PROCEEDINGS OF THE FIFTH

INTERNATIONAL CONFERENCE ON FINANCE AND ACCOUNTING

FOR THE PROMOTION OF SUSTAINABLE DEVELOPMENT IN THE PRIVATE SECTOR

(FASPS5)

FINANCIAL PUBLISHING HOUSE

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ACADEMY OF FINANCE

The Academy of Finance (AOF) is a public and research-oriented university, affiliated to the Ministry of Finance, Vietnam. The AOF was officially established under the Decision No 120/2001/ QD-TTg dated August 17th, 2001 of the Prime Minister by integrating Hanoi University of Finance and Accounting (founded in 1963), the Finance Research Institution (founded in 1961) and the Financial Training Center (founded in 1995). The main campus of the Academy of Finance is located in Hanoi.

The mission of Academy of Finance is to provide expertise in research and training of professional finance and accounting to the society. This mission has been defined for our 55-year history with outstanding achievements and contributions branded by our lecturers, researchers and students. The AOF established self-evaluation council since 2006 according to regulations of MOET Vietnam. This council significantly helped to improve the academic performance, and in April 2016, AOF was accredited by Center for Education Accreditation (CEA) – Association of Vietnam Universities and Colleges (AVUC). The accreditation result was published according to the Decision 10/QD-KDCLGD dated February 20th, 2017 of AVUC ranking AOF in top 5 best universities in Vietnam. The Academy of Finance offer a high quality of training and research through 14 faculties including Fundamental Sciences, Political theories, Public Finance, Tax and Customs, Corporate Finance, Banking and Insurance, International Finance, Accounting, Business Administration, Economic Information, Foreign Languages, Economics, Postgraduate Education, In-service training, and 02 centers: Center for Languages and Informatics Training, Information Technology Center, 2 research institutes: Institute for International Finance Education (IIFE) and Institute of Economics and Finance and 13 support divisions. AOF offers a rich training programs included ordinary undergraduate/graduate programs spread in 06 academic majors: Finance and Banking, Accounting and Auditing, Business Administration, Management Information, Economic and Financial English, Economics. The AOF also offer to international and Vietnamese students with different choices partially/totally taught in English such as High Advanced Program or Dual Degree Programme (DDP - a Joint Training Progamme between the Institute of International Finance Education - Academy of Finance and the University of Greenwich (UK). Throughout its history, AOF's qualified scientists and lecturers have been supporting more than 85,000 students including 5,000 masters and 300 doctors and additionally 500 international students for Laos and Cambodia for the past 55 years. Significantly, a large number of AOF's graduates are leaders of the Government, ministries, local authorities and businesses. The academy has also been recognized for conducting thousands of valuable research projects for the policy makers in economic development of the State. The rich tradition and custom makes AOF unique among the other universities and colleges in Vietnam and attracts thousands of learners to study at the academy annually. The valuable contributions of AOF to the development of the State in training and doing research has been respected publicly, therefore, the academy has been recognized with national unique awards. Many AOF alumni are key people in the Government and Local Administrations. In the process of globalization and the advent of the Industry 4.0, the AOF Management Board sets out the following major development directions:

- Intensively develop training and research performance, maximize the core values to adapt to the emerging demands of the intellectual economy and the Industry 4.0.

- Diversify training courses, renovate academic management measures, improve the professional capacity, and improve self-study spirit with creativity and experience.

- Improve the research capacity in the manner that harmonizes fundamental studies with applied studies. Actively and comprehensively integrate into regionalization and globalization process regarding training, capacity building and research activities.

- Conduct academic management reform in close relation with financial autonomy and social accountability, create a new academic environment with high openness, creativity and internationalism, continuously attract excellent staffs and scholars to work and do research at AOF.

THE NATIONAL INSTITUTE FOR FINANCE

The National Institute for Finance (hereinafter referred to as the NIF), formerly the Financial Science Institute, was established in 1961. NIF is a public organization of science and technology, engages in fundamental and comprehensive research and studies on domestic and international issues in fiscal and economic fields, specialized in policy matters, as a think-tank of the Ministry of Finance.

Key missions of NIF assigned by the Finance Minister include (1) Research and develop the national financial strategies, fiscal and monetary policies; (2) Conduct basic and applied scientific research in the field of finance; (3) Organize financial and economic analysis and forecasting activities; research and assess the impact of financial policies on socio-economic development and sustainable growth; (4) Organize the establishment of financial databases and information systems, edit and publish journals, research publications, and documents on strategic and financial policies; (5) Manage the research and technological activities of the financial sector; (6) Participate in training and consulting in the field of finance; (7) Propose and organize the implementation of international cooperation activities and (8) Perform other tasks assigned by the Finance Minister.

Vietnam has entered a new period of development, intensified international integration, and opened up numerous opportunities as well as challenges. NIF has played a crucial role in shaping financial policies and improving financial legislation. NIF has analyzed and evaluated the impacts of important policies such as corporate income tax, personal income tax, excise tax, state-owned enterprise restructuring, and budget management. Acknowledged by the leaders of MOF for the experience and success in constructing the Finance Development Strategy for the period 2001 – 2010 and 2011-2020, NIF continues to be trusted to lead and coordinate with related departments of MOF to develop the Finance Development Strategy by the year 2030. The Finance Development Strategy by the year 2030 aims to concretize major policies and orientations of the Communist Party and the State regarding the finance-budget sector for the period. On March 27th 2022, the Prime Minister officially signed a Decision to approve the Finance Development Strategy by the year 2030. Beside, NIF actively joins with various departments under the MOF in developing sectoral strategies such as: Tax Reform Strategy, Custom Development Strategy; Public Debt Strategy; Strategy for Development of Vietnam's Insurance Market; Strategy for Development of the Stock Market; National Reserve Development Strategy; Strategy of Accounting – Auditing.

Over the past 60 years, NIF has established collaborative relationships with a variety of domestic and international organizations and collaborators in the economic and financial fields such as the WB, IMF, ADB, GIZ, UN, AMRO and PRI, etc.

UNIVERSITY OF FINANCE - MARKETING (UFM)

University of Finance - Marketing (UFM) is a public higher education institution governed by the Ministry of Finance, having the right to autonomy and self-responsibility of a non-business unit. The forerunner of the University of Finance - Marketing is the Central School of Pricing Officers in the South, established under the Decision No. 210/VGNN-TCDT dated September 1, 1976 by the State Pricing Commission

It then became a Vocational School before turning into a college and then a university as it is today. UFM has undergone over 45 years of establishment and development as a highly-ranked institution in the higher education system of Vietnam with a scale of nearly 20,000 students and 6 campuses in Ho Chi Minh City. UFM is traning students to become human resources that meet national and regional standards; it has also transferred scientific achievements in the field of business and management, and has participated in strategic and policy planning for the Finance sector, for businesses and for social organizations. Currently, UFM is offering both undergraduate and postgraduate programs via various training modes full-time and part-time in 15 majors. In addition to conducting mass regular programs, UFM has also implemented high-quality, special, international, and international cooperation programs. The number of articles and projects at all levels implemented over the years has been gradually increasing in both quality and quantity. UFM's international cooperation activities have made remarkable progress. In addition to training cooperation, UFM has signed several cooperation agreements on student exchange and scientific research with various universities around the world.

University of Finance - Marketing has set development goals to become an application-oriented university by the end of 2026 while maintaining national standards at educational institution level and training program level with at least 4 programs that will meet the quality standards of the ASEAN University Network (AUN-QA). By the end of 2030, the University will reach the level of a state-of-the-art university in the ASEAN region, UFM is expected to be ranked among the top 500 prestigious universities in Asia (according to prestigious ranking standards) by the end of 2045 and will become the leading application-oriented educational institution in Vietnam and in the region of ASEAN.

UNIVERSITY OF FINANCE AND ACCOUNTANCY

Belonging to the Ministry of Finance, University of Finance and Accountancy (UFA) is an undergraduate and postgraduate training institution. Its mission is training, fostering, providing learners with quality training programs with application orientation in the fields of business, administration and law; it also carries out scientific researches and transfers these scientific research results into practice; contributing to human resource and community development, serving the socio-economic development of the Central and Highlands provinces, the whole country and the Central provinces of Lao People's Democratic Republic in the context of global economy integration.

With the main campus in Quang Ngai province and a branch in Thua Thien Hue province, the training scale of the University is increasing day by day. In the field of undergraduate training, the University is specialized in Accounting, Auditing, Economic Law, Finance - Banking, Business Administration, International Business. In the field of postgraduate training, the University is specialized in Finance and Banking at Master level. Along with improving the quality of professional skills, the University devotes a great deal of effort in connecting with businesses to create jobs for graduate students; creating an environment for students to practice essential skills through yearly activities of the Youth Union, the Student's Association, professional academic competitions, clubs, etc. Many remarkable achievements have been obtained by UFA students in recent years: 02 "January Star" Awards, 01 Consolation Prize in the national final round of the contest "Students with Financial Management Skills 2019", 01 Third Prize and 01 Consolation Prize at the contest "Start-up Ideas" in Quang Ngai province, Top 20 "National Student Leader Contest", 01 third prize and 01 consolation prize in the "2022 National English Olympics", participating in some competitions and get remarkable prizes: "Looking for startup ideas", "Festival of English clubs, teams and groups in Quang Ngai Province 2023", "Contest of Marxist-Leninist sciences and Ho Chi Minh ideology - Light illuminating the way 2023", etc.

With a long history of over 47 years of construction and development (1976-2023), the University has trained and fostered nearly 62 thousand students with practical knowledge and skills sought by employers. Many students of the University have been affirming their contribution to the financial system in the Central and Central Highlands region as well as in Vietnam. The University has received a large number of noble awards from the Vietnamese State. This is the recognition of the social community for the quality and the University's brand with its identity: "Quality - Friendliness - Creativity - Integration".

UNIVERSITY OF FINANCE AND BUSINESS ADMINISTRATION (UFBA)

The University of Finance and Business Administration (UFBA) is a public tertiary education institution under the Ministry of Finance, established under Decision No. 1320/QD-TTg dated September 18, 2012 of the Prime Minister on the basis of upgrading the College of Finance and Business Administration. The university's mission is to provide high-quality training and scientific research products with domestic and regional brands in the fields of economics, finance, accounting, and business administration, contributing to the national industrialization and modernization and international integration.

Currently, the University specializes in 7 tertiary-level majors: Economics, Accounting, Auditing, Business Administration, Finance - Banking, International Business, Management Information Systems and one post-graduate major in Finance – Banking, with the training scale of 4000 graduate and post-graduate students. Over the period of 58 years of construction and development (1965-2023), the University lecturers, officials and employees have constantly strived, with unity, creativity, efforts to overcome all difficulties and challenges, to fulfill all assigned work, contributing to the general development of the Finance field and the cause of education and training. The efforts of generations of the University lecturers, officials and employees have been recognized and awarded many noble titles by the Communist Party and the Government such as the Independence Medals, First Class, Second Class and Third Class; Labor Medals, First, Second, Third Class and many other noble awards.

INSTITUTE OF FINANCIAL TRAINING (IFT)

The Institute of Financial Training (IFT) under the Ministry of Finance was established by the Prime Minister in 2006. The Institute is not only responsible for training civil servants in accordance to professional standard, but also contributes to socio-economic solution. Hence, the school helps to develop and plan strategies and policies for the financial sector. The IFT has built a reputation for its intensive training programs, which are tied to the country's current economic and financial management practices, the application of information technology, and the trend of globalization.

Training at IFT improve ones' knowledge, qualifications and skills in order to become managers and higher professional - level officials. They are equipped to serve up to high professional standards, to become experts in economics and finance, and lastly, to be professional, diligent, intelligent and flexible civil servants, who meet the requirements of the country's economic development in this period of industrialization, modernization and international economic integration.

On average, IFT has trained over 17,000 students in the financial sector with over 250 different classes annually. IFT is known as the largest and most prestigious institute in the country in terms of providing training, retraining, financial and accounting consulting services to the society.

ASSOCIATE PROFESSOR NGUYEN TRONG CO
NATIONAL TEACHER, PRESIDENT OF THE ACADEMY OF FINANCE

Assoc. Prof. Nguyen Trong Co is the President of the Academy of Finance. He has been working for the Academy of Finance since he was young and held different positions such as lecturer, Head of Financial Analysis Department, Deputy Head of Human Resources Department, and Vice President before being nominated the President of Academy of Finance in 2014.

He is the Editor of the Journal of Finance and Accounting Research and serves the Scientific Board of Finance Research Sector as Vice President and a member of *Scientific Board of Banking Research Sector*.

He was also nominated as honour member of FCPA Australia.

Assoc. Prof. Nguyen Trong Co is the author/coauthor of more than 41 valuable text books and supplementary materials such as "Financial Analysis", Finance Publishing House, 2017, "Auditing management and usage of mineral resources for sustainable development in Viet Nam"; Finance Publishing House, 2016; Business owner with financial statements report, finance Publishing House 2015; Autonomous mechanism of public units In City, facts and solutions, National economic university publisher 2020 and etc. He has researched actively with more than 54 research projects spread on different fields: corporate finance and public finance, and technological markets. In the Academy of Finance, he has published more than 84 articles in both local and international journals.

DR. NGUYEN NHU QUYNH
PRESIDENT OF NATIONAL INSTITUTE FOR FINANCE, MINISTRY OF FINANCE

For more than 24 years working in the Finance industry, Dr. Nguyen Nhu Quynh has worked at several Ministerial bodies under the Ministry of Finance (Department of Financial Policy, Legal Department, Head of Secretary Division - Ministerial Office, and Acting CEO of Hanoi Stock Exchange) before becoming President of the National Institute for Finance in 2021. He is known as an enthusiastic leader in organizing and managing research activities. He is also known for his in-depth knowledge of legal and policy framework, tax policies, public finance management, macroeconomics, corporate finance, international finance and financial markets.

He has proactively participated in the process of developing a number of strategies for the public financial sector, namely the Finance Development Strategy by the year 2030, Tax Reform Strategy, Custom Development Strategy; Public Debt Strategy; Strategy for Development of Vietnam's Insurance Market; Strategy for Development of the Stock Market; National Reserve Development Strategy; Strategy of Accounting - Auditing. As the President of NIF, his colleagues praise him for his leadership skills in corporate management, financial market management, public finance management; and his experience in giving policy advice in the areas of taxation, public finance management and financial market. Dr. Nguyen Nhu Quynh holds a Bachelor's degree in Economics from the Academy of Finance, a Master's degree in Public Policy from Hitotsubashi University (Japan), and a Doctorate degree in Economics from Kobe University (Japan).

ASSOC. PROF. DR. PHAM TIEN DAT
PRESIDENT OF UNIVERSITY OF FINANCE – MARKETING

Associate Professor Dr. Pham Tien Dat is currently the President of University of Finance - Marketing. He used to hold the position of Deputy Director, in charge of the Institute of Financial Strategy and Policy, Ministry of Finance. In March 2021, he was transferred and appointed as Chairman of the Board of Directors.

In November 2021, he was appointed as the President of University of Finance - Marketing and has occupied this position until the present time. Having extensive research and teaching experience in the field of finance and banking, Associate Professor Dr. Pham Tien Dat has published more than 40 domestic and international research papers, managed 5 ministerial- and provincial-level projects in Vietnam. He was also the chief Editor and participated in compiling 11 coursebooks.

DR. PHAM SY HUNG
RECTOR OF THE UNIVERSITY OF FINANCE AND ACCOUNTANCY

Dr. Pham Sy Hung, the Rector of the University of Finance and Accountancy, has worked for the University of Finance and Accountancy since graduating in 1987. In the period 1987-1998, Dr. Pham Sy Hung played various roles as Lecturer, Deputy Head of Training Management Department of the Junior College of Finance and Accountancy No.3.

During the period 1998-2008, Dr. Pham Sy Hung was the Deputy Head of the Training Management and Science Department of the College of Finance and Accountancy before being appointed as the Vice Rector of the College of Finance and Accountancy in 2008. When the College was upgraded to become the University of Finance and Accountancy in 2011, Dr. Pham Sy Hung was appointed as the Vice Rector. In 2018, he was appointed as the Rector of the University of Finance and Accountancy and has held that position until now. He has participated in many research projects at all levels. He is the coauthor of some valuable textbooks and supplementary materials, he has published many articles of high scientific value.

DR. NGUYEN TRONG NGHIA
RECTOR OF THE UNIVERSITY OF FINANCE - BUSINESS ADMINISTRATION

Being the Rector of the University of Finance - Business Administration since 2017, Meritorious Teacher, Dr. Nguyen Trong Nghia has devoted his lifetime to the University with different positions: Lecturer, Main lecturer, Deputy Head of Training Management Department, Head of Training Management Department, Head Faculty of Valuation, and Vice-Rector. Also, he is the Chairman of the University Scientific and Training Council, Deputy Editor-in-Chief in charge of the Journal of Finance - Business Administration.

He is the author/co-author of 10 books and textbooks on economics and business administration, such as Textbook of Investment Economics, Textbook of International Economics, Textbook of Principles of Market Price Formation, Textbook of Document Drafting, etc. Besides, he is the author/co-author of 20 scientific articles published in prestigious domestic and foreign journals, the head of 05 ministerial level scientific research projects and 12 at tertiary level. For his contributions and merits, he was awarded the Third-class Labor Medal by the State of Vietnam in 2008, the Second-class Labor Medal in 2019; National emulation fighter, Certificate of Merit from the Prime Minister (2 times), Emulation soldier of the Finance Sector and many certificates of merit at the ministerial and provincial levels.

MR. DO VAN TRUONG, MSC - DIRECTOR OF INSTITUTE OF FINANCIAL TRAINING (IFT) - MINISTRY OF FINANCE.

Mr. Do Van Truong is known as an enthusiastic leader in the field of training civil servants. Graduated with an Accounting degree from Hanoi University of Finance and Accounting (now Academy of Finance), he has years of managing experience in finance - accounting, banking, etc and has been promoted through many positions such as Financial Inspector, Secretary of Deputy Minister - Ministry of Finance, Deputy Chief of Office - Ministry of Finance.

His colleagues praise him for his breakthroughs in digital transformation and application of information technology in training programs. He has launched many training programs in response to professional management needs in the finance sector. Director Do Van Truong has the motto which is "training must always be tied to the current needs and practice of financial management."

1. BOARD OF DIRECTORS

No.	Name	Title	
1	Assoc. Prof. Dr. Nguyen Trong Co	President of Academy of Finance	Chairman
2	Assoc. Prof. Dr. Nguyen Manh Thieu	Vice President of Academy of Finance	Deputy Chairman
3	Assoc. Prof. Dr. Truong Thi Thuy	Vice President of Academy of Finance	Deputy Chairman
4	Assoc. Prof. Dr. Nguyen Dao Tung	President of the School Council, Academy of Finance	Deputy Chairman
5	Dr. Nguyen Van Binh	Vice President of Academy of Finance	Deputy Chairman
6	Dr. Nguyen Nhu Quynh	Director of National Institute for Finance	Deputy Chairman
7	Dr. Pham Sy Hung	President of University of Finance and Accountancy	Deputy Chairman
8	Assoc. Prof. Dr. Pham Tien Dat	President of University of Finance and Marketing	Deputy Chairman
9	MSc. Do Van Truong	President of Institute of Financial Training	Deputy Chairman
10	Dr. Nguyen Trong Nghia	President of University of Finance and Business Administration	Deputy Chairman
11	Assoc. Prof. Dr. Ngo Thanh Hoang	Director of Science Research Management, Academy of Finance	Deputy Chairman

2. ORGANIZATION BOARD

No.	Name	Title	
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4	Assoc. Prof. Dr. Pham Tien Dat	President of University of Finance and Marketing	Deputy Chairman
5	Dr. Le Thi Thuy Van	Vice Director of National Institute for Finance	Deputy Chairman
6	Assoc. Prof. Dr. Nhu Trong Bach	Vice President of Institute of Financial Training	Deputy Chairman
7	Dr. Dao Van Tu	Vice President of University of Finance and Business Administration	Deputy Chairman
8	Dr. Dao Mai Phuong	Head of Science Research Management & International Affair Department, National Institute for Finance	Commissioner
9	Assoc. Prof. Dr. Phan Thi Hang Nga	Head of Science Research Management, University of Finance and Marketing	Commissioner
10	Dr. Nguyen Thi Phuong Ngoc	Head of Science Research Management & International Affair Department, University of Finance and Accountancy	Commissioner
11	Assoc. Prof. Dr. Chuc Anh Tu	Head of the Examination and Quality Management Department, Academy of Finance	Commissioner
12	Assoc. Prof. Dr. Nguyen Le Cuong	Chief of staff, Academy of Finance	Commissioner
13	Assoc. Prof. Dr. Nguyen Xuan Thach	Head of Education Management, Academy of Finance	Commissioner
14	MSc. Nguyen Le Mai	In charge of Finance and Accounting department, Academy of Finance	Commissioner
15	Dr. Pham Van Nghia	Deputy director of Personnel Management Department, Academy of Finance	Commissioner
16	Dr. Nguyen Thi Thuy Nga	Deputy Head of Scientific Management, Academy of Finance	Commissioner
17	Assoc. Prof. Dr. Nguyen Xuan Thach	Director of Education Management, Academy of Finance	Commissioner
18	Assoc. Prof. Dr. Nguyen Trong Than	Director of Postgraduate Faculty, Academy of Finance	Commissioner
19	Dr. Duong Quoc Quan	Acting Dean of Faculty of Political Theory, Academy of Finance	Commissioner

20	Assoc. Prof. Dr. Le Xuan Truong	Dean of Custom and Tax Faculty, Academy of Finance	Commissioner
21	Assoc. Prof. Dr. Mai Ngoc Anh	Dean of Accounting Faculty, Academy of Finance	Commissioner
22	Assoc. Prof. Dr. Dao Thi Minh Thanh	Dean of Business Administration Faculty, Academy of Finance	Commissioner
23	Assoc. Prof. Dr. Vu Van Ninh	Dean of Corporate Finance Faculty, Academy of Finance	Commissioner
24	Assoc. Prof. Dr. Doan Minh Phung	Dean of Insurance and Banking Faculty, Academy of Finance	Commissioner
25	Assoc. Prof. Dr. Vu Duy Vinh	Dean of International Finance Faculty, Academy of Finance	Commissioner
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28	Dr. Nguyen Thi Thuy Quynh	Dean of Faculty of Basic, Academy of Finance	Commissioner
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30	Assoc. Prof. Dr. Vu Duy Nguyen	Director of Institute of Economics - Finance	Commissioner
31	Dr. Trinh Thanh Huyen	Director of Institute of International Financial Education, Academy of Finance	Commissioner
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38	MSc. Dao Thi Oanh	Foreign Language Faculty, Academy of Finance	Commissioner
39	MSc. Nguyen Thi Tam	Foreign Language Faculty, Academy of Finance	Commissioner

3. CONTENT BOARD

No.	**Name**	**Title**	
1	Assoc. Prof. Dr. Nguyen Manh Thieu	Vice President of Academy of Finance	Chairman
2	Assoc. Prof. Dr. Truong Thi Thuy	Vice President of Academy of Finance	Deputy Chairman
3	Dr. Le Tuan Hiep	President of the School Council, University of Finance and Business Administration	Deputy Chairman
4	Assoc. Prof. Dr. Pham Tien Dat	President of University of Finance and Marketing	Deputy Chairman
5	Dr. Le Thi Thuy Van	Vice Director of National Institute for Finance	Deputy Chairman
6	Dr. Dao Van Tu	Vice President of University of Finance and Business Administration	Deputy Chairman
7	Dr. Bui Thi Yen Linh	Vice President of University of Finance and Accountancy	Deputy Chairman
8	Assoc. Prof. Dr. Nhu Trong Bach	Vice President of Institute of Financial Training	Deputy Chairman
9	Assoc. Prof. Dr. Ngo Thanh Hoang	Director of Science Research Management, Academy of Finance	Deputy Chairman
10	Assoc. Prof. Simone Domenico Scagnelli	School of Business and Law, Edith Cowan University, Australia	Commissioner
11	Professor Mark Holmes	School of Accounting, Finance and Economics Operations, University of Waikato	Commissioner
12	Dr. Le Quang Thuan	Director of Corporate Finance Policy Department, National Institute for Finance	Commissioner
13	Msc. Nguyen Thi Thuy	Deputy Director of Public Finance Policy Department, National Institute for Finance	Commissioner
14	Msc. Luu Anh Nguyet	Deputy Director of Financial Market Development Department, National Institute for Finance	Commissioner
15	Assoc. Prof. Dr. Phan Thi Hang Nga	Director of Science Research Management, University of Finance and Marketing	Commissioner

16	Assoc. Prof. Dr. Nguyen Thi My Linh	Dean of Finance and Banking Faculty, University of Finance and Marketing	Commissioner
17	Dr. Tran Hong Van	Dean of Accounting & Auditing Faculty, University of Finance and Marketing	Commissioner
18	Dr. Nguyen Thanh Nha	Dean of Custom and Tax Faculty, University of Finance and Marketing	Commissioner
19	Dr. Doan Ngoc Phuc	Dean of Economics – Law Faculty, University of Finance and Marketing	Commissioner
20	Dr. Nguyen Quang Hiep	Deputy Director of Scientific Management & International Affairs Department, University of Finance and Business Administration	Commissioner
21	Dr. Truong Thi Duc Giang	Vice Dean of Finance and Banking Faculty, University of Finance and Business Administration	Commissioner
22	Dr. Nguyen Thi Cam Thuy	Vice Dean of Accounting & Auditing Faculty, University of Finance and Business Administration	Commissioner
23	Dr. Do Tien Toi	Vice Dean of Business Administration Faculty, University of Finance and Business Administration	Commissioner
24	Dr. Ha Thi Huong Lan	President of Centre for Financial Consulting and Training Development, Institute of Financial Training	Commissioner
25	Dr. Tran Vinh Quang	Science and Education Administration Department, Institute of Financial Training	Commissioner
26	Dr. Nguyen Thi Phuong Ngoc	Director of Scientific Management & International Affairs Department, University of Finance and Accountancy	Commissioner
27	Dr. Vo Thi Thu Dieu	Deputy Director of Scientific Management & International Affairs Department, University of Finance and Accountancy	Commissioner
28	Dr. Phan Thi Thuy Nga	Vice Dean of Accounting & Auditing Faculty, University of Finance and Accountancy	Commissioner
29	Dr. Nguyen Thi Nhu Mai	Dean of Business Administration Faculty, University of Finance and Accountancy	Commissioner
30	Dr. Huynh Thu Hien	Vice Dean of Finance and Banking Faculty, University of Finance and Accountancy	Commissioner
31	Dr. Tran Hoang Vu	University of Finance and Accountancy	Commissioner
32	Dr. Nguyen Thi Le Huyen	University of Finance and Accountancy	Commissioner
33	Dr. Nguyen Phuong Ha	University of Finance and Accountancy	Commissioner
34	Dr. Nguyen Thi Le Huyen	University of Finance and Accountancy	Commissioner
35	Assoc. Prof. Dr. Chuc Anh Tu	Head of the Examination and Quality Management Department, Academy of Finance	Commissioner
36	Assoc. Prof. Dr. Nguyen Le Cuong	Chief of staff, Academy of Finance	Commissioner
37	Dr. Nguyen Thi Thuy Nga	Deputy Head of Scientific Management, Academy of Finance	Commissioner
38	Dr. Dao Ngoc Ha	Deputy Head of Scientific Management, Academy of Finance	Commissioner
39	Dr. Nguyen Hong Chinh	Science Research Management Department, Academy of Finance	Commissioner
40	MSc. Nguyen Thi Thanh Huyen	Science Research Management Department, Academy of Finance	Commissioner
41	Dr. Nguyen Thi Hong Van	Deputy Director of International Collaboration Department, Academy of Finance	Commissioner
42	Dr. Nguyen Huu Tan	Deputy Director of International Collaboration Department, Academy of Finance	Commissioner
43	MSc. Ha Tuan Vinh	International Collaboration Department, Academy of Finance	Commissioner
44	Dr. Ta Dinh Hoa	Secretary of Academy of Finance HCYU	Commissioner

45	Dr. Nguyen Dinh Hoan	Dean of Economic Faculty, Academy of Finance	Commissioner
46	Dr. Nguyen Thi Thuy Trang	Vice Dean of Foreign Language Faculty, Academy of Finance	Commissioner
47	Dr. Nguyen Minh Thanh	Accounting Faculty, Academy of Finance	Commissioner
48	Dr. Le Thi Yen Oanh	Accounting Faculty, Academy of Finance	Commissioner
49	MSc. Nguyen Ba Linh	Accounting Faculty, Academy of Finance	Commissioner
50	Dr. Bui To Quyen	Accounting Faculty, Academy of Finance	Commissioner
51	MSc. Nguyen Huong Gian	Accounting Faculty, Academy of Finance	Commissioner
52	Dr. Nguyen Thi Thanh Phuong	Accounting Faculty, Academy of Finance	Commissioner
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54	Dr. Nguyen Anh Quang	Public Finance Faculty, Academy of Finance	Commissioner
55	Dr. Nguyen Huu Dai	Public Finance Faculty, Academy of Finance	Commissioner
56	Assoc. Prof. Dr. Pham Thanh Hoa	Corporate Finance Faculty, Academy of Finance	Commissioner
57	Dr. Bui Hà Linh	Corporate Finance Faculty, Academy of Finance	Commissioner
58	Dr. Vu Duc Kien	Corporate Finance Faculty, Academy of Finance	Commissioner
59	Dr. Hoang Thi Phuong Lan	International Finance Faculty, Academy of Finance	Commissioner
60	Dr. Nguyen Thuy Linh	Insurance Bank Faculty, Academy of Finance	Commissioner
61	Dr. Ngo Duc Tien	Insurance Bank Faculty, Academy of Finance	Commissioner
62	Dr. Vu Thi Ngoc Anh	Insurance Bank Faculty, Academy of Finance	Commissioner
63	Dr. Nguyen Thi Nhung	Business Administration Faculty, Academy of Finance	Commissioner
64	Dr. Ho Thi Hoa	Business Administration Faculty, Academy of Finance	Commissioner
65	Assoc. Prof. Dr. Nguyen Thi Viet Nga	Economic Faculty, Academy of Finance	Commissioner
66	Dr. Tran Phuong Anh	Economic Faculty, Academy of Finance	Commissioner
67	Dr. Pham Nhu Mai Anh	Custom and Tax Faculty, Academy of Finance	Commissioner
68	Msc. Nguyen Thi Thuy Trang	Custom and Tax Faculty, Academy of Finance	Commissioner

4. ADMINISTRATIVE BOARD

No.	Name	Title	
1	Dr. Nguyen Van Binh	Vice President of Academy of Finance	Chairman
2	Dr. Nguyen Thi Thuy Nga	Vice Director of Science Research Management, Academy of Finance	Deputy Chairman
3	Dr. Nguyen Thi Hong Van	Deputy director of International Collaboration Department, Academy of Finance	Deputy Chairman
4	Dr. Dao Ngoc Ha	Vice Director of Science Research Management, Academy of Finance	Member
5	Msc. Nguyen Le Mai	Director of Finance and Accounting department, Academy of Finance	Member
6	Msc. Nguyen Dinh Son Thanh	Director of Facilities Management Department, Academy of Finance	Member
7	Dr. Nguyen Phi Hung	Vice Director of Facilities Management Department, Academy of Finance	Member
8	Msc.Vu Van Khien	Deputy chief of staff, Academy of Finance	Member
9	Dr. Nguyen Hong Chinh	Science Research Management, Academy of Finance	Member
10	Msc. Nguyen Thi Hong Hanh	Science Research Management, Academy of Finance	Member
11	Msc. Nguyen T.Thanh Huyen	Science Research Management, Academy of Finance	Member
12	Msc. Ha Tuan Vinh	International Collaboration Department, Academy of Finance	Member
13	Msc. Phan Thi Oanh	Finance and Accounting department, Academy of Finance	Member
14	Dr. Phan Van Hao	Vice Secretary of Academy of Finance HCYU	Member
15	Msc. Nguyen Viet Tien	Vice president of Library, Academy of Finance	Member
16	Dr. Bui Quang Viet	Head of Heath Clinic, Academy of Finance	Member
17	Msc. Ngo Vut Bong	Deputy Director of Information Centre, Academy of Finance	Member
18	Msc. Nguyen Thi Thanh Nga	Vice President of Information Centre, Academy of Finance	Member

19	Msc. Duong Duc Thanh	Information Centre, Academy of Finance	Member
20	Msc. Vu Dieu Loan	Information Centre, Academy of Finance	Member
21	Msc. Nguyen Tien Huy	Information Centre, Academy of Finance	Member
22	Msc. Dao Thi Loan	Political And Student Affairs Department, Academy of Finance	Member
23	Nguyen Van Vinh	Facilities Management Department, Academy of Finance	Member
24	Msc. Nguyen Xuan Lam	Joint Party and Mass Organizations Administrative Office, Academy of Finance	Member
25	Msc. Bui Van Tien	Joint Party and Mass Organizations Administrative Office, Academy of Finance	Member

5. SECRETARY BOARD

No.	Name	Title	
1	Assoc. Prof. Dr. Ngo Thanh Hoang	Director of Science Research Management, Academy of Finance	Chairman
2	Dr. Nguyen Hong Chinh	Science Research Management, Academy of Finance	Member
3	Dr. Pham Quynh Trang	Faculty of Political Theory, Academy of Finance	Member
4	Dr. Tran Thi Phuong Anh	Economics Faculty, Academy of Finance	Member
5	Dr. Nguyen Huu Tan	Deputy director of International Collaboration Department, Academy of Finance	Member
6	Dr. Bui Ha Linh	Corporate Finance Faculty, Academy of Finance	Member
7	Dr. Nguyen Minh Thanh	Accounting Faculty, Academy of Finance	Member
8	Dr. Nguyen Thi Nhung	Business Administration Faculty, Academy of Finance	Member

MỤC LỤC

REMARKS OF THE 5TH INTERNATIONAL CONFERENCE "FINANCE AND ACCOUNTING FOR THE PROMOTION OF SUSTAINABLE DEVELOPMENT IN THE PRIVATE SECTOR" (FASPS5)

In the era of Doi Moi, the Party and State have recognized the position and role of private economy in the development of a multi-component economic system. As a result, the private economy has continued to grow and become one of the key factors contributing to rapid economic growth. In recent years, the private economy has not only recovered but has also made progress in terms of both quantity and quality. Resolution 10/NQ-TW dated June 3, 2017, of the 5th Central Committee Plenum of the 12th Party Congress on the development of the private economy set the requirement for the private economy to develop alongside the state and collective economies, becoming a significant driving force for a market-oriented socialist economy. However, the global economic landscape is extremely complex, unpredictable, and full of challenges, compounded by existing economic issues. The fourth industrial revolution, with its advancements in digital technology, has rapidly transformed daily life, and the changing political landscape around the world adds to the complexity. This presents substantial challenges for both the private and state-owned sectors.

The strong development of the private economic sector, in terms of quantity, quality, effectiveness, and sustainability, has been emphasized. The government has issued Resolution No. 45/NQ-CP, an action plan to implement Resolution No. 10-NQ/TW of the 12th Party Central Committee on developing the private economy as a crucial driving force for a market-oriented socialist economy. The overall goal of this program is to develop the private economy into a significant driving force for a market-oriented socialist economy, contributing to the rapid and sustainable socioeconomic development, while enhancing self-reliance and self-sufficience.

In a context where the state budget faces difficulties and there is a trend of declining foreign capital inflows, policies to encourage private sector investment are necessary. The 10-year socio-economic development strategy for 2021-2030 aims to significantly develop the private sector in terms of quantity and quality. It encourages the formation and growth of large private economic groups with strong competitive capabilities regionally and internationally. By 2030, it targets having at least 2 million enterprises with the private sector contributing 60-65% to GDP. To achieve this, an average of at least 143,000 new businesses must be established each year, alongside various corresponding measures to promote business formation, reactivation, and reduce business closures. In a market-oriented socialist economy, the development of the private sector is not only crucial for maintaining high GDP growth rates and generating state revenue, but also for addressing a range of social issues such as job creation, poverty reduction, hunger eradication and human resource development.

In order to propose solutions and recommendations to promote the development of the private economy in the new context, Academy of Finance, in collaboration with the University of Finance and Marketing, the University of Finance and Accountancy, the University of Finance and Business

Administration, the National Institute for Finance, the Institute of Financial Training, organized the fifth International Workshop with the theme: "Finance and Accounting for Accelerating the promotion of Sustainable Development of the Private Economy." The conference has attracted a significant number of scientists and researchers from universities, academies, and research institutes in and outside the country. The organizing committee received nearly 140 articles and selected, edited 136 high-quality articles for publication in the proceedings of this international conference. The submitted articles focused on analyzing and evaluating various aspects of the economy, finance, management, human resources, accounting, and auditing, both in the context of general economic development and specifically within the private sector.

The research articles demonstrated a high level of scientific content and reflected diversity in approaches to promoting the rapid and sustainable development of the private economy. With the hope that the workshop serves as a platform for scientists, managers, business leaders, and professional organizations, both nationally and internationally, to exchange and share information and directions for finance, accounting, and economics to accelerate the fast and sustainable development of the private sector. The ultimate goal is to achieve the aspirations set for 2030: Vietnam as a developing country with modern industry, high average income, and by 2045, becoming a developed nation with high income.

We extend our best wishes to all delegates and esteemed scientists for good health, happiness, and success!

With sincere appreciation,

THE WORKSHOP ORGANIZING COMMITTEE

ANALYZING THE CASH FLOW DISRUPTIONS CAUSED BY COVID-19 IN VIETNAM'S FOOD AND BEVERAGE SECTOR

PhD. Nguyen Thi Thanh Phuong[1], MA. Tran Thi Thuy Anh[2]

Abstract: *The COVID-19 pandemic's impact on cash flows in the food and beverage industry is a critical research area. To investigate this, a group of researchers utilized financial data from the Fiin Pro database, focusing on 33 Vietnamese food and beverage companies spanning from 2017 to 2022. The study employed a regression model analysis, specifically the data regression analysis using the Feasible Generalized Least Squares (FGLS) method based on the multi-regression model. The research findings suggest that the COVID-19 pandemic negatively affected operating cash flow while positively influencing cash flow from investing and cash flow from financing activities in these food and beverage businesses..*

1. INTRODUCTION

The food and beverage industry is a multifaceted sector encompassing various activities, from production to service provision (Gomes, 2001; Demir & Dincer, 2020). Historically, it has contributed to economic growth and, more recently, evolved to provide diverse and artistic culinary experiences (Pfitzer & Krishnaswamy, 2007). The COVID-19 pandemic has profoundly impacted various sectors, including the food and beverage industry, with supply chain disruptions, reduced demand, and changing consumer preferences (McKibbin & Fernando, 2020; Lee, 2020).

Cash flow is critical for a company's financial health and sustainability, especially in the food and beverage sector (Karas & Režňáková, 2020; Brealey, Myers, & Allen, 2017). Effective cash flow management is vital for a company's well-being, and the pandemic significantly disrupted cash flow dynamics within the industry (O'Brien & Putnis, 2020). This study investigates the impact of the pandemic on cash flows in Vietnamese food and beverage companies (Ha, Nguyen, & Nguyen, 2020). Given the industry's importance to the Vietnamese economy, understanding the pandemic's effects on cash flow is crucial for stakeholders (General Statistics Office of Vietnam, 2021). The research aims to identify specific areas of impact on cash flows, providing guidance for business sustainability and policy support (Brigham, 2016; O'Brien & Putnis, 2020).

The study addresses three main research questions:

1. How has the Covid-19 pandemic affected cash flow in Vietnam's food and beverage industry?

2. What effects will the pandemic have on cash management strategies in the sector going forward?

There's a need for ongoing research on how the pandemic uniquely affects the Vietnamese food and beverage industry, as existing studies often do not cover the evolving situation and its long-term implications (Gomes, 2001; McKibbin & Fernando, 2020).

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2. LITERATURE REVIEW

2.1. Empirical Studies

Research on the relationship between a firm's cash flow and various financial aspects is well-documented. Some studies suggest a positive link between cash flow and leverage (Ross, 1977; Harris & Raviv, 1991; Jensen, 2014), while others propose a negative correlation (Myers & Majiuf, 1981; Chaplinsky & Niehaus, 1993). Shenoy & Koch (1996) conducted a comprehensive study on the matter, highlighting the existence of both positive and negative signals between leverage and cash flow.

Cash flow and liquidity have also been subjects of research. Tangngisalu et al. (2022) used signaling theory to find a significant positive relationship between cash flow and liquidity. Kirkham (2012) and Durrah et al. (2016) reported similar findings, while Lancaster and Steven (2011) identified a significant negative relationship between CFO and liquidity. The relationship between cash flow and Return on Assets (ROA) has been explored as well. Akumu (2014) found a negative relationship between FCF and ROA, whereas Hubbard (1998) reported a short-term positive correlation between free cash flows and ROA. Similarly, Ali (2018) and Shaharuddin et al. (2021) discovered a positive correlation between cash flow and ROA. Mong'o (2010) observed an inverse relationship between cash flow from operating and bank profit, with CFI and CFF having positive impacts.

Cash flow, especially during financial crises like the Covid-19 pandemic, is critical. Altman Z-score is considered an efficient model for assessing financial distress, and cash flow plays a vital role in helping companies overcome challenges (Unegbu & Adefila, 2013; Almamy et al., 2016). Studies directly addressing the impact of Covid-19 on a firm's cash flow are limited. Song et al. (2021) and Ding et al. (2021) found a positive relationship between cash flows and Covid-19 in the context of the restaurant business. However, Castanho (2022) reported a significant decline in textile firms due to Covid-19. Vo & Tran (2021) conducted a study in Vietnam, focusing on the food and beverage industry, and found that the pandemic led to decreased cash flow, with effective cash flow management being crucial for business survival.

2.2. Signaling theories

Signaling theory, proposed by Spence in 2002, explores how two parties communicate and interpret information in commercial transactions, particularly in the context of a seller influencing a buyer's decisions. The party providing information decides what and how to communicate, while the other party, including shareholders and investors, interprets these signals. Tangngisalu et al. (2022) highlight that information in these transactions often involves information asymmetry, with interested parties relying on financial statements from the company. These disclosures can be used for promotion and attracting investors. Signal strategies are the actions signal generators take to influence investors and stakeholders, and the impact can be positive or negative depending on the signal's favorability. Research, such as Kintsch & Van Dijk (1978), Rennekamp (2012), and Shah & Oppenheimer (2007), suggests that an individual's reading ability influences their perception and decision-making. Easily readable and understandable reports are seen as positive signals that inform decision-making, while complex information can hinder comprehension and judgment, potentially impacting decision-making.

3. RESEARCH METHODOLOGY

The study employs a quantitative approach, utilizing panel data extracted from the financial reports of publicly listed food and beverage firms. Through the computation of financial metrics, the researcher performs regression analyses, encompassing Ordinary Least Squares (OLS), Random Effects Model (REM), Fixed Effects Model (FEM), and ultimately, the Feasible Generalized Least Squares (FGLS) method, to assess how the governance of Net Working Capital (NWC) management influences the profitability of these companies. To measure and assess the effectiveness of cash flow management of the business, the research uses the "Cash Flows To Total Assets Ratio'. It is chosen because it allows to evaluate how efficiently a business manages its cash flows generated from core operations in relation to its asset base. This ratio provides insights into financial stability, liquidity, and the company's capacity to generate cash, which are all essential aspects of cash flow management and overall financial performance:

Table 1: Description of all variables and Abbreviation

Variables	Concepts	Prior studies
Dependent varriables		
Cash flows from Operating (CFO)	Cash flows from Operating activities / Total Assets	Shaharuddin et al., (2021) Azhar Farooq & Ahmed Sheikh, (2021)
Cash flows from Investing (CFI)	Cash flows from Investing activities / Total Assets	Calculated according to CFO
Cash flows from Financing (CFF)	Cash flows from Financing activities / Total Assets	Calculated according to CFO
Independent variables		
Covid-19 (COVDEAD)	Natural logarithm of deaths recorded	Bollyky et al., (2023)
Leverage (LEV)	Debt to Equity ratio	Shaharuddin et al., (2021)
Liquidity (LID)	Current Assets / Current Liabilities	Dirman, (2020)
Return on Assets (ROA)	Profit after tax/ Total Asset	Shaharuddin et al., (2021)
Z-Score (ZS)	Z-Score is defined by using data in its model for the fiscal period.	Huang et al., (2022) ;Almamy et al., (2016)

Source: Author's compilation

From above defined research variables, the research has built the regression model based on the previous regression model of Aggarwal & Padhan, (2017) and Huynh. D, (2022)

$$\mathbf{CFit = \beta0 + \beta1COVDEADit + \beta2LEVit + \beta3LIDit + \beta4ROAit + \beta5ZSit + \varepsilon it}$$

Where: *CF: Cash flow, is defined by three alternative proxies for cash flow (CFO to Total Assets ratio, CFI to Total Assets ratio and CFF to Total Assets ratio)*

i is the enterprise i, and t is the year t ; ε is the error term of the model*;* β *0* β *1,* β *2,* β *3,* β *4,* β *5 are the regression model coefficients.*

The research sample is derived from the data of 198 observations from 33 Vietnamese food and beverage firms in HOSE, HNX over 6 years from 2017 to 2022, from Fiin Pro database the summary of descriptive statistics will be conducted in two stages, including before and during COVID-19.

3. RESULT AND DISCUSSION

3.1. Descriptive Statistic

The Descriptive Statistics provide an overview of various variables utilized in the research model, presenting information such as the mean, standard deviation (SD), as well as the minimum and maximum values for each variable.

Table 2: Descriptive statistics of variables before Covid-19

Variable	Mean	Std. Dev.	Min	Max
CFO	0.0863822	0.1315411	-0.2276097	0.4556233
CFI	-0.0543938	0.1268782	-0.4554636	0.5994391
CFF	-0.035627	0.1542588	-0.7979246	0.4359427
LEV	0.2465096	0.1963493	0	0.6178116
LID	0.0218253	1.337436	-2.830343	11.64915
ROA	0.0923831	0.0871471	-0.1898779	0.3209624
ZS	3.937786	3.233259	0.3152303	16.72627

Source: Author's compilation by using STATA 14

Table 3: Descriptive statistics of all variables during Covid-19

Variable	Mean	Std. Dev.	Min	Max
CFO	0.0663722	0.176387	-0.6668978	0.8147394
CFI	-0.0343347	0.105843	-0.3240159	0.666782
CFF	-0.0243244	0.1464836	-0.7487932	0.498234
COVDEAD	7.742185	3.009528	3.555348	10.38465
LEV	0.2285383	0.1933606	0	0.7328339
LID	-0.0176286	1.548201	-11.53948	8.220154
ROA	0.0713214	0.0745997	-0.2670474	0.2412853
ZS	3.729964	2.413106	-1.063052	12.49565

Source: Author's compilation by using STATA 14

In summary, the table reveals significant shifts in CFO (Cash Flows from Operating activities) values before and during the Covid-19 pandemic. The lowest CFO value went from -0.2276097 pre-Covid to -0.6668978 during the pandemic, reflecting F&B firms' struggle to cover expenses from sales alone. Conversely, the highest CFO value nearly doubled, suggesting benefits for many food and beverage companies due to their essential products.

The highest CFI (Cash Flows from Investing activities) value also rose from 0.5994391 to 0.666782, indicating some firms sold assets or securities to compensate for reduced CFO. CFF (Cash Flows from Financing activities) showed less change. Mean values of specific firm variables decreased post-Covid-19, notably LID (current ratio), which shifted from positive to negative. This suggests F&B firms may have faced increased debt burdens and cash balance challenges. Z-scores indicate Vietnamese food and beverage businesses remain financially stable, with values falling between 3 and 4.

3.2. Multi- collinearity analysis

The author employs Variance Inflation Factor (VIF) data to assess the presence of multicollinearity. The VIF values derived from the regression analysis are presented in the table below.

Table 4: Summary results of multi-collinearity (VIF)

Variables	VIF	1/VIF
ZS	2.40	0.417421
ROA	2.05	0.488003
LEV	1.40	0.712369
LID	1.02	0.977247
COVDEAD	1.02	0.978810
Mean VIF	1.58	

According to the results of Table 4, VIF value of all variables are less than 10, showing that there is no multicollinearity

3.3. Regression analysis

The Fixed Effect Model (FEM) has been chosen as the preferred model for analyzing the results related to CFO and CFF, while the Ordinary Least Square (OLS) model is considered the most suitable for CFI regression. Nevertheless, the authors have compiled the results from all three approaches for each alternative proxy of Cash flow

Table 5.: Regression results for OLS, FEM, REM model of CFO

CFO	OLS	FEM	REM
COVDEAD	-0.0041327* [-1.86]	-0.0062956*** [-2.90]	-0.0041327* [-1.86]
LEV	-0.2266979*** [-3.82]	-0.7099913*** [-5.87]	-0.2266979*** [-3.82]
LID	-0.0204921*** [-3.00]	-0.0216752*** [-3.19]	-0.0204921*** [-3.00]
ROA	0.4890555*** [-0.02]	-0.1321579 [-0.52]	0.4890555*** [2.86]
ZS	-0.0001078 [3.59]	-0.00811 [-0.82]	-0.0001078 [-0.02]
_cons	0.1066475	0.3113437	0.1066475
N	198	198	198
R-sq	0.2475	0.2356	0.1355

Note(s): The numbers in parentheses are standard errors. *, **, *** indicate significance levels at 10%, 5%, 1%

Source: Author's compilation by using STATA 14

Table 5 presents regression results for Cash Flow from Operating (CFO) using a dataset of 33 Vietnamese food and beverage firms with 198 observations. The OLS, FEM, and REM models consistently show a negative association between Covid-19 and CFO, with significance levels ranging from 1% to 10%. Notably, the coefficient value of Covid-19 (-0.0062956) in the FEM model is the smallest among the independent variables. Among other independent variables, all significantly impact CFO, except for Z-score, which, despite its negative effect, lacks statistical significance. The FEM model is the preferred choice for CFO analysis. Liquidity (LID) and leverage (LEV) have strong negative impacts on CFO at a 1% significance level, while ROA surprisingly lacks a significant relationship with CFO. The model's R-squared value is 0.2356, explaining 23.56% of CFO variation. In summary, all independent variables negatively affect CFO, with only three—COVDEAD, LEV, and LID—reaching statistical significance levels below 1%.

Table 6: Regression results for OLS, FEM, REM model of CFI

CFI	OLS	FEM	REM
COVDEAD	0.0020267 [1.20]	0.0017605 [1.00]	0.0020267 [1.20]
LEV	-0.1003542*** [-2.24]	-0.1691874* [-1.72]	-0.1003542*** [-2.24]
LID	0.0304616*** [5.90]	0.0303949*** [5.51]	0.0304616*** [5.90]
ROA	-0.4798652*** [-3.71]	-0.5166252*** [-2.52]	-0.4798652*** [-3.71]
ZS	0.0025194 [0.63]	-0.0011228 [-0.14]	0.0025194 [0.63]
_Cons	0.0011821	0.0355347	0.0011821
N	198	198	198
R-sq	0.2391	0.2242	0.2210

Note(s): The numbers in parentheses are standard errors. *, **, *** indicate significance levels at 10%, 5%, 1%

Source: Author's compilation by using STATA 14

Table 6 summarizes regression results for Cash Flow from Investing (CFI) using data from 198 observations of 33 listed food and beverage companies in Vietnam. All three modeling approaches (OLS, FEM, and REM) indicate a positive correlation between Covid-19 and CFI, although it is not statistically significant. The coefficient value of Covid-19 (0.0020267) in the OLS model, selected as the most suitable, is the smallest among the independent variables. Regarding the other independent variables, all significantly impact CFI, except for Z-score. In the OLS results related to CFI, three independent variables—leverage, liquidity, and ROA—demonstrate clear relationships with CFI. Specifically, all three variables have significance levels below 1%, with leverage and ROA negatively affecting CFI, while liquidity has a positive influence. The model's R-squared value is 0.2391, indicating that it can explain 23.91% of the variation in CFI. In summary, in the OLS model, the variable COVDEAD has a positive but insignificant relationship with CFI. However, three variables—LEV, LID, and ROA—display statistically significant relationships with CFI at levels below 1%.

Table 7: Regression results for OLS, FEM, REM model of CFF

CFF	OLS	FEM	REM
COVDEAD	0.0035438 [1.57]	0.0059737*** [2.78]	0.0035438 [1.57]
LEV	0.2962598*** [4.93]	0.8250846*** [6.90]	0.2962598*** [4.93]

LID	-0.008717 [-1.26]	-0.0093307 [-1.39]	-0.008717 [-1.26]
ROA	0.1359327 [0.78]	0.747465*** [2.99]	0.1359327 [0.433]
ZS	-0.0029178 [-0.54]	0.0131972 [1.34]	-0.0029178 [0.587]
_Cons	-0.1139847	-0.3608362	-0.1139847
N	198	198	198
R-sq	0.1693	0.2673	0.1833

Note(s): The numbers in parentheses are standard errors. *, **, *** indicate significance levels at 10%, 5%, 1%

Source: Author's compilation by using STATA 14

Table 7 summarizes regression results for Cash Flow from Financing (CFF) based on data from 33 listed food and beverage businesses in Vietnam, comprising 198 observations. Three modeling approaches, including OLS, FEM, and REM, were employed. All models indicate a positive correlation between Covid-19 and CFF, with the Fixed Effect Model (FEM) demonstrating statistical significance at the 1% level. However, the Covid-19 coefficient in the FEM model (0.0059737) is smaller than other independent variables.

Liquidity negatively impacts CFF, while Z-score positively affects it, although these effects lack statistical significance. The model's R-squared value is 0.2637, explaining 26.37% of CFF variation. In conclusion, within the FEM model, COVDEAD significantly relates to CFF at the 1% level. Only two other independent variables out of four have a statistically significant impact on CFF.

3.4. Test for autocorrelation

Table 8: Summary results of autocorrelation

Autocorrelation test (Wooldridge test)		
CFO (FEM model)	CFI (OLS model)	CFF (FEM model)
F (1,32) = 1.733	F (1,32) = 0.086	F (1,32) = 7.574
Prob>F = 0.1974	Prob>F = 0.7717	Prob>F = 0.0097

The presence of autocorrelation in panel data was investigated using the test proposed by Wooldridge in 2010. Table 8 indicates that only one CFF model exhibits autocorrelation, with a P-value of 0.0097, which is below the significance threshold of 0.05

3.5. Test for heteroscedasticity

Table 9: Summary results of heteroscedasticity

Heteroscedasticity test (Wald's test)		
CFO (FEM model)	CFI (OLS model)	CFF (FEM model)
chi2(33) = 1752.59	chi2(20) = 79.73	chi2(33) = 18735.26
Prob>F = 0.0000	Prob>F = 0.0000	Prob>F = 0.0000

Source: Author's compilation by using STATA 14

The presence of heteroscedasticity in the models utilizing three different proxies of cash flow, namely CFO, CFI, and CFF, was assessed using the Abraham Wald test, as suggested by Abraham Wald in 1940. Table 9 reveals that all three models exhibit heteroscedasticity.

3.4. Fixing model with the Feasible generalized least squares (FGLS)

The previous part showed that there are many flaws in OLS, FEM, REM results, consisting of autocorrelation and heteroscedasticity. Therefore, the research applied the feasible generalized least squares (FGLS) approach to overcome the defects of the model.

Table 10: Regression results with FGLS method for CFO alternative proxy

CFO	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
COVDEAD	-0.0040468	0.0009671	-4.18	0.000	-0.0059424	-0.0021513
LEV	-0.1542154	0.0323383	-4.77	0.000	-0.2175973	-0.0908334
LID	-0.0020867	0.0074574	-0.28	0.780	-0.016703	0.0125295
ROA	0.5862292	0.0901988	6.50	0.000	0.4094428	0.7630157
ZS	0.0001419	0.0014952	0.09	0.924	-0.0027888	0.0030725
_cons	0.0804445	0.0172491	4.66	0.000	0.046637	0.1142521

Source: Author's compilation by using STATA 14

Table 10 presents regression results for CFO using the FGLS method. The analysis shows that Covid-19 continues to have a negative impact on CFO at a significance level of 1%. However, there are some changes in the relationships with other independent variables. In this analysis, ROA has become a statistically significant variable with a positive relationship with CFO at the 1% level, which is consistent with Shaharuddin et al. (2021). Leverage is found to have a negative effect on CFO, with statistical significance at the 1% level, contrary to the findings of Shenoy & Kock (1996). LID negatively impacts CFO, but its statistical significance is weak, which does not align with the results of Tangngisalu et al. (2022). ZS, on the other hand, has a positive relationship with CFO, in line with Huang et al. (2022), but its statistical significance is weak. The results of the remaining variables, LID and ZS, do not align with previous studies, and only ZS has a positive effect on CFO, while both LID and ZS lack statistical significance.

Table 11: Regression results with FGLS method for CFI alternative proxy

CFI	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
COVDEAD	0.0027625	0.0009207	3.00	0.003	0.000958	0.004567
LEV	-0.0516603	0.0294412	-1.75	0.079	-0.109364	0.0060434
LID	0.0252054	0.0064444	3.91	0.000	0.0125746	0.0378362
ROA	-0.3705834	0.0759737	-4.88	0.000	-0.5194891	-0.2216777
ZS	0.0027877	0.0023377	1.19	0.233	-0.0017941	0.0073696
_cons	-0.0253894	0.0143966	-1.76	0.078	-0.0536062	0.0028274

Source: Author's compilation by using STATA 14

Table 11 demonstrates the regression results for CFI by using the FGLS method. There are few benefit mutations in the regression results. In detail, the appearance of Covid-19 positively impacted on the CFI at 1% statistically significant. Regarding other independent variables, LID and ROA still have significant impacts on CFI.

Table 12: Regression results with FGLS method for CFF alternative proxy

CFF	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
COVDEAD	0.0022738	0.0012302	1.85	0.065	-0.0001373	0.0046849
LEV	0.2493423	0.0451356	5.52	0.000	0.1608781	0.3378065
LID	-0.0040574	0.004386	-0.93	0.355	-0.0126539	0.004539
ROA	-0.0553222	0.110246	-0.50	0.616	-0.2714005	0.160756
ZS	-0.0038013	0.0024578	-1.55	0.122	-0.0086185	0.0010159
_cons	-0.0686017	0.0210155	-3.26	0.001	-0.1097914	-0.027412

Source: Author's compilation by using STATA 14

Table 12 shows the regression results for CFF by using the FGLS method. There are few significant mutations in the regression results of this model. Overall, the appearance of Covid-19 still positively impacted on the CFF, however, the level of significance changed from 1% to 10%. Moreover, there is only one variable of LEV that has statistical meaning with CFF.

4. CONCLUSION AND RECOMMENDATIONS

4.1. Conclusion

The research examines how Covid-19 affected cash flow in Vietnam's food and beverage industry from 2017 to 2022. Using the FGLS approach and a panel data regression model to address issues like autocorrelation and heteroskedasticity, we found some intriguing results. While the results regarding CFO align with prior research in Vietnam, our findings for CFI differ from our initial assumptions based on signaling theory. In reality, Vietnamese food and beverage businesses seem inclined to seek investment opportunities rather than curtailing investments.

As CFO decreases and CFI rises, CFF also increases, covering a portion of business operations, as indicated by our regression results. These cash flow dynamics can be attributed to significant factors. Firstly, shifts in consumer shopping habits have influenced operating cash flow. Secondly, supply chain disruptions have caused production delays and export issues. Lastly, market supply and demand changes have played a role.

Businesses, in response, explore new revenue streams through financial instruments or adapt production to target the domestic market. With declining CFO and increasing investment cash flow, businesses must seek alternative funding sources. Our research contributes by examining three distinct proxies of cash flow (CFO, CFI, CFF) during the Covid-19 pandemic, in contrast to previous studies that focused on general cash flow or free cash flow (FCF). However, there are limitations to consider. The sample size is small, involving only 33 Vietnamese food and beverage businesses. Additionally, our regression model utilizes only financial variables, lacking macroeconomic or other variables for greater reliability.

4.2 Recommendations

For enhancing cash flow management for Vietnam's food and beverage businesses during systematic risks like the Covid-19 pandemic include:

- Effective Inventory Management: Given the negative impact of liquidity (LID) on CFO, it is crucial to focus on bolstering cash flow during crises. Food and beverage companies should consider strategies to reduce finished goods inventory, particularly for perishable products, to prevent spoilage and financial losses.

- Emphasis on Working Capital Management: Working capital management involves inventory, payables, and receivables. Businesses should adopt a holistic approach that prioritizes prompt payment collection from customers and extends payment timelines to suppliers, while being mindful of trade-offs and potential impacts on supplier relationships and creditworthiness.

- Diversify Revenue Streams: To reduce reliance on a single revenue source, expand product or service offerings. Revenue diversification can help stabilize cash flow during turbulent times. Adaptability and the ability to pivot based on market feedback and changing conditions are crucial for success in diversifying revenue streams.

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ASYMMETRIC IMPACT OF PUBLIC DEBT ON CREDIT SUPPLY TO PRIVATE SECTOR IN VIETNAM - A NARDL MODEL APPROACH

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Abstract: *The primary objective of this study is to examine the uneven effects of state debt on loan provision for the private sector in Vietnam. This study employs the NARDL model to assess the extent to which public debt affects the provision of credit to the private sector. Additionally, it incorporates control variables such as private sector capital demand, the expansion of the broad money supply, and the economic growth rate. The data were collected at a quarterly frequency over the period spanning from the first quarter of 2000 to the first quarter of 2021. The findings indicate that the influence of public debt on the private sector is not uniformly good. The impact of public debt on the private sector has both positive and negative consequences. However, it is important to note that when public debt exceeds a particular threshold, adverse effects may arise. Specifically, the increased public debt can lead to a phenomenon known as crowding out, wherein the credit supply for the private sector is constrained, hence impeding the capital demand of private enterprises. This paper proposes the implementation of prudent measures to manage public debt within an acceptable threshold, with the aim of mitigating the adverse consequences and minimizing the potential crowding-out effects of the public sector on the private sector.*

Keyword: *Asymmetry; Public debt; Credit; Private sector; Vietnam.*

1. INTRODUCTION

Public borrowing in fiscal policy is a crucial element of the financial framework of the macroeconomy. Specifically, public debt can serve as a mechanism for implementing expansionary fiscal policy during periods of economic difficulty. Public debt serves as a primary mechanism for financing government deficits, sourced either from domestic or global markets. Nevertheless, despite its potential benefits, the detrimental consequences of this phenomenon can be substantial and may precipitate a significant public debt crisis if not well controlled, as exemplified by the experiences of Venezuela (2017), Argentina (2005–2016), and Greece (2009–2018). The accumulation of public debt over a period of time has the potential to undermine the efficacy of fiscal budget operations, as a substantial amount of the budget may be allocated towards servicing the debt. Hence, the act of borrowing should be contemplated solely under circumstances of genuine necessity, such as to facilitate the revitalization of the economy during periods of crisis or to fulfill the requirements of public infrastructure initiatives (Deshpande, 1997).

Furthermore, the adverse consequences of governmental debt on the private sector manifest when investors experience apprehension regarding the potential taxation and diversion of investment returns for debt repayment purposes. This observation implies the potential for governmental debt to exert a detrimental influence on the private sector. The gradual growth of public debt is also regarded as detrimental to investment activity, potentially leading to crowding out effects from the public sector to the private sector. Furthermore, if not effectively managed, it can impose a burden on future generations. The phenomenon of public debt crowding out private

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investment is widely recognized as a bad outcome for the economy. Apart from the impact of governmental debt, there are other factors that exert influence on private investment. The issues under consideration encompass interest rates (Wuhan & Adnan, 2015; Iheonu & Nwakeze, 2016), economic development, and public capital expenditure (Nyoni & Bonga, 2017; Combey, 2016). In an alternative area of investigation, it has been suggested that public debt could potentially exert a favorable influence on the private sector (Abubakar & Mamman, 2020; Brown-Collier & Collier, 1995). The existence of divergent perspectives suggests a dearth of agreement regarding the influence of public debt on private investment.

The issue of elevated public debt is a matter of apprehension for nations in Southeast Asia. As per projections by the World Bank, it is anticipated that the public debt and debt guaranteed by the public sector of Vietnam will persist at a level that is both sustainable and stable, amounting to approximately 36% of the country's Gross Domestic Product (GDP) by the year 2023. One of the inquiries that has been raised pertains to the potential impact of escalating governmental debt on the provision of credit capital to the private sector. Does private investment exhibit a negative or inverse response to a rise in public debt, regardless of its magnitude? The utilization of debt to fund government spending on infrastructure and education has the potential to attract supplementary private investment by bolstering both physical and human capital. Nevertheless, in the event that the government opts to obtain funds from the domestic market, the presence of a substantial government debt may potentially diminish the amount of credit accessible to individuals and businesses, thereby leading to an increase in interest rates for private investment. Moreover, the accrual of debt coupled with volatility in financial stability and sustainability can have a detrimental impact on investor confidence. In such circumstances, investors may anticipate reduced potential revenue as a result of increased tax burdens aimed at servicing public debt in the forthcoming period.

Hence, there is a need for increased focus on investigating the nonlinearity in the correlation between governmental debt and the private sector. The response of private investment may exhibit disparate reactions in the face of increasing or decreasing levels of public debt, thereby suggesting asymmetric effects of public debt on the private sector. The implementation of debt reduction measures has the potential to enhance investor confidence, leading to a substantial rise in private investment. Conversely, the augmentation of domestic debt has the potential to engender elevated interest rates, resulting in diminished investment levels. Nevertheless, in the event that investors anticipate favorable returns, the decrease in investment may not be equivalent to the rise in investment resulting from a reduction in public debt. Through an examination of the current body of literature pertaining to the correlation between public debt and the private sector, it has been seen that there are certain gaps in research regarding the asymmetric effects of public debt on the provision of credit to the private sector within the context of Vietnam. This study provides further empirical data regarding the uneven effects of state debt on the availability of credit for the private sector in Vietnam. The subsequent sections of the paper are structured in the following manner: Section 2 of this paper provides a comprehensive literature review, while Section 3 includes the data and research model. The findings of the research are presented and analyzed in Section 4, while Section 5 provides overarching conclusions regarding the research.

2. THEORY AND RESEARCH ON THE IMPACT OF PUBLIC DEBT ON THE PRIVATE ECONOMIC SECTOR

There is a lack of consensus among scholars about the theoretical ideas around the correlation between public debt and the private sector. The examination of the theoretical linkage between the variables can be approached from three distinct angles. The initial trend is characterized by the presence of arguments pertaining to the crowding-out hypothesis. The hypothesis posits that the accumulation of public debt results in heightened competition for borrowing capital between the private and public sectors, resulting in upward pressure on interest rates. Consequently, this phenomenon leads to a decrease in private investment. Government borrowing has the potential to displace private investment as it involves the transfer of capital resources from the private sector to the public sector, which is generally characterized by lower efficiency in its operations. In the context of a market economy, the necessity of government intervention is often debated, with the argument being that prices will naturally adapt to restore real income levels to their full employment potential. When the government heavily relies on borrowing sources due to limited financial resources, it reduces the available capital for private organizations. Consequently, this leads to an increase in borrowing costs for private businesses, ultimately displacing private investment (Majumder, 2007). According to neoclassical theory, public debt has an additional negative impact on private investment. This occurs when the government borrows funds to address a deficit, leading to a transfer of the tax burden onto future generations. Consequently, this shift in taxation results in heightened consumption levels and diminished savings. In order to achieve equilibrium between savings and investment within the capital market, it is seen that an increase in interest rates occurs, resulting in a decrease in investment capital (Bernheim, 1989; Khan & Gill, 2009). According to Paudyn (2013), the augmented public debt leads to a decline in private sector investment, causing a decrease in the country's credit rating. Consequently, this diminished credit rating leads to a drop in investor confidence, which subsequently results in a decrease in private sector investment.

The second trend pertaining to the relationship between governmental debt and the private sector can be attributed to the principles of Keynesian economics. Keynes posited that the accumulation of governmental debt has a favorable influence on the private sector. This theory posits that the government engages in borrowing as a response to a decrease in investment. Consequently, when the borrowed funds are allocated towards capital expenditure, the intended outcome is to stimulate the development of public infrastructure. There exists a positive correlation between the expansion of public infrastructure and the augmentation of economic growth. Government expenditure has the potential to generate a positive impact on private investment by means of the multiplier effect. This effect results in an overall increase in spending across both the public and private sectors, thereby fostering economic growth. As a consequence, investor confidence in the business environment is enhanced, subsequently leading to an upsurge in private sector investment (Musgrave, 1997; Baddeley, 2003). In addition, it has been argued that public debt-funded capital projects play a crucial role in attracting private investment by establishing infrastructure that fosters investment (Musolesi, 2011). According to Makin (2015), economic growth and the expansion of private investment can be facilitated through the utilization of borrowing and governmental spending. These measures serve to stimulate demand and effectively respond to its growth by encouraging further investment.

The third perspective on the relationship between public debt and private sector investment is provided by the superior debt theory, which suggests that public debt has an asymmetric impact on the private economy. This theory, proposed by Krugman (1988) and Sachs (1989), asserts that initial increases in public debt have a positive impact and provide substantial support for the growth of the private economic sector. A nonlinear relationship exists between public debt and the private economic sector once public debt exceeds a certain threshold. The reason public debt exceeding a certain threshold discourages investment is because investors fear that their investment returns will be taxed to service public debt and related interest (Deshpande, 1997). The decline in investor confidence decreases private economic sector investments. Furthermore, a rapid increase in public debt causes credit rating agencies to evaluate nations less favorably. These lower evaluations tend to diminish investor confidence, thereby impeding private sector investments (Calvo, 1998).

The empirical evidence regarding the effects of public debt is heterogeneous, with studies yielding varying results. An important finding is that a rise in public debt frequently has negative effects on private sector investment. Using an instrumental variable approach, Huang and colleagues (2016) demonstrated that local public debt is inversely correlated with the capital investment ratio of domestic private manufacturing enterprises in China; the effect is more pronounced for domestic firms that heavily rely on credit funding. Investments at the enterprise level are more sensitive to internal capital in cities with high public debt, possibly due to limited access to external credit. Origin and colleagues (2021) and Picarelli and colleagues (2019) have demonstrated that excessive public debt has a negative impact on the investment and expansion of the private sector. Philip and coworkers (2017) examined the relationship between domestic debt and private sector credit in Nigeria using a structural VAR model and annual data from 1970 to 2015. The results of impulse response functions indicated that Nigeria's public debt has a long-lasting negative effect on the domestic private sector credit market. Findings by King'wara (2014) and Lidiema (2018) in Kenya are consistent with the crowding-out hypothesis, although the negative relationship diminishes in the long term. Using a panel dataset of 20 OECD countries, Salotti and Trecroci (2012) argued that high public debt is associated with a substantial and nonlinear decline in both aggregate investment expenditure and productivity growth. Using a VEC model and Granger causality analyses, Asogwa and Okeke (2013) investigated the relationship between public debt and investment in Nigeria. The research confirmed both the crowding-out effect of public debt on domestic investment and the existence of a Granger-causal relationship between public debt and investment.

The theory of excessive debt posits a third perspective on the correlation between public debt and private sector investment, highlighting the presence of asymmetric effects of public debt on the private sector. The idea put forth by Krugman (1988) and Sachs (1989) is that an initial increase in public debt has a favorable effect on the private sector, facilitating its development. Nevertheless, once public debt exceeds a specific threshold, it will impede the private sector, indicating a non-linear correlation between public debt and the private sector. One potential factor contributing to investment hurdles is the presence of substantial public debt, since investors may be apprehensive about the potential taxation of their investment returns to service the public debt and associated interest (Deshpande, 1997). The decrease in investor confidence precipitates a corresponding decrease in private sector investment. Furthermore, the overutilization of public debt has the potential to alter a nation's debt composition and impact the demand for domestic financial assets (Da Silva et al., 2014). Moreover, the study conducted by Imimole and Imoughele (2012) revealed a noteworthy adverse effect of domestic debt on investment. The study conducted an observation, which revealed that a 10.0% rise in domestic debt corresponded to a 2.2% decline in investment.

Nevertheless, certain empirical investigations have yielded evidence supporting the notion that public debt might have a favorable effect on private investment. For instance, Thilanka and

Ranjith (2018) observed such a relationship in the context of Sri Lanka. According to a study by Thilanka and Sri Ranjith (2018), increased private investment in Sri Lanka was a result of public debt. Within the specific context of Sri Lanka, the authors put forth the argument that public debt has a beneficial influence, which is manifested through the facilitation of subsidies, transfers, and substantial microcredit. According to Manda's (2019) research, it was contended that public debt exerted little influence on investment or impeded economic growth, and there was a lack of substantiating evidence for the occurrence of crowding-out effects. Şen and Kaya (2014) posited that the utilization of public debt to fund economic development, public services, infrastructure, and capital support had a favorable impact on the source of money for private sector investment. Furthermore, the research conducted by Hajian, Mohamed, and Habibullah (2017) yielded neither substantiation of the detrimental consequences of public debt on private sector investment nor any indication of crowding out effects resulting from public debt in the context of Malaysia. Checherita-Westphal and Rother (2012) observed that there was no discernible influence of public debt on the private sector in several European nations. However, they did identify a non-linear association between average GDP per capita growth and public debt. According to the study conducted by Lau et al. (2019), it was discovered that public debt not only has a detrimental effect on investment, but there is also a nonlinear association between these two variables. In their study, Ebi and Imoke (2017) discovered a non-linear correlation between the origin of capital for private sector investment and public debt. Their findings indicate that moderate levels of public debt have a stimulating effect on the source of capital for private sector investment. However, high levels of public debt have a detrimental impact, eroding the positive influence of the private sector.

3. RESEARCH METHODS AND DATA

The NARDL model

The study tests the asymmetric impact of public debt on bank credit supply for the private sector in Vietnam using A Nonlinear Autoregressive Distributed Lag Model (NARDL):

DCB = f(LIA, CLP, BMG, GDP)

The NARDL model shows the asymmetric impacts in the short and long term through the decomposition of positive and negative coefficients of the explanatory variables. The asymmetric model is suitable for testing the nonlinear impacts of the factors:

$$y_t = \beta^+ x_t + \beta^- x_t + u_t \quad (1)$$

$$\Delta x_t = v_{t'} \quad (2)$$

To perform the NARDL model, the series x_t and y_t must be stationary with the highest order of difference that is 1. x_t is decomposed into: $x_t = x_0 + x_t^+ + x_t^-$. Where, x_t^+ and x_t^- represent the positive and negative impacts of the independent variable x on the dependent variable y:

$$x_t^+ = \sum_{j=1}^{t} \Delta x_j^+ = \sum_{j=1}^{t} \max(\Delta x_j, 0)\text{, } x_t^- = \sum_{j=1}^{t} \Delta x_j^- = \sum_{j=1}^{t} \min(\Delta x_j, 0) \quad (3)$$

The static linear combination of the components:

$$z_t = \beta_0^+ y_t^+ + \beta_0^- y_t^- + \beta_1^+ x_t^+ + \beta_1^- x_t^- \quad (4)$$

In expression (4): $\beta^+ = -\beta_1^+ / \beta_0$ and $\beta^- = -\beta_1^- / \beta_0$.

The NARDL model (p, q):

$$y_t = \sum_{j=1}^{p} \phi_j y_{t-j} + \sum_{j=0}^{q} (\theta_j^{+'} x_{t-j}^{+} + \theta_j^{-'} x_{t-j}^{-}) + \varepsilon_{t'} \quad (5)$$

$$\Delta y_t = \rho y_{t-1} + \theta^{+'} x_{t-1}^{+} + \theta^{-'} x_{t-1}^{-} + \sum_{j=1}^{\rho-1} \gamma_j \Delta y_{t-j} + \sum_{j=0}^{\rho-1} (\varphi_j^{+'} \Delta x_{t-j}^{+} + \varphi_j^{-'} \Delta x_{t-j}^{-}) \quad (6)$$

$$= \rho \zeta_{t-1} + \sum_{j=1}^{\rho-1} \gamma_j \Delta y_{t-j} + \sum_{j=0}^{q-1} (\varphi_j^{+'} \Delta x_{t-j}^{+} + \varphi_j^{-'} \Delta x_{t-j}^{-})$$

Where $\rho = \sum_{j=1}^{p} \phi_{j-1}, \gamma_j = -\sum_{i=j+1}^{p} \phi_i$ với j=1,…,p-1,

$\theta^{+} = \sum_{j=0}^{q} \theta_j^{+}, \theta^{-} = \sum_{j=0}^{q} \phi_j^{-}, \varphi_0^{+} = \theta_0^{+}, \varphi_j^{+} = -\sum_{i=j+1}^{q} \theta_j^{+}$ với j=1,…,q-1

$\varphi_0^{-} = \phi_0^{-}, \varphi_j^{-} = \sum_{i=j+1}^{q} \theta_j^{-}$ with j=1,…,p-1 và $\zeta_t = y_t - \beta^{+'} x_t^{+} - \beta^{-'} x_t^{-}$ is the asymmetric ECM coefficient.

The reduced form of expression (6) is as follows:

$$\Delta x_t = \sum_{j=1}^{q-1} \Lambda_j \Delta x_{t-j} + \upsilon_{t'} \quad (7)$$

$$\varepsilon_t = \omega' \upsilon_t + e_t = \omega' (\Delta x_t - \sum_{j=1}^{q-1} \Lambda_j \Delta x_{t-j}) + e_{t'} \quad (8)$$

If substitute expression (8) into (6), we obtain an asymmetric ECM::

$$\Delta y_t = \rho \zeta_{t-1} + \sum_{j}^{p-1} \gamma_j \Delta y_{t-j} + \sum_{j=0}^{q-1} (\pi_j^{+'} \Delta_{t-j}^{+} + \pi_j^{-'} \Delta_{t-j}^{-}) + e_{t'} \quad (9)$$

Where $\begin{matrix} \pi_0^{+} = \theta_0^{+} + \omega, \pi_0^{-} = \theta_0^{-} + \omega, \pi_j^{+} = \varphi_j^{+} + \omega' \Lambda_j \\ \pi_j^{-} = \varphi_j^{-} + \omega' \Lambda_j \end{matrix}$ with j=1,..,q-1

Equation (9) is the NARDL asymmetric regression model showing the nonlinear impacts of the independent variables x_t on the dependent variable y_t.

Description of Model Variables

This study investigates the asymmetric effects of public debt on bank credit allocated to the private economic sector in Vietnam. The analysis incorporates five variables, namely public debt (LIA), bank credit allocated to the private sector (DCB), capital demand of the private sector (CLP), growth in broad money supply (BMG), and the rate of economic growth (GDP). The data has been gathered on a quarterly basis, spanning from the initial quarter of 2000 to the first quarter of 2021, and procured from the International Monetary Fund (IMF). The variables of state debt (LIA), bank credit supplied to the private sector (DCB), and capital demand of the private sector (CLP) deviate from a normal distribution and display pronounced right-skewness in their tails, which is statistically significant. In order to fulfill the input data criteria of the model, the study employs the transformation of these variables into natural logarithms, resulting in a distribution that closely approximates normality.

4. RESEARCH RESULTS AND DISCUSSION

Table 4.1 presents the results of unit root tests. The results indicate that GDP, BMG, LIA, CLP, and DCB are stationary at either the I(0) or I(1) difference level. For the NARDL model, unit root tests are essential because the autoregressive distributed lag model is applied to series that are stationary at I(0), I(1), or a combination of I(0) and I(1). The model cannot be applied when any variable is stationary at the second difference level, I(2). The results confirm that there are no series stationary at the second difference level, allowing for the application of the NARDL model in this study.

Table 4.1. Augmented Dickey-Fuller test statistic

Variables	I(0)	I(1)
Augmented Dickey-Fuller Unit Root Test – t-values (P-values)		
GDP	-2.874 (0.052)	-4.759 (0.000)*
BMG	-2.974 (0.041)*	
LIA	-1.534 (0.511)	-6.325 (0.000)*
CLP	-2.887 (0.051)*	-4.740 (0.000)*
DCB	-2.148 (0.226)	-7.689 (0.000)*

Source: Eviews10 regression results

Various tests were conducted, including the Ramsey test for functional form, the Jarque-Bera test for residuals, and the Breusch/Pagan test for heteroskedasticity. The NARDL model is presented in Table 4.2, and the results confirm that the model does not suffer from any of the mentioned issues; thus, this study can be used to estimate the NARDL.

Table 4.2. The NARDL model

Variables	Coef.	Std. Err.	t-Statistic	Sig.
DDCB(-1)	-0.753987	0.107228	-7.031640	0.0000
DDCB(-2)	-0.485589	0.105880	-4.586219	0.0000
DDCB(-3)	-0.376334	0.066732	-5.639514	0.0000
DBMG_POS	-0.002626	0.000912	-2.879900	0.0059
DBMG_POS(-1)	0.004246	0.001050	4.044992	0.0002
DBMG_POS(-2)	-0.001321	0.000801	-1.648219	0.1057
DBMG_NEG	0.002256	0.000779	2.894327	0.0057
DBMG_NEG(-1)	-1.91E-05	0.001156	-0.016525	0.9869
DBMG_NEG(-2)	-0.001552	0.000826	-1.877868	0.0664
DCLP_POS	0.832387	0.133057	6.255870	0.0000
DCLP_POS(-1)	0.262877	0.176680	1.487874	0.1432
DCLP_POS(-2)	0.739891	0.166225	4.451155	0.0000
DCLP_NEG	0.611265	0.105442	5.797188	0.0000
DCLP_NEG(-1)	0.744680	0.177564	4.193866	0.0001

DCLP_NEG(-2)	0.055376	0.144610	0.382932	0.7034
DCLP_NEG(-3)	0.426541	0.110295	3.867277	0.0003
DGDP_POS	-0.007007	0.002452	-2.857157	0.0063
DGDP_POS(-1)	0.007183	0.002874	2.499064	0.0159
DGDP_POS(-2)	-0.012636	0.003109	-4.064450	0.0002
DGDP_NEG	0.000814	0.003020	0.269488	0.7887
DGDP_NEG(-1)	-0.005479	0.003719	-1.473080	0.1471
DGDP_NEG(-2)	0.001550	0.004038	0.384012	0.7026
DGDP_NEG(-3)	-0.010963	0.003560	-3.079624	0.0034
DLIA_POS	-0.006656	0.021626	-0.307784	0.7596
DLIA_POS(-1)	0.064945	0.036733	1.768025	0.0833
DLIA_POS(-2)	-0.118398	0.043131	-2.745090	0.0084
DLIA_NEG	0.044296	0.053069	0.834693	0.4079
DLIA_NEG(-1)	-0.181856	0.054181	-3.356461	0.0015
DLIA_NEG(-2)	0.086202	0.032856	2.623604	0.0116
C	-0.059697	0.021147	-2.822887	0.0069
R^2	0.928319			
F-	35.83289			
Ramsey RESET Test	Giá trị P = 0.000			
Breusch/Pagan Heteroskedasticity Test	Giá trị P = 0.004			

Source: Eviews10 regression results

Additionally, Table 4.3 presents the results of non-linear cointegration between variables based on Pesaran's F-statistics and t_BDM. The null hypothesis, Ho: no cointegration, is tested. The F-statistics value is greater than t_BDM, confirming the existence of a long-term relationship between public debt and bank credit supplied to the private economic sector. Therefore, the long-term relationship can be further analyzed when nonlinear cointegration estimates are available.

Table 4.3. Cointegration test

Co-integrated test statistics:	F: 16.63614
	t_{BDM}: 2.85

Source: Eviews10 regression results

Table 4.4. Impact of public debt on bank credit provided to the private economic sector in the long term

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DBMG_POS(-1)	0.000299	0.000892	0.335254	0.7389
DBMG_NEG(-1)	0.000685	0.000692	0.990414	0.3268
DCLP_POS(-1)	1.835156	0.237348	7.731923	0.0000
DCLP_NEG(-1)	1.837862	0.236048	7.785955	0.0000
DGDP_POS(-1)	-0.012459	0.004736	-2.630581	0.0114
DGDP_NEG(-1)	-0.014077	0.004580	-3.073451	0.0035
DLIA_POS(-1)	-0.060109	0.044186	-1.360368	0.1799
DLIA_NEG(-1)	-0.051358	0.047081	-1.090836	0.2807
D(DDCB(-1))	0.861923	0.151686	5.682290	0.0000
D(DDCB(-2))	0.376334	0.066732	5.639514	0.0000
D(DBMG_POS)	-0.002626	0.000912	-2.879900	0.0059

D(DBMG_POS(-1))	0.001321	0.000801	1.648219	0.1057
D(DBMG_NEG)	0.002256	0.000779	2.894327	0.0057
D(DBMG_NEG(-1))	0.001552	0.000826	1.877868	0.0664
D(DCLP_POS)	0.832387	0.133057	6.255870	0.0000
D(DCLP_POS(-1))	-0.739891	0.166225	-4.451155	0.0000
D(DCLP_NEG)	0.611265	0.105442	5.797188	0.0000
D(DCLP_NEG(-1))	-0.481917	0.143048	-3.368913	0.0015
D(DCLP_NEG(-2))	-0.426541	0.110295	-3.867277	0.0003
D(DGDP_POS)	-0.007007	0.002452	-2.857157	0.0063
D(DGDP_POS(-1))	0.012636	0.003109	4.064450	0.0002
D(DGDP_NEG)	0.000814	0.003020	0.269488	0.7887
D(DGDP_NEG(-1))	0.009412	0.004139	2.274247	0.0274
D(DGDP_NEG(-2))	0.010963	0.003560	3.079624	0.0034
D(DLIA_POS)	-0.006656	0.021626	-0.307784	0.7596
D(DLIA_POS(-1))	0.118398	0.043131	2.745090	0.0084
D(DLIA_NEG)	0.044296	0.053069	0.834693	0.4079
D(DLIA_NEG(-1))	-0.086202	0.032856	-2.623604	0.0116

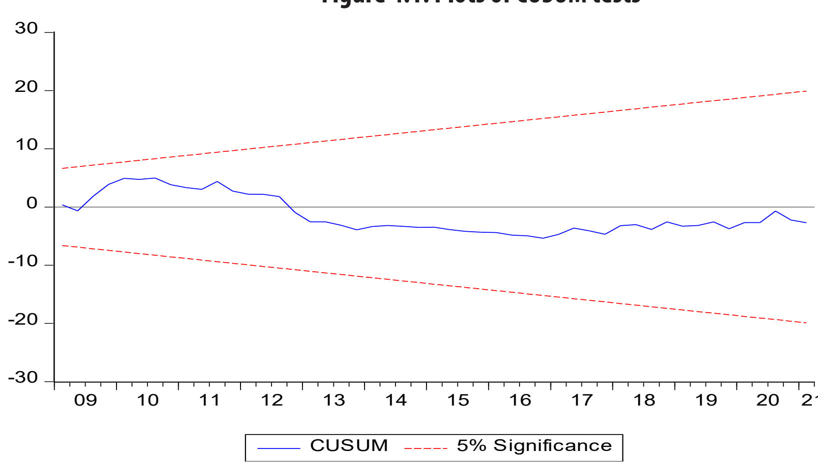
Source: Eviews10 regression results

Table 4.4 demonstrates the existence of an asymmetric impact of public debt on bank credit supplied to the private economic sector in Vietnam over the long term. When public debt increases by 1 unit, it has a negative effect, causing a decrease of -0.006656 units in bank credit supplied to the private economic sector. Conversely, a 1-unit decrease in public debt leads to an increase of 0.044296 units in bank credit supplied to the private economic sector.

The respective coefficients in Tables 4.2 and 4.4 show the directional influence of the independent factors on the dependent variables. This influence might be either positive or negative. In contrast, independent variables with positive or negative signs indicate whether they have a positive or negative impact, which results in unequal effects on the dependent variables as seen in the associated covariate coefficients.

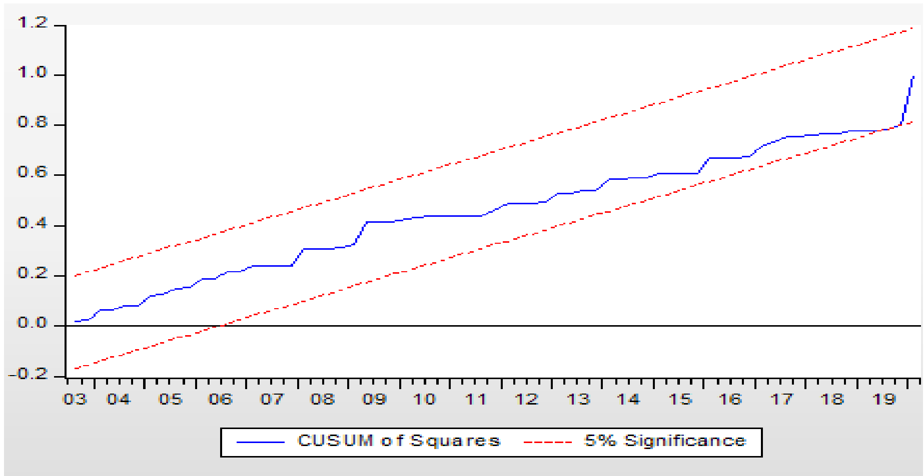
To test the significance of the study, NARDL statistics are used. The study assesses the stability of estimated parameters using Cusum and Cusumsq statistics, as shown in Figures 4.1 and 4.2. The results confirm that Cusum and Cusumsq fall within the critical bounds with a significance level of 5%, indicating model stability without sudden shifts or structural breaks.

Figure 4.1. Plots of CUSUM tests



Source: Eviews10 regression results

Figure 4.2. Plots of CUSUMSQ tests



Source: Eviews10 regression results

The findings of the study suggest that a rise in public debt by one unit has a detrimental effect on the private economic sector, leading to a reduction of around -0.006656 units in the provision of bank credit to the private sector. The real-world ramifications of this phenomenon lie in the potential deterrence of investments due to worries about the redirection of investment proceeds towards increased taxes resulting from an increase in debt servicing expenses. On the contrary, a reduction of 1 unit in public debt facilitates an augmentation in the availability of capital to the private economic sector, resulting in a corresponding increase of 0.044296 units in bank credit provided to the private sector. The research findings presented in this study align with established theoretical frameworks and are in line with earlier empirical studies. The theoretical framework, drawing upon the perspectives of New Classical economists Krugman (1988) and Sachs (1989), posits that in its first stages, public debt yields positive benefits and provides support for the operations of the private economic sector. Nevertheless, once the level of public debt exceeds a certain threshold, it starts to impede the private sector, illustrating the non-linear correlation between public debt and the private economic sector. The presence of public debt has been found to have crowding-out effects and asymmetric repercussions for the private sector. This occurs as investor confidence is eroded and the nation's credit ratings are lowered, resulting in a subsequent reduction in the amount of bank credit that is made available to the private sector. The findings of this study align with previous empirical research conducted by Vincent and Clem (2013), Gicheru and Nasieku (2016), Kamundia et al. (2015), and Mabula and Mutasa (2019). These studies have also indicated that an excessive amount of public debt has a detrimental impact on the private economic sector by redirecting capital that would have otherwise been allocated to private sector activities. The diminished ability to borrow is a consequence of the displacement of private economic activity by the state sector, sometimes referred to as crowding-out effects. Moreover, the presence of substantial debt servicing expenses indicates that funds that could have been designated for infrastructure initiatives and economic stimulus are instead diverted towards debt repayment, thus exerting a negative impact on private investment.

5. CONCLUSION

The study investigates the asymmetric impact of Vietnam's public debt on bank credit extended to the private sector. In order to accomplish this objective, the analysis applied an asymmetric

Nonlinear Autoregressive Distributed Lag (NARDL) model. The research findings demonstrate that when governmental debt exceeds a specific level, it has negative consequences for the availability of credit to the private economic sector. The findings of the study also suggest that the reduction of domestic public debt has a positive impact on the long-term accessibility of loans to the private economic sector. The study highlights the importance of implementing measures to decrease government borrowing and reduce public debt as a means to promote private sector capital. The findings of the study indicate that the judicious utilization of both domestic and international public debt has the ability to stimulate economic activity and hence facilitate economic growth. However, on a broader scale, the allocation of government expenditures will play a crucial role in determining the relationship between public debt and economic growth. For instance, the act of borrowing funds with the intention of repaying debt, engaging in recurrent spending, or engaging in wasteful spending may not effectively stimulate the economy. Conversely, borrowing funds for the purpose of financing development projects, boosting capital expenditure, and making reasonable long-term investments in production projects has the potential to foster economic growth. Vietnam, akin to numerous emerging economies, predominantly engages in borrowing for the aforementioned purposes. Consequently, the public debt levels of such nations persistently escalate, leading to a decline in credit accessibility and investment opportunities for the private economic sector. This, in turn, results in an upsurge in unemployment rates, a decrease in national output, and a substantial portion of the population being confined to impoverished conditions. The inadequacy of the debt-driven model in effectively assessing the influence of public debt on the private economic sector underscores the fact that elevated levels of debt can impede economic growth, mostly as a result of less credit availability from the banking system and reduced investment in the private economic sector.

The examination of the relationship between the public sector and the private sector, particularly in developing nations and growing markets such as Vietnam, presents a captivating area of study. The research team plans to extend the scope of the study in the future to investigate the influence of regional public sector issues, such as public debt, taxation, and government expenditure, on the growth and development of Vietnam's private economic sector.

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KEYNOTE - HARMONIZING SUSTAINABILITY REPORTING: AN OVERVIEW OF THE RECENT DEVELOPMENTS AND A RESEARCH AGENDA

Simone Scagnelli [1]

INTRODUCTION

In recent years, heightened concerns about climate change have underscored the imperative for governments, organizations, and individuals to alter their conduct towards more sustainable practices. This paradigm shift emphasizes the critical role of information pertaining to corporate sustainability initiatives in shaping economic and political landscapes, guiding private investments, and ensuring the well-being of both consumers and workers by mitigating business-associated risks (de Colle et al., 2013; Schaltegger & Burritt, 2015).

Accordingly, information related to organisations' sustainability practices is getting increasing, driven by the potential business value generated through enhanced accountability, and communication that can be used to satisfy investor and stakeholder interests (Larrinaga, 2007). Despite, the controversial and critical debate about the role of CSR and corporate sustainability, often being used as reputational strategies to attract customers or impress external audiences (Simunic & Colleoni, 2022) (Cambra-Fierro et al., 2008; Friedman, 1962; Higgins & Larrinaga, 2014; Lii & Lee, 2012; Melo & Garrido-Morgado, 2012; Porter & Kramer, 2011), a growing stream of literature is demonstrating that ESG-related disclosure and reporting to improve corporate transparency, build trust and better engage with such stakeholders and audiences (Truant et al., 2017).

However, sustainability reporting has led to a proliferation of different frameworks and guidelines, resulting in a growing number of companies preparing sustainability reports using different frameworks (Mynhardt et al., 2017; Siew, 2015). This lack of standardization hinders comparability and makes it difficult for stakeholders to assess the impacts of business activities on the environment and society (Ramanathan & Isaksson, 2022; Unerman et al., 2010). Additionally, the accuracy and materiality of indicators used in sustainability reporting are often insufficient, further hindering comparability and the usefulness of the reports (Unerman & Zappettini, 2014). The complex multi-dimensional nature of accounting harmonization, including cultural, enforcement, tax, and legal differences, also presents barriers to achieving complete convergence of national accounting standards (Cherepanova, 2017).

Harmonization can address the problem of reduced comparability caused by the plurality of reporting standards, allowing for better analysis and decision-making and can ensure the reliability and validity of indicators, addressing the issue of accuracy in reporting (Ferrer et al., 2020). Furthermore, harmonization can provide common approaches for verification, ensuring the quality of sustainability reporting in both traditional and responsible financial markets (A. Ali & Jadoon, 2022; Beerbaum, 2022). By promoting standardization, harmonization can facilitate information

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sharing, conformity assessment, and business networking, enabling companies to achieve economic and environmental objectives while minimizing trade barriers (Shad et al., 2019). Overall, it can contribute to the development of a sustainable economy, where companies take responsibility for their actions and report on their economic, social, and environmental impacts.

Hence, the key drivers of the harmonization of sustainability reporting standards include the need for reduced comparability due to the plurality of reporting standards and improved capital allocation based on better understanding of organisations' risk and challenges in today's complex World (I. Ali et al., 2023; Stolowy & Paugam, 2023).

The recently formed ISSB-International Sustainability Standards Board (part of the IFRS Foundation), the Global Reporting Initiative (GRI), the US Sustainability Accounting Standards Board (now consolidated in the ISSB), the International Integrated Reporting Council (now consolidated in the ISSB), the Climate Disclosure Standards Board (now consolidated in the ISSB), the Carbon Disclosure Project (CDP), are some of the framework and bodies that have shaped the recent sustainability reporting landscape. In the last ten years, several efforts have been made to combine frameworks and their guidelines and standards with the aim to achieve a higher level of harmonization in sustainability reporting.

One of the most influential initiatives to promote consistent and comparable climate reporting by companies is the Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board (FSB) in 2015 and has developed a framework to help public companies and other organizations disclose climate-related risks and opportunities (TCFD, 2023). The TCFD framework consists of four pillars: governance, strategy, risk management, and metrics and targets. The TCFD has also published guidance on metrics, targets, and transition plans for different sectors. The TCFD standards are widely supported by investors, regulators, and companies around the world. Another initiative is the International Sustainability Standards Board (ISSB), which was established by the IFRS Foundation in October 2022 following the merge with the Value Reporting Foundation (resulting from merger of the SASB and the IIRC) and the Climate Disclosure Standards Board to set global baseline standards for sustainability disclosure (IFRS, 2023.). The ISSB issued its first two standards, IFRS S1 and IFRS S2, on general and climate-related disclosures in July 2023. A third initiative is the European Sustainability Reporting Standards (ESRS), which were developed by the European Financial Reporting Advisory Group (EFRAG) as a technical adviser to the European Commission (EFRAG, 2023). The ESRS although aligned with the ISSB standards and the Corporate Sustainability Reporting Directive (CSRD), which requires companies in the EU to report using a double materiality perspective. The ESRS were adopted by the European Commission as delegated acts in July 2023. A fourth initiative is the proposed US SEC climate rule, which would require SEC registrants to disclose information on their greenhouse gas emissions, climate risk management, and scenario analysis (SEC 2023). These initiatives aim to improve the quality, comparability, and reliability of sustainability information for investors and other stakeholders.

The following sections provide more information about the IFRS Sustainability Disclosure Standards developed by ISSB and the European Sustainability Reporting Standards (ESRS) developed by the EFRAG, while the final section propose a research agenda for accounting and finance scholar based on such sustainability standardisation context.

IFRS SUSTAINABILITY DISCLOSURE STANDARDS S1 AND S2

IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information[1]

The standard S1 released by the ISSB aims to provide investors and other stakeholders with useful information about how an entity's sustainability-related risks and opportunities affect its prospects and value creation (IFRS 2023). The standard requires an entity to disclose information about:

- **Governance**: the processes, controls and procedures the entity uses to monitor, manage and oversee sustainability-related risks and opportunities;
- **Strategy**: the entity's strategy for addressing sustainability-related risks and opportunities, including its objectives, targets and actions;
- **Risk management**: the entity's process for identifying, assessing and managing sustainability-related risks and opportunities, including its risk appetite, risk exposure and risk mitigation;
- **Metrics and targets**: the entity's performance indicators and measures for assessing and managing sustainability-related risks and opportunities, including quantitative and qualitative information.

This standard applies to all sustainability-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, access to finance or cost of capital over the short, medium or long term. The standard also allows for flexibility in how an entity determines the materiality of such information, taking into account the nature and size of its business, its industry and its stakeholders' expectations.

An important principle in S1 is the "connectivity" approach, requiring companies to disclose how their sustainability-related risks and opportunities are connected to their financial performance and position. This means that firms should explain how their sustainability strategy, governance, risk management, and metrics and targets affect their financial results and value creation. Importantly, it also implies that companies should issue their sustainability disclosures at the same time as their financial statements and cover the same reporting period (Mac Cormac, 2023)

IFRS S2 Climate-related Disclosures[2]

IFRS S2 is a global standard for climate-related disclosures issued by the International Sustainability Standards Board (ISSB) in June 20231. It applies to annual reporting periods beginning on or after 1 January 2024, with earlier application permitted as long as IFRS S1 is also applied. Its objective is to require an organisation to disclose information about its climate-related risks and opportunities that is useful to users of general purpose financial reports in making decisions relating to providing resources to the organisation. These are climate-related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term.

The S2 standard two types of climate-related risks: (i) physical risks and (ii) transition risks. Physical risks are the risks arising from the physical effects of climate change, such as extreme weather events, changes in temperature and precipitation patterns, and sea level rise. Transition risks are the risks arising from the process of adjustment towards a low-carbon economy, such as

[1] Available at https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s1-general-requirements/

[2] Available at https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures/

policy changes, technological innovations, market shifts, and reputational factors. The standard also applies to climate-related opportunities available to the organisation, such as resource efficiency, new products and services, access to new markets, and enhanced reputation.

Consistent with IFRS S1, the requirements for disclosing information about an entity's climate-related risks and opportunities are in four areas: governance, strategy, risk management, and metrics and targets. For each area, IFRS S2 specifies the objective of the disclosures, the minimum disclosures required, and additional guidance on how to prepare and present the disclosures. A summary of the requiremens according to these four areas is provided below (IFRS S2:5-33, 2023):

- **Governance:** information disclosure about the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities as well as identification of the body(s) or individual(s); information about management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.
- **Strategy:** information disclosure about the strategy for managing climate change, including identification, assessment, and response to climate-related risks and opportunities. How climate change affects the organisation's prospects, business model, value chain, decision-making, transition plan, financial position, financial performance, cash flows, and climate resilience in the present and in the future.
- **Risk management:** information disclosure about risk management processes related to climate change, including how they are integrated into the overall risk management process. Policies, inputs, parameters, methods, criteria, priorities, changes, and the monitoring of these processes for both climate-related risks and opportunities; whether and how there is use of climate-related scenario analysis to inform the identification of climate-related risks and opportunities.
- **Climate-related metrics and targets:** information disclosure about greenhouse gas emissions (GHG, scope 1, 2 and 3 as metric tonnes), climate-related risks and opportunities, capital deployment, internal carbon prices, and remuneration related to climate change (also with reference to cross-industry categories). Details about amount, percentage, approach, and changes of these metrics and how they are measured, classified, disaggregated, and aligned with the Greenhouse Gas Protocol[1] and eventually other standards. Climate-related targets that have been set and how they will be monitored and assessed.

EUROPEAN SUSTAINABILITY REPORTING STANDARDS (ESRS)

The European Sustainability Reporting Standards (ESRS) are a set of EU compliance and disclosure requirements adopted on July 31, 2023 by the European Commission (European Commission, 2023), and developed by the European Financial Reporting Advisory Group (EFRAG). The ESRS are the sustainability reporting standards that underpin the EU Corporate Sustainability Reporting Directive (CSRD 2022/2464/EU)[2], which aims to bring sustainability reporting on par with financial reporting for European large companies. The ESRS cover the full range of environmental, social, and governance issues, including climate change, biodiversity and human rights.

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1 Available at https://ghgprotocol.org/

2 Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022L2464

The ESRS consist of 12 standards, each covering a specific sustainability topic. The first standard, ESRS 1, provides general requirements for sustainability reporting, such as materiality assessment, reporting boundaries, assurance and presentation (Denkstatt, 2023). The other 11 standards, ESRS 2 to ESRS 12, provide topic-specific disclosure requirements for pollution, water, climate, biodiversity, resource use and circular economy, own workforce, workers in value chain, affected communities, consumers and end-users, business conduct and governance. The standards also include indicators deriving from other EU regulations, such as the Sustainable Finance Disclosure Regulation (SFDR), the Benchmark Regulation (BMR) and the Capital Requirements Regulation/Directive (CRR/CRD).

The ESRS apply to all companies subject to the CSRD, which are all large and listed companies in the EU. From 2028, non-EU companies operating in Europe must also report their impacts using the ESRS or equivalent standards. The reporting requirements will be phased in over time for different companies, starting from financial year 2024, depending on their size and sector. The ESRS are designed to be consistent with the EU legal framework and interoperable with global standards, such as those developed by the International Sustainability Standards Board (ISSB) and especially the Global Reporting Initiative (GRI). Accordingly, the cost of adopting ESRS for companies may be reduced by leveraging such existing reporting frameworks given their interoperability; especially that GRI and ISSB are developing tools to simplify the reporting process and support companies to report in accordance with both ESRS and their own standards within a single sustainability report (Mac Cormac, 2023).

The ESRS aim to provide information not only for investors but also the other stakeholders to understand the sustainability impact of the companies in which they invest or interact with (Giner & Luque-Vílchez, 2022) and more information will be provided in the next section.

Key approach distinctions.

The IFRS-ISSB standards and ESRS are the most recent sets of sustainability reporting standards that aim to provide information for investors and other stakeholders on the environmental, social and governance (ESG) performance of companies. However, there are some key distinctions that will be presented in the following paragraphs, also including some reference to GRI standards.

Materiality approach:

- **IFRS-ISSB** adopts "financial materiality" (consistent with the definition of materiality included in the IFRS Accounting Standards). Information is material if omitting, misstating or obscuring it could reasonably be expected to influence investor decisions.

- **ESRS** are based on the double materiality principle, which means that organisations have to report on both the impacts of sustainability matters on their financial performance and position, and the impacts of their activities on people and the environment.

- **GRI** standards are based on the impact materiality principle, which means that organisations have to report on the most significant impacts of their activities on the economy, environment and society.

Target audience (stakeholders):

- The **ISSB** primarily aims to fulfill the needs of a specific stakeholder group: investors. It focuses on creating standardized sustainability reporting guidelines that cater to the interests of the investment community on a global scale.

- **ESRS** (consistent with GRI) takes a more inclusive multistakeholder approach, recognizing the varied concerns of different stakeholders within the European context. It seeks to engage a broad spectrum of stakeholders, including governments, businesses, civil society, and investors, to ensure comprehensive sustainability reporting standards that reflect diverse regional perspectives.

CONCLUSIONS AND RESEARCH AGENDA

In conclusion, the harmonization of sustainability reporting standards represents a significant milestone in the corporate reporting landscape. These developments should bring greater clarity and comparability to sustainability reporting, benefitting organizations, investors, and stakeholders. These developments pose significant opportunities for accounting and finance scholars and their research endeavours.

How do the new sustainability reporting standards affect the decision-making and behaviour of companies, investors, and other stakeholders?

The new standards change the incentives, expectations, and accountability of different actors in the sustainability reporting ecosystem. For instance, they influence the strategic choices, resource allocation, and performance management of companies by requiring them to disclose their sustainability impacts, risks, and opportunities. They also affect the information needs, preferences, and usage of investors and other stakeholders by providing them with more relevant, reliable, and comparable data on sustainability performance and outcomes. In addition, they shape the regulatory environment, supervision, and enforcement of sustainability reporting by setting common rules, principles, and indicators for sustainability disclosure and assurance.

How do the new sustainability reporting standards interact with existing financial reporting standards and practices?

The new standards aim to integrate financial and non-financial information in a coherent and consistent way. For instance, evaluating how the new standards enhance or reduce the quality, comparability, and reliability of financial and non-financial information by addressing the gaps, overlaps, and inconsistencies. Or assessing the value relevance of information and the cost of capital by examining how the new standards affect the market valuation, risk perception, and investment decisions.

How do the new standards impact the corporate governance, risk management and internal control systems of companies?

Analysing the impact on the roles and responsibilities of board members, managers, auditors, and other internal stakeholders in relation to sustainability reporting. Understanding if they enhance or impair the effectiveness and efficiency of internal control systems for ensuring the accuracy, reliability, and security of sustainability-related information. If they improve or worsen the performance and reputation of companies in terms of sustainability outcomes.

How do the new sustainability reporting standards affect the development and innovation of sustainable finance products and services?

Studying if they create or constrain opportunities for developing and offering sustainable finance products and services, such as green bonds, social impact investing, or ESG funds. Or facilitate or hinder the access to and allocation of capital for sustainable finance products.

How do the new sustainability reporting standards contribute to the transition to a low-carbon and circular economy?

Understanding if they encourage or discourage the adoption of low-carbon technologies, practices, and behaviours by companies, investors, regulators, and other stakeholders. Or stimulate or inhibit the creation of value from waste reduction, reuse, recycling, and regeneration by companies. And if their adoption accelerate or slow down the progress of a specific area or jurisdiction towards a low-carbon and circular economy at different levels (e.g., sectoral, regional, national).

How do the new sustainability reporting standards address the diversity and complexity of sustainability issues across different sectors, regions and contexts?

Studying the diversity and complexity of sustainability issues across different sectors (e.g., energy, agriculture, manufacturing), across different regions (e.g., developed vs developing countries) and the impact across different contexts (e.g., social, cultural, political).

Additionally, Accounting and finance educators can face various challenges and opportunities given the developments in this sustainability reporting context. Some of the challenges include updating their knowledge and skills, designing relevant and innovative curricula, ensuring the quality and diversity of education and research, and attracting and developing qualified faculty and staff. Some of the opportunities include leveraging new technologies and platforms, engaging with various stakeholders, fostering a culture of excellence, innovation, and diversity, and preparing future-ready professionals.

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PROPOSED RESEARCH MODEL OF BUSINESS DIGITAL TRANSFORMATION IN VIETNAM

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Abstract: *Research through the process of synthesizing and analyzing previous studies to have a deeper insight into the digital transformation concept, the factors affecting digital transformation as well as digital transformation in businesses that have an impact to business performance. The article proposes a research model on enterprises digital transformation in Vienam with influencing factors including Leadership, Digital business strategy, Employee capacity, Corporate culture, Technology platform, Enterprise pressure, Information security, Technology readiness, and Compatibility. Moreover, the study also proposes to consider the Business performance as the digital transformation result in enterprises.*

Keywords: *Digital transformation, Business performance, Technology, Business*

1. INTRODUCTION

Today, competition between businesses is increasingly fierce, especially in the digital age, requiring businesses to continuously innovate and improve to adapt to changes of customers and the economy. Therefore, businesses need to pay attention to transforming appropriate business models, combined with innovative thinking to determine long-term strategies and competitive advantages of each business in the new situation. In addition, with the trend of globalization, along with the strong development of the Fourth Industrial Revolution (Industry 4.0), digital transformation has become one of the key goals and indispensable development strategies for businesses around the world.

Industry 4.0 has impacted on all aspects of the economy, causing rapid changes in all business areas of enterprises. In addition, objective factors such as epidemics, natural disasters, ...forcing businesses to face difficulties that were never there before. This has required businesses to carry out a transformation process, transforming from traditional and manual management and production to the use of tools with higher science and technology content – known as the process of "Digital Transformation". According to Berman (2012), digital transformation affects many aspects of society, especially the development of businesses and the creation of new business models.

Indeed, the rapid development of the field of digital technology is becoming a guideline in changing the national governance of each government, changing the mode of governance - production and business activities of each enterprise and the way of life, communication of each individual in society. Today, the term "digital transformation" has gradually become familiar to the public. Experts said that digital transformation will become a mandatory trend for businesses in the era of globalization and the booming internet. This is not only a trend but also an inevitable of the times, if you stand outside, businesses will not succeed.

Stemming from practical requirements, high application and requirements for digital transformation play an important role in the survival and development of businesses. This study

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hopes to build a model of factors affecting businesses' digital transformation, thereby affecting business performance. From there, it helps businesses recognize the importance of converting arguments to meet the construction and development needs of businesses.

2. THEORETICAL BASIS AND RESEARCH FRAMEWORK

2.1. Concept of Digital transformation in business

Digital transformation has recently emerged as a new issue, facing practical needs that require both theoretical and practical research. In the world, research on digital transformation activities is being conducted extensively. According to Stolterman and Fors (2004), digital transformation is defined as the use of technology to radically improve an organization's performance or reach. McDonald and Rowsell-Jones (2012) argue that digital transformation is not just about digitizing resources, but about creating corporate value on the basis of digital assets. In view of this, Fitzgerald et al. (2013) defines digital transformation in an enterprise as the use of new digital technologies, such as social media, smart mobile devices, new analytics techniques, or automated alignment systems to implement major changes in business operations such as improving customer experience, Optimize operations and create new business models. Moreover, Demirkan et al. (2016) said that the digital transformation activity in question is a rapid and far-reaching transformation phenomenon, in which this transformation is based on digital advances to apply to production and business activities, processes and business models. Similarly, Hess et al. (2016) also mentioned an important feature of digital transformation that is the application of changes in digital technology, from which it is possible to develop new production and business models, thereby creating newer products and services to meet customer needs or apply advances digital in the transformation of organizational structures, processes - workflows towards automation (automatic). According to Micic (2017), the definition of digital transformation is referred to as the integration of digital technology into business activities that leads to changes in business operations and provides value to customers, while the author emphasizes that the subject of digital transformation is the application of digital technologies and activities. The main of the enterprise is the production, processing and transfer of information flow. The application of digital technology is based on the development of many different types of technologies including telecommunication networks, computing technology, software techniques (Micic, 2017).

According to Dao My Chi & Le Thanh Tiep (2022), there is currently no unified definition that can be generalized about digital transformation. At each stage associated with a different perspective, the authors come up with a different concept. From a corporate perspective, the authors share the same view that digital transformation is the application of new technology to optimize resources, operational processes and better satisfy customer needs. The concept of digital transformation is expressed by organizations, individuals and businesses based on their own definitions and development directions. Digital transformation is theapplication of digital technological advances, thereby changing the mode of operation of enterprises in the production, business and management process of enterprises (Dao My Chi & Le Thanh Tiep, 2022)

Thus, based on previous researches, digital transformation can be defined as follows Digital transformation is the integration of digital technologies into all areas of operation of an enterprise, taking advantage of technologies to fundamentally change the way it operates, business model and provide new values to its customers as well as accelerate the development of business activities.

Therefore, digital transformation is also a change in the culture of businesses, requiring businesses to constantly change, experiment with new things and comfortably accept failures to adapt themselves to changes in the environment.

So far, many authors have tried to define the exact concept of digital transformation but there has not been a widely accepted official concept, so its boundaries are often very blurred. Some concepts related to digital transformation are summarized by the author in Table 1 below.

Table 1. Synthesis of concepts related to digital transformation

Authors	Define
Stolterman & Fors (2004)	Digital transformation is the changes that digital technology causes or affects all aspects of human life
Martin (2008)	Digital transformation is now often understood as the use of information and communication technology, not only that conventional automation is carried out but basically creates new possibilities in business, public government as well as the lives of people and society
Westerma, et al. (2011)	Digital transformation is the use of technology to radically improve the performance or reach of a business, it is becoming a hot topic for companies across the globe. Executives across all industries are embracing digital advancements such as analytics, mobility, social media, and smart devices – while improving the use of traditional technologies to transform customer relationships, internal processes, and valuable propositions
McDonald's & RowsellJones (2012)	Digital transformation is not merely about digitizing resources but also leading to the value and revenue generated from digital assets
PwC (2013)	Digital transformation describes the fundamental transformation of the entire business world through the establishment of new internet-based technologies with a fundamental impact on society as a whole.
Mazzone (2014)	Digital transformation is the process of deliberate and ongoing digital development of a company, business model, conceptual process, or methodology, both strategically and tactically.
Schweer & Sahl (2016)	Digital transformation is the consistent network of all sectors of the economy and the adjustment of participants to the new reality of the digital economy. Decisions in networked systems include exchanging and analyzing data, calculating and evaluating options, as well as initiating actions and producing results
Demirkan et al. (2016)	Digital transformation refers to a rapid and far-reaching transformation phenomenon in which this transformation is based on digital advances for application to production activities, businesses, processes and business models
Micic (2017)	Digital transformation is referred to as the integration of digital technology into business operations that leads to changes in business operations and provides value to customers, and the author emphasizes that the subject of digital transformation is the application of digital technologies and the main activities of that business is the production, processing and transfer of information flows. The application of digital technology is based on the development of many different types of technologies including telecommunications networks, computing technology, software techniques
Ismail, Khater, and Zaki (2017)	Digital transformation is a process through which companies converge many new digital technologies, enhanced with ubiquitous connectivity, with the aim of achieving superior performance and sustainable competitive advantage, by transforming many aspects of business, including business models, customer experiences (including digital transformation, products and support services), and operations (including processes and decision-making), and impacting people (including talent, skills, and culture) and networks (including the entire value system)
Schwertner (2017)	Digital transformation is the application of technology to build new business models, processes, software and systems that bring more profitable revenue, greater competitive advantages and greater efficiency
Deloitte (2018)	Digital transformation is the use of technology to radically improve an organization's performance or reach. In a digitally transformed business, digital technologies enable improved processes, talent attraction, and new business models

Kotarba (2018)	Digital transformation can be defined as the modification (or adaptation) of business models, derived from the pace of development of technological progress and innovation, creating changes in consumer behavior and society.
OECD (2018)	Digital transformation refers to the impacts of digitalization on the economy and society. Digitization is the conversion of analog data and processes into a computer-readable format. Digitalization is the use of digital technologies and data and their connectivity that leads to new activities or changes to existing ones
Lesher & Associates (2019)	Digital transformation is the result of the digitization and digitization of economies and societies
Vietnamese Government (2019)	Digital transformation is the use of data and digital technology to comprehensively and comprehensively change all aspects of socio-economic life, reshaping the way we live, work and relate to each other
European Commission (2019)	Digital transformation is characterized by a combination of advanced technologies and the integration of physical and digital systems, the predominance of innovative business models and new processes, and the creation of intelligent products and services
Kozarkiewicz (2020)	Digital transformation is a process in which digital technologies play a central role in creating and reinforcing the disruptive changes that take place in the industry (sector) and in society.
Dao My Chi & Le Thanh Tiep, 2022	Digital transformation is the application of technological advances in digital, thereby changing the mode of operation of enterprises in the production, business and management process of enterprises

(Source: Author's Compilation, 2023)

Kozarkiewicz (2020) emphasizes that disruption can drive strategic responses, organizations increase competitiveness, use digital technologies to create higher new value and achieve strategic entry goals, and overcome barriers in digital transformation that need structural change. These changes not only lead to positive organizational outcomes, but can also be accompanied by undesirable outcomes (Vial, 2019).

There are many definitions provided by academics, government agencies, and business professionals. Some of them are summarized in Table 1. The digital transformation of a company requires a fundamental organizational change. Based on the views of Bostom Consulting Group experts, "Digital transformation requires instilling a culture that supports change while supporting the company's overall strategy" (Hemerling et al., 2018). The sole focus should be on customers and their needs (Schwertner, 2017; Dahlstrom et al., 2017). Many researchers have carried out literature reviews to study the concept of digital transformation, one of the main differences between the current study and the previous one is that the authors used most of the most recent publications to collect data, and the concept was also considered from representatives of the business sector, those who have participated in the digital transformation implementation process.

In order to classify the research results on the concept of digital transformation in a conspicuous way, the internal factors within the concept of Digital transformation, the factors that trigger the digital transformation process as well as the potential results that can be achieved for businesses and society from digital transformation are summarized in Table 2 (Verina & Titko, 2019).

Table 2. Contents and internal factors of the concept of "Digital Transformation"

Technology	Management/Process	Human being
-Data	- Business model	-Customer
- Big Data	- Operating model	- Employees/workforce/people
- Cloud applications	- Operational process	-Administer
- Mobile devices	-Strategy	- Chief Executive Officer
- Social Media	- Business activities	-Talent
-Software	- Organizational structure	- The owners
-Analyze	- Organizational culture	- Suppliers
- Embedded devices	- Coordination mechanism	-Partner
- Artificial intelligence	- Products	- Stakeholders
- The Internet of Things	- New services	-Ability
- Cybersecurity		
- App marketplaces		

(Nguồn: Verina & Titko, 2019)

2.2. Factors affecting the digital transformation ability of businesses

Currently, due to the versatile nature, the study of the role of digital transformation in the world has received great attention from academia. However, in Vietnam, current research is still relatively limited and sketchy (Dao My Chi & Le Thanh Tiep, 2022).

The study by Chatterjee et al. (2002) argues that for digital transformation to be successful, leaders must believe in the value and benefits of new technologies and support their implementation in organizational operations. Another perspective, Lanzolla and Anderson (2008) emphasized the application of digital technologies as a driving factor in digital transformation. Digital technologies may include big data, mobile, cloud computing, or search-engine-based applications (White, 2012). In this view, Hess et al. (2016) emphasized the role of human factors, especially managers, in promoting transformation processes, and there should be a match between human resource capacity and digital technology applications to make optimal use of those technology applications. In addition, research by Nadkarni et al. (2020) compiled from previous studies shows that the internal factors affecting the digital transformation ability of businesses are divided into 3 groups: 33% focus on technology, 34% focus on organizational issues, and 33% focus on both technology and organizational issues. In organization-focused studies, 4 factors are mentioned a lot and directly affect the expected results of digital transformation of businesses: (1) leadership, (2) digital business strategy, (3) employee competence, and (4) corporate culture. For technology-focused research, the use of technology platforms for business activities such as systematic storage of data information, interaction with customers, internal communication and communication, and other activities affecting the digital transformation ability of enterprises is called (5) technology platforms.

The study of Cu Ba Quyet (2021) is a rare study when the study explores the factors affecting the successful digital transformation of businesses in Vietnam. In particular, digital transformation of enterprises is built based on the model of 3 different groups of factors including technology factors, factors belonging to businesses and factors belonging to the environment. Contrary to the research of Chu Ba Quyet (2021), the research of author Pham Thi Thanh Huyen (2021) conducted an analysis of factors affecting digital transformation in tourism in Vietnam and proposed a model of digital transformation affected by 3 large groups of factors including e-commerce and digital platforms, big data and intelligent systems, artificial intelligence and the internet of things. In addition, Dao My Chi and Le Thanh Tiep (2022) also proposed 12 factors affecting the digital transformation of businesses in Ho Chi Minh City, including process digitization; Safety and security; The availability of digital data and technology; Compatibility; Strategy of the enterprise; Human resources of the enterprise; The structure and processes of the enterprise; Enterprise innovation; Customer choice; Competitive pressureh; Supportive government policy; and The impact of the Covid-19 pandemic. In the research of Nguyen Thi Kim Anh (2022), it has proposed a research model of factors affecting the digital transformation ability of businesses with 6 factors and scales of each factor including Leadership, Digital Business Strategy, Employee Capacity, Corporate Culture, Technology platforms, and Pressure on the business. The above are rare studies in Vietnam that mention the factors affecting digital transformation in Vietnam.

Table 3. Statistics of factors affecting the digital transformation ability of businesses

Component / Author	Lea-ders-hip	Digit-al -business -strategy	Emp-loyee-quali-ficati-ons	Organi-zatio-nal-culture	Digital-technolo-gy - platform	Comp-etitor	Security Concern	Digital & Technol-ogy-readiness	CCompati-bility
Lanzolla et al. (2008)	x								
Tiago Oliveira & Maria F. O. Martins (2009)						x	x	x	
Low et al. (2011)						x		x	x
White (2012)	x								
Peltola (2012)	x	x							
Hess et al. (2018)	x	x							
Tarute et al. (2018)	x								
Diber (2019)	x	x	x						
Ferreira et al. (2019)	x	x							
Gamache et al. (2019)	x	x	x						
Isensee et al. (2020)	x	x	x	x	x				
Eller, R. et al. (2020)		x	x						
Irimias & Mitev (2020)	x	x	x						
Chu Ba Quyet (2021)		x	x				x	x	
Nguyen Thi Kim Anh et al. (2022)	x	x	x	x	x	x			
Dao My Chi & Le Thanh Tiep (2022)	x	x	x			x	x	x	x
Zhang, X. et al. (2022)					x				
Teng et al. (2022)		x	x		x				

(Source: Author's Compilation, 2023)

2.3. Digital transformation affects business performance

Improving business performance is an essential goal of every business, therefore, factors related to improving operational efficiency have become core issues in management studies (Simon et al., 2019). The business is committed to growth to ensure survival (Teece, 2007). Performance is the evaluation of the performance of an enterprise, either through the results it has achieved or through the potential to achieve future achievements (Tseng et al., 2014). Good performance is fundamental to the survival and development of businesses (Leitch et al., 2010). Performance from digital transformation can be judged by a variety of factors, such as operational performance (Karimi et al., 2015). Digital transformation can improve organizational performance. Wamba and

Mishra (2017) argue that manufacturing businesses invest in digitization to enable reduced data processing costs by automating data collection, storage, and diagnostics. Helfat and Raubitschek (2018) propose that improving the use of digital tools will enhance customer engagement and development of product service systems, including improvements in remote diagnostics and process management. Hong et al. (2019) show that enterprises achieve mass production through digitization and reducing product costs. Dubey et al. (2020) proposed in their research on manufacturing organizations that big data analytics and artificial intelligence can improve operational performance under the influence of environmental dynamics.

Digital transformation is a tool that not only boosts productivity but also enhances commercial competitiveness (Paiola et al., 2021). Digital transformation is essential to help businesses create better customer experiences as well as improve operational process efficiency through automation (Coskun-Setirek &; Tanrikulu, 2021).

Current studies show that digital transformation has an impact on corporate financial performance (Keawphang, 2014). Digital transformation of businesses has a positive impact on their operational performance (Shahbaz et al., 2019). The positive impact of digital transformation on business performance is more evident in large enterprises, state-owned enterprises, mature enterprises and non-manufacturing (services) enterprises (Teng et al., 2022). Moreover, some of the benefits of digital transformation for businesses are the transformation and optimization of traditional business operations through digital technology; raise the level of large-scale production and trading of traditional products; and realizing value benefits, such as improved efficiency, reduced costs, and improved quality (Teng et al., 2022).

In many studies it has been proven that digital transformation has a positive impact on the performance of companies (Mubarak et al., 2019; Teng et al., 2022; Chouaibi et al, 2022). These Industry 4.0 tools can solve businesses' technological challenges, and can ultimately increase sustainable business performance. Moreover, they drive performance and significantly impact production and services. Studies have proven that digital transformation has a positive effect on production and services, and increases business operational efficiency (Shahbaz et al., 2019; Mubarak et al., 2019). In addition, a study by Do et al. (2022) on the impact of digital transformation on the bank's operational efficiency has shown that digital transformation has a positive impact on the operational efficiency of businesses.

Bảng 4. Summary of previous studies related to digital transformation and Business performance

Author	Dimension	Business performance
Digital transformation	Chen et al. (2016)	Positive
	Nwankpa & Roumani (2016)	Positive
	Mubarak et al. (2019)	Positive
	Guo & Xu (2021)	Positive
	Jardak & Ben Hamad (2022)	Positive
	Zhang et al. (2022)	Positive
	Ren et al. (2023)	Positive
	Phan Thi Hang Nga et al. (2023)	Positive

(Source: Author's Compilation, 2023)

2.4. Research models and hypotheses

Through the process of synthesizing and analyzing previous studies, the author found that the main factors affecting the digital transformation ability of businesses in Vietnam include 9 factors: Leadership, Digital Business Strategy, Employee Competence, Corporate Culture, Pressure on Businesses and Technology Platform; Pressure on business; Safety and security; The availability of digital data and technology; Compatibility.

❖ Leadership: The change in thinking and actions of leaders greatly affects the digital transformation ability of businesses. Such changes include: rapid optimization of leadership decision-making processes thanks to instant access to expanded information and data (Mazzei & Noble, 2017), new communication principles, and changes in leadership learning and development (Sia et al., 2016). Moreover, leaders need new digital thinking to lead the digital transformation journey of the business. In the past, leadership training programs primarily focused on leadership and communication skills. But in times of digital transformation, executives must become technological visionaries and develop their adaptability. Transparency in management and communication through media, along with the dissemination of information and the speed at which data is disseminated online, are important challenges of digitalization for managers that require them to constantly learn and interact more face-to-face.

❖ Digital business strategy: Bharadwaj et al. (2013) argue that information technology plays an increasingly important role in business operations. It is not merely a support for governance but has evolved into an essential element in building corporate strategy. The development and implementation of a business strategy to achieve the long-term goals of the business on a digital technology platform is called a digital business strategy.

❖ Employee qualifications: To accelerate the digital transformation process, there will be additional elements and elements that need to be refined both organizationally and management. For employees and managers, there should be a process for carrying out activities at a faster pace, more accurate, more effective when digital transformation. Therefore, it is required that employees are competent, willing to access, develop and use new technologies in work improvement and performance (Bharadwaj et al., 2013). Moreover, depending on business conditions such as industries and operating models of the organization, employees as well as managers must develop the ability to feel and flexibly exploit the network system and connectivity in the digital environment (Kohli and Melville, 2019) to identify new ideas, evaluate, modify, and ultimately come up with new business models (Berman, 2012; Daniel &; Wilson, 2003).

❖ Organizational culture: Digital transformation is not only a technology-driven challenge but also requires a profound cultural change in the business.

Everyone in the business must be prepared with adaptive skill sets and digital literacy. First, digital transformation requires a corporate culture that consistently verifies data and shares verified data (Dremel et al., 2017). Data must be seen as a great asset and a factor driving the digital transformation of businesses. This will require greater transparency in day-to-day business and workflow as well as data-driven thinking among employees. On the other hand, digital transformation can cause cultural conflict between younger digitally savvy but inexperienced employees and older employees with a long track record in traditional business but lagging behind technologically (Kohli & Johnson, 2011). Management to prevent conflicts between two different cultural subjects from arising within the same organization through facilitating a culture of academic friendliness and openly supported and trusted by executives can effectively mitigate potential cultural divides (Kohli and Melville, 2019).

❖Technology platform: Digital transformation will change the structure of work (Loebbecke & Picot, 2015), job roles and workplace requirements (White, 2012). Digital interconnectedness allows for the emergence of cross-location groups across the entire scope of the business. In this context, the traditional hierarchical work structure gradually disappears and new opportunities emerge beyond the boundaries of the business, such as the integration of other external services (Loebbecke & Picot, 2015). In addition, implementing a working environment based on digital technology becomes essential. According to White (2012), a digital workplace must be relevant, principled, imaginative, and independent of location. Thus, how businesses have a technology application platform in current operations will greatly affect the ability of businesses to successfully transform their arguments in the future.

❖Competitor: In the face of competitive pressure in better meeting customer needs, the prolonged epidemic situation, new government regulations, businesses are increasingly fully identifying the problems they are facing, forcing businesses to improve and optimize management, implementation process and use of resources (Nguyen Thi Kim Anh et al., 2022).

❖Security Concern: Information security concerns are defined as the extent to which virtual worlds are considered unsafe for conducting business activities, such as corporate data exchanges, meetings, and collaboration activities (Zhu et al., 2006). According to trade journals, virtual worlds are considered unsafe to conduct business activities (Lynch, 2008; Naone, 2008). According to Chu Ba Quyet (2020), in reports on information technology application limitations in Vietnam, information security factors are always considered as obstacles. Today, most data runs on public platforms or is stored externally, and as such, organizations have limited options to protect their corporate data in the cyber world. In addition, in the virtual world, collaboration and meetings involving sensitive corporate information cannot be kept confidential (Naone, 2008). As a result, organizations may be concerned about the lack of security in Economy 4.0. Several studies on Internet use show that security concerns are a deterrent factor to an organization's use of the Internet for business purposes. Walczuch, Braven and Lundgren (2000) and Cecilia (2020) argue that if organizations have greater concerns about information security on the Internet, such as unauthorized access to internal networks, insecure information exchanges, and insecure technology platforms, they will be less willing to accept the Internet for business.

❖Technology readines: The technological readiness of organizations, i.e. technology infrastructure and information technology human resources, affects the adoption of new technologies (Kuan *and* Chau, 2001; To and Sir, 2006; Oliveira and Martins, 2010; Wang et al., 2010). Technology infrastructure refers to installed enterprise network technologies and systems, providing a platform for building cloud computing applications. Information technology human resources provide knowledge and skills to deploy information technology applications related to cloud computing (Wang et al., 2010). Cloud computing services can only become part of value chain operations if companies have the necessary infrastructure and technical capacity. As a result, companies that are technologically ready will be better prepared for cloud adoption.

❖Compatibility: Compatibility refers to the degree to which innovation is consistent with the potential adopter's current values, previous practices, and current needs (Rogers, 1983). Compatibility has been considered an essential element for innovation adoption (Cooper and Zmud, 1990; Wang et al., 2010). When technology is recognized as compatible with job application systems, companies are often likely to consider adopting new technology.

❖Based on discussion and survey of business experts and managers, the study proposed the research model as Figure 1.

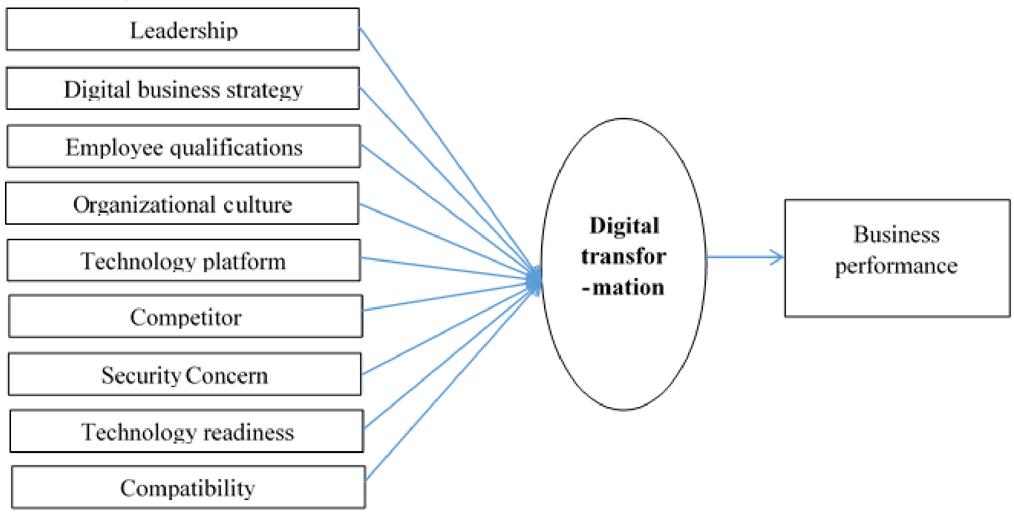

Figure 1. Proposed Research Model

RESEARCH HYPOTHESES

H1: Leadership has a positive impact on the digital transformation

H2: Digital business strategy has a positive impact on the digital transformation

H3: Employee capacity has a positive impact on the digital transformation

H4: Corporate culture has a positive impact on the digital transformation

H5: The technology platform has a positive impact on the digital transformation

H6: The pressure on businesses has a positive impact on their digital transformation

H7: Information safety and security have a positive impact on the digital transformation

H8: Compatibility has a positive impact on the digital transformation

H9: The availability of digital data and technology has a positive impact on the digital transformation

H10: Compatibility has a positive impact on the digital transformation

H11: Digital transformation has a positive impact on business performance

3. CONCLUSIONS

In this article, we analyze the pre-existing studies on digital transformation systematically. The article analyzed contributions related to research topics, their findings to have a deeper insight into digital transformation in businesses. The analysis leads to the proposal of a research model on digital transformation for Vietnamese businesses, including factors affecting digital transformation in enterprises, Leadership, Digital Business Strategy, Employee Capacity, Corporate Culture, Technology Platform, Pressure on Business, Information Security, Digital Data and Technology Availability, and Compatibility. In addition, the model also proposes to study the impact of digital transformation in enterprises on business performance.

However, in the future, the above model needs to be tested in practice to have practical conclusions. Empirical research on factors affecting digital transformation in Vietnam to be able to clearly determine the impact of each factor related to digital transformation in businesses. From there, it can help Vietnamese businesses have a more comprehensive view of their businesses' digital transformation capabilities.

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IMPACT OF THE PANDEMIC SHOCK ON THE VIETNAMESE STOCK MARKET AND POLICY IMPLICATIONS

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Abstract: *This paper investigates the impact of the COVID-19 pandemic on the Vietnamese stock market (VNX). Historically, pandemics have often caused major disruptions to the economies of many countries, and stock markets are quick to reflect these impacts. The COVID-19 pandemic has created major challenges for the VNX, even though Vietnam has successfully controlled the pandemic. This paper uses the Vector Autoregression (VAR) method to quantify the impact of COVID-19 on the VNX. The VAR model is used to analyze the dynamic interactions between time series variables. The study helps to better understand the relationship between macroeconomic factors and the stock market in the context of the pandemic, and to identify solutions and implications for enhancing the sustainability of the VNX.*

Keywords: *COVID-19 pandemic, Vietnamese stock market, impact, shock, sustainable development, Vector Autoregression (VAR) method.*

1. INTRODUCTION

In the history of the world economy, pandemics have always been major shocks, causing strong fluctuations and challenges for the economies of many countries. The stock market, a complex and sensitive system, is often the place that reflects the impact of such events most quickly and profoundly.

Before the COVID-19 pandemic, the world had witnessed many similar events such as the 1973 oil shock, the 2008 global financial crisis, and many other events. Each event has provided valuable lessons, helping leaders, investors, and the academic community to better understand the relationship between macroeconomic factors and the stock market.

The COVID-19 pandemic, one of the largest and most complex pandemics of the 21st century, has not only caused far-reaching negative impacts on the global economy, but has also created unprecedented challenges for the stock market. Vietnam, a country that is on the path of development and deep integration, is no exception to this rule. Although it has controlled the epidemic better than many other countries, the instability of the stock market has still occurred, causing negative impacts on the economy.

Analyzing the impact of the pandemic shock on the Vietnamese stock market not only helps us to better understand the relationship between macroeconomic factors and the stock market in this special context, but also to find solutions and implications for the sustainable development of the stock market in the future.

2. LITERATURE REVIEW

COVID-19 pandemic has caused negative impacts to the global economy, including the stock market. Many empirical studies have been conducted to assess the impact of COVID-19 pandemic on the stock market activities in different countries, using various econometric methods.

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Some studies use regression methods to assess the impact of COVID-19 pandemic on stock market. For example, He et al. (2020) used t-tests and non-parametric Mann-Whitney test to assess the direct and spillover effects of COVID-19 on stock markets in China, Italy, South Korea, France, Spain, Germany, Japan, and the United States (US). They found that COVID-19 pandemic has negative but short-term impacts on stock markets of these countries; and the impact of COVID-19 on stock markets has two-way spillover effects between Asian countries and European and American countries.

Similarly, Liu et al. (2020) used event study method and found that stock markets in these countries have declined sharply after the outbreak of the virus. They also noted that stock market reaction in low-income Asian countries is more negative than other countries.

Some studies use qualitative methods to assess the impact of COVID-19 pandemic on stock market. For example, Yan, Tu, Stuart, and Zhang (2020) analyzed the impacts that COVID-19 may cause on stock market and proposed investment strategies for investors. They concluded that, typically, stock markets overreact to such outbreaks in the short run but in the long run, the market eventually self-adjusts and rebounds.

In addition, some studies use other methods to assess the impact of COVID-19 pandemic on stock market. For example, Baker et al. (2020) used text-based qualitative method to examine the unprecedented impact of COVID-19 on stock market in the US. They found that while previous pandemics, including Spanish flu, only left mild impacts on the US stock market, COVID-19 has had a significant impact on the US stock market.

In general, stock market (SM) is a complex system that reflects the interactions of many economic and financial factors. One of the important aspects of SM is its ability to absorb and respond to shocks.

SM Sensitivity: One notable point is the ability of SM to absorb shocks. If SM has the ability to absorb shocks, the negative consequences can be mitigated, helping the market to avoid negative transmission shocks to the real economy (Chakraborty, T., 2012).

Factors Affecting Shock Absorption Capacity: Chakraborty, T. (2012) and Tripathi, P. (2016) have approached this issue by considering a range of factors, including diversification, interconnectedness, size of financial system, asset structure, debt structure, complexity and transparency, as well as leverage. These factors all affect the ability of SM to absorb and respond to shocks.

Investor Psychology: Investor psychology plays an important role in shaping the value of stocks and market volatility. Unprecedented events such as the Covid pandemic can lead to overreactions from investors, causing strong volatility in the market (He et al., 2020; Liu et al., 2020).

SM Infrastructure: The SM infrastructure system, including both technical and legal infrastructure, plays an important role in determining the market's shock absorption capacity.

Level of Economic and Financial Development: Amstad, Cornelli, Gambacorta, and Xia (2020) have shown that the global stock market is sensitive to changes in the risk-taking index, especially in more financially developed economies. Liu et al. (2020) also emphasize that low-income countries have a more negative response to shocks.

The COVID-19 pandemic has had a significant impact on the global stock market. The impact of the pandemic varies across countries and sectors, and the ability of the stock market to absorb shocks is affected by a number of factors, including investor psychology, the SM infrastructure, and the level of economic and financial development.

2. DATA AND METHODOLOGY

To quantify the impact of COVID-19 on the Vietnamese stock market (VSM), the Vector Autoregression (VAR) method was selected. VAR is a system of autoregressive regression equations widely used in econometric research to analyze the dynamic interactions between time series variables. The VAR model can be employed to predict time series data, analyze data characteristics, and understand interactions between variables. This method is commonly utilized in macroeconomic and financial research (Sims, 1980).

In the context of the COVID-19 pandemic, several studies have applied the VAR model to assess the pandemic's impact on stock markets. For instance, Al-Awadhi et al. (2020) employed the VAR method to explore the impact of COVID-19 on the stock markets of G7 countries. Goodell and Huynh (2020) also applied the VAR method to investigate the relationship between the COVID-19 pandemic and the global stock market.

In Vietnam's context, the VAR model is an appropriate choice to evaluate the impact of COVID-19 on the VSM due to the method's multidirectional interaction capabilities. Especially in this case, the selection of variables in the VAR model was meticulously considered to accurately reflect the factors influencing the VSM during the pandemic phase.

The equation for the VAR model is:

$$REt = \alpha01 + \alpha02CPIt + \alpha03UERt + \alpha04Newcaset + \alpha05Newdeatht + \alpha06Vaccinedt + \varepsilon ot$$

Where:

• REt: The primary dependent variable, representing the VSM's returns, indicating market fluctuations during the pandemic.

• CPIt and UERt: These are significant economic variables reflecting inflation and employment conditions, directly influencing the VSM.

• Newcaset and Newdeatht: These micro indicators directly measure the pandemic's severity, affecting the economic situation and the VSM.

• Vaccinedt: This micro variable reflects the community's vaccination rate, crucial as it indicates the control level and recovery progress from the pandemic.

These variables were chosen as they offer a comprehensive view of both the economic and health impacts of the pandemic on the VSM. Simultaneously, the selection of these variables also adheres to economic and financial theories and previous research addressing the impact of similar variables on the VSM.

Data was collected from official sources such as the National Statistics Office, the Ho Chi Minh City Stock Exchange, and several international data sources. The data includes daily stock indices, COVID-19 infection cases, death cases, and other macro variables from January 2019 to December 2022.

The VAR model allows us to consider interactions between multiple time series variables simultaneously, especially useful when examining the impact of a significant event like COVID-19 on various different variables. Additionally, the VAR model also helps assess the spillover effects between variables.

3. DATA DESCRIPTION

Utilizing data collected from official sources of the Vietnamese Stock Market (VSM) and the National Statistics Office, we present the following analytical overview:

Table 1: Descriptive statistics of the data series after natural logarithm transformation

Variable	Obs	Mean	Std. dev.	Min	Max
lnvnindex	749	6.944566	.183346	6.491042	7.31376
lncpi	749	.8530801	.6081964	-1.660731	1.860975
lnuer	749	.9634642	.2060171	.7654678	1.381282
newcase	487	2491.61	5048.682	0	39132
newdeath	359	66.13092	121.3015	0	804
vaccined	204	2.40e+07	2.76e+07	955	7.74e+07

(Source: Stata)

This dataset provides information on six variables: lnvnindex, lncpi, lnuer, newcase, newdeath, and vaccinated. These variables are measured on a daily level from January 1, 2019, to December 31, 2022.

1) lnvnindex: This is the dependent variable, representing the returns of the Vietnamese stock market (VNIndex) measured in natural logarithm. The average value of lnvnindex is 6.94, with a standard deviation of 0.18. This suggests that the returns of the VNIndex tend to fluctuate around the average, with relatively low volatility.

2) lncpi: This is the first independent variable, representing inflation measured in natural logarithm. The average value of lncpi is 0.85, with a standard deviation of 0.61. This indicates that inflation in Vietnam tends to fluctuate around the average, with relatively high volatility.

3) lnuer: This is the second independent variable, representing the unemployment rate measured in natural logarithm. The average value of lnuer is 0.96, with a standard deviation of 0.21. This suggests that the unemployment rate in Vietnam tends to fluctuate around the average, with relatively low volatility.

4) newcase: This is the third independent variable, representing the daily number of new COVID-19 infections. The average value of newcase is 2491, with a standard deviation of 5049. This indicates that the daily number of new COVID-19 infections in Vietnam has a significant fluctuation.

5) newdeath: This is the fourth independent variable, representing the daily number of COVID-19 related deaths. The average value of newdeath is 66, with a standard deviation of 121. This suggests that the daily number of COVID-19 related deaths in Vietnam has a significant fluctuation.

6) vaccinated: This is the fifth independent variable, representing the daily number of individuals vaccinated against COVID-19. The average value of vaccinated is 2.4 million, with a standard deviation of 2.76 million. This indicates that the daily number of individuals vaccinated against COVID-19 in Vietnam has been increasing over time.

4. RESULTS

After estimating the VAR model, we proceed to validate the model through various tests such as the residual series test, stability test, and impulse response test. The objective is to ensure that the model is estimated accurately and holds statistical significance.

Subsequently, we will conduct a linear regression analysis, followed by a VAR analysis for the data series. The results are show in **Appendix 1.**

When evaluating the entire period before and after the outbreak of the pandemic (2019-2022), which spans 4 years, the linear regression model based on table data provides more accurate insights into the pandemic's impact over the entire period. This is especially true when considering micro variables such as the daily number of new infections, daily COVID-19 related deaths, and the number of fully vaccinated individuals. The results indicate that the R-squared value for the VNIndex in relation to all variables is above 80%, underscoring the model's persuasiveness and the appropriateness of the chosen variables.

However, the regression model's results somewhat contradict traditional economic theories. The VNIndex correlates positively throughout the period with all macroeconomic variables. This means that an increase in the CPI or unemployment rate also leads to an increase in the stock index. Notably, even with rising daily infection and death rates due to COVID-19, or with increasing numbers of fully vaccinated individuals, the stock index continued to rise throughout the period.

This study reveals that the Vietnamese stock market reacted differently than other global stock markets during the COVID-19 pandemic. Previous research has shown that pandemics typically destabilize stock markets, leading to a decline in stock indices. However, this study's findings indicate that the Vietnamese stock index increased during the pandemic. While prior studies have highlighted that pandemics typically destabilize stock markets, leading to a decline in stock indices due to reduced consumer demand, investment, and increased business risks, the Vietnamese stock index experienced growth during the pandemic. This can be attributed to several factors, including:

(i) Government support policies: The Vietnamese government implemented numerous policies to support businesses and citizens during the pandemic, stabilizing the economy and stock market.

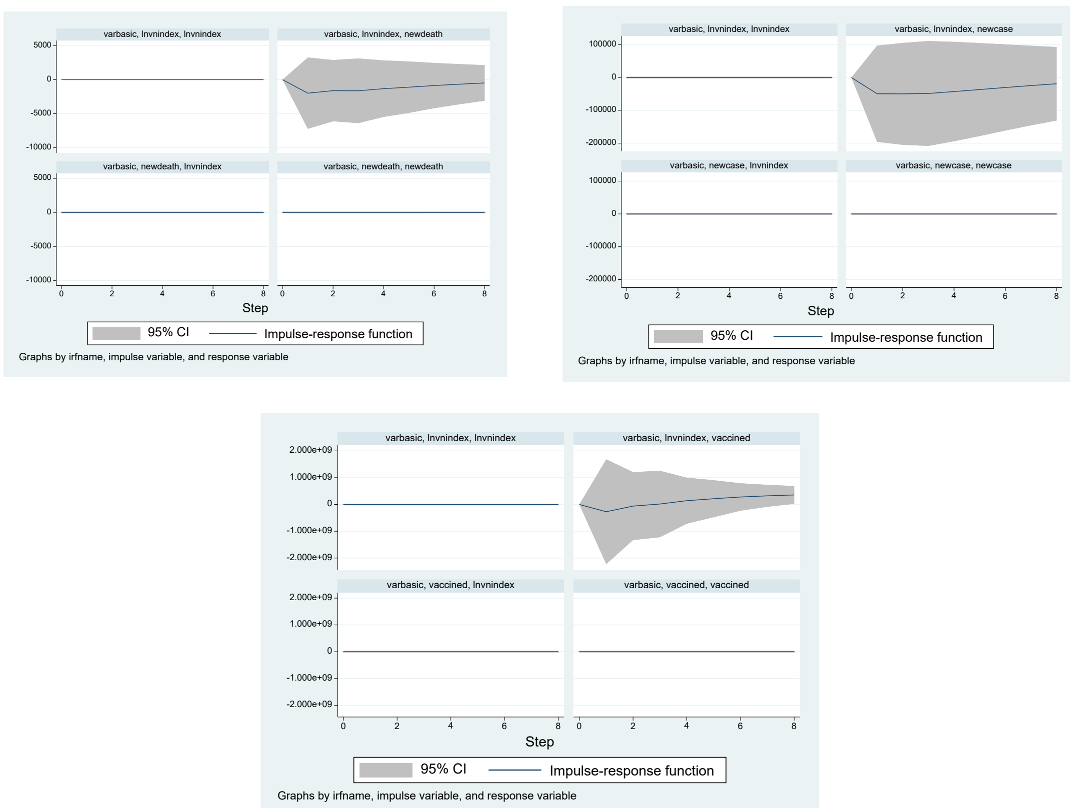
(ii) Economic growth: Vietnam was among the fastest-growing economies in the world during the pandemic. This fostered investor optimism, leading to a rise in the stock index.

(iii) Participation of foreign investors: Foreign investors increased their purchases of Vietnamese stocks during the pandemic, contributing to the stock market's growth.

Based on the VAR model (**Appendix 2**), it is evident that the COVID-19 pandemic has induced significant fluctuations in the Vietnamese stock market. Specifically, for every 10% increase in new infections, the stock index declines by approximately 1.5%. Similarly, with every 10% rise in deaths, the stock index further decreases by 0.8%. Other macroeconomic variables, such as inflation and employment, also exhibit a comparable correlation with the stock index. Moreover, the results indicate a short-term inverse relationship between micro variables and the stock market. This can be attributed to the negative impact of pandemic-related micro variables on the stock market. These micro variables encompass infection rates, mortality rates, and the number of vaccinated individuals. The VAR model's outcomes suggest that these micro variables all possess negative regression coefficients, implying their detrimental effects on the stock market. Specifically, the infection and mortality rates exert a more pronounced negative influence on the stock market, while the number of vaccinated individuals has a positive impact. This aligns with the observed reality. In 2020, COVID-19 outbreaks led to significant downturns in the Vietnamese stock market. The VN-Index plummeted by 25.77% in March 2020 and declined by 11.48% over the entire year. However, once the pandemic was controlled, the Vietnamese stock market rebounded and exhibited robust growth in 2021. The VN-Index surged by 11.48% in 2021, reaching a new record of 1,500.81 points in November 2021.

Subsequently, we will examine the Impulse Response Function (IRF) of the micro variables in relation to the returns of the Vietnamese stock market.:

Figure 1. Impulse response function (IRF) of micro variables on returns of Vietnam stock market (2019-2022).



(Source: Stata)

Through the Impulse Response Function (IRF), for the macro variables in the model, specifically the CPI and UER, their Beta coefficients relative to the VNIndex are 0.001 and 0.08, respectively. These results suggest that the unemployment rate has a stronger impact on the stock market, while inflation also influences but to a lesser extent. This is consistent with prior international studies on the correlation between inflation rates and stock markets or unemployment rates and stock markets, indicating that inflation rates are typically consolidated and announced after integrating various factors. In contrast, unemployment rates have a more immediate impact on stock markets as they reflect the strength of businesses through labor and production.

For the micro variables, which include information on new infections, deaths, and the number of individuals vaccinated against COVID-19, based on the above VAR vector regression analysis, the infection and mortality rates negatively impact the stock market, with the mortality rate having a higher Beta coefficient. Thus, it can be concluded that information on the mortality rate negatively affects stock market returns in the short term. Additionally, while new infections also negatively influence stock market returns, the impact is milder compared to the death rate. Conversely, given the positive Beta coefficient of the number of vaccinated individuals, this variable indicates a positive correlation with changes in stock market returns, suggesting that stock market investment sentiment heavily relies on positive societal reactions, media coverage, and government-provided information. In reality, the Vietnamese stock market is rated among the top ten stock markets worldwide in terms of resilience to the COVID-19 pandemic and its subsequent recovery. Furthermore, Vietnam has officially become the largest market in the MSCI Frontier Markets Index. This is expected to attract substantial investments from large foreign funds using the MSCI Frontier Markets Index as a benchmark.

Through the VAR model, the study finds that micro variables influence stock market returns before macro variables do. This is consistent with prior arguments and empirical studies, such as those by the IMF (2020) and the World Bank (2020).

Overall, this research provides additional evidence on the impact of significant events on stock markets, especially in the context of a pandemic. This is crucial in aiding investors and regulatory bodies in better understanding market fluctuations and making informed decisions.

However, this model still has limitations that need improvement. While the model for the entire pre- and post-COVID-19 period has shown a high R-squared value, incorporating other macro variables could offer a more in-depth and enriched perspective for the study. This would not only provide more insights into the impact of COVID-19 on the Vietnamese stock market but also offer significant policy implications for policymakers and portfolio managers.

5. DISCUSSIONS

First, the sensitivity of the Vietnamese stock market to information. The results of the model show that the correlation of the Vietnamese stock market with macroeconomic variables is stronger than before the pandemic. In fact, the Vietnamese stock market also showed a stronger reaction of VNIndex, HNIndex to economic, policy shocks... in 2022. This shows that the Vietnamese stock market is becoming increasingly sensitive to the global financial and economic situation, macroeconomic conditions, and macroeconomic policy. The reasons for this increase in sensitivity can be explained by a number of factors, including: (i) The recovery of the market after the direct impact of the Covid-19 pandemic was mainly due to the context, without accompanying the upgrading of the underlying conditions of the market such as the growth of listed companies, technical infrastructure conditions, market structure, investor conditions; (ii) Vietnam is currently deeply and widely integrated with the economies of the world, so the Vietnamese stock market will also be affected and influenced by the global stock market; (iii) The war in Ukraine, the pandemic, the tightening of fiscal and monetary policies in the world will also lead to a decline in global economic growth, including Vietnam. The sensitivity of the Vietnamese stock market to information is increasing, making the market more vulnerable to economic and policy shocks. This requires regulators to take measures to mitigate risks and enhance the sustainability of the market.

Second, the quality of information on the Vietnamese stock market. From the conclusion of the regression model, it can be seen that information is an important factor affecting the stock market. Good news will boost the market, while bad news will cause the market to fall. On the Vietnamese stock market, the quality of information still needs to be improved in many ways. Some specific issues include: (i) Incorrect, opaque information: This is a common problem on the Vietnamese stock market. Much of the information that is released is incorrect, opaque, leading to investors making wrong investment decisions; (ii) Information is distorted, manipulated: Some individuals take advantage of insider information to manipulate the market, causing losses to small investors; (iii) Information is not transmitted to investors in a timely and complete manner: This makes it difficult for investors to make accurate investment decisions.

Third, the issue of price manipulation on the Vietnamese stock market has made the Vietnamese stock market go against the world in the Covid-19 period. Price manipulation is a serious problem on the Vietnamese stock market. According to the results of a study by the Institute for International Economic and Political Research (VEPR), in the period 2017-2021, about 70% of price manipulation cases on the Vietnamese stock market involved shares of state-owned enterprises. Price manipulation has made the Vietnamese stock market go against the global trend in the Covid-19 period. While stock markets around the world fell due to the impact of the pandemic, the Vietnamese stock market rose sharply. This has made the Vietnamese stock market an attractive destination for foreign investors.

Fourth, the information and price of the stock market do not match the state of the economy and do not reflect the true value of the enterprise. The information and price of the Vietnamese stock market still do not match the state of the economy and do not reflect the true value of the enterprise. Some of the causes of this situation include: (i) The quality of information still has many problems, making it difficult for investors to make accurate investment decisions; (ii) The stock market is still small and underdeveloped, making information and prices affected by psychological factors; (iii) Investors still lack knowledge and experience, making them easily led by the crowd. The fact that many businesses and banks took advantage of the rising stock price to issue more shares to increase capital, not only created risks for investors but also affected the overall capital mobilization efficiency. The strong participation of individual investors has contributed positively to the recovery and growth of the stock market, but also poses unpredictable risks. In fact, there have been cases of businesses that have lost money, been severely affected by the pandemic, but the stock price has still risen sharply. In addition, taking advantage of the high stock price, many businesses and banks are pushing to issue more shares to increase their charter capital. The situation of weak businesses raising capital thanks to rising stock prices not only poses a risk to investors, but also affects the efficiency of mobilizing and using capital of the economy as a whole.

Despite significant improvements in recent years, the policy of preventing shocks in the Vietnamese stock market still has some limitations. Temporary measures to respond to emergencies have not been implemented effectively.

Regarding the criteria for public companies and the process of issuing securities, the Government has issued Decree No. 155/2020/ND-CP amending and supplementing some articles of Decree No. 108/2015/ND-CP on the issuance and trading of corporate bonds. This decree specifies the criteria for public companies and the process of issuing securities to ensure transparency and publicity of the market. However, in practice, there are still some shortcomings in the implementation of these regulations, including some regulations that are not yet in line with reality, making it difficult for businesses to meet the criteria for public companies and the process of issuing securities, and the implementation of regulations is not yet serious, leading to the situation where some businesses violate regulations but are not seriously punished.

Regarding information transparency in the stock market, the Government has issued Decree No. 186/2021/ND-CP detailing the Law on Securities on the information disclosure activities of listed organizations, registered organizations for trading and public companies. This decree specifies the responsibilities of organizations and individuals on the stock market to disclose information. However, in practice, there are still some shortcomings in the disclosure of information on the stock market, including some organizations and individuals have not fully fulfilled their disclosure obligations under regulations, and the handling of violations of regulations on information disclosure is not yet serious, leading to the situation where some organizations and individuals violate regulations but are not seriously punished.

Regarding the law on protecting the interests of investors, the Government has issued Decree No. 156/2020/ND-CP detailing the Law on Securities on the protection of the interests of investors. This decree specifies the specific measures to protect the interests of investors, including measures to deal with violations of the law on securities, the stock market, and measures to compensate for losses to investors. However, in practice, the implementation of these regulations is still difficult due to the regulations are not yet complete and lack feasibility, and the coordination mechanism between relevant agencies in protecting the interests of investors is not yet tight.

Regarding IT infrastructure in the stock market, the project to build a new securities trading system is still under implementation and does not have a specific plan for completion. However, the Government has approved this project with a total investment of VND 1,200 billion. The project is expected to be completed in 2025 and will replace the current trading system of the Vietnam Securities Exchange (VNX).

Regarding foreign ownership limits, the Government still does not have a specific plan to expand foreign ownership limits for listed companies. This could affect the liquidity and development of the Vietnamese stock market.

Regarding emergency response policies, the Ministry of Finance has issued a number of measures to support businesses and investors, including reducing the cost of securities services, reducing fees and levies in the securities field, and liquidity support[1]. These policies have helped to reduce the difficulties for businesses and investors, contributing to stabilizing the market. However, there are still some limitations to these policies, including: (i) The scope of support is limited, and it has not met the needs of businesses and investors; (ii) The emergency intervention mechanism for the market is still not perfect, and there are no specific regulations on liquidity support measures.

Regarding policies with a macroeconomic stability nature, Vietnam has implemented a series of monetary and fiscal policy measures, including maintaining high liquidity, reducing

1 Circular No. 14/2020/TT-BTC expired on December 31, 2021. However, the Ministry of Finance issued Circular No. 219/2022/TT-BTC, reducing the price of 15 types of securities services from January 1, 2023 to December 31, 2023.

Circular No. 37/2020/TT-BTC expired on December 31, 2021. However, the Ministry of Finance issued Circular No. 220/2022/TT-BTC, reducing 50% of fees and levies in the securities field from January 1, 2023 to December 31, 2023.

The Vietnam Securities Depository Center (VSD) continues to reduce 30% of E-voting service fees for issuers.

The State Securities Commission (SSC) issued Circular No. 12/2022/TT-UBCK, which regulates the emergency intervention mechanism for the securities market. This mechanism includes measures such as:

• Adjusting the price fluctuation range of securities.

• Temporarily suspending trading.

• Purchasing shares of listed companies.

• Liquidity support for investors.

interest rates, providing timely credit, and creating favorable conditions for reducing capital costs and lending rates.

6. RECOMMENDATIONS

First, strengthen monitoring and inspection of information disclosure by listed companies. To reduce the occurrence of inaccurate and opaque information, the Ministry of Finance needs to coordinate closely with the State Securities Commission and the Stock Exchanges in monitoring, inspecting, and strictly handling violations. At the same time, there should be a policy to encourage the disclosure of accurate and complete information, such as tax reduction for companies that comply well with information disclosure.

Second, improve the quality of IT infrastructure of the stock market. The Ministry of Finance needs to accelerate the implementation of the new securities trading system, and at the same time increase investment in upgrading IT infrastructure to ensure the stability, security, and efficiency of the system.

Third, develop and issue specific regulations on expanding foreign ownership limits for listed companies. This will help to improve the liquidity and development of the Vietnamese stock market, attracting more foreign investment into the market.

Fourth, strengthen education and propaganda about the stock market for investors. The Ministry of Finance needs to coordinate with relevant agencies to organize training and propaganda programs to raise awareness and knowledge of investors, helping them to make smart and effective investment decisions.

Fifth, develop and issue specific regulations on strictly handling manipulative price and other violations on the stock market. At the same time, it is necessary to strengthen monitoring and inspection to detect and handle violations in a timely manner.

Sixth, consider adjusting monetary and fiscal policies to support production and business and reduce the flow of capital into investment and speculation channels in securities. At the same time, there should be measures to support businesses to overcome difficulties, such as tax and fee reduction, timely provision of credit.

Seventh, strengthen international cooperation in the field of securities. The Ministry of Finance needs to coordinate with relevant agencies to organize international conferences and seminars on securities, and strengthen cooperation with international securities organizations to learn from experience and apply effective policies and management measures from developed countries.

7. CONCLUSIONS

The COVID-19 pandemic has had a profound impact on the global economy, and the Vietnamese stock market was no exception. Despite Vietnam's relatively good control of the pandemic, the stock market still reflected the instability, negatively impacting the economy. Using the Vector Autoregression (VAR) method, the study analyzed the interactions between macroeconomic, microeconomic, and stock market factors. The results showed a strong relationship between the variables and the stock market, especially in the context of the pandemic.

To ensure the sustainable development of financial markets in the future, it is necessary to understand and prepare for shocks similar to COVID-19. The solutions and implications proposed in the study aim to enhance the market's ability to absorb shocks in the future.

In general, the evaluation and analysis of the impact of the COVID-19 pandemic on the Vietnamese stock market not only helps us to better understand the relationship between macroeconomic, microeconomic, and stock market factors, but also provides valuable implications for the sustainable development of the stock market in the future.

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APPENDIX 1. LINEAR REGRESSION ANALYSIS OF THE VNINDEX DATA AGAINST MACROECONOMIC AND MICROECONOMIC VARIABLES FOR THE ENTIRE PERIOD FROM 2019 TO 2022.

Source	SS	df	MS			
				Number of obs	=	204
				F(5, 198)	=	189.42
Model	.718538604	5	.143707721	Prob > F	=	0.0000
Residual	.150214447	198	.000758659	R-squared	=	0.8271
				Adj R-squared	=	0.8227
Total	.868753051	203	.004279572	Root MSE	=	.02754

lnvnindex	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
lncpi	.0644274	.0084093	7.66	0.000	.0478441	.0810106
lnuer	.0331605	.0121732	2.72	0.007	.0091548	.0571663
newcase	2.33e-06	5.25e-07	4.44	0.000	1.29e-06	3.37e-06
newdeath	.0000618	.0000185	3.35	0.001	.0000254	.0000983
vaccined	1.45e-09	1.17e-10	12.37	0.000	1.22e-09	1.68e-09
_cons	7.053061	.01358	519.37	0.000	7.026281	7.079841

(Source: Stata)

APPENDIX 2. VAR ANALYSIS FOR VNINDEX'S PROFIT DATA WITH MACRO VARIABLES AND MICRO VARIABLES FOR THE ENTIRE PERIOD 2019-2022

Vector autoregression

Sample: 29jan2019 thru 29dec2022, but with gaps

		Number of obs	= 119
Log likelihood =	859.0899	AIC	= -14.10235
FPE =	2.58e-09	HQIC	= -13.91268
Det(Sigma_ml) =	1.84e-09	SBIC	= -13.63527

Equation	Parms	RMSE	R-sq	chi2	P>chi2
lnvnindex	10	.001661	0.9994	71532.62	0.0000
lnhnindex	10	.028828	0.9736	342.5594	0.0000

	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
lnvnindex						
lnvnindex						
L1.	1.279089	.1286827	9.94	0.000	1.026875	1.531302
L2.	-.2820384	.1292525	-2.18	0.029	-.5353686	-.0287081
lnhnindex						
L1.	-.0016868	.0022636	-0.75	0.456	-.0061234	.0027498
L2.	.0005931	.0023036	0.26	0.797	-.0039219	.0051081
lncpi	.0010654	.0007666	1.39	0.165	-.000437	.0025678
lnuer	-.0014869	.000962	-1.55	0.122	-.0033724	.0003985
newcase	-1.70e-08	4.43e-08	-0.38	0.700	-1.04e-07	6.98e-08
newdeath	-7.27e-07	1.46e-06	-0.50	0.619	-3.59e-06	2.14e-06
vaccined	1.57e-11	1.35e-11	1.16	0.245	-1.08e-11	4.22e-11
_cons	.0293599	.0449657	0.65	0.514	-.0587712	.117491
lnhnindex						
lnvnindex						
L1.	-3.752298	2.234056	-1.68	0.093	-8.130967	.6263721
L2.	4.595238	2.243949	2.05	0.041	.1971782	8.993298
lnhnindex						
L1.	-.0258904	.0392986	-0.66	0.510	-.1029142	.0511335
L2.	-.0344449	.0399928	-0.86	0.389	-.1128293	.0439396
lncpi	.0846922	.0133082	6.36	0.000	.0586086	.1107758
lnuer	.0327847	.0167009	1.96	0.050	.0000515	.0655179
newcase	-2.06e-07	7.69e-07	-0.27	0.788	-1.71e-06	1.30e-06
newdeath	.00004	.0000254	1.57	0.115	-9.79e-06	.0000897
vaccined	4.63e-09	2.35e-10	19.73	0.000	4.17e-09	5.09e-09
_cons	-.1028755	.780648	-0.13	0.895	-1.632917	1.427167

(Source: Stata)

ORGANIZING THE REWARD, DISCIPLINE SYSTEM ACCORDING TO MANAGERIAL RESPONSIBILITY AT HOA PHAT'S IRON AND STEEL MANUFACTURING SUBSIDIARIES

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Abstract: Reward is a form of encouraging employees in an enterprise when their assigned tasks are well implemented. On the other hand, disciplinary measures help prevent employees from committing acts that harm the enterprise reputation and efficiency and go against collective benefits or the law. The article employs numerous data collection methods such as observation, questionnaires, interviews... and data analysis methods including statistics in order to generate the current situation of organizing reward systems according to managerial responsibility in iron and steel manufacturing enterprises of Hoa Phat Group, thereby suggesting solutions to perfect the organization of this reward system, contributing to improving business administration efficiency.

Keywords: reward, discipline, responsibility center, Hoa Phat

1. INTRODUCTION

One of the most important contents of business administraiton is building an appropriate reward and discipline system, motivating administrators and employees to develop their abilities, contributing to improving operational efficiency of each department. Building a reward and discipline system is part of the enterprise's human resource strategy. Organizing the reward and discipline system according to the enterprise's responsibility centers contributes to improving the operational efficiency of the responsibility centers.

Currently, Hoa Phat is the group that leading industrial production group in Vietnam. Starting from a company specializing in trading construction machines in August 1992, Hoa Phat gradually expanded into other fields such as furniture, steel pipes, construction steel, refrigeration, real estate and agriculture. In November 15, 2007, Hoa Phat Group officially listed their shares on the Vietnamese stock market with the stock code HPG (Hoa Phat Marketing Strategy, n.d). By 2023, Hoa Phat has 10 iron and steel manufacturing enterprises are distributed in the provinces in the North, Central and South. At Hoa Phat's iron and steel production enterprises, responsibility centers are also established. However, the organization of the reward system according to responsibility centers does not really motivate the managers and employees to develop their capabilities and effort to improve the efficiency of the responsibility centers and the performance of the entire enterprise. This study employs some survey data on the managers at 10 iron and steel manufacturing enterprises of Hoa Phat Group to evaluate the current situation of organizing the reward, discipline system according to responsibility centers, thereby providing complete solution to the organization of the reward system, creating work motivation for administrators and employees, and improve the organizational performance.

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2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

Though research on reward and discipline systems is quite extensive in the world and in Vietnam. However, there are not much research on rewards and discipline associated with responsibility centers. A number of typical works related to the research may be mentioned below.

Gross et al (2004) point out that reward system is an important part of human resource strategy in any organizations. Since traditional reward models no longer work in today's business environment, modern organizations must design their reward systems that incorporate organizational strategy to achieve higher performance, at both individual and organizational levels. An appropriate reward system can help an organization deliver the right amounts to the right people, at the right time, for the right reasons.

According to Mello (2014), salaries and rewards affect the organization through the employer's ability, ensuring optimal levels of employee performance to achieve the organization's strategic goals.

Hsieh et all (2011) believe that businesses need to apply a contribution-oriented human resource strategy and need to increase the portion of alternative output rewards. In addition, enterprises should have a combination of business competitive strategies, human resource strategies and reward systems. The authors believe that businesses need to develop appropriate alternative rewards, which include human capital rewards, output rewards and position rewards.

According to Kaplan et al (2015), part of the control process includes preparing performance reports, which compare actual and budgeted data to identify reasons for unsatisfactory performance or whether resources can be improved. These performance reports can also be used to evaluate and reward employees.

D. Hansen (2006) emphasizes that regular management rewards include performance-related incentives whose objective is to encourage managers to act in the best interests of the business. Forms of management rewards include pay rises, bonuses based on reported earnings, stock options, and non-cash bonuses.

It can be seen through a number of studies on reward systems that there has been orientation on building a reward system according to management responsibilities and reward forms. However, there has been no specific research on the reward system at Hoa Phat Group's iron and steel production enterprises. Each business has its own characteristics, so perfecting the organizational reward system in each enterprise needs different models. The article aims to perfect the model of organizing the reward system according to responsibility centers in iron and steel manufacturing enterprises of Hoa Phat Group.

3. METHODOLOGY AND PROPOSED MODEL

The research methodology used throughout the study is the dialectical methodology of historical materialism. Research methods used by the authors used to accomplish the research objective is data collection and data analysis methods to accomplish the research objectives.

+ Data collection methods include such numerous methods as secondary data collection method, observation method, typical case study method, interview method, and questionnaire.

The researchers conduct in-depth interviews with the managers of Hoa Phat Hai Duong Steel Joint Stock Company, Hoa Phat Dung Quat Steel Joint Stock Company, Hoa Phat Steel Pipe Company Limited and conduct case studies at these three enterprises.

The authors conducted a survey on the managers and accountants of all the 10 iron and steel manufacturing enterprises of Hoa Phat Group during July 2023.

The questionnaires are designed to investigate some content about the organization of the reward system at the enterprises. The 5-level-Likert questionnaires include both closed questions and open questions. The number of questionnaires distributed was 376, 344 of which was returned, with response rate of 91%.

+ Data analysis method: descriptive statistical method

The result from the questionnaires helps the researchers determine the average value of the content of the organizational reward system, on which some evaluation of the organization of the reward system at the researched enterprises is made.

4. RESEARCH RESULTS

4.1. Organizing the reward, discipline system according to management responsibilities

According to Nguyen Ngoc Quang (2014), a responsibility center is a operating organizational department where the department manager is responsible for all activities of his or her department to senior managers. In an enterprise, based on financial decentralization, many different types of responsibility centers arise such as cost centers, revenue centers, profit centers, and investment centers.

Rewarding is the praising, recognizing, honoring merit, encouraging material benefits for collectives and individuals with achievements and benefits brought to the business. The reward system is an important part of an organization's human resource strategy. Organizing the reward system according to management responsibility is an important content in organizing responsibility accounting in businesses. A good reward system will help businesses gain the efforts of managers at all levels in implementing the common goals. An appropriate reward system can help an organization deliver the right amount, to the right people, at the right time, for the right reasons (Gross et al., 2004).

Forms of reward according to management responsibilities

- Cash Reward
- Stock Reward
- Rewards based on income and reports
- Non-cash rewards

(i) Cash Reward

Cash rewards include salaries and bonuses. One way a company can reward good management performance is through periodic pay rises. Business profits and individual performance are the most common bases for deciding bonus amounts. Financial measurement methods are often used to measure short-term performance such as cost and profit targets. At the same time, there can be non-financial methods such as quality or time indicators. Using non-financial measurement methods will help reward recipients control long-term performance (Kaplan et al., 2015).

However, bonuses are more flexible than salary increases. Many companies use a combination of salary and bonuses. Then, the base salary is the same, and the bonus fluctuates according to reported earnings. Managers' rewards can be tied to the department's net income to motivate them to increase net income. Hence, when building a corporate reward system, it is necessary to carefully consider the positives and negatives from specific policies, and need to share risks from the owners to the business managers (D Hansen, 2006).

(ii) Stock reward

The company can reward managers with shares. Theoretically, the reward value should increase when the company performs well and decrease when the company performs poorly. However, the limitation of this type of reward is that stock prices can decrease because they are beyond the control of the managers. When stock prices fall, managers worry about the employees' morale. To keep morale high, the company creates a bonus fund that is distributed to meet sales and earnings goals. The goal of awarding stock options is to encourage managers to focus on the long term goals. The price of stock options is usually set approximately at the market price at the time of issuance. Then, if the stock price increases in the future, the manager can exercise the option, thereby purchasing the stock at a below-market price and receiving an immediate return (D Hansen, 2006).

(iii) Reward with stock purchase rights

Stock options give executives the right to buy a company's stocks at a specified future date, at a specified price. Stock options are created with the purpose of motivating executives to work. To create incentive value, the option price should be greater than the current price of the stocks. With stock options, directors may attempt to increase the future stock prices rather than focusing on short-term profits. Stock options are an option with virtually no downsides and unlimited growth potential. Therefore, executives may be incentivized to undertake high-risk projects which is hoped to pay higher rewards. (Kaplan et al., 2015).

(iv) Reward with performance shares

Companies use performance shares to reward their employees for achieving a specific (usually long-term) goal. The most common goal is to achieve EPS growth over a period of three to five years (typically 9% to 15% cumulative growth). Executives typically do not receive additional bonuses for exceeding the EPS increase range but instead receive a certain percentage of the bonus. Performance shares are affected by restrictions such as stock options: management risks and factors beyond the administrator's control. Performance stock rewards are said to cause managers to focus on making decisions that improve accounting metrics rather than economic value for the company (Kaplan et al., 2015).

(v) Rewards based on income and reports

The fundamental goal of a company using earnings-based rewards is goal congruence between owners and managers. To the extent that a company's owners want the net income and stock prices to increase, rewarding management based on these increases will help encourage managerial efforts. However, managers can increase short-term measures by using long-term ones such as keeping net income levels high by refusing to invest in more modern and efficient equipment, changing accounting methods (depreciation method, inventory valuation method, etc.), changing early income to increase profits... Thus, with compensation based on income, reporting encourages managers to be short-term oriented (D Hansen, 2006).

(iv) Non-cash rewards

Non-cash rewards are an important part of the management reward structure. There are many forms of non-cash rewards; for example, managers can have autonomy in carrying out daily business activities, have effective assistants or effective tools to support task solving... (D Hansen, 2006).

Rewards may be cash or cash equivalents or may be privileges or other benefits. Privileges can come in several forms. As a matter of fact, the most popular privileges in practice are vacations, priority parking, health insurance, club memberships, and special health insurance packages. In some special cases, privileges are provided depending on the position within the company. In other words, privileges are awarded based on an informal performance appraisal. The granting of privileges, such as vacations, may be directly tied to the results of formal performance appraisals, often in the form of a contest. Other non-monetary rewards include official recognition in the form of a trophy, informal recognition in the form of social invitations from long-time executives. Senior managers are often rewarded based on informal performance evaluations (Kaplan et al., 2015).

The choice of any forms of reward in an enterprise must come from the level of implementation of responsibility accounting in each enterprise, must be consistent with the characteristics of production and business, management organization at the enterprise and most importantly must aim to encourage managers to act in the best interests of the enterprise.

Disciplinary forms according to management responsibilities

Discipline is the orderly behavior of members in complying with the rules and regulations of the organization. The reason for applying disciplinary measures in businesses is to prevent or correct unfavorable situations for the business. Basically, discipline is a form of personnel training. According to Kaplan et al. (2015), there are several forms of discipline as follows

- Light discipline: Reprimand, suspension, fine...

- Serious discipline: Salary cut, demotion, dismissal...

(i) Light discipline

+ Reprimands

Reprimands can be given in oral or written forms. In case the management results are below the estimate due to some reasons belonging to the first management responsibility, the senior managers can give a warning by expressing disapproval to the managers at lower level. It is important to grasp the principle that verbal warnings should always be given calmly, objectively and privately. The conversation should be recorded in a formal document or recorded in the manager's personnel file.

A written reprimand is given after a verbal reprimand. By this way, senior managers send a written warning to lower-level managers when their management results are two or more times lower than estimates due to a number of reasons that fall within their management responsibility, and at the same time ask them to specifically explain their management responsibilities (directly in oral or written forms). Next, the reprimanded manager will send a report to the human resources department. This is a common process in many organizations.

+ Discipline by suspension

Suspension is applied to serious violations of management responsibilities. The suspension may last a few days. Accordingly, some senior leaders will apply suspension from the first violation and sack lower-level managers for the next violation. In addition, higher-level managers will let lower-level managers improve their performance and behavior with multiple suspensions, each longer than the previous, before finally applying the form of dismissal.

+ Loss of privileges

With this form of discipline, some privileges such as priority in job assignment, vacations, flexible hours, choice of work equipment, etc. can be revoked for a certain period of time.

+ Fine

Fines are applied to certain violations that cause damage to goods, machinery, or certain assets of the company or to compensate for the lost money due to incorrect accounting by deducting money or paying fine with managers.

+ Work transfer

When violating discipline, a manager can also be transferred to a farther location or another department. The transfer has been definitely discussed in advance by system administrators. This form is often applied by non-governmental organizations.

(ii) Serious discipline

+ Salary cut

Salary cuts are applied to managers at all levels for violations related to damage or loss of property. The damages caused by them are then recovered from their wages.

+ Demotion

Demotion is applicable in cases where managers at all levels show their unsuitability for the current position. They are demoted to a lower job with lower salary and responsibility. This seriously affects the morale and motivation of managers.

+ Temporary suspension during conclusion of investigation

Temporary suspension during conclusion of investigation is applied to serious behavior of managers at all levels. At that time, the manager's regular salary was withheld for the duration of the investigation. The suspension could last for more than several months until the investigation is completed. Managers who are temporarily suspended will only receive a living allowance during the suspension period.

+ Dismissal

When managers at all levels commit serious violations related to integrity, professional ethics, etc., dismissal is applied. The dismissal affects the manager's reputation, making it difficult for them to apply for a job elsewhere. Before deciding to sack a manager, superior managers need to review the personnel file and all relevant documents to consider before deciding whether to sack or not.

4.2. Current situation of organizing the reward, discipline system according to management responsibilities

The authors conducted a survey on managers and accountants at 10 iron and steel manufacturing enterprises under Hoa Phat Group. The survey results are shown in table 1:

Table 1. Survey results on reward, discipline system organization according to management responsibilities

(Note: 1: Very low, 2: Low, 3: Average, 4: High, 5: Very high)

No.	Questions	1	2	3	4	5	Mean
1	The enterprises issue reward/discipline regulations in written form.	0	0	0	341	3	4.00872
2	The reward/ discipline system is consistent with the performance of department managers.	0	0	322	15	7	3.08430
3	Diverse forms of reward/discipline.	0	0	322	15	7	3.08430
4	The reward/discipline system enhances the work efficiency of department managers.	0	0	100	200	44	3.77907
5	Department managers are satisfied with the enterprise's reward/ disciplinary system.	0	0	102	200	42	3.73837

6	The reward/ discipline system is renewed:						
	yearly	0	0	319	25	0	3.07267
	quarterly	0	0	0	0	0	0
	others	0	0	0	0	0	0

(Source: Research results)

As shown in the table, the reward, discipline system at Hoa Phat Group's iron and steel manufacturing enterprises is relatively consistent with management responsibilities. The reward forms can increase department managers' efficiency and the department managers are satisfied with the reward system.

The enterprises have issued written reward and disciplinary regulations with quite a high Mean of 4.00872, which means Hoa Phat Group's iron and steel manufacturing enterprises have issued clearly written reward regulations. The reward/discipline system in accordance with the manager's responsibilities has a Mean of 3.0843, showing that the compatibility is not high. The form of reward/discipline is not really diverse with Mean equal to 3.0843. The reward/discipline system enhances work efficiency (Mean = 3.77907), proving that administrators' reward/discipline measures have significantly contributed to increasing work efficiency. Department managers are satisfied with the reward/discipline system of the enterprise (Mean = 3.73837), proving that managers are relatively satisfied with the reward/discipline system. The reward/discipline system has an annual review with a Mean of 3.07267.

The results of in-depth interviews with managers at all levels at Hoa Phat Steel Joint Stock Companies in Hai Duong, Dung Quat and Hoa Phat Steel Pipe Company Limited show that the enterprises have attractive reward policies, which satisfy the managers. The reward/discipline system is built to ensure openness, fairness and benefits of all the officers and employees. The main form of reward is monthly unexpected bonuses if there are criteria such as excessive sales targets, etc. At the end of each year, cash bonuses are offered.

Disciplinary measures, according to the interview results, include such forms as warning, reprimand, demotionand dismissal, and administrative discipline such as fines, warnings, salary deductions, dismissal,... For example, employees who come to work late must evaluate their performance and deduct their year-end bonuses. According to the Group's regulations, employees who damage a product due to the employee's fault must pay material compensation according to the severity of the violation.

Beside, the managers participating in the interviewe agree that, at Hoa Phat Group enterprises, the employees being late for work must be evaluated in terms of emulation, resulting bonus deductions at the end of the year. The form of reward/discipline, however, is said to not really diverse. Some forms of reward have not been applied such as stock rewards. The companies have not based on the level of exceeding the plan of the departments to determine the reward level according to each level of exceeding the plan. Therefore, this has not encouraged the department managers to improve the operational efficiency of the department radically.

Additionally, some disciplinary action has been issued, but the discipline has not been tied to the level of non-fulfillment of each department which the manager is in charge of.

5. DISCUSSION AND CONCLUSION

5.1. Discussion

** Organizing the reward and discipline system at Hoa Phat Group's iron and steel production enterprises has achieved the following results:*

- The reward and discipline system is relatively consistent with management responsibilities, contributing to enhancing the work efficiency of department managers. Department managers are satisfied with the reward and discipline system.

- The reward/discipline system is built to ensure openness, fairness and benefits of all officers and employees of the company. The main form of monetary reward is to increase the motivation of employees and managers. The main form of discipline is excluding emulation, excluding year-end rewards or material compensation for employees who are at fault for causing damaged products, which also limits violations of working time and improves labor quality in the enterprise. .

** Some limitations in organizing reward and discipline systems at iron and steel manufacturing enterprises of Hoa Phat Group:*

According to the results of the current situation, the reward system according to management responsibility at Hoa Phat enterprises is designed with not highly diverse reward/discipline forms which is not associated with the performance of departments as well as department managers. Stock rewards have not been applied in recent years. The main form of reward at these companies is a monetary reward based on the employees' salary. The reward has varied in the organization due to different salary levels, whereby the higher the managers, the higher the bonuses.

Some forms of discipline have been applied, however, when the departments do not complete the planned targets, there is no form of fine payment, instead tenure bonuses are reduced but regular annual bonuses. This has not motivated the managers to put more efforts and be more responsible in completing the plans of their departments and increasing the efficiency of the department's operation. Therefore, it can be seen that the forms of discipline are not associated with the management results of department managers, and the forms of discipline are not diverse and inconsistent.

** Solutions:*

The authors proposes a number of forms of reward and discipline according to the characteristics and management features of each type of responsibility center as follows:

Reward system

The overall reward system and regular management rewards are an extremely important factor in promoting management performance. The reward/ discipline system at iron and steel manufacturing enterprises of Hoa Phat Group is not associated with the performance and management efficiency of managers at all levels in the enterprises. Therefore, it is necessary to organize the reward/ discipline system associated with performance results. The appropriate reward system will have a positive impact, creating a great motivation to motivate managers to come up with better implementation solutions to achieve high efficiency in the operation of the department and the whole organization.

Hoa Phat Group's iron and steel manufacturing enterprises can reward management in the form of salary increases, bonuses based on reported income, stock options and non-cash rewards. Each different management level, iron and steel manufacturing enterprises of Hoa Phat Group can choose appropriate reward forms:

- For investment center managers, in order to both increase responsibility and management efficiency, it is possible to apply the form of reward based on reported income, and ROI, RI, EVA investment efficiency indicators,... associated with stock rewards.

- For profit center and revenue centers managers, it is possible to reward based on reported income, revenue targets, profits, and customer satisfaction levels,... incorporating non-cash rewards. There are many forms of non-cash rewards. For example, the managers can have autonomy in the day-to-day conduct of their business, or have effective assistants and effective tools to support job solving...

- For cost center managers, monetary rewards can be given based on the IA report, the rate of cost savings,...

Disciplinary system

In order to bind the responsibilities of managers at all levels at iron and steel manufacturing enterprises of Hoa Phat Group, it is necessary to promulgate a disciplinary system associated with the performance results of managers at all levels. Currently, at Hoa Phat enterprises there is no form of disciplinary action to fine managers when the departments they are in charge of fail to fulfill assigned tasks. That has not put enough pressure on the managers in performing their responsibilities and implementation in order to result in the departments' achievements. Therefore, at Hoa Phat Group's iron and steel manufacturing enterprises, it is necessary to issue specific fines to managers whose departments are in charge of failing to fulfill their tasks.

There also should be a positive form of discipline, that is, self-discipline or self-control. It helps businesses own an atmosphere of mutual trust and all employees strive for their common goals. Then, the companys' plans must be developed methodically, reasonably and disseminated to all the employees and managers at all levels in order for them to understand the companys' rules and the plans to be implemented. Accordingly, they will take positive action to implement positive discipline. Self-discipline developed within the whole enterprises will form work spirit and teamwork, becoming a positive culture of the business.

When building the disciplinary system, the iron and steel manufacturing enterprises of Hoa Phat Group should notice that if the accountability accounting system focuses too much on evaluating the department managers' responsibility, they may not try to realize the common goals of the organization; and in turn, they find ways to cope and do not trust the evaluation system. In addition, if the responsibility accounting system focuses on information, the department managers will know the reasons for the results of the department, thereby handling limitations, improving and increasing efficiency and operational results. Therefore, it is necessary to collect, process, analyze and provide information according to the responsibility centers in a reasonable way in order to find out the causes of limitations in each department and help department managers find out solutions to limitations.

5.2. Conclusion

The reward system is one of the most important strategies in an organization. To stimulate employees, it is possible to build a reward system with various forms. In order to prevent behavior against to the benefits of the organization, the disciplinary system should also be strengthened. Hoa Phat Group's iron and steel manufacturing enterprises have made efforts in building their reward and discipline systems to enhance the management efficiency of the responsibility centers. However The Group need to diversify forms of reward and discipline associated with managerial responsibilities to improve the management efficiency of the department and the whole Group.

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ASSESSMENT OF EFFECIENCY OF AGRIBANK'S SUPPORT POLICIES FOR PRIVATE SECTOR OPERATIONS IN FIELD OF AGRICULTURE, FORESTRY AND FISHERIES

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Abstract: *This article aims to analyze the effectiveness of the support policies of the Bank for Agriculture and Rural Development of Vietnam (Agribank) to support the private sector operating in the fields of agriculture, forestry and fisheries. By using the comparative method, the author has used two factors affecting the effectiveness of the above support policies, namely total outstanding loans and overdue loans. The results of this research will be the basis for Agribank to continue to extend or build preferential credit packages to promote the development of the private sector operating in the fields of agriculture, forestry, and fisheries in both scale, quality and efficiency.*

Key words: *Agribank, agriculture, forestry, fisheries, preferred products, private sector.*

1. INTRODUCTION

Peace, cooperation, association and development are still major trends, but strategic competition between major countries is very complex and fierce, the multipolar situation is increasingly clear. Globalization and international integration continue to progress but encounter many obstacles and challenges, populism and protectionism tend to increase. Policy adjustments and foreign relations of major countries in the region and the world are evolving unpredictably. Sustainable development has become an overarching trend in the world; Digital economy, circular economy, and green growth are development models chosen by many countries. The United Nations' 2030 Agenda for Sustainable Development has a great influence on the way of growth, economic cooperation, trade and investment in the world. Transition to renewable energy and green energy will be a clearer trend in the coming period. The 2021-2030 socio-economic development strategy has determined that by 2030 (the 100th anniversary of the founding of the Communist Party of Vietnam), Vietnam will be a developing country with modern industry, high average income, and both Vision to 2045 (the 100th anniversary of the country's founding) to become a developed, high-income country. Therefore, it is necessary to create conditions for the private economy, especially the private economy operating in the fields of agriculture, forestry and fisheries, to develop in a socialist direction to realize these goals. As one of the state-owned commercial banks that plays a leading role in the banking system, Agribank always promotes the pioneering and exemplary role of a state-owned commercial bank in leading the system of credit institutions. Agribank seriously and effectively implement the national monetary policy and the Party and State's guidelines and policies on currency and banking, especially credit policy to meet the needs of the private economy operating active in the fields of agriculture, forestry and fisheries and oriented to build relationships with businesses that are sustainable, long-term partnerships, for the benefit and development of businesses. Since the end of 2021, when the Covid-19 epidemic situation became complicated, Agribank promptly implemented preferential credit programs for the agriculture, forestry and fisheries sectors. This has initially shown effectiveness, but there is

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still a need for specific research on the effectiveness of the support policies that Agribank has applied recently to evaluate more accurately, from there as a basis for proposing extensions time to apply or develop other support policies.

2. Research Methodology

The research method used by the author to evaluate the effectiveness of Agribank's preferential credit policies for the private sector is the comparative method. This method is widely used in general economic analysis. Commonly used comparison techniques are absolute numerical comparison, relative numerical comparison, vertical comparison and horizontal comparison. The absolute numerical comparison is the result of subtracting data between the periods of analysis, it represents the variability of the economic phenomenon. The relative numerical comparison is the result of dividing the absolute comparison value by the base period value, which reflects the rate or rate of change of the analytic indicator. Vertical comparison is the relative numerical comparison of each part to the whole or one part to another. The technique of vertical comparison reflects the structure of the whole. Horizontal comparison is a comparison of quantity on the same criterion, used to reflect the growth and development of events and phenomena.

3. CREDIT STATUS OF THE PRIVATE SECTOR OPERATING IN THE FIELDS OF AGRICULTURE, FORESTRY AND FISHERIES AT AGRIBANK

3.1. The period before the support policy

Unit: Billion VND

Time	Total outstanding balance of Agribank	Agriculture, forestry and fisheries					
		Outstanding balance	Proportion	Short-term	Medium-term	Long-term	Bad debt
31/12/2020	1,209,693	323,286	26.72%	137,314	171,738	14,233	2,983
31/12/2021	1,319,520	339,500	25.73%	149,416	175,909	14,175	3,496

Table 1. Agricultural, forestry and fishery Outstanding at Agribank December 31, 2020 and December 31, 2021

(Source: Agribank internal data)

- As of December 31, 2020, total outstanding at Agribank reached 1,209,693 billion VND, of which outstanding of customers in the fields of agriculture, forestry and fisheries reached 323,286 billion VND, accounting for 26.72% /Total outstanding of Agribank, of which short-term loans reached 137,314 billion VND, accounting for 42.5%, medium-term loan balance reached 171,738 billion VND, accounting for 53.1%, long-term loans accounts for the lowest proportion, reaching 14,233 billion VND, equivalent to 4.4%.

Overdue debt for customers in the agricultural, forestry and fishery sectors is 2.983 billion VND, accounting for 0.92% of total outstanding loans in this sector, accounting for 0.25% of Agribank's total outstanding.

- As of December 31, 2021, total outstanding loans at Agribank reached 1,319,520 billion VND, of which outstanding loans to customers in the fields of agriculture, forestry and fisheries reached 339,500 billion VND, accounting for 25.73% /Total outstanding loans of Agribank, of which short-term loans reached 149,416 billion VND, accounting for 44.0%, medium-term loan outstanding loans reached 175,909 billion VND, accounting for 51.8%, long-term loan outstanding accounts for the lowest proportion, reaching 14,175 billion VND, equivalent to 4.2%.

Overdue debt for customers in the agriculture, forestry and fisheries sector at this time increased to 3,496 billion VND, accounting for 1.03% of total outstanding debt in this field, accounting for 0.26% of Agribank's total outstanding.

3.2. The period after the support policy

3.2.1 Agricultural, forestry and fishery Outstanding at Agribank in 2022 and the first 7 months of 2023

To provide opportunities to access preferential loans, helping customers restore business operations after the period affected by the COVID-19 epidemic, especially corporate customers. in the fields of agriculture, forestry, fisheries, etc., thereby contributing to the banking industry implementing the policies of the Government and the State Bank on supporting the promotion of production and business, recovery and development. the country's economy. Agribank deploys preferential credit packages with a scale of up to 35,000 billion VND

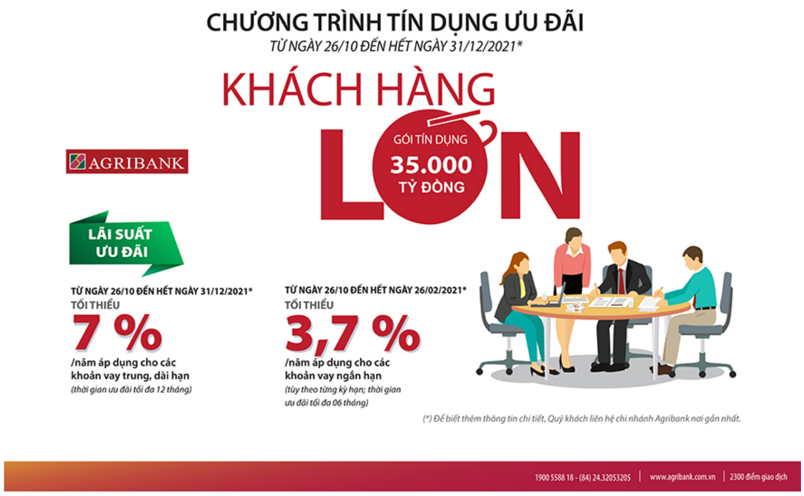

Figure 1. Preferential credit program for businesses in the fields of agriculture, forestry and fisheries of Agribank

(Source: www.agribank.com.vn)

In addition, Agribank is very active in implementing linked loan programs and loans for high-tech agricultural development under the direction of the Government and the State Bank. Agribank provides unsecured loans with assets to customers who meet the conditions with a maximum unsecured loan amount of 80% of the value of the project. Regarding the high-tech agricultural loan program, Agribank spends a minimum scale of 50,000 billion VND (about 2.2 billion USD) to invest in lending to this field.

Unit: Billion VND

Time	Total outstanding balance of Agribank	Agriculture, forestry and fisheries					
		Outstanding balance	Proportion	Short-term	Medium-term	Long-term	Bad debt
31/12/2022	1,425,731	370,515	25.99%	167,142	189,802	13,571	3,019
31/7/2023	1,444,731	380,846	26.36%	169,081	197,561	14,204	3,308

Table 2. Statistics of outstanding for agriculture, forestry and fisheries at Agribank 2022 and the first 7 months of 2023

(Source: Agribank internal data)

- As of December 31, 2022, total outstanding at Agribank reached 1,425,731 billion VND, of which outstanding loans to customers in the fields of agriculture, forestry and fisheries reached 370,515 billion VND, accounting for 25.99% /Total outstanding of Agribank, of which short-term loans reached 167,142 billion VND, accounting for 45.1%, medium-term loan outstanding loans reached 189,802 billion VND, accounting for 51.2%, long-term loan outstanding loans term reached 13,571 billion VND, equivalent to 3.7% .

Overdue debt for customers in the agriculture, forestry and fisheries sector increased to 3,019 at this time. billion VND, accounting for 0.81% Total outstanding loans in this field account for 0.21 % of Agribank's total outstanding loans.

- As of July 31, 2023 , total outstanding loans at Agribank reached 1,444,731 billion VND, of which outstanding loans to customers in the fields of agriculture, forestry and fisheries reached 380,846 billion VND, accounting for 26 billion VND. .36% /Total outstanding loans of Agribank, of which short-term loans reached 169,081 billion VND, accounting for 44.4%, medium-term loan outstanding loans reached 197,561 billion VND, accounting for 51.9%, long-term loan outstanding loans term reached 14,204 billion VND, equivalent to a rate of 3.7 % .

Bad debt for customers in the agriculture, forestry and fisheries sector increased to 3,308 billion VND, accounting for 0.87% Total outstanding in this field, account for 0.23% of Agribank's total outstanding.

3.2.2. Proportion of agricultural, forestry and fishery loans in the "Big 4" and the entire industry

Unit: Billion VND

TT	Bank	31/12/2022			31/7/2023		
		Loan balance	Proportion/ Total utstanding	Proportion/ entire industry	Loan balance	Proportion/ Total utstanding	Proportion/ entire industry
1	Agribank	370,515	26.0%	41.6%	380,846	26.4%	41 .9%
2	Vietinbank	46,775	3.7%	5.2%	52,383	3.9%	5 .8%
3	BIDV	261,915	17.6%	29.4%	284,948	17.9%	31 .3%
4	Vietcombank	229,513	20.2%	25.7%	237,187	20.3%	26 .1%
5	Entire Industry	890,502	7.5%	100.0%	910,069	7.3%	100.0%

Table 3. Statistics on the proportion of loans to agriculture, forestry and fisheries at the "Big 4" and the entire industry

(Source: Agribank internal data)

According to collected data, as of December 31, 2022, Agribank's agricultural, forestry and fishery outstanding reached 370,515 billion VND, accounting for 26.0% of Agribank's loan balance, the highest among credit institutions in Vietnam, accounting for 41.6% of the entire banking system , outstanding in this sector only accounts for 7.5% of total outstanding of the entire industry. Meanwhile, outstanding loans for agriculture, forestry and fisheries at BIDV and Vietcombank are only 261,915 billion VND and 229,513 billion VND , accounting for 29.4% and 25.7% of the total loan balance of the entire industry in this field. Vietinbank has the lowest loan market share, only 5.2% market share with loan balance reaching 3.7% of Vietinbank's total outstanding, equivalent to 46,775 billions VND.

As of July 31 , 2023 , while BIDV and Vietcombank maintained the 2nd and 3rd positions with market shares of 31.3 % and 26.1 % respectively, Agribank still maintained the 1st position with outstanding of agriculture, forestry and fisheries reached 380,846 billion VND, accounting for 26.4% of Agribank 's loan balance, accounting for 41.9% of the entire banking system .

4. EVALUATE THE EFFECTIVENESS OF AGRIBANK'S SUPPORT POLICY FOR THE AGRICULTURE, FORESTRY AND FISHERIES SECTORS

As the Covid-19 epidemic reached its worst level since the beginning of the pandemic, the downturn in Vietnam's manufacturing industry became even more severe. This is also the main reason for the number of field customers Agriculture, forestry and fisheries at Agribank decreased from 2,067,226 customers as of December 31, 2020 to 1,944,809 customers as of December 31, 2021. Although total outstanding debt increased from 323.286 billion VND December 31, 2020 up 339.500 billion VND on December 31, 2021, but the loan proportion on total outstanding decreased from 26.72% to 25.73% as of December 31, 2021 .

Bad debts for the agriculture, forestry and fisheries sectors as of December 31, 2020 and December 31, 2021 reached VND 2,983 billion and VND 3,496 billion, respectively, corresponding to an increase in bad debt ratio from 0.92% increased to 1.03%. Through the process of disbursement of preferential credit capital to support the agriculture, forestry and fisheries sectors to overcome difficult times, bad debt balance in this sector also increased proportionally to the amount of capital accessed, at the same time reached 339,500 billion VND. This is also reasonable because Agribank then accelerates disbursement so that customers in the agricultural, forestry and fishery sectors can quickly access capital, while also solving temporary difficulties of businesses due to the impact of the pandemic. Covid 19.

At the end of 2021 and early 2022, when the Covid-19 epidemic is basically controlled and businesses restore production and business, Agribank also applies measures to control and restructure disbursed capital and bad debts in the fields of agriculture, forestry and fisheries decreased to 3,019 billion VND. In 2022, credit institutions have lent loans to many key agricultural sectors in localities in the Mekong Delta region with a growth rate of over 13% such as: seafood (112,000 billion VND, increased 16%), rice (89,000 billion VND, up 13%), vegetables (19,000 billion VND, up 14%)... In this area alone, Agribank - a friend of farmers has invested about 217,000 billion VND in capital. Credit with outstanding loans to the agricultural and rural sector is estimated at about 180,000 billion VND. Agricultural production enterprises applying high technology in An Giang and Vinh Long have recently accessed more than 4,000 billion VND in capital with preferential interest rates to develop food, vegetable and agricultural product processing factories. At the same time , after implementing support policies, only Agribank branches in Ho Chi Minh City in the first two months of 2023 has lent more than 15,960 billion VND to the agricultural and rural sector. In particular, for the preferential interest rate loan program to serve agricultural economic restructuring, the Agribank system in suburban districts of Ho Chi Minh City such as Cu Chi and Hoc Mon has accumulated loans of 1,600 - 3,200 billion VND to serve projects and plans for converting crops and livestock. Realizing that customers in the agriculture, forestry and fisheries sector are still heavily affected by the Covid-19 pandemic, to support customers operating in the forestry and fisheries sector to overcome difficulties, the Bank The State has just launched a credit program of VND 15,000 billion for this field. Borrowers are customers with projects/plans serving production and business activities in the field of forestry and fisheries. Loan interest rates in Vietnamese Dong are at least 1% - 2%/year lower than the average lending interest rates for the same term (short term, medium, long term) of lending commercial banks applied from time to time. period. Implementation period is until June 30, 2024 . Immediately after the program was implemented, Agribank committed to participating in the program with an expected scale of about VND 3,000 billion, while also exempting and reducing service fees for customers participating in the program, helping businesses ensure financial health, thereby maintaining stable production and ready raw material sources when the consumer market recovers.

5. RECOMMENDATIONS AND SOLUTIONS TO IMPROVE THE EFFECTIVENESS OF AGRIBANK'S SUPPORT POLICIES

To improve the effectiveness of Agribank's support policy, the author proposes some recommendations and solutions as follows:

Firstly, increase information to propagate Agribank's support policies, coordinate to provide timely information to customers in the fields of agriculture, forestry and fisheries. At the same time, improve the lending process, loan procedures, enhance appraisal capabilities to shorten loan processing time, create conditions for customers to access capital while still ensuring loan safety.

Secondly, coordinate with socio-political organizations and relevant local agencies, departments and branches to coordinate and review customers in the fields of agriculture, forestry and fisheries as a basis for implementing preferential policies, creating conditions for beneficiaries to quickly and promptly access Agribank's preferential capital.

Thirdly, improving the quality of human resources. In preferential credit activities for customers in the fields of agriculture, forestry and fisheries, the human factor plays an important role, determining the quality, credit efficiency, reputation and position of Agribank. Therefore, to improve the effectiveness of preferential policies, training and fostering staff is a very important solution. It is necessary to train Agribank staff to have the capacity, professional qualifications, political courage, good skills, professional ethics, good health, and meet the requirements of developing and applying science and technology, information technology, a sense of discipline, work skills, life skills, communication, behavior, dedication, and good customer service.

6. CONCLUSION

Demonstrating a pioneering and exemplary role in seriously and effectively implementing national monetary policy and the Party and State's guidelines and policies on currency and banking, especially credit policy, right from the beginning of 2020 when the Covid-19 epidemic began to break out in the country, following the direction of the Government and the State Bank, Agribank quickly stepped in to support and remove difficulties for businesses and customers affected by the Covid-19 epidemic including restructuring debt repayment terms, exemption or reduction of interest, fees, new loans... according to Circular 01/2020/TT-NHNN and Circular 03/2021/TT -SBV. As of September 23, 2021, Agribank's outstanding debt affected by the Covid-19 epidemic is more than 222,000 billion VND. To date, Agribank has restructured debt repayment terms for 10,714 customers with outstanding debt (principal and interest) of VND 26,086 billion; Exempt and reduce interest for 1,466 customers with outstanding of 3,717 billion VND.

With the mission of serving the development of "Tam Nong", Agribank is the main bank in investing in agriculture, farmers, rural areas, and the fields of agriculture, forestry, and fisheries. Currently, Agribank lends to the fisheries sector with outstanding loans of about 59,000 billion VND, accounting for about 4% of Agribank's outstanding loans to the economy, with 142,870 customers, focusing on processing, business, and export industries in seafood. For the forestry and wood processing sectors, the current outstanding debt is more than 55,400 billion VND, with more than 74,300 customers.

Although a commercial bank must compete to mobilize capital according to market mechanisms, each year with the Bank's financial resources, Agribank still spends thousands of billion VND to support customers with low-interest loans, work with customers to overcome difficulties, restore and develop production and business. Facing the situation of "exhaustion" and the risk that businesses will find it difficult to recover, joining hands with the Government, the State Bank and the community to implement the 10-year socio-economic development strategy 2021-2030, Agribank has proactively taken the initiative, proactively and promptly deploy many solutions to support the private sector, especially in the fields of agriculture, forestry and fisheries, becoming a solid fulcrum for businesses and entrepreneurs. Agribank also implemented an interest rate support policy of 2%/year above the actual loan interest rate from the state budget for loans from enterprises, cooperatives, and business households, including the fields of agriculture, forestry and fisheries. Along with policies to restructure debt repayment terms and maintain the same debt group according to Circular 02/2023/TT-NHNN of the State Bank, exempt and reduce interest and fees to support customers in paying off bad debts and debts that have had their risks resolved during the post-pandemic recovery period. Recently, Agribank launched a preferential credit program to finance export and import customers, applicable to businesses exporting rice, meat, aquatic products, coffee, agricultural products, handicrafts..., with interest The preferential interest rate is up to 1%/year lower than Agribank's current lending interest rate floor. In addition to interest rate incentives, customers participating in the program also enjoy attractive incentives on foreign currency exchange rates and service fees. In the coming time, Agribank is committed to focusing resources to continue supporting customers in the fields of agriculture, forestry and fisheries , contributing to strongly promoting the private sector, towards the goal of by 2030, Vietnam will be a developing country with modern industry, high average income and a vision to become a developed, high-income country by 2045 .

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FINANCIAL RESOURCES FOR COOPERATIVE DEVELOPMENT IN VIETNAM

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Abtracts: *Cooperatives and the collective economy increasingly play a clear role in the sustainable development of Vietnam's economy. In recent years, with the support of the state through policies, cooperatives across the country have reaped many achievements, but in the development process there are still certain limitations and obstacles, especially on financial resources. Based on the analysis of the current situation of financial resources, the article has pointed out the limitations and causes leading to the problems, thereby proposing a number of solutions and recommendations to contribute to promoting the mobilization of financial resources. Financial resources serving cooperative development in Vietnam.*

Keywords: *financial resources, development, cooperatives*

1. INTRODUCTION

Cooperatives have an important role and position in socio-economic development in general and in the agricultural and rural areas in particular. This is an economic organization that not only supports cooperative members to participate in the new rural construction program, but also implements the goal of restructuring the agricultural sector towards enhancing value and sustainable development. Developing and improving the efficiency of collective economic activities is the task of the entire political system. Based on the internal strength of the organization, the State builds and perfects institutions and policies to support and encourage development, develop.

The cooperative development strategy identifies the goal for the period 2021-2030 that the whole country will have about 140,000 cooperative groups with 2 million members, 45,000 member cooperatives. In which, the number of cooperatives operating fairly and well accounts for 60 - 70% of the total number of cooperatives in the country, striving to have over 5,000 cooperatives and 500 cooperative groups applying high technology to production by 2030. export and consumption of agricultural products, traceability. At the same time, strengthen the value chain link between businesses and cooperatives, striving to have about 50% of agricultural cooperatives link with businesses along the value chain.

To achieve the above goals, capital is considered one of the most important factors. Cooperatives need to have diverse investment capital sources to be proactive in production and business activities. This article will analyze and offer some solutions to mobilize financial resources to develop cooperatives.

2. THEORETICAL BASIS

a) Concepts

Cooperatives are conceived as economic organizations formed by economic entities who voluntarily contribute capital and contribute; Activities are mainly aimed at serving the economic

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activities of participating members with the motto of helping each other; The basic principles of cooperatives are voluntariness, equality, mutual benefit and democratic management...

Forms of cooperatives include: Support service cooperatives; Centralized production cooperatives; Cooperatives combine member support services and centralized production; New-style cooperatives according to industry, according to the connection needs of the community.

Financial resources are a type of resource necessary for investment and development in all aspects of cooperatives, formed from contributions and monetary support (or assets that can be quickly converted into money) from the state, of the people, members of the cooperative,... and is managed and used appropriately for the economic development of the cooperative.

Financial resources mentioned here include currency, material resources and other assets converted into money to promote cooperative development. Financial resources for cooperative development are formed from main sources such as: equity capital, credit capital...

b) Factors affecting financial resources for cooperative development

- Factors inside the cooperative:

+ Number of years of operation: affects the cooperative's ability to access capital. Young cooperatives need to build reputation in the market to be highly appreciated by banks and considered to lend equally to long-standing cooperatives.

+ Field of activity: Each industry is different and will have different levels of risk, so it will affect the ability of different cooperatives to access bank loans, each cooperative needs different business fields. Be flexible and sensitive in planning the development of your cooperative to make the best use of preferential policies and support from the State.

+ Charter capital: The cooperative's charter capital affects the cooperative's ability to access capital. Currently, the charter capital of cooperatives is still low, charter capital of up to 01 billion VND accounts for the majority. To increase the ability to access bank capital for investment, production and business, cooperatives need to consider increasing their charter capital.

+ Revenue growth rate: this helps the cooperative create an attractiveness to attract external investment capital, including bank loans.

+ Collateral: With loans, loan conditions as well as bank management and supervision will be stricter. If the cooperative meets the requirements, the opportunity to access capital will be increased because the collateral assets are more abundant and the value of the collateral assets is also greater.

+ Profit: When there is a suitable strategy and business plan that allows the cooperative to make the most of resources for production and business, this will increase the efficiency of the cooperative's operations, contributing to increased profits, which Increasing profits will mean higher and easier access to bank loans.

+ Social relationships: Through social relationships, cooperatives can easily learn about the State's mechanisms, policies and laws regarding their business fields, market information as well as information. credit easier.

- Besides the factors inside the cooperative, there are also external factors that affect the attraction of financial resources for cooperative development such as: local socio-economic conditions; State support policies for economic development, attracting investment to develop cooperatives...

3. CURRENT STATUS OF FINANCIAL RESOURCES FOR COOPERATIVE DEVELOPMENT INVIETNAM

3.1. Current status of cooperative activities in Vietnam

According to the 2020 White Paper on Vietnamese Cooperatives of the Ministry of Planning and Investment, as of December 31, 2019, the country had 22,204 cooperatives, the number of operating cooperatives with production results was 14,388, including 7,418 agricultural cooperatives., forestry and fisheries (accounting for more than 51% of the total number of cooperatives, an increase of 5.5% compared to the same period in 2018). The number of newly established cooperatives nationwide continues to increase. In 2019, there were 2,732 newly established cooperatives nationwide, an increase of 6.3% compared to 2018. In the period 2016-2019, each year the country had 2,380 newly established cooperatives. , an increase of 72.1% compared to the period 2013-2015.

In 2020, according to the 2020 Annual Report of the Cooperative Alliance, the whole country had 25,454 cooperatives, the number of newly established cooperatives was 2,138, with 65%, equivalent to 16,520 cooperatives, being agricultural cooperatives. In the first 6 months of 2021 alone, the whole country established 843 new cooperatives, 92 cooperatives higher than the same period in 2020, reaching 56.2% of the 2021 plan target, of which, the agricultural sector is 635 cooperatives (accounting for 75.32%). It is estimated that by December 31, 2022, the whole country has 29,021 cooperatives, 123,241 cooperative groups and 125 cooperative unions. Cooperatives attract 6.94 million household members, mainly in rural areas, and 2.6 million workers; Total charter capital reached 54.15 trillion VND, an average of 1.86 billion VND/cooperative; Total asset value reached 187.75 trillion VND, an average of 6.5 billion VND/cooperative.

Regarding organizational and operational models: Cooperatives have been more proactive in the market economy and international economic integration; Cooperative members have clearly demonstrated their roles and responsibilities through contributing capital and using the cooperative's services to develop the household economy. Many cooperatives have proactively built plans to choose production and business plans suitable to the local capacity and strengths, sought or strengthened links between members and member households in the cooperative and each other. between cooperatives and cooperatives, businesses, other economic sectors, scientists... affirming their role in supporting the economic development of member households.

Regarding business results: The number of effectively operating cooperatives accounts for about 57% of the total number of cooperatives. For cooperatives operating with business results, in 2019, the total net revenue of the entire operating cooperative area with production and business results reached VND 99,928 billion, an increase of 12.9% compared to 2018. , increased much higher than the rate of capital increase of cooperatives (down 0.3%). On average in the period 2016-2019, each year the cooperative generated 85,952 billion VND in net revenue, an increase of 21.5% compared to the average period 2011-2015 (Ministry of Planning and Investment, 2021). In 2022, most cooperatives and cooperative unions will be profitable, although not high due to increased input costs; Many agricultural cooperatives achieve revenue of 350 - 400 million VND/ha; Non-agricultural cooperatives' income increased by 6% over the same period in 2021.

Regarding production methods and application of science and technology: The number of agricultural cooperatives producing along the value chain and applying high technology in production is increasing and is gradually becoming the optimal production method for development. sustainable development. In 2018, the country had nearly 1,200 cooperatives organizing production associated with the value chain, applying high technology and food hygiene and safety standards; Many cooperatives cooperate with supermarkets and large enterprises to expand consumption markets, contributing to improving product quality and competitiveness. The number of agricultural cooperatives applying high technology in the country has increased very rapidly from 199 cooperatives in 2017, in 2018 reaching 520 cooperatives and by the end of 2020, the whole country had 1718 cooperatives applying high technology.

3.2. Current status of financial resources for cooperatives in Vietnam

Currently, the main financial resources for cooperatives to use in production and business activities come from the following main sources:

a) *Owner's capital*

This source is formed from the capital contributions of cooperative members and the cooperative's self-additional capital from annual after-tax profits.

The initial capital contribution of members is in the form of capital contribution in cash, in kind or by industrial property rights depending on the agreement between members. According to Clause 3, Article 4 of the 2012 Law on Cooperatives, Charter capital is the total capital contributed or committed to be contributed by members and member cooperatives within a certain period of time and recorded in the cooperative charter. Contributed capital is Vietnamese Dong, other assets are converted into Vietnamese Dong including foreign currencies, artifacts, value of land use rights, intellectual property rights and valuable papers at the time. capital contribution point. The value of capital contributions in other types of assets is determined according to the principle of agreement between the cooperative and its members or through an appraisal organization. For cooperatives, members' capital contributions are made according to the agreement and charter but must not exceed 20% of the cooperative's charter capital. The term, form and level of charter capital contribution are according to the provisions of the charter, but the time limit for full capital contribution does not exceed 06 months from the date the cooperative is granted a registration certificate or from the date of admission.

For cooperatives, mobilizing charter capital is very important, especially cash contributions, which directly affect the cooperative's operations. Cooperatives that mobilize charter capital from the beginning and continue to supplement it as they operate also contribute to helping members be more responsible for the cooperative's business activities. However, current reality shows that the capital contribution of cooperatives in our country is still very modest. When members join cooperatives, they lack capital, techniques and knowledge about economic management and the market... The motivation that makes them join cooperatives is to take advantage of economies of scale and Cooperation brings better benefits to them in production and business activities. Therefore, the amount of capital contributed by investors is basically guaranteed in terms of regulations at a minimum level, causing current cooperatives to still lack capital, making it difficult to be proactive in activities.

Cooperatives in our country today mostly operate in the field of agriculture, small-scale production, outdated technology, and ineffective operations, so revenue and profits are not high. Therefore, the annual after-tax self-additional capital is very limited.

b) *Sources of credit capital*

In addition to equity capital, cooperatives also mobilize loans from other financial and credit institutions. According to the regulations of the State Bank, cooperatives can access capital from banks, non-bank credit institutions, microfinance institutions, and people's credit funds. Sources from credit include: State development investment credit capital and commercial credit capital used for activities in the New Rural Construction Program. The purpose is to promote stable economic growth, so this source often has many incentives for borrowers.

Regarding capital access policy

Currently, the market economy sector is equal with other economic sectors in accessing bank credit capital, and is considered by credit institutions for secured or unsecured loans according to the provisions of law. The State Bank of Vietnam prioritizes credit investment and has deployed and issued many mechanisms and policies to create conditions to remove difficulties for market economy and cooperatives in accessing credit capital, specifically focusing on : (1) Reduce interest rates, stabilize exchange rates, increase liquidity to support credit institutions, open up credit capital flows and synchronously deploy solutions to overcome difficulties for cooperatives; (2) Amend, supplement and improve the credit mechanism in the direction of creating conditions for cooperatives to expand production and business and access credit capital sources; (3) Develop specific mechanisms for a number of industries that use a lot of labor effectively, especially in the agricultural sector; (4) Lending processes and procedures at credit institutions are simplified in the direction of creating conditions for the market economy sector to expand production and business and access capital at credit institutions.

In addition, the State Bank has a mechanism and policy to support preferential credit for agricultural cooperatives according to Decree No. 55/2015/ND-CP dated June 9, 2015 on credit policy to serve agricultural cooperatives. agricultural and rural development, effective from August 1, 2015 and Decree No. 116/2018/ND-CP dated September 7, 2018 amending and supplementing a number of articles of Decree No. 55/2015 /ND-CP (on the basis of overcoming the shortcomings of Decree No. 55/2015/ND-CP).

It can be said that bank credit capital has contributed to promoting the development of cooperatives, improving the material and spiritual life of cooperative members. Outstanding credit debt for the market economy sector has tended to increase in recent times, especially after the process of transformation and reorganization of operations under the Law on Cooperatives in 2012. Cooperatives have access to credit capital sources to expand. production and business activities in many forms: many cooperatives have built good business plans and have feasible production projects, so they have been granted loans by credit institutions in the form of mortgaged assets. from loan capital or can receive loan interest rate support or post-investment interest rate support from the State or the province implements a policy of exempting and reducing income tax for a certain period of time for cooperatives that relocate and invest in industry zones…

By the end of 2018, the credit balance for these customers of credit institutions reached 6,269 billion VND, with 1,808 customers (1,479 Cooperatives with outstanding debt of 4,609 billion VND, 18 LH Cooperatives with 825 billion VND and 311 THT with 768 billion VND). In the period 2013-2016, outstanding loans to cooperatives under Decree No. 55/ND-CP reached about 3,200 billion VND, of which unsecured loans to cooperatives reached about 70 billion VND, for 35 cooperatives, accounting for a very small proportion (about 2.18%) of the total outstanding loans according to Decree No. 55/ND-CP.

About the Cooperative Development Support Fund: The Cooperative Development Support Fund system is organized from central to local levels.

At the Central level, the Cooperative Development Support Fund is assigned to the Vietnam Cooperative Alliance to manage. The initial charter capital allocated by the state budget is 100 billion VND to support the operations of cooperatives. As of the end of 2018, the total capital of the Central Cooperative Development Support Fund was 136.4 billion VND, of which the initial state budget charter capital was 100 billion VND, additional capital during the operation process. is 36.4 billion VND. Total loan turnover of the Central Cooperative Support Fund since its establishment (2006) up to now is 258.7 billion VND for 110 projects, of which loan balance is 99.3 billion VND, bad debt is 5,025 billion VND, accounting for 6.06% of total outstanding debt. The Fund's loan projects focus mainly on the agricultural sector, rural, mountainous, and remote areas (accounting for 70% of the total number of projects) in 35 provinces and cities.

On June 22, 2017, the Prime Minister issued Decision No. 23/2017/QD-TTg, according to which the charter capital of the Cooperative Development Support Fund is allocated by the state budget from development investment expenditure sources, in 2018 it increased to 500 billion VND and by 2020 it reached 1,000 billion VND. In this Decision, the Cooperative Development Support Fund has two additional tasks: Credit guarantee and post-investment interest rate support to support cooperatives in accessing credit capital at commercial banks. trade to develop production and business activities. In 2019, the Central Cooperative Development Support Fund was granted an additional charter capital of VND 300 billion from development investment capital.

Locally, most provinces and cities have established Cooperative Development Support Funds and have initially operated effectively. As of the end of 2019, 53/63 provinces across the country have established local Cooperative Development Support Funds.

The total operating capital of local cooperative development support funds is about 1,544 billion VND, of which charter capital granted or loaned by the state budget is 769.7 billion VND, capital mobilized from borrowing members. , organizations, individuals or self-additional capital from the results of production and business activities is 774.3 billion VND. Total loan turnover of local Cooperative Funds since their establishment is 10,437 billion VND (including short-term, medium-term and long-term) for 5,730 cooperatives and 607,837 cooperative groups and members. members and employees of the cooperative, loan balance is 1,314 billion VND. Loan projects from local Funds focus mainly on developing production and business, innovating technical technology, expanding production scale, and expanding product consumption markets.

The establishment and operation of the Cooperative Development Support Fund has created an additional capital support channel for cooperatives. Basically, after borrowing capital from the Cooperative Development Support Fund, cooperatives have developed quite effectively, growing in scale and production and business efficiency: revenue and after-tax profit increased by an average of 50% - 60%; The number of members increased by an average of 4%; The number of employees increased by an average of 37%; Average income increased by 35%; Budget payments increased by an average of 74%.

3.3. Some difficulties in mobilizing financial resources of cooperatives in Vietnam

- Many cooperatives have difficulty accessing capital from credit institutions.

The reason comes from the following reasons:

+ The cooperative does not meet the loan terms and procedures. Currently, most cooperatives are in the following situation: No headquarters; very little charter capital; Production and business plans have not yet been developed; lack of publicity and transparency, failure to properly implement regulations on financial and accounting management; The cooperative management board really does not meet the requirements for cooperative management and administration; Some cooperatives ineffectively use loan capital, use loan capital for the wrong purpose, have long overdue debt, and have a mentality of dependence and hope for support from the State.

+ On the Bank side: Some commercial banks are not enthusiastic in creating conditions for cooperatives to borrow capital; For loan procedures according to Decree No. 55/2015/ND-CP, cooperatives must submit a certificate of land use rights or a certificate confirming that they have not been granted a certificate of land use rights, while cooperatives do not have documents.

- The capital allocated by the state budget to the Central Cooperative Development Support Fund is still limited, so far only 400 billion VND has been allocated, the amount of capital mobilized from voluntary contributions is insignificant (only about 367 million VND), while the annual loan demand of cooperatives reaches tens of thousands of billions of VND; Loan procedures according to regulations are still strict and complicated.

For local Cooperative Support Funds, implementation still faces difficulties due to: There is no unified legal framework for the establishment, organization and operation of the Fund, so many localities are still confused in the establishment and operation of cooperatives. organize activities. The Funds' financial capacity is limited, operating capital is low, and they mainly depend on the state budget. Personnel implementing professional activities are basically limited in both professional capacity and work experience, so the quality of the Fund's credit activities still poses many potential risks; The coordination of activities of the Central and local Funds is still lackluster and cannot take advantage of their network.

- Capital contributions from cooperative members are limited because members still face many difficulties when joining the cooperative. Besides, they also encounter barriers when accessing credit sources such as procedures, collateral, worries about debt burden, risks, etc. The phenomenon of cooperatives not focusing on mobilizing capital common or forming undivided assets, profits or business results of the cooperative are divided immediately among members during the period, not cumulative, which also happens in many places.

3.4. Some solutions for mobilizing financial resources for cooperatives in Vietnam

- Unify the concept of "collective ownership" in innovation and development of collective economy and cooperatives

The concept of "collective ownership" needs to be unified on two aspects of capital and profit, as a basis for forming undivided assets and common income in collective economic organizations and cooperatives. That is the foundation to increase the strength of cooperatives, helping them proactively innovate and have the potential to implement innovation.

- For equity capital:

+ Encourage members to increase the amount of capital contribution in many forms such as mobilizing personal credit, household economic development support programs from the state and organizations, ...

+ Research and apply progressive production and business models to improve efficiency, speed up capital turnover, and increase profits to increase annual additional capital.

+ Develop unified regulations in cooperatives in mobilizing and using capital sources. In addition, cooperatives need to enhance the consensus of members through action programs, propagandize and disseminate knowledge, and enhance the sense of responsibility of members for the common activities of the cooperative.

- For credit capital sources:

+ Cooperatives need to build reputation in the market to be highly appreciated by credit institutions such as banks and consider lending more easily.

+ Cooperatives should find reputable partners with long-term credit relationships with banks to transact, through which the cooperative will build relationships with banks.

+ Strengthen relationships with other cooperatives at home and abroad to jointly implement projects where cooperatives can participate in the common value chain and take advantage of financial resources from the parties.

+ Take full advantage of credit capital sources to meet the capital needs for the development of the cooperative.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions

In recent times, cooperatives have mobilized capital to basically serve the development of production and business of cooperatives. Cooperatives have mobilized capital contributions from cooperative members, loans from the Cooperative Development Fund, loans from banks and credit institutions; subsidies and support from the State, domestic and foreign organizations and individuals; donated amounts, donations and other legally mobilized sources.

Mobilizing capital has helped cooperation develop relatively stably over time. The socio-economic efficiency of cooperatives contributes to creating jobs for workers, creating stable income, and improving people's lives. Cooperatives have gradually innovated and are an important factor in transforming the agricultural and industrial economic structure to promote the process of building new rural areas locally.

4.2. Recommendations

- On the state side:

The State needs to review, amend and supplement the system of support policies in accordance with specialized laws and the needs and actual development situation of cooperatives. Unify regulations on the content of support policies that are currently scattered in specialized legal documents such as: tax and fee policies; training and fostering human resources, trade promotion and market expansion, credit capital, ... into synchronous policy groups for economic organizations including: Policy group to support development orientation; Group of support and incentive policies to create motivation; Risk prevention and damage mitigation policy group. In addition, the state needs to build policy mechanisms to attract domestic and foreign investment for cooperative development. The state needs to support capital and assets for cooperatives participating in the chain to form assets and through these assets can invest in production and mortgage when borrowing capital.

- On the cooperative side:

Cooperatives need to make more efforts, be more active and proactive, and not rely on or depend on the State's support policies. Cooperatives must make the most of financial resources to serve the innovation of management processes and production technology. In addition, cooperatives also need to strictly implement the provisions of the Cooperative Law and the cooperative charter that has been agreed upon.

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SUSTAINABLE EXPORT SOLUTIONS OF VIETNAM TO 2030

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Abstract: To sustainably develop Vietnam's export of goods up to 2030, enhance Vietnam's position in the global value chain, and create motivation for rapid and sustainable economic development, it is necessary to find solutions to promote sustainable and feasible exports in the coming time. The article analyzes perspectives and orientations for export development and proposes solutions for sustainable export development until 2030. The research results are a reference source to help state management agencies build and promulgate appropriate mechanisms and policies to develop sustainable exports according to the objectives of the proposed strategy.

Keywords: Sustainable export; export policy; Vietnamese goods brand.

1. INTRODUCTION

In recent years, Vietnam's export of goods has developed strongly, achieving outstanding achievements and making an important contribution to the country's socio-economic growth. Export turnover increased continuously at a high level, directly reflecting the increase in the scale of export goods and the sustainable growth of exports in terms of value. The export structure of goods has shifted strongly from raw exports to deeply processed and technological goods exports. The export market develops diversely and stably, etc. This is evidenced by the total import and export turnover of goods in 2011-2020, increasing 2.7 times, from 203.6 billion USD in 2011 to 545.3 billion USD in 2020. Average growth of export turnover reached 14.6%/year. Remarkably, in 2022, export turnover will reach 371.3 billion USD, an increase of 10.5% compared to the previous year. Relatively positive export growth in both the domestic economic sector and the FDI sector (enterprises with 100% domestic capital reached 95.4 billion USD, up 6.8%; FDI enterprises (including crude oil) reached 275.9 billion USD, an increase of 11.8%). Of which, the group of processed industrial goods reached 319.2 billion USD, accounting for 86% of total export turnover, and recorded an increase of 10.1% compared to the previous year. The export market continues to grow in both breadth and depth, especially exports to some markets that are FTA partners increased sharply, such as ASEAN reaching 34 billion USD, an increase of 17.8% compared to 2021; Korea reached 24.3 billion USD, up 10.7%; Japan reached 24.2 billion USD, up 20.4%; EU reached 46.8 billion USD, an increase of 16.7%, etc. (Ministry of Industry and Trade, 2023).

Besides the achieved results, Vietnam's export of goods still has certain limitations, such as the scale of exported goods is still small; although growth is relatively high, it is not sustainable in the long term; the source of export goods is unsustainable, lacks connectivity, and is susceptible to the negative impacts of fluctuating foreign markets; competitiveness is limited at all three levels: product, enterprise, and national. Many essential export products are still processed goods; Vietnam's export goods depend heavily on FDI enterprises, etc. Therefore, to solve the above problems and ensure sound implementation of the goal of sustainable export development based on

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a balanced and harmonious structure, promoting competitive advantages, comparative advantages, and developing brand of Vietnamese goods, enhancing Vietnam's position in the global value chain, being a driving force for rapid and sustainable economic development according to the import-export strategy of goods to 2030 approved in the Decision No. 493/QD-TTg of the Prime Minister, state management agencies, as well as policymakers, need to find practical solutions to promote sustainable and feasible exports in the coming time and by 2030.

The article analyzes perspectives and orientations for export development and proposes solutions for sustainable export development until 2030, thereby helping state management agencies in the process of building and promulgating mechanisms, appropriate policies to develop sustainable exports, enhance the country's position in the global value chain and be the driving force for rapid, and sustainable economic growth according to the objectives of the proposed strategy.

2. CURRENT STATUS OF COMMODITY EXPORT STRATEGY FOR THE PERIOD 2011-2020

In recent times, Vietnam's commodity export activities have achieved impressive achievements, making important contributions to the country's innovation and economic development. The scale of commodity exports is constantly expanding, making a major contribution to implementing the Socio-Economic Development Strategy while increasing Vietnam's position and influence in the international arena. During 2011-2020, the total import and export turnover of goods increased 2.7 times, from 203.6 billion USD in 2011 to 545.3 billion USD in 2020. The average growth of export turnover of goods reached 14.6%/year. Regarding export scale, in 2011, Vietnam was in the 41st position; by 2015, it had risen to the 32nd position, and by 2020, it was in the 22nd position. Export products are increasingly diverse and rich. The number of items with an export turnover of 1 billion USD or more has increased over the years: in 2011, there were 21 items with an export turnover of over 1 billion USD; in 2016, it increased to 25 items, and in 2020, there will be 31 items (Ministry of Industry and Trade, 2023).

However, besides the achieved results, goods export activities in the 2011-2020 period still have some shortcomings and limitations as the scale of exported goods is still small; although growth is relatively high, it is not sustainable in the long term. The source of export goods is unsustainable, lacks connectivity, and is susceptible to the negative impacts of fluctuating foreign markets; export growth is high but not sustainable when the export market structure is still slow; bilateral trade balance with some large markets is not reasonable; the economy has not fully exploited its export competitive advantages based on technology, labor skills, management, etc. to create export product groups that are highly competitive and have high scientific and technological content (Ha Anh, 2022).

3. SOLUTIONS FOR SUSTAINABLE EXPORT DEVELOPMENT OF VIETNAM UNTIL 2030

3.1. Viewpoints, orientations, and goals for sustainable export development of Vietnam until 2030.

Starting from the current situation of the commodity export strategy for 2011-2020 and in accordance with the export strategy for the new period, focusing on growth quality and sustainability of export development. On April 19, 2022, the Prime Minister issued Decision No. 493/QD-TTg approving the Goods Import and Export Strategy until 2030 (Prime Minister, 2022) with many important highlights in terms of Points, goals, directions, specifically as follows:

(1) Strategic perspectives: the strategy mentions three perspectives corresponding to factors related to export development: growth quality, drivers of growth, and growth methods and orientations.

Firstly, embark on sustainable export development based on coordination in commodity structure, market structure, and trade balance with each market and market area; coordination between short-term and long-term goals; coordination between opportunities to participate in and enjoy the fruits of export growth; coordination with green trade, fair trade, environmental, biodiversity conservation and adaptation to climate change.

Secondly, develop the export of goods in association with investment in the development of economic–technical infrastructure, science-technology, digital transformation, development of digital economy, development of the green, sustainable, and circular production system, and improvement of the quality of human resources. Increase the innovative and creative content in exported products; build and develop trademarks of Vietnamese goods for export.

Thirdly, export development is associated with industry and local development planning and plans to promote competitive advantages and efficiency, effectively exploit and take advantage of opportunities, and limit the impact of difficulties and challenges in implementing commitments to international economic integration, profoundly participating in the global supply chain and value chain.

(2) Specific goals of the strategy: compared to the Export Strategy for the period 2011-2020, Vietnam's strategic goal of sustainable export development by 2030 focuses on sustainable export development and is the driving force of rapid and sustainable economic growth, that is, "Sustainable development of import and export with a balanced and harmonious structure, promoting competitive advantages, comparative advantages, developing Vietnamese goods brands, enhancing the national position in the chain global value, is the driving force of rapid and sustainable economic growth. This has been concretized in the perspective of sustainable import-export development based on harmonizing commodity structure, market structure, and trade balance with each market and market area. In addition to the goals of export and import growth in terms of scale and trade balance goals, the strategy adds goals on export structure and export and import market structure. As follows:

Firstly, exports grow steadily, and the trade balance is healthy and reasonable, with an average growth rate of commodity exports expected to reach 6-7%/year in the period 2021-2030, including the average export growth rate in the period 2021-2025, which is expected to be 8-9%/year; the average export growth rate in the period of 2026-2030 which is expected to be 5-6%/year; Maintain the trade balance in the period of 2021-2025; strive to maintain a sustainable trade surplus from 2026 to 2030; look forward to a healthy and reasonable trade balance involving key trade partners.

Secondly, sustainable export with a balanced and harmonious product structure and market structure will increase the export proportion of export processing and manufacturing technology goods to 88% of total export turnover by 2025 and 90% by 2030. Of these, the proportion of medium and high technology exports is 65% by 2025 and 70% by 2030. Increase the proportion of the European export market to 16-17% of total export turnover by 2025 and 18-19% by 2030; the Americas region to 32-33% by 2025 and 34-35% by 2030. The proportion of the Asian region's export market will be about 49-50% of total export turnover by 2025 and 46-47% by 2030;

In the coming time, focus on developing product industries, specifically as follows: (i) merchandise exports in the agriculture, forestry and aquaculture industry: Increase the proportion of products created by deep processing systems and of high economic value; improve the ability to meet quality, food hygiene and safety regulations, standards and corporate social and environmental responsibility criteria; proactively adapt to and overcome trade barriers and trade remedies in overseas markets; (ii) merchandise exports in the processing and manufacturing industry: Increase the domestic content of exported goods, reduce dependence on imported raw materials, spare parts and components; increase the proportion of products in the medium- and high-tech industry; rapidly increase the proportion of exported products with high technology and innovation content; (iii) make more investment in developing export of green and eco-friendly products.

According to the requirements of sustainable export development, promote comparative advantages and transform a reasonable growth model in depth; effectively use resources associated with protecting the ecological environment and solving social problems; promote the structure of export goods in depth; Increase the proportion of exported goods with high scientific and technological content, added value, green economy products, circular economy, and environmentally friendly products.

Thirdly, diversify export markets. Actively participate in production networks and global value chains; focus on producing and developing high-value-added, branded goods on domestic and foreign markets; avoid excessive dependence on a single market; strive for a healthy and reasonable bilateral trade balance, ensuring sustainable growth in the long term. Effectively exploit market opening opportunities from economic integration commitments in free trade agreements to boost exports into major markets, such as EU, Japan, China, South Korea, ASEAN, etc., robustly exploit potential markets, such as the United States, Russia, Eastern Europe, Northern Europe, India, Africa, the Middle East, Latin America, etc., and aim to build stable and long-lasting trade frameworks.

(3) From the above perspectives and goals, Vietnam has determined major orientations for exporting goods and developing export markets until 2030 as follows:

Firstly, sustainably develop the export subsector, bring into full play its competitive advantages, shift to a rational in-depth growth model, effectively use resources, protect the ecological environment, and successfully address social issues and problems.

Secondly, promote the export of goods in-depth, promote the process of industrialization and modernization of the country, increase the proportion of exported products and goods with added value and high science and technology content, high innovation content, green economic products, and environmentally friendly.

3.2. Solutions for sustainable export development of Vietnam until 2030

To overcome shortcomings and limitations in the Export Strategy for the period 2011-2020 towards sustainable export development, it is necessary to focus on synchronously implementing the following leading solutions:

Firstly, review to supplement and edit economic mechanisms and policies. Reviewing economic and trade mechanisms and policies must be carried out regularly to ensure compatibility with the socio-economic context in each stage of socio-economic development as well as the national context. Maintaining the stability of the macroeconomic environment through improving investment and financial policies, balancing the budget, stabilizing the currency, controlling inflation, promoting socio-economic development, simplifying administrative procedures, import and export procedures, etc.

Accordingly, it is necessary to review the system of legal documents, mechanisms, and policies to detect limitations that are no longer consistent with reality as well as inconsistent with international regulations and commitments in bilateral and multilateral trade agreements. Remove barriers in the legal system and economic and financial policies for goods export activities. Strengthen state management in export activities to facilitate trade, combat trade fraud, and move towards fair trade; guide and support businesses to apply and achieve certificates on green growth and sustainable growth in accordance with international standards and standards of target markets; ensure security and fairness in export activities. On that basis, supplement and edit accordingly. Actively participate in developing common rules and laws of the International Trade Organization (WTO), ASEAN Economic Community (AEC), and Asia-Pacific Economic Cooperation Forum (APEC); Actively protect the legitimate interests of the State, Vietnamese businesses and consumers in international economic, trade and investment disputes. Building modern Vietnamese market economic institutions, ensuring systematicity, openness, transparency, and stability; ensuring favorable conditions for sustainable exports; promoting deep processing with high technology content.

Secondly, develop production, create an adequate and sustainable supply for export; restructuring of manufacturing and service industries; encourage projects and research on new materials, production and export of environmentally friendly products and products with high scientific and technological content.

Thirdly, enhances national competitiveness in export activities. Innovate the growth model in depth and increasingly improve quality; restructuring the industry and restructuring businesses based on effectively using advanced scientific and technological achievements, especially the Fourth Industrial Revolution and digital technology. Invest in developing synchronous, modern, highly connected infrastructure; transforming the economy from exploiting and using raw resources to deep processing, increasing the added value of goods; build regional and national logistics centers to participate in regional and international logistics networks; analyze and evaluate the competitiveness of each industry, each type of product, service, and each locality to have plans to improve competitiveness; vigorously develop the private sector into the economy's primary and fundamental driving force, developed economic links increase investment resources for the in-depth development of commodity production. Invest in developing national brands and ensure State support for businesses registering for trademark protection in the international market; Encourage the formation of concentrated key export production areas, creating a large-scale source of high-quality export goods that meet international standards.

Fourthly, improve the competitiveness of products, services, and export enterprises. Accordingly, enterprises need to innovate their strategies and methods of production and business, strengthen relationships and actively participate in the process of international division of labor, participate in regional and international production and distribution networks, participate in the global value chain, accelerate the process of digital transformation and business on digital platforms of enterprises. Develop and diversify export methods, combining traditional methods with modern export methods; promote the application of cross-border e-commerce and participate in international e-commerce platforms.

Organize modern production processes, apply advanced management methods to save input costs to reduce the cost of exported goods and services, and innovate specifications, product designs, and packaging designs to suit consumer tastes in each market area, etc. On that basis, improve the competitiveness of exported products and services.

Fifthly, diversify export markets. Promote bilateral and multilateral negotiations with key and potential markets and market areas. Strengthen export promotion activities with a focus on expanding markets to developing countries, potential markets, and emerging markets; Develop exports in depth to traditional markets such as China, the US, the EU, ASEAN countries, etc.

Sixthly, effectively take advantage of the advantages brought by FTAs. The imposition of low or 0% tax rates on Vietnamese export goods in the FTAs Vietnam has signed and implemented is a driving force to promote the export activities of Vietnamese enterprises. Enterprises need to carefully research and take advantage of incentives provided by FTAs to penetrate the market and increase export growth effectively and sustainably.

Seventhly, invest in science and technology development. Focus on building high-tech centers, attracting foreign investment from multinational companies to shorten the technology gap with countries around the world gradually; develop the science and technology market to create conditions for enterprises to access and increase the liquidity of investment capital sources for research and development; Enhance technological innovation and creative products. Implement mechanisms to encourage organizations and individuals of all economic sectors to invest in science and technology development.

Eighthly, strengthen information and communication activities in exports. Promote communication information about exports, international markets, and Vietnam's export products. The Ministry of Industry and Trade needs to preside over and coordinate with agencies and units to issue information publications on export. The state needs to make adequate investments to have a database and strongly develop a shared and nationally interconnected electronic database to support exports.

4. CONCLUSION

In recent times, Vietnam's export activities have achieved significant results; however, this activity has also faced difficulties in the context of many unpredictable developments in the world economy, such as purchasing power decreasing significantly due to increased economic difficulties in developed countries, inflation increased in most economies, many products supply disruptions or had sharp increases in prices due to political conflicts or strict measures to prevent the Covid-19 epidemic. Although export turnover has increased continuously at a high level, there are still some shortcomings, such as the source of export goods is unsustainable, lacks connectivity, and is susceptible to the negative impacts of fluctuating foreign markets; high but unsustainable export growth; the economy has not fully exploited the competitive advantages of exports based on technology, labor skills, management, etc. Therefore, for export activities to develop sustainably and create export product groups that are highly competitive, with high scientific and technological content, water management agencies and policymakers need to focus on implementing several solutions such as reviewing, amending, supplementing, and perfecting mechanisms, economic policy; enhance national competitiveness in export activities; improve the competitiveness of export products; diversify export markets; investment in science and technology development; strengthen information and communication activities in export; develop and restructure manufacturing industries, creating an adequate and sustainable supply for export.

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STRATEGIC MANAGEMENT ACCOUNTING IN THE CONTEXT OF DIGITAL TRANSFORMATION

Prof. Dr. Chuc Anh Tu[1], Chuc Khanh Linh[2]

Abstract: *Understanding the contents and roles of strategic management accounting (SMA) is very necessary, in order to enhance applications and businesses in today's increasingly competitive conditions. On the basis of comparing TMA and SMA to see the purposes, effects, content and conditions of application. Especially in terms of applying the results of the Industrial Revolution 4.0 to SMA. The relationship of strategic management accounting and the management of business activities of enterprises*

Keywords: *Strategy Management Accounting, Traditional Management Accounting, Industrial Revolution 4.0; Digital Transformation*

1. INTRODUCTION

In the period before 2010, Management Accounting appeared in Vietnam and received attention because of the limitations of Management Accounting focusing only on the completion of the General Cost Management Accounting model and how to combine it with the Financial Accounting system (mixed model). In this period, the Ministry of Finance issued Guiding Circular No. 53/2006/TT-BTC.

In the period from 2010 to 2015, Management Accounting gradually added cost-related content such as classifying costs according to cost behavior, building a cost estimation system, cost determination methods, break-even analysis, analyzing the relationship between three factors volume, cost and profit, cost information analysis for short-term and long-term decisions, especially the improvement of the Management Accounting reporting system to provide more detailed information for managers. In this period, there were studies related to Strategic Management Accounting.

In the period from 2015 to now, Management Accounting has been applied a lot to improve the efficiency of businesses in practice. In this period, there is a clear appearance of the content of Strategic Management Accounting due to the increasing global competition in general and competition between businesses in particular, also increasing the challenges for managers, Management Accounting therefore must also change to meet the constantly arising and changing needs of management. Therefore, TMA information has not met the requirements of corporate governance, gradually revealing many shortcomings in supporting managers because the information it brings is only internal and exists within the scope with short-term forecasting time. The process of making strategic decisions, executing strategies and evaluating strategies needs a lot of relevant information inside and outside the business, so SMA appears as an urgent need of businesses.

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The change of business environment in the 1980s led to the change of TMA and therefore, SMA was formed with many techniques to solve the existing problems of TMA. Along with the development of technology and the application in business and decision-making of Management Accounting, many motivational factors are identified as reasons for the application of SMA tools in the business. Access to competitive information and tools to support the decision-making process is the process of managing and controlling the cost of the product lifecycle. The development of SMA and the application of intelligence such as AI, data analysis, and the improvement of business processes are factors identified as the main reasons for businesses to apply SMA

2. LITERATURE REVIEW

SMA was first mentioned by Simmonds in 1981, who stated the following about SMA: "Providing and analyzing Management Accounting data about the business and its competitors, for use in controlling and developing business strategy."

In 1988, Bromwich echoed Simmonds' views and emphasized that the business should focus on external issues, since "the business makes a profit in the market and competitors also create challenges for the business in this market."

Studies by Bromwich 1990 have shown that the concept relates to SMA: "Provision and analysis of financial information in the production market of the business, the costs of competitors, the cost structure, the strategic control of the business and of competitors in the market for a number of periods."

Dixon & Smith (1993) point out that the provision and analysis of information regarding the internal operations of the business, current and future competitors, and market trends assist in evaluating the strategic process.

The authors Foster & Gupta (1994), Roslender (1996), and Wilson (1995) argue that SMA is related to marketing issues of businesses such as market share and market share development, image development of the business or issues related to the analysis of benefits from customers.

Other authors Foster & Gupta (1994) and Wilson (1995) argue that Strategic Management Accounting deals with marketing issues of the business such as market share and market share development, image development of the business or issues related to the analysis of benefits from customers.

Roslender (1995), "Accounting for strategic positioning is a term that can be usefully used to describe developments in Management Accounting, designed to assist senior managers in securing and maintaining a competitive advantage".

The authors Lord (1996), and Dixon & Smith (1993) argue that SMA is the intersection of Management Accounting and corporate strategy.

Ittner &; Larcker, (1997), "Management Accounting is increasingly being called upon to take an active role in informing strategic decision-making and monitoring the implementation and success of strategic plans".

According to Roslender & Hart (2003): "Strategic Management Accounting is defined as a general approach to strategically positioned accounting, defined by the effort to integrate Management Accounting and market governance within the strategic management theoretical framework."

According to Langfield-Smith (2008): "Strategic Management Accounting – SMA requires a strategic orientation to generate, interpret, and analyze Management Accounting information and competitor activities, in order to provide important characteristics for comparison."

According to Tillmann & Goddard (2008), Strategic Management Accounting is broadly defined as the use of Management Accounting systems in supporting strategic decision-making;

The Perspective of Ma & Tayles (2009) Strategic Management Accounting: Management Accountants themselves are concerned with strategically oriented information for decision-making and control.

Akhmetzianov &; Sokolov (2020) argue that the application of Strategic Management Accounting is a fundamental matter for evaluating the accounting product life cycle, target costs, cost allocation and direct costs.

According to Shaqqour (2020), Strategic Management Accounting requires the preparation and application of a variety of policies, practices, methods and tools to adjust the internal and external strategic directions of the organization to ensure that relevant and reasonable information is provided for the business to achieve.

According to Duci (2021), Strategic Management Accounting is an evolution of Management Accounting and a retention role to inform decision-making and have perspectives on prospects, not historical perspectives such as Management Accounting and strategic Management Accounting with focus and multiple periods, orientation and competition.

Research by Visedsun and Terdpaopong (2021) concludes that the strategy and objectives of businesses have metrics that specifically affect financial and non-financial information, in order to show the results of the organization, Strategic Management Accounting systems with appropriate techniques should be applied and the use of Traditional Management Accounting should be minimized.

Lyudmila & Emil (2022) detect the pattern of accounting, information precisely owned by the company used to administer, evaluate and record business activities.

3. RESULTS AND DISCUSSIONS

First, studies on Strategic Management Accounting have shown that due to the emergence of Traditional Management Accounting, it is focused only on internal issues and has no strategic direction. Based on studies from 1982 to 2022, there is no consensus on Strategic Management Accounting, as Coad (1996) states Strategic Management Accounting is an area of interest and there is an increase in profitability among researchers. The characteristic is that there is no clear concept, so there is no uniform view of Strategic Management Accounting or the development of Strategic Management Accounting in the future.

Second, according to Lord (1996), the following functions will be related to SMA, that is, to collect information related to competitors; use accounting in making strategic decisions; Cut costs based on strategic decisions and leverage competitive advantages. Wilson and Chua (1993) tabulated the 10 differentiating factors between TMA and SMA, Table 1

Table 1. Comparison of Traditional Management Accounting and Strategic Management Accounting

No.	TMA	SMA
1	Historical	Prospective
2	Single Entry	Relative
3	Introspective	Out-ward looking
4	Manufacturing focus	Competitive focus
5	Existing activities	Possibilities
6	Reactive	Proactive
7	Programmed	Un-programmed
8	Data orientation	Information oriented
9	Based on existing systems	Unconstrained by existing systems
10	Built on conventions	Ignores conventions

Source: Synthesized by the author

Third, there are 04 periods of Strategic Management Accounting: strategic identification of business units; analysis of cost strategies; Market strategy analysis and strategy evaluation. Strategic Management Accounting is a process that requires each period to be completed before executing with next-level analysis. For example, is an ineffective attempt to analyze the role of a unit cost strategy if the appropriate concept of a business unit is not completed first. Moreover, the process does not end with the evaluation strategy being a follow-up cycle. The concept of the business unit may change, and the role of strategic costing of the business unit may change, however, the business will not be aware of these changes if Strategic Management Accounting is considered an annual task of the business.

Table 2. Techniques used in Strategic Management Accounting

Group name	Techniques
Cost	Attribute Costing
	Life Cycle Costing
	Quality Costing
	Target Costing
	Value Chain Costing
	Activity Based Costing
Estimating control and measuring effectiveness	Benchmarking
	Balanced Scorecard
Strategy execution	Strategic Costing
	Strategic Pricing
	Branch Value
Competitor	Competitor Cost Assessment
	Compititive Position Minitoring
	Compititor Performance Appraiser
Customer	Customer Profitability Analysis
	Lifetime Customer Profitability Analysis
	Valuation of Customers as Assets

Source: Synthesized by the author

Fourth, the role of Strategic Management Accounting is manifested in businesses as follows:

+ Provide information directed outside the unit: it is to provide information about competitors by comparing the cost structure of competitors, comparing with the cost structure of their units, at the same time, managing the achievements of main competitors to help managers identify business strategies of competitors, from there, it is possible to build a better business strategy of their unit, thereby improving operational efficiency; Provide information about customers through comparing revenue achieved from customers or customer groups with costs related to that revenue, analyzing customers' profits, etc. to find the right potential customers, product markets and distribution channels. Because customer information is a concern of businesses, improving customer relationships, satisfying customers and enhancing customer value is enhancing competitive advantages for businesses

+ Provide information within the Unit: collect and report information related to internal resources in order to maximize the resources of the Business to bring business efficiency and create sustainable competitive advantages through ABC / ABM techniques; Life cycle costs; Quality cost; Target cost; Value chain costs. The use of ABC/ABM, price chain costs

Fifth, according to studies, Strategic Management Accounting includes the following 05 contents: strategic costs; strategic planning, control and measurement of results; strategic decisions; competitive accounting and customer accounting

+ Cost strategy: marketing strategy and information based on cost database, classified by businesses and ensuring the effectiveness of the strategy to achieve competitive content. There are 05 techniques used cost allocation, product life cycle, cost quality, target cost and chain value cost

+ Strategic planning, control and measurement of results: The theories that identify the issues necessary for businesses are to give attention to the planning, control and measurable characteristics of Management Accounting, which is important in orienting the market approach to operations. Will include Benchmarking and Balanced Scorecard

+ Strategic decision-making: Strategic Management Accounting tools make strategic decisions to support strategies. The range of options for strategic decision-making includes cost strategy, selling price strategy and brand valuation strategy

+ Competitor's accounting: There are 03 accounting tool templates of competitors: managing competitor accounting positions and evaluating competitors

+ Customer accounting: related to the goal of increasing profits, sales and costs related to customers or customer departments. Customer accounting techniques will include profit analysis, customer profit lifecycle analysis, and customer evaluation

Sixth, the manifestation of the digital era in Strategic Management Accounting: technologies that must be considered for the application of Strategic Management Accounting

Table 3. Technologies applied in Strategic Management Accounting

Technology	Contents
Software Packages/Business Resource Planning (ERP)	A Complete software solution package is installed for cost management, payroll processing, inventory management, human resource management, customer relationship management, financial report preparation…

Cloud Computing	Customized cloud-based solutions are used in control reporting, analytics, monitoring and data governance
Big Data, Internet of Things (IoT) and Analytics	High-volume, high-velocity, high variety of structured-unstructured data consisting of emails, messages, social media posts, texts, audio, video, images etc. Moreover, the use of IoT (e.g., sensing, self-acting devices) in production, logistics, transportation etc. produces a huge amount of unstructured data that needs to integrate with structured data. Big data requires new analytics, hence, the emergence of big data analytics to process and generate relevant information from the big data
Blockchain	The emergence of digital currency, cryptocurrency, and blockchain technologies is expected to have an impact on accounting. Besides traditional double-entry book-keeping, in blockchain technology, there may be a need for a third entry for a cryptographic signature for the validity of the transactions. The pervasive effect of blockchain technology in MAC is not clear yet.
Artificial Intelligence	Machine learning and natural language process can be used for better predictions, regular business decisions, vendor selection, cost estimation…

Source: Md. Saiful Alam & Dewan Mahboob Hossain, (2021)

4. RECOMMENDATIONS AND SOLUTIONS

For State management agencies

State management agencies should soon issue documents on Management Accounting in general and types of Management Accounting in particular, including Strategic Management Accounting. Especially the digital environment of the industrial revolution 4.0. Guide Management Accounting models suitable for each type of business, guide the implementation and application of new Management Accounting techniques in each business.

For professional organizations

It is necessary to specialize more in demonstrating the role and implementation process to facilitate support for businesses in propagating and introducing SMA techniques through seminars, helping businesses to be aware of the role and effects of SMA.

For training institutions

Develop programs and contents of each level to have a roadmap to bring SMA techniques into training in Accounting - Auditing and some other related majors.

For businesses and management accountants

It is necessary to be aware of the role of Strategic Management Accounting in businesses, to have investment in facilities, equipment, human resources as well as information technology, in order to apply Management Accounting in general as well as SMA. Using the information of Management Accounting at the request of the manager, the management will be effective.

Increased application of technology

In the 4.0 technology environment, it is necessary to increase the application of technology in Strategic Management Accounting in order to implement the management and analysis process effectively. See technology as experts in data analytics to translate data into business processes.

At the same time, forming a digital environment, technology affected by the Industrial Revolution 4.0 can be mentioned Big Data or Data Analytics, Cloud Computing, AI, Blockchain, the Internet of Things (IoT), and Robotic Process Automation. Let's consider them in more detail, in Table 4

Table 4. Elements of the 4.0 Technology Revolution and Strategic Management Accounting

Big Data	The biggest impact on Industry 4.0 accounting will be Data Analytics or Big Data – data analytics associated with relational databases in an accounting information system. Big Data identification allows accounting and finance to take on a more strategic role and help shape the future
Cloud Computing	The evolution of accounting is changing the expectations of clients and accountants are forced to adjust the way they do it to meet the requirements. People are willing to do less paperwork as they need to focus on what they are passionate about in the things they want to do. This means that people will have to depend on technology to help them work in a more integrated way
Artificial Intelligence (AI)	Artificial intelligence is the science of designing, creating and constructing a machine (computer) or computer program that would have an intelligence similar to that of a person. Intelligence in this case is the ability to act or solve problems in the way that people use their intelligence. The scope of intelligence covers many aspects of the abilities of the human intellect, such as reflection, knowledge, planning, learning, natural language processing, and the ability to manipulate objects. With artificial intelligence, the machine is expected to have general intelligence, just like humans
BlockChain	Blockchain is a digital data storage system consisting of many servers (multiserver). In blockchain technology, data created by one server can be replicated and verified by another server, which is why blockchain is often compared to a bank's cash book containing all customer transaction data. However, this general ledger is available to all blockchain users and is not limited to authorized bank employees
Robotic Process Automation	Robotic Process Automation is the application of technology that allows employees to configure computer software or «robots» to capture and interpret existing applications for transaction processing, data manipulation, response initiation and communication with other digital systems (IRPA & AI, 2017)
Industry 4.0 and ERP-systems	An ERP (Business Resource Planning) system is a business process management software that manages and organizes a company's business processes, all in a single integrated platform. Activities that can be managed with an ERP system include finance, sales, customer relations, manufacturing, inventory management, supply chain management, human resources, payroll, etc. (Trunina et al., 2018)
The Internet of Things (IoT)	With the support of IoT, all other Industry 4.0 technologies could be linked to ERP systems. IoT should be the point of integration between Industry 4.0 and ERP systems. The integration of this technology in Industry 4.0 is closely related to communication protocols between machines and different frameworks, which should be harmonized in the future.
Industry 4.0 and Intellectual Capital (IC)	Under the conditions of Industry 4.0 in the current digital ecosystem, accounting may face the problem of measuring intangible assets and Intellectual Capital (IC). After all, intangible assets will be focused on big data. As mentioned earlier, the structure of the big data set, which consists of audio, images, and video, will be difficult to record in a traditional accounting system. The problem depends on how to measure intangible assets, which for the most part cannot be reflected in the financial statements.
Industry 4.0 and Extensible Business Reporting Language (XBRL)	It is believed that for Industry 4.0, real-time credentials will be presented to users with information faster and more efficiently. In today's system, this is visible in real-time when credentials are provided to information users via XBRL (Extensible Business Reporting Language). XBRL is a financial reporting language that is rapidly spreading around the world. XBRL is the name of a framework that allows real-time presentation of financial information on the Internet and enables electronic communication (Toraman and Abdioglu, 2008)

Source: Oksana Onyshchenko, Zaneta Simanaviciene, Nataliia Semenyshena, (2022)

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FINANCIAL STATEMENTS' RELIABILITY AFFECT FIRMS' PERFORMANCE LISTED IN VIETNAM

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Abstract: The paper aims to estimate the effect of financial statement reliability on listed firms' performance in Vietnam, particularly on the Ho Chi Minh City Stock Exchange, from 2015 to 2022. Reliability is a crthe listedattribute of information quality in financial statements, and by using the quantitative method (feasible generalized least squares – FGLS), the findings show that reliability positively affects listed firms' performance with a confidence interval of 95%. On the platform of agency theory, reliability of financial statements is considered a tool for managers and board of directors to fulfill their duties to external users, while stakeholder theory emphasizes the advantages of reliable financial statements in gaining performance.

Keywords: firm performance, reliability, agency theory, stakeholder theory, Vietnam.

1. INTRODUCTION

The International Financial Reporting Standards (IFRS) framework defines the purpose of financial statements as "to provide useful financial information about an enterprise to existing and prospective investors, potential lenders, and other creditors in making decisions about the provision of resources to the business" (IASB, 2010a). Furthermore, reliable financial statements provide useful information to users in making their decisions (Naser & Nuseibeh, 2003; Shahwan, 2008; Socea, 2012; Tontiset & Kaiwinit, 2018). According to (Kewo & Afiah, 2017; Safkaur et al., 2019), highly reliable financial statements help increase the firm's performance and positively influence the strategic decisions of investors and managers. Thus, the reliability of financial statements is a concern for many stakeholders, such as administrators, investors, customers, banks...

Prior studies have shown that financial statements' reliability increases companies' performances efficiently, especially in large companies (Abd-Elnaby et al., 2021; Akgün, 2016b; Al-Dmour, 2018; Alesaaa et al., 2020; Bukenya, 2014; Evana & Dewi, 2017; Kharuddin et al., 2010; Tontiset & Kaiwinit, 2018). These authors conduct their studies with primary data by using the questionnaire survey, except for the studies by Al-Dmour (2018); Alesaaa et al. (2020). Based on some theories and empirical studies, the current work estimates the effect of financial statements' reliability on listed firm's performance in HOSE from 2015 to 2022. The research question needs to be clarified as follows "To what extent, how does financial statements' reliability affect listed firm's performance in Vietnam from 2015 to 2022".

Significantly, this paper highlights two contributions: First, the study explores the relationship between the reliability of financial statements and listed firms' performance on the Ho Chi Minh City Stock Exchange (HOSE) under the IASB's fundamental qualitative characteristic framework. Second, the study addresses the role of financial statements' reliability in improving firms' performance based on agency and stakeholder theories.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

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2.1. Literature review

From the practical point of view, owners' constraints have related to management and operation ability (Quoc Trung, 2021). Besdies, Eisenhardt, (1989) emphasizes that an appropriate and good corporate governance system can reduce conflicts within the agency problem. Because it requires managers and board of directors regulating the diclosed information in transparent and reliable, so that stakeholders can make their own evaluations and investment decisions (Gaa, 2009; Glassman, 2006). So, agency theory suggests the disclosure of information to reduce information asymmetry between principals and agents and it sees managers as accountable to principals. This theory considers the reliability of financial statements as a tool to fulfill the duties and responsibilities of managers and board of directors to external users, while stakeholder theory considers the advantages from the disclosure of reliable financial statements in terms of gaining support from outside communities (Arcas-Pellicer et al., 2022). In particularly, stakeholder theory of Freeman (1984) mentions that the increased quality of the information in financial statements is a sign of public accountability and commitment to the users of these reports (Coy & Dixon, 2004), because this is a critical way to improve the confidence of stakeholders in the entities via the reliability of financial statements (Freeman & Reed, 1983; Freeman, 1984; Donaldson & Preston, 1995; Michelon & Parbonetti, 2012). As a result, the higher the reliability of financial statements can be obtained (Arcas-Pellicer et al., 2022; Ntim et al., 2017).

2.2. Empirical research

Some researchers have focused on the factors that impact on the reliability of financial statements of listed manufacturing companies. Evana & Dewi (2017) and Tontiset & Kaiwinit (2018) found that audit committees, accounting professional ethics, the quality of the accounting information system, the effectiveness of the audit committee, and the audit firm's quality significantly influence the reliability of financial statements. In Vietnam, Nguyen Thi Thanh Tram (2021) identified factors affecting the quality of financial reporting information for small and medium-sized enterprises in Binh Dinh Province, including internal control, regulatory environment, accounting work process, information disclosure, audit, and accountant qualifications. Furthermore, Abd-Elnaby et al., (2021) investigates the impact of financial reporting quality on corporate financial performance. According to Bukenya, (2014), the study listed the characteristics of the information quality, including reliability, relevance, accuracy, timeliness, and intelligibility that affects firms' performance.The result of Al-Dmour's study, (2018) prove the reliability of accounting information system take a positive impact on the financial performance signgificantly.

To sum up, even though there are many scholars concerned about the role of financial statements' reliability in the operation and how to improve the financial statement quality. However, just only the research of Abd-Elnaby et al. (2021) investigates the impact of financial reporting quality on corporate financial performance under applying IFRS. However, in Vietnam, the financial statements are based on the Vietnamese accounting standards, which were adopted as part of international accounting standards. So, finding the impact of accounting information's reliability on financial performance is quite important in the Vietnamese context.

2.3. Factors affect firm's performance

2.3.1. Financial statements' reliability

Reliability of financial statements is defined as published financial statements that are being reliably prepared to provide information useful to users in making economic decisions that result in an efficient allocation of resources for enhancing firms' performance (Naser & Nuseibeh, 2003; Shahwan, 2008; Socea, 2012; Tontiset & Kaiwinit, 2018). Prior studies have shown that financial statements' reliability increases companies' performances and operations efficiency, especially in large companies (Abd-Elnaby et al., 2021; Akgün, 2016b; Al-Dmour, 2018; Alesaaa et al., 2020; Bukenya, 2014; Evana & Dewi, 2017; Kharuddin et al., 2010; Tontiset & Kaiwinit, 2018).

According to An (2015), conservatism is an important measure of financial reporting quality because conservatism decreases opportunistic managfement behaviours and mitigates information asymmetries. According to Arsenijević (2020), conservative reporting "can increase the reliability of financial information because conservatism results in fewer estimates (and, thus, more objective measurement)" (Balachandran & Mohanram, 2011). So, conservatism as a proxy for financial reporting quality (Ball & Shivakumar, 2006). Accruals measures at the firm-year level are equal to averaged (non-operating) accruals scaled by total assets over the previous five years (with a minimum of two years) or centred on the observation year, multiplied by negative one. According to (Givoly & Hayn, 2000), the reliability of financial statemetns is measured based on the conservatism model which is calculated by the following formula [1].

$$reliability = non - accruals \times (-1) = \left[\frac{Non-Operating\ accruals}{Total\ assets}\right] \times (-1) \quad [1]$$

Where:

Non-operating accruals = total operating Accruals (before depreciation) - operating accruals

operating accruals = different between the changes in current assets and the changes in current liability

Based on the discussions, the following hypothesis is proposed.

Hypothesis 1: the reliability of financial statements *positively affects listed firms' performance in HOSE.*

2.3.2. Control factors

Based on previous studies, they mentioned some control factors such as firm size (Liu, 2020; Yadav et al., 2021); firm age ((Dang et al., 2020; Liu, 2020; Pervan et al., 2019); audit firm type (Amahalu, 2020; El-Dyasty & Elamer, 2020; Zahid et al., 2022); liquidity (Alarussi & Gao, 2021; Pervan et al., 2019); growth domestic product (Ghazavi & Bayraktar, 2018; Hasan et al., 2018) and inflation (Matar et al., 2018; Pervan et al., 2015; Saif-Alyousfi, 2022) impact to the firm's performance.

3. RESEARCH METHODOLOGY

3.1. Sample

Applying circular 200/2014/TT-BTC " On guidelines for accounting policies for enterprises" issued on December 22nd, 2014. So, the research time is from 2015 to 2022, with 235 non-financial listed firms on HOSE were analyzed, excluding those companies that have not yet released audited financial statements for 2022.The sample size is 235*8=1,880 observations, but after eliminating unobtained data, the number decreased to 1,868. Data was gathered from financial statements, annual reports, bank websites, and FiinPro database. Macro-economic factors come from the World Bank website.

3.2. Research model

The research model is used in this paper as follows:

$$performance_{i,t} = \alpha_0 + \alpha_1 reliability_{i,t} + \sum_2^n \alpha_j control\ variables_{i,t} + \varepsilon \qquad [2]$$

Table 1: Variables in model

Variables	Index	Formula
Dependent variable		
$firm\ performance$	return on equity	$roe = \frac{\text{Net income}}{\text{Owner's equity}}$
Independent variable		
FS's reliability	rel	rel = $non-accruals \times (-1) = \left[\frac{Non-Operating\ accruals}{Total\ assets}\right] \times (-1)$
Control variables	Firm size	size = Ln(total assets)
	Audit firm type	audit = 1 if Big4, auditfirm = 0 otherwise
	Firm age	age = Length of time that a company has existed
	Liquidity ratio	$liq = \frac{\text{Current assets}}{\text{Current liabilities}}$
	GDP growth rate	World Bank
	Inflation rate	

3.3. Methodology

The study employs quantitative methodology like the Pooled ordinary least squares (OLS), fixed effects model (FEM), random effects model (REM), and feasible generalized least squares (FGLS) to estimate the effect of financial statements' reliability on firm performance. The article conducts an F-test to select the optimal model between Pooled OLS and FEM models. If the probability value Prob (Chi-square) is less than 5%, FEM is chosen. Then, a Hausman test is conducted to determine the preferred FEM and REM models. If Prob (Random) is less than 5%, FEM is chosen. After that, the model is tested for defective phenomena like multicollinearity, autocorrelation, and heteroscedasticity, and FGLS regression is used to ensure unbiased results.

4. MODEL ANALYSIS AND DISCUSSION

4.1. Model analysis

Table 2: Descriptive statistics

Variable	Obs	Mean	Min	Max
roe	1,868	0.079	-40.890	1.590
rel	1,868	-0.016	-1.770	1.130

Variable	Obs	Mean	Min	Max
size	1,868	28.214	24.910	33.990
age	1,868	3.216	1.950	4.550
liq	1,868	2.710	0.100	52.260
audit	1,868	0.414	0.000	1.000
gdp	1,868	0.062	0.030	0.080
inf	1,868	0.030	0.010	0.040

Table 2 shows the descriptive statistics of all variables in the model. ROE has the mean value of 0.079, its maximum, minimum value and standard deviation are 1.590, -40.890 and 0.992, respectively. The maximum value of return on equity (1.590) belongs to Truong Thanh Furniture Corporationat the year of 2019 whist this company has the lowest loss on 2018, -40.890. Concerning the FS's reliability, its minimum and maximum values are -1.770 and 1.130, respectively. The lowest value the highest reliability is. This number belongs to the Sieu Thanh Joint Stock Company in 2022, while Japan Vietnam Medical Instrument Joint Stock Company in 2015 has the lowest reliability.

Table 3. Correlation matrix and VIF

	roe	rel	size	age	liq	audit	gdp	inf	VIF
roe	1.000								
rel	0.272	1.000							1.070
size	0.123	-0.161	1.000						1.230
age	-0.035	-0.025	0.025	1.000					1.010
liq	-0.001	-0.019	-0.031	-0.074	1.000				1.010
audit	0.116	-0.067	0.349	0.008	-0.060	1.000			1.160
gdp	0.131	0.175	0.072	-0.026	-0.006	0.104	1.000		1.050
inf	0.415	-0.002	0.231	0.063	0.004	0.089	0.001	1.000	1.070

According to Hair Jr et al. (1995); Montgomery et al. (2021); O'brien (2007) INTRODUCTION TO LINEAR REGRESSION ANALYSIS A comprehensive and current introduction to the fundamentals of regression analysis Introduction to Linear Regression Analysis, 6th Edition is the most comprehensive, fulsome, and current examination of the foundations of linear regression analysis. Fully updated in this new sixth edition, the distinguished authors have included new material on generalized regression techniques and new examples to help the reader understand retain the concepts taught in the book. The new edition focuses on four key areas of improvement over the fifth edition: New exercises and data sets New material on generalized regression techniques The inclusion of JMP software in key areas Carefully condensing the text where possible Introduction to Linear Regression Analysis skillfully blends theory and application in both the conventional and less common uses of regression analysis in today's cutting-edge scientific research. The text equips readers to understand the basic principles needed to apply regression model-building techniques in various fields of study, including engineering, management, and the health sciences. https://github.com/citation-style-language/schema/raw/master/csl-citation.json"} , a VIF coefficient of less than 10 is acceptable. As a rule of thumb, all VIF values are smaller than 10 (Table 3). Thus, there is evidence of the absence of multicollinearity phenomenon. Besides, the correlation matrix confirms linear relationship between variables in a dataset, with a Pearson correlation coefficient below 0.7, indicating low collinearity in the model (Ratner, 2009; Shrestha, 2020).

Table 4. Test of autocorrelation and heteroskedasticity

No.	Test	p-values	H0
1	Wooldridge test for autocorrelation in panel data	0.008	Reject
2	Breusch-Pagan / Cook-Weisberg test for heteroskedasticity	0.000	Reject

The residuals are tested for autocorrelation and heteroscedasticity to ensure they are independent and there is no systematic change in their spread. Table 4 shows the presence of heteroskedasticity and autocorrelation. Thus, FEM and REM methods are used to solve these problems. A Hausman test is conducted to determine the preferred method, FEM, which is chosen based on a probability value Prob (Random) of 0.000, less than the 5% significance level. Besides, feasible generalized least squares (FGLS) regression is used to solve the remaining defective issues and ensure unbiased results.

Table 5: Results of FGLS for two models

roe	Coef.	P>z
rel	0.591	0.000
size	0.039	0.071
age	-0.207	0.009
liq	0.063	0.724
audit	0.251	0.000
gdp	0.488	0.001
inf	0.893	0.075

Note: rel is reliability; roe is return on equity; size is firm size; age is firm age; liq is liquidity ratio; audit is audit firm; gdp is the growth of gross domestic product; inf is the inflation rate.

4.2. Discussion

The findings show that the research model has four statistically significant variables at 5%. The reliability of financial statements directly impacts performance (coefficient = 0.591), with higher reliability resulting in better performance. The finding is supported by the studies Abd-Elnaby et al. (2021); Akgün (2016a); Jianu & Jianu (2021). Adediran et al. (2013) argued that managers are more willing to report profit than loss in terms of profitability, as it can impact share price and other indicators. This aligns with agency theory, as managers in large companies seek higher efficiency in financial performance and seek to gain personal benefits, such as position and compensation (Inchausti, 1997). Besdies, financial performance is measured by roe, it reflects the return on equity, it means the financial reports' reliability plays an important role for the owners, especially the shareholders and investors. Higher reliability can reflect the companies' information that are disclosure on financial reports to help the investors/ owners make suitable decisions.

Regarding control variables, firm age negatively impacts listed firms' performance in HOSE (coefficient = -0.207). This finding is consistent with previous studies by (Liu, 2020) as the negative coefficient indicates that firm performance decreases as the firm gets older. Audit firm type positively impacts listed firms' performance in HOSE. Another line of studies observed a positive relationship between audit firm type and firms' performance (Amahalu, 2020; Zahid et al., 2022). High-ranking audit firms release reliable, authentic financial statements to consolidate investor confidence. Besides, those authors find that firms with higher disclosure quality after auditing by Big Four accounting firms show significantly better performance. Gross domestic product has a significant positive effect on firms' performance. The result is consistent with the studies by Ghazavi & Bayraktar, (2018); Hasan et al., (2018). An increase in GDP is interpreted as a sign that the economy is doing well, which promotes firms' performance. Those authors demonstrate that expanding economies allow companies to run more effectively.

5. CONCLUSIONS AND LIMITATIONS

The study examined the significant positive effect of financial statements' reliability on listed firms' performance in Vietnam, using FGLS. The results are explained based on agency theory and stakeholder theory, which are considered mechanisms to reduce asymmetric information between insider and outsider investors and leverage the disclosure of reliable financial statements to improve performance.

Although the research results are obtained, the study may have some limitations. First, to provide a comprehensive outlook, the data set should include all listed firms on both the Hanoi Stock Exchange and the Ho Chi Minh City Stock Exchange. Second, the model is regressed without a mediating or moderating factor, making it crucial to investigate the relationship between financial statements' reliability and firms' performance, which is mediated or moderated by the firm size factor. Finally, endogeneity needs to be addressed in the model by using the generalized method of moments (GMM).

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TRAINING HUMAN RESOURCES IN THE FIELD OF ACCOUNTING IN THE CONTEXT OF INDUSTRIAL REVOLUTION 4.0

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Abstract: *The industrial revolution 4.0 has a strong impact on all professions and fields, including accounting. Industry 4.0 is based on digital technology, integrating intelligent technologies to optimize production processes, business processes, business processes, production methods and new technologies, including accountants' information processing and information provision processes. The context of digital technology gives rise to new requirements for accounting human resources.*

The article researches the impact of the industrial revolution 4.0 on accounting and new trends of the accounting in the era of digital transformation. From there, the authors offer solutions to improve accounting human resources in the context of Industrial Revolution 4.0.

Keywords: *Industrial revolution 4.0; digital transformation, accounting, human resources.*

1. INDUSTRIAL REVOLUTION 4.0

The essence of the industrial revolution 4.0 (Industry 4.0) is based on digital technology and integrates smart technology to optimize processes, production methods, 3D printing technology, biotechnology, new materials, automation technology, robotics,... Therefore, today not only encapsulated in the field of pure production, but Industry 4.0 also has a strong impact on the financial sector of countries around the world.

Before approaching Industry 4.0, the stage of artificial intelligence and robotization, the industrial revolution has undergone the following remarkable milestones:

The 1.0th Industrial Revolution (late 18th century) → revolution in mechanization, steam engines;

The 2.0th Industrial Revolution (early 19th century) → revolution in electrification and electricity;

The 3.0th Industrial Revolution (around the 1960s → revolution in automation, the field of electronics.

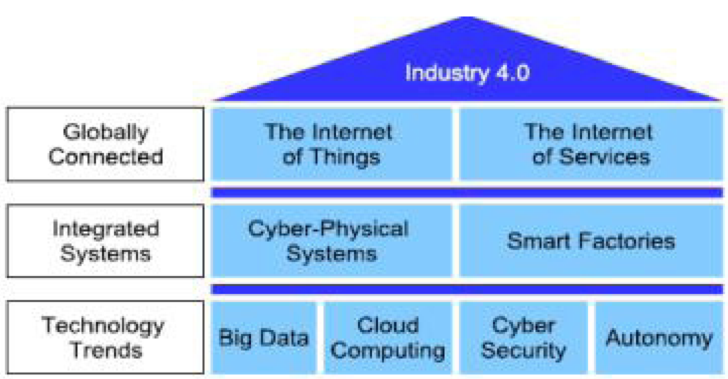

Figure 1: Vision of technology 4.0

(Source: Flynn, Dance & Schaefer, 2017)

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The term "Industry 4.0" is associated with the advent of the Fourth Industrial Revolution. It has accompanied by changes to machines, technologies, processes and employees. The core elements of digital in Industry 4.0 will be: Artificial Intelligence (AI), Internet of Things (IoT) and Big Data. The concept of Industry 4.0 is used in European manufacturing introduced by Germany. English-speaking countries such as the Entityed States or the Entityed Kingdom use the phrase "Internet of Things" or "Industrial Internet". Although the terms are different, it can be generally understood that the added value of the business can be ensured through the connection of digital processes (Josef Horák, 2016). Industry 4.0 provides an approach in which people, information and communication technologies evolve more closely together (Gabriel and Pessl, 2016). However, it is predicted that Industry 4.0 will lead to a significant reduction in human labor, which could cause high unemployment (Baygin et al., 2016).

2. NEW TRENDS IN THE FIELD OF ACCOUNTING IN THE DIGITAL TRANSFORMATION ERA

** Innovate accounting processes*

Under the impact of digital technology, the accounting work at each accounting entity will have quite a lot of changes. According to the Vietnam Accounting Law 2015 Accounting is the collection, processing, examination, analysis and provision of economic and financial information in the form of value, in-kind and labor time", thus accounting is the process of collecting, processing, examining, analyzing and providing economic and financial information to subjects wishing to use information to make economic decisions. The breakthrough of technology significantly affects the accounting process when most accounting practices apply information technology, including bookkeeping and financial statement preparation activities.

About data collection: The collection of data is carried out through accounting vouchers. Currently, accounting documents used include paper and electronic documents. In the coming time, electronic documents will gradually be popularly used. The process of recording information on electronic documents is done through data entry and data transfer on the system. The check of documents is supported by accounting software before storing. Unlike paper documents, electronic documents are reviewed by electronic signatures. The Law on Accounting of Vietnam 2015 has regulations on storing electronic documents to ensure information safety and security, avoid forms of exploitation, intrusion, theft and use of electronic documents in accordance with regulations. In the coming time, the explosion of cloud computing technology, Blockchain technology and big data will help process information and store information systematically, scientifically and achieve the best efficiency.

Regarding inspection and processing of accounting data: Blockchain technology has impacted the methodology, manner of checking and processing accounting data. The first blockchain was invented and designed by Satoshi Nakamoto in 2008 and realized a year later. Blockchain is a technology that stores and transmits information by means of blocks that are linked together and expand over time. Blockchain possesses a special feature that data transmission does not require an intermediary to confirm information, information cannot be changed and can only be added when there is a consensus of all nodes in the system. In the field of accounting, Blockchain technology serves as an open and decentralized accounting ledger capable of recording and verifying transactions without the need for an intermediary. This technology is designed to be neutral with data modification and cannot be retroactive, ensuring the integrity of the data, improving the safety and confidentiality of accounting information. In addition, Blockchain technology also helps users easily access accounting data that has been recorded multidimensionally in the data chain instead of the current form of double bookkeeping.

About data storage: Cloud technology and Blockchain make stori accounting data easy, fast, systematic, scientific and cost-effective. With the application of new technologies, data will be stored in large and unlimited volumes, automatically backed up to create copies of data to help protect data in case of system failure, data loss or data destruction.

Regarding analysis and provision of accounting information: The automatic storage and updating of accounting data changes on the basis of digital technology with the ability to collect big data and fast data processing speed, ensuring that accounting data is always available, timely serving the processing and analysis process, provide information. On the basis of the information provided, accounting entity managers have a deeper understanding of their entity's operations, helping them identify which stages and areas of the entity will have to improve to increase efficiency, reduce costs and better manage risks.

** The increasing proliferation of accounting software solutions.*

The application of technology solutions in the field of accounting is and will change the face of this field. Software engineering platforms with different levels of functions and jobs help optimize and minimize accounting tasks. Jobs are easily replaced by software such as: recording entries, bookkeeping, preparing financial statements, salary, financial analysis ,... With the cloud-based accounting system, accounting entity administrators can easily access the system at any time to retrieve data related to their entity's operations such as inventory; accounts receivable and payable; revenue and expense situation,... With bookkeeping system management technology platforms, spreadsheets also help control and better manage cash flow; Increase efficiency in analyzing, reporting complete financial status for heads of entitys. Moreover, this system also helps entitys save time in building workflows. With such benefits, the switch to using an accounting system based on cloud computing technology,... will be a big trend in the field of accounting.

3. CHALLENGES FOR ACCOUNTING IN THE CONTEXT OF INDUSTRY 4.0

Vietnam has now signed bilateral and multilateral free trade agreements, gradually entering the era of Industrial Revolution 4.0. That process also poses new problems for the field of accounting, specifically:

The process of digitizing the field of accounting.

The digitalization process has become one of the current global trends, especially after the industrial revolution 4.0. The digitization process is of decisive importance for the processing, storage and transmission of data. Digital data can be transmitted without loss of quality or data loss, which is a way of preserving information in an organization today. In the current era of digital transformation, many new types of businesses based on digital platforms appear; economic activities are increasingly diverse and abundant; The number of transactions in the economy will grow rapidly, putting a lot of pressure on the accounting sector to change its focus from checking the authenticity, conformity of transactions with regulations, accounting standards and preparing financial statements to providing more in-depth information for the process decision of accounting entity administrators. The digitization of Vietnam's accounting sector is inevitable.

Digital infrastructure and information security issues in the field of accounting

In the field of accounting, processing and analysis of accounting data plays an extremely important role and is the core of providing economic and financial information in the form of reports to those wishing to use the information to make appropriate economic decisions, promote the development of economic activities. In addition, increasing access to and sharing of data is crucial for the free and unlimited exchange of information globally. Therefore, it is required that each country, including Vietnam, must invest in building digital infrastructure to ensure quality and readiness for connectivity.

Along with the rapid development of digital technology and the trend of cloud computing, security vulnerabilities are also increasing. This leads to risks in accounting activities, especially in management accounting activities. Therefore, in order to ensure information security for the activities of entitys, each entity needs to focus on equipping and upgrading security tools and measures to keep up with the development trend of technology; at the same time raising awareness and awareness of officials and employees in this issue. In addition, information security and cybersecurity in accounting activities in the current era are extremely important, both ensuring national financial security, creating trust, peace of mind and protecting the interests of accounting service users.

Roadmap for transformation and application of International Financial Reporting Standards

In the context of international economic integration, free trade and fair competition, economic and financial information requires transparency, reliability and presentation in accordance with international accounting standards. Vietnam Accounting Standards (VAS) were developed based on International Accounting Standards from the years 2000 to 2005 according to the principle of selective application of international practices, suitable to the characteristics of the economy and management level of Vietnamese enterprises at the time of issuance of the standard. Up to now, Vietnam has developed and issued 26 accounting standards. VAS has basically approached International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS), reflecting the majority of transactions of the market economy, improving the openness and transparency of information about financial statements of entitys. However, VAS currently still has a significant gap with IFRS, which is reflected in some main manifestations such as VAS does not have regulations allowing the revaluation of assets and liabilities at fair value or revocable value at the time of reporting, this makes the value of assets and liabilities not reflect the actual fluctuations of the market, there are no regulations to present the Equity Fluctuation Report into a separate report, ... One of the reasons for this disharmony is that VAS has not updated the changes of IFRS. Currently, the Ministry of Finance has issued Decision 345/QD-BTC approving the scheme to apply financial reporting standards in Vietnam in order to complete the legal framework on finance and accounting; contribute to improving the transparency and efficiency of financial information, contributing to promoting the integration of Vietnam's economy with the world. Therefore, in the coming time, Vietnam needs to continue to implement solutions to directly adjust the system of Vietnamese accounting standards as well as solutions related to the economic and legal environment.

Human resources development for the field of accounting.

When applying digital technology, artificial intelligence can replace manual tasks of accountants such as collecting, processing and calculating data,... However, technology is only a tool to support work in accounting that works according to pre-programmed programming. For complex stages such as analysis, finding causes to provide solutions for each specific situation, even unprecedented situations ... human involvement is always required. Although artificial intelligence cannot replace humans, it is changing the working environment and circumstances of accountants. That requires the development of new skill groups needed for human resources in the field of accounting. Accountants will again have to be people who understand technology, use technology for their work. Therefore, in addition to the deep expertise of accounting professions, competencies, emotional indicators, human resources in the field of accounting also need to supplement technology skills (artificial intelligence, cloud computing, Blockchain,...), knowledge of law, communication, management and vision,...

4. THE CURRENT SITUATION OF HUMAN RESOURCES TRAINING IN THE FIELD OF ACCOUNTING IN VIETNAM

According to experts, the quality of human resources in the field of accounting in Vietnam is still limited. Statistics from the Accounting and Auditing Supervision Administration (Ministry of Finance) as of April 28, 2023 show that more than 420 practicing accountants have been granted certificates of registration to practice accounting services by the Ministry of Finance and more than 200 accounting service enterprises have been granted certificates of eligibility to provide accounting services by the Ministry of Finance. According to Dinh The Hung (2022), Vietnam's accounting human resources have certain limitations such as: knowledge and thinking of accountants are mainly professional and compliant; limited initiative and creativity; Working style and working mindset are not really professional.

Graduates are relatively fully equipped with accounting theory but lack methodical practice, resulting in limited working skills. In addition, soft skills such as communication skills, teamwork skills, problem-solving skills and especially foreign language ability of students majoring in accounting are lacking and weak. Therefore, students after graduating and working often lack confidence, lack creativity and cannot immediately adapt to work.

According to Tran Thi Hang (2018), the training program is not really associated with the training capacity as well as the requirements of the international integration period, the training program is heavy on theory, the content of specialized subjects is still spread, there is a lack of subjects on soft skills, there has not been much exchange with businesses, with national and international universities. Luong Thi Yen (2019) also criticized the general training programs of schools that are slow to improve innovation, theory is not associated with practice, the duration structure is not reasonable, leading to students learning too much but knowledge is not suitable with reality. Therefore, the development of training objectives, training programs and outcome standards for Accounting students is still formal, not really associated with the training capacity as well as the requirements of training quality of the market economy in the stage of international integration. These programs do not directly serve the development of specialized knowledge, making the program heavy in theory, lacking cohesion with practice.

In addition, although not much, most large universities in the current period have clearly identified the changes and challenges in the upcoming industry 4.0 context, so they have begun to change their training programs towards integrating with professional certificates of international professional associations, expand cooperation with businesses as well as exchange and exchange students with schools abroad, and also began to transform when introducing a number of technology subjects into the accounting and auditing training program. Partnerships between schools and professional organizations and auditing firms are expanding. Typically, since 2018, the Institute of Chartered Accountants of England and Wales (ICAEW) and KPMG Auditing Company (KPMG) have signed a memorandum of cooperation with the University of Economics and Law (UEL), Foreign Trade University Campus II in Ho Chi Minh City, University of Economics - Hanoi National University (UEB) and Banking Academy (BA) to implement the "KPMG - ICAEW STAR Program". This partnership opens up opportentityies for talented accounting and auditing students to receive professional training in some subjects of CFAB professional certificates from the time they are still in the lecture hall, along with the opportentityy to do an early internship and work at KPMG, one of the Big 4 in Vietnam. In addition, some large and prestigious universities have implemented the teaching of subjects in English to overcome language barriers, develop English skills for students, and help students better integrate into the international working environment. Specifically, training programs integrated with CFAB professional certificate of ICAEW at UEL and Hanoi National Economics University (NEU) implemented since 2015 or certificate of certified public accountant - ACCA integrated in the training program of Foreign Trade University... However, the number of schools changing training programs and teaching methods is not much, most other higher education institutions are still using academic curricula and few innovations and updates.

5. HUMAN RESOURCES TRAINING ACTIVITIES IN THE FIELD OF ACCOUNTING IN THE CONTEXT OF DIGITAL TRANSFORMATION

The Industrial Revolution 4.0 will dramatically change the relationships of people, living, working and educating. This technology is disrupting every industry worldwide at an unprecedented rate, and the accounting is not out of the loop. Therefore, to ensure graduates can get jobs, the teaching and learning activities of accounting students need to be adapted to the expectations of employers of accounting graduates in the Industry 4.0 environment (Bonekamp and Sure, 2015). To be ready to participate in a world alongside intelligent machines, how will they need to receive a different education than before?

Redefining the purpose of education

Throughout time, education has developed based on the needs of society in each period. Now, as we move further into the future, education will need to support learners to develop the skills and mindset to do anything in the future rather than a specific "something."

The American philosopher John Dewey said, "If we teach students today as we taught yesterday, we will rob them of tomorrow." Instead of teachers distilling information for learners and then memorizing them, teachers will become guides, guides, and facilitates learners in learning and applying knowledge in research. Failure needs to be accepted as an essential step to learning. In addition, teaching will be much more personalized, which will be supported by the inclusion of technologies such as AI, creating creative spaces for schools. In the learning and teaching process, new programs help facilitate the teaching process. Mastering some good systems will give you an edge for career development. For example, SAP ERP (Enterprise Resources Planning), a software adopted by large companies to manage their business operations, if one can use this software will be able to help himself not only in his current job but also take advantage of himself when looking for new jobs in other companies that also use SAP.

Development of human potential

Although machines are mastering many tasks typically performed by humans, humans are still better at creative endeavor, imagination, critical thinking, social interaction, and physical dexterity. The education system of the future needs to develop these inherent human abilities, so they are equipped to cooperate with machines of the future rather than compete with them. According to the 2018 Jobs Report from the World Economic Forum, executives expect employees with critical thinking and collaboration skills even more than employees with technology skills.

According to Jaroslav Vrchota's research (2019) on the necessary skills and competencies of the workforce for the 4.0 technology era, skills are divided into personal and technical, classified into "Must have skills", "Need skills" and "Can have skills".

About teaching

Accountants of the future increasingly need to be taught and improved skills in digital technologies (including cloud computing and the use of big data), about globalization and ever-evolving regulations (tax regulations, new forms of corporate reporting, integrated reporting regulations, etc.).

According to ACCA research, knowledge of digital technologies is an area where accountants are weak (Muhammad Islam, 2017). Currently, few universities build curricula for accounting students tailored to their future needs. Universities will need to develop or incorporate external entitys, new entitys in cloud computing, big data, digital technologies, integrated reporting etc. for accounting students. Universities should consult with professional accounting organizations to recruit more professionals/lecturers in new fields and organize new courses. At the same time, schools should invest in existing faculty, training, learning to coordinate and teach for new programs.

Lecturers must innovate in teaching methods, equip specialized knowledge associated with reality so that learners have a more specific view of future work. The practice stage should be divided into groups to discuss, exchange and support each other. The practical content covers all activities in the entity, from practicing the actual set of documents on software, practicing books and making financial reports.

Industry 4.0 requires accounting graduates to focus more on IT abilities. This is because many jobs in the Industry 4.0 era performed by humans will be replaced by IT. Educational institutions have started implementing or using various strategies related to IT in their teaching and learning process so that accounting graduates can equip themselves with a variety of IT skills, which will provide accounting graduates with an advantage in securing employment.

Table 1: Classification of skills and competencies required for Industry 4.0

	Must-have skills	**Need skills**	**Can-have skills**
Technique	- IT skills -Data processing and analysis capabilities - Analytical knowledge - Ability to use new equipment	-Knowledge Management -Interdisciplinary general knowledge of technology - Understanding of data security and information security -Specialized knowledge of the production process	- Programming -Specialized knowledge of technology - Understanding of the law

Individual	- Personal Time Management - Adaptability to change - Team skills - Social skills - Communication skills	- Trust new technology - Lifelong learning	

(Source:Jaroslav Vrchota, Human Resources Readiness for Industry 4.0, 2019)

In addition, training institutions should strengthen thematic meetings, practical exchanges, and share specialized experiences with businesses and affiliates. Through activities that both help teachers expand the reality in teaching and help learners have a more specific and clear view of the amount of theory learned in the curriculum.

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THE IMPACT OF MACROECONOMIC VARIABLES ON THE FINANCIAL RESOURCES OF ENTERPRISES IN VIETNAM

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Abstract: In the context of globalization and a rapidly growing economy, financial resources play an extremely important role in maintaining and developing business activities of enterprises. In particular, in Vietnam, one of the countries witnessing strong economic development, it requires businesses to have abundant and sustainable financial resources. However, the fluctuations in the macro market economy also have a significant impact on the financial resources of businesses. This study uses the VAR model to analyze the effect of macroeconomic variables on the financial resources of enterprises in Vietnam, thereby proposing some policies to improve the quality of financial resources of enterprises and expanding sources of mobilizing financial resources of Vietnamese enterprises for growth and development goals.

Keywords: Macroeconomic variables, financial resources, enterprises in Vietnam.

1. INTRODUCTION

Financial resources are not only a key factor in the operation of the entire economy, but they also have a vital impact on many businesses. In particular, for Vietnamese businesses to move towards integration and globalization, it requires sustainable financial resources.

However, in the current context of many fluctuations in the macro-economy, along with the innovation of the market economy and increasingly fierce competition between economic sectors, it has caused difficulties and challenges to the financial resources of enterprises. According to the Vietnam Chamber of Commerce and Industry, nearly 10% of Vietnamese businesses are in a situation of shortage of capital and business cash flow, especially medium, small and micro enterprises. Or in Resolution 126/NQ-CP, the Government assessed that the world situation is complicated leading to recession, reduced growth, potential financial and debt risks. Under that pressure, the situation of domestic trade activities is also affected, especially inflation, exchange rates, increased production costs, shrinking export market demand,...

All of these have an impact on financial resources of enterprises operating in our country. To stabilize the economy, the Government has closely monitored macro indicators to ensure a great balance of the economy. Thanks to that, the situation is gradually stabilizing again, and market sentiment and confidence are gradually being consolidated.

It can be seen that macroeconomic variables have significant effect on the financial resources of enterprises. Therefore, the topic *"The impact of macroeconomic variables on the financial resources of enterprises in Vietnam"* was selected for this study.

2. LITERATURE REVIEW AND RESEARCH MODEL

2.1. Literature review

According to the acceleration theory of JM Clark (1917) and Gordon (2009), investment depends on changes in output expectations (GDP). This theory argues that any change in output/

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GDP will lead to a change in investment capital flow decisions. Besides, from the foundation of the investment function of John Hicks (1937), James Tobin (1969) continued to consolidate and confirm that business investment depends on the level of change in GDP and interest rates. In other words, Tobin's investment function model supports the argument that GDP has a proportional effect on investment.

In the study "The impact of monetary policy tools on domestic investment and economic growth of Nigeria: 1970 – 2018" by Okoroa for OK David (2020), the author used the ARDL model combining the next method ADF and PP with the number of rows of data variables that are domestic private investment, economic growth rate, money supply, commercial bank credit, commercial bank interest rate, interest rate,.... to show that money supply negatively impacts financial resources for private domestic businesses. The results also assumed that the ratio index, interest rate and economic growth rate do not have a significant influence on domestic investment during the study period.

Many empirical studies have been conducted with the goal of evaluating the impact of macroeconomic variables on businesses' financial resources, specifically capital coming from foreign investment. Yang, Xiong, and Ze (2013) examine the determinants of foreign direct investment (FDI) and foreign portfolio investment (FPI) in 13 developing countries in Asia and the US - Latin from 1981 to 2011. Regression results show that in emerging Asian economies , FPI is mainly affected by exchange rates and risk fluctuations of the stock market.

In Vietnam has a topic by Associate Professor, Dr. Le Thi Lanh, MSc. Huynh Thi Cam Ha and MSc. Le Thi Hong Minh that researched "The impact of macroeconomic indicators on foreign porfolio investment (FPI) flows". This article examines the impact of macroeconomic variables on foreign porfolio investment in Vietnam during the period 2005 - 2012. ADF and Philips - Perron test with delay 3 is used to test the properties of time series variables, GLS regression method is applied instead of OLS to increase the efficiency of the model. Macroeconomic indicators considered include: GDP, inflation, interest rates, exchange rates and stock market index of stock prices. Among macroeconomic variables, GDP and inflation are significantly significant in explaining FDI inflows in Vietnam, but GDP and inflation have opposite reactions to foreign portfolio investment (FPI). The study recommends that the implementation of a reasonable macroeconomic policy and the planning of the country's investment strategy will enhance the efficiency in obtaining foreign portfolio investment.

Research "Effect of macroeconomic factors on investment: Evidence in Vietnam" by Le Thanh Tung (2013) aims to evaluate the influence of macro variables on the investment decisions of firms in Vietnam. The author used the Panel data analysis method and collected data from 60 Vietnamese enterprises listed on the Ho Chi Minh Stock Exchange in the period from 2005 to 2010. The macro variables selected for the study include GDP, interest rates, exchange rates and stock market prices. The results show that GDP and stock market prices have an influence. The study also shows that the impact of macro variables on business investment varies depending on the specific economic sector.

Research "Macro factors affecting FPI capital flow attraction in Binh Duong province" by author Dang Van Cuong (2021) aims to find empirical evidence on local-level macroeconomic indicators of Binh Duong province affecting FPI capital flows into the locality. Through series data from 1997 to 2020, the article uses the error correction model (ECM) co-integration analysis method to estimate the impact of these macro factors. The estimation results show that the province's annual gross product (GDP) and public investment have a positive impact on FPI capital flows in both the short and long term.

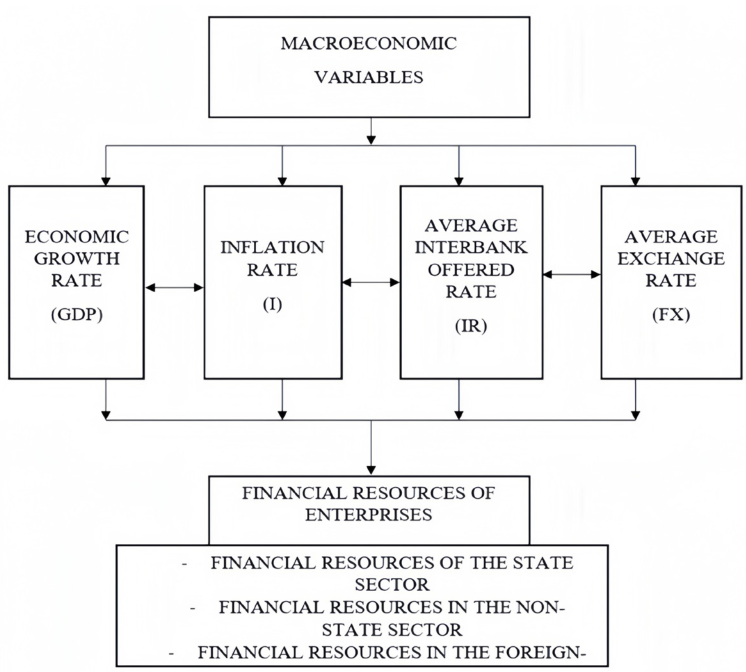
2.2. Research model

This study focuses on analyzing how macroeconomic variables affect the financial resources of enterprises in Vietnam. The model is chosen for regression is the Vector Autoregressive (VAR) models - models are widely used in time series research to examine the dynamic relationships that exist between variables that interact with one another.

The data included in the model is a continuous time series of 18 years from 2005 to 2022. However, due to data limitations, the study selected macro factors to be included in the model. including: economic growth rate (GDP), inflation rate (I), average 6-month interbank interest rate (IR), average exchange rate VND/USD (FX) and financial resources (LIC). In which, the financial resources variable (the dependent variable) represents the increase in financial resources of enterprises and analyzes the impact of the dependent variable: economic growth rate, inflation rate, average interbank interest rate and VND/USD exchange rate to this index. However, to increase accuracy in assessing the relationship between macroeconomic variables and the enterprise's financial resources, the authors consider the dependent variable in 3 separate areas:

- State Sector (LSIC)
- Non-state sector (LNIC)
- Foreign Investment Sector (LFIC)

General research equation: ***LIC = f (GDP, I, IR, FX)***



(Source: Proposal from the authors)

Figure 1: Research model

Table 1: Description table of variables

Variable	Measurement method	Expectation sign	Hypothesis	Source
Dependent variables				
Ln(SICt)	The value of natural logarithm of the financial resources of the State Sector in the year t			GSO
Ln(NICt)	The value of natural logarithm of the financial resources of the non-state sector in year t			GSO
Ln(SICt)	The value of natural logarithm of the financial resources of the foreign-invested sector in year t			GSO
Independent variables				
Ln(GDPt)	The value of the natural logarithm of Vietnam's GDP at a time t	+	The coefficients of the variables will have a positive sign depending on the estimated results. When the coefficient is positive, the economic growth rate increases, leading to the financial resources of enterprises increases and vice versa.	GSO
Ln(It)	The value of the natural logarithm of Vietnam's inflation at a time t	-	When the coefficient is negative, it means when the inflation rate increases, the financial resources of enterprises decrease and vice versa.	GSO
Ln(IRt)	The value of the natural logarithm of Vietnam's average interbank offered rate	-	When the coefficient is negative, it means when the interest rate increases, the financial resources of enterprises decrease and vice versa.	Vietstock
Ln(FXt)	The value of natural logarithm of Vietnam's average exchange rate	-	When the coefficient is negative, it means when the exchange rate increases, the financial resources of enterprises decrease and vice versa.	Vietstock

(Source: Proposal from the author's team)

Table 2: Data description table

Year	SIC	NIC	FIC	GDP	I	IR	FX
2005	172,000	105,000	47,000	8.4	8.4	7.72	15,859
2006	199,843	134,030	65,027	8.2	6.6	8.25	15,994
2007	200,000	187,800	74,100	8.48	12.6	8.36	16.105
2008	184,400	263,000	189,900	6.18	19.9	12.05	16,302
2009	245,000	278,000	181,200	5.32	6.52	8.93	17,065
2010	316,300	299,500	214,500	6.78	11.75	10.99	18,613
2011	341,600	309,400	226,900	5.89	18.13	14.08	20.51
2012	374,300	385,000	230,000	5.03	6.81	11.17	20,828
2013	440,500	410,500	240,100	5.42	6.04	6.4	20,935
2014	486,800	468,500	265,400	5.98	1.84	5.14	21,151
2015	519,500	529,600	318,100	6.68	0.6	4.9	21,683
2016	557,500	579,700	347,900	6.21	4.74	4.98	21,932

2017	594,900	676,300	396,200	6.81	3.53	4.86	22,373
2018	619,100	803.300	434,200	7.08	3.54	4.7	33,606
2019	634,900	942,500	469,400	7.02	2.79	5.26	23,045
2020	729,000	972,200	463,300	2.91	3.23	3.84	23,208
2021	713,600	1,720,200	485,100	2.58	1.84	2.86	23,178
2022	824,700	1,873,200	521,900	8.02	3.15	5.76	23,727

Source: Compiled by the authors

3. RESEARCH RESULTS ON THE IMPACT OF MACROECONOMIC VARIABLES ON THE FINANCIAL RESOURCES OF BUSINESSES IN VIETNAM

3.1. Testing Stationarity

Augmented Dickey - Fuller (ADF) Unit root tests and Phillips - Perron tests are used to test the stationarity of the variables.

Table 3: Result of stationarity test

Variable	ADF	P-value	Stop chain	Result	Critical value (t-statistic)		
					1%	5%	10%
Ln(SIC)	-3.925275	0.0115 (**)	DLn(SIC)	Stop	-4.004425	-3. 098896	-2.690439
Ln(NIC)	-8.519854	0.0000 (**)	DLn(NIC,2)	Stop	-3.959148	-3.081002	-2.681330
Ln(FIC)	-5.083147	0.0011 (**)	DLn(FIC)	Stop	-3.920350	-3.065585	-2.673459
Ln(GDP)	-3.889516	0.0106 (**)	Ln(GDP)	Stop	-3.920350	-3.065585	-2.673459
Ln(I)	-5.182122	0.0011 (**)	DLn(I)	Stop	-3.959148	-3.081002	-2.681330
Ln(IR)	-3.673192	0.0161 (**)	DLn(IR)	Stop	-3.920350	-3.065585	-2.673459
Ln(FX)	-3.286406	0.0377 (**)	DLn(FX)	Stop	-4.057910	-3.119910	-2.701103

Source: Results from Eviews 10

Comment:

Testing the stationarity of the series at 5% significance level (**), the result shows that SIC, FIC, I, IR, FX stops when taking the first difference and NIC stops when taking the second difference. Particularly, GDP stops when taking the difference of order 0.

3.2. Test for Optimal Lag Structure

Table 4: Results of Optimal Lag Structure testing of 3 areas

- **State sectors**

Lag	LogL	L.R	FPE	AIC	SC	HQ
0	-231.3160	NA*	4643246.	29.53949	29.7809*	29.55186
first	-202.4541	36.07736	3469979.*	29.05676*	30.50536	29.1309*

- **Non-State sectors**

Lag	LogL	L.R	FPE	AIC	SC	HQ
0	-241.9240	NA	1.37e+08	32.92320	33.15922	32.92069
first	-201.4415	48.5789*	2198724*	30.8588*	32.27497*	30.84378*

- **Foreign-invested sector**

Lag	LogL	L.R	FPE	AIC	SC	HQ
0	-224.8561	NA*	2070807*	28.73202*	28.97345*	28.74438*
first	-205.6303	24.03226	5161274.	29.45379	30.90240	29.52797

Source: Results from Eviews 10

Comment:

Based on AIC, the model has an optimal delay of 1. From the results of the stop calculation and the optimal delay, the VAR model is selected as a suitable model to analyze the impact of macroeconomic variables on the financial resources of enterprises in different regions.

3.3. Assessing Stability of the VAR Model

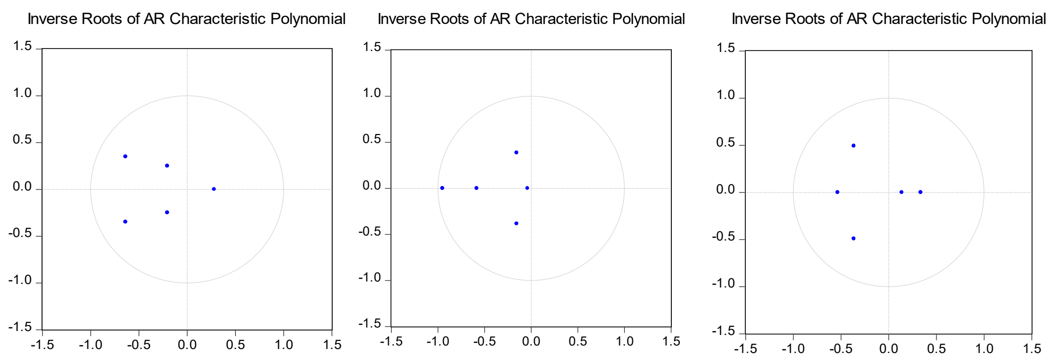


Figure 2: Stability of the model

Source: Results from Eviews 10

Comment:

The results of testing the stability of the VAR model through the Inverse Roots of AR Characteristic Polynomial test. The eigenvalues are all in a single circle (or they are all less than 1), which implies that the VAR model is stable and the estimated results from the VAR model can be trusted.

3.4. Testing for Residual Autocorrelation

Table 5: Results of residual test of 3 areas

- **State sector**

Lag	**LRE* stat**	**DF**	**Prob.**	**Rao F-stat**	**DF**	**Prob.**
first	38.75098	25	0.0390	1.910643	(25, 5.2)	0.2369

- **Non-State sectors**

Lag	LRE* stat	DF	Prob.	Rao F-stat	DF	Prob.
first	151.1759	25	0.0000	6734.916	(25, 1.5)	0.0012

- **Foreign-invested sector**

Lag	LRE* stat	DF	Prob.	Rao F-stat	DF	Prob.
first	32.04044	25	0.1568	1.209924	(25, 5.2)	0.4531

Source: Results from Eviews 10

Comment:

The results of the autocorrelation test show that the P-values of the State sector and the foreign-invested sector in Lag1 are both more than 0.05. So, at the significance level of 0.05, the model in these two regions has autocorrelation. Meanwhile, in the non-state sector, the P-value is less than 0.05. So at the significance level of 0.05, the model does not have autocorrelation.

3.5. Evaluating Granger Causality

In the multivariable VAR model, the Granger causality test tells us which variable a change in the model is affected by. The results of the causality test are:

Table 6: Synthetic of Granger causality relationship of variables to financial resources of the State sector

Dependent variable	D(LNSIC)	LNGDP	D(LNI)	D(LNIR)	D(LNFX)
D(LNSIC)		0.0974	0.6390	0.9174	0.5194
LNGDP	0.0378		0.1077	0.6020	0.9479
D(LNI)	0.1168	0.5463		0.5551	0.8003
D(LNIR)	0.7002	0.5375	0.5574		0.6622
D(LNFX)	0.0847	0.0350	0.8056	0.6575	

Source: Results from Eviews 10

Table 7: Synthtic of Granger causality relationship of variables to financial resources of the non-state sector

Dependent variable	D(LNNIC)	LNGDP	D(LNI)	D(LNIR)	D(LNFX)
D(LNNIC)		0.0004	0.2864	0.1095	0.9966
LNGDP	0.0007		0.1024	0.2223	0.9674
D(LNI)	0.1607	0.6136		0.5138	0.8284
D(LNIR)	0.6773	0.3915	0.3075		0.8177
D(LNFX)	0.5134	0.0047	0.8406	0.6408	

Source: Results from Eviews 10

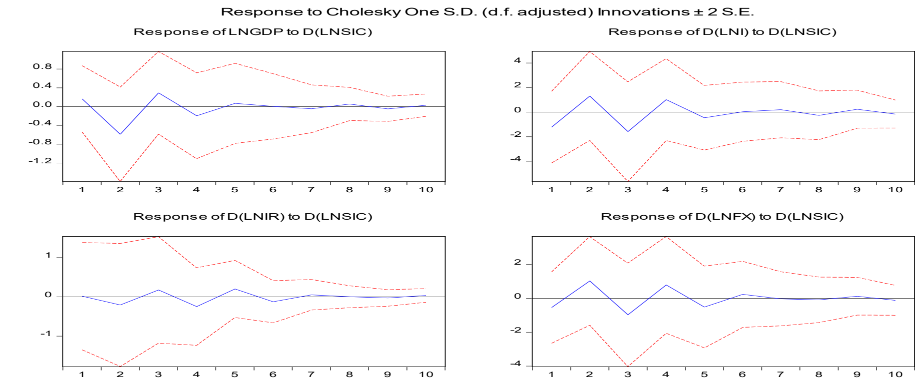
Table 8: Summary of Granger causality relationship of variables to financial resources of Foreign - invested sector

Dependent variable	D(LNFIC)	LNGDP	D(LNI)	D(LNIR)	D(LNFX)
D(LNFIC)		0.6500	0.1827	0.4060	0.7570
LNGDP	0.1828		0.0762	0.5506	0.8986
D(LNI)	0.1559	0.5036		0.5297	0.8333
D(LNIR)	0.1550	0.8088	0.8493		0.9432
D(LNFX)	0.4748	0.0782	0.8306	0.6492	

Source: Results from Eviews 10

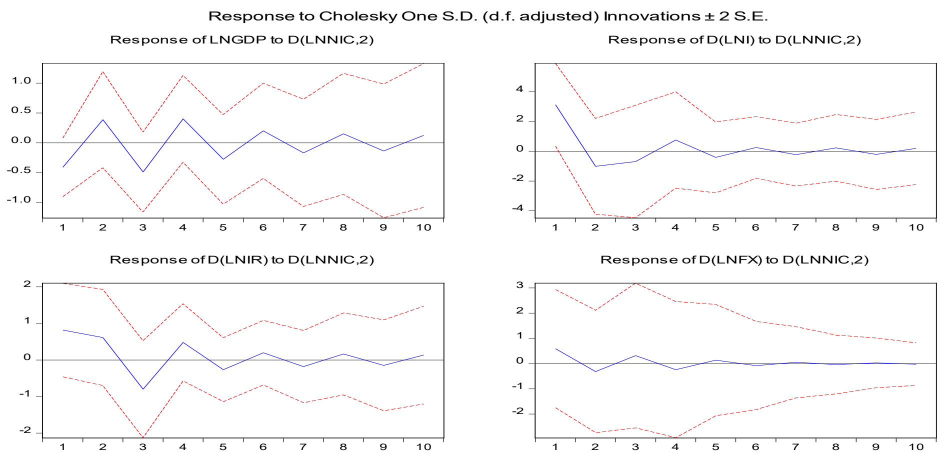
Comment: At the 10% significance level, Prob of all variables is less than 5%. Therefore, all the independent and dependent variables: GDP, IR, I, FX all have an impact on the financial resources of Vietnamese enterprises in different regions and vice versa.

3.6. Impulse response function (IRF)



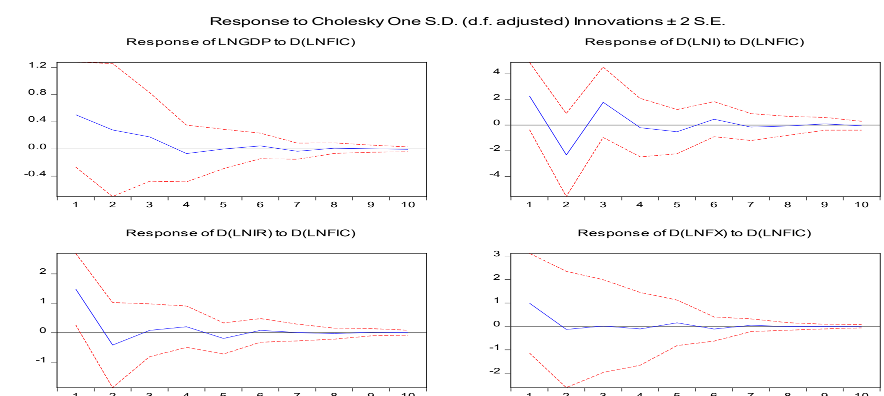
Source: Results from Eviews 10

Figure 3: Results of impulse response function in the State sector



Source: Results from Eviews 10

Figure 4: Result of impulse response function in the non-State sector



Source: Results from Eviews 10

Figure 5: Result of impulse response function in the foreign-invested sector

Overall, the push reaction results show:

In the State sector: All indicators have strong fluctuations and in the last years, these indicators tend to decrease. The push reaction results show that GDP and IR initially cause the state sector's financial resources to decrease in year 1 and from year 2 to year 5 it fluctuates strongly. However, after that, from the 5th year onwards, it decreased and remained stable. The reason is that from the later period, the economic growth rate decreased while interest rates increased, causing the economy to develop slowly, thereby negatively affecting the financial resources of enterprises.

In the non-state sector: The results of the push reaction show that GDP, I and IR have a great impact on the financial resources of enterprises in the non-state sector, causing financial resources in this area to always fluctuate. strong for 10 years. The reason is abnormal economic growth causes other macro factors to be affected, interest rates and inflation increase very high or decrease very low, leading to the ability of businesses to mobilize financial resources is also affected and tends to fluctuate unevenly between years.

In foreign-invested sectors: The push reaction results show that the decline in GDP in the first 4 years and FX in the 1st and 2nd years makes financial resources of businesses in this area also decreased. During the following period, GDP increased slightly, mainly maintaining stability and slightly decreasing at the end. From the 5th year onwards, the financial energy in foreign-invested areas also remains stable until the final year. In addition, the average interbank interest rate IR and inflation rate I have a stronger fluctuation range, but at the end of the period, the response of financial resources of enterprises in these two areas is almost the same. .

3.7. Variance Decomposition Test

To assess the impact of the past values of each variable more accurately, we conduct variance decomposition according to Sim's Recursive Cholesky method.

Table 9: State sector Variance decomposition results

Variance Decomposition of D(LNSIC):						
Period	**SE**	**D(LNSIC)**	**LNGDP**	**D(LNI)**	**D(LNIR)**	**D(LNFX)**
first	26.21126	100,0000	0.000000	0.000000	0.000000	0.000000
2	39.57710	54.16817	35.86618	3.479257	0.081441	6.404952
3	45.21433	43.51687	33.92071	15.71623	0.166248	6.679943
4	47.98644	38.65816	34.08081	17.85994	0.332206	9.068887
5	48.85029	38.01591	33.48607	17.61054	0.376814	10.51066
6	49.28067	38.37378	32.90432	17.39978	0.372120	10.95000
7	49.62639	38.52522	32.61667	17.61320	0.372161	10.87275
8	49.88506	38.39923	32.55359	17.90260	0.380528	10.76406
9	50.03061	38.22877	32.56763	18.06452	0.388543	10.75054
ten	50.09139	38.13638	32.57688	18.10817	0.392532	10.78605

Source: Results from Eviews 10

The result of the analysis of variance shows that, during the 10-year period of the study, the financial resources of the state sector are greatly affected by the shock created by itself (38.14%). GDP has the most explanatory role for the financial resources of the State sector and has a decreasing role (from 35.87% in the 2nd year to 32.58% in the 10th year) leading to financial resources decline. The second influencing factor is inflation (I) with the explanation role increasing sharply and keeping at 17 ~ 18%. Along with that, FX also shows its influence on financial resources. The role of IR explains the increase and stabilization of about 0.3% of fluctuations in financial resources of the State sector.

This result is completely reasonable because financial resources are proportional to GDP and inversely proportional to I, IR, FX. Therefore, when GDP decreases and the remaining 3 variables increase, it makes financial resources in this area decrease in line with the direction of impact between variables.

Table 10: Non-State Sector Variance decomposition results

Email: maipqkinhte@hvtc.edu.vn, Academy of Finance						
Period	**SE**	**D(LNNIC,2)**	**LNGDP**	**D(LNI)**	**D(LNIR)**	**D(LNFX)**
first	128.3677	100,0000	0.000000	0.000000	0.000000	0.000000
2	180.6522	81.79595	12.57223	4.108232	0.750096	0.773485
3	219.9760	68.28964	8.536706	4.040723	4.378176	14.75475
4	267.7432	51.18029	8.482818	3.611459	7.344740	29.38070
5	317.3410	38.60677	10.22702	3.307083	8.815158	39.04397
6	364.1840	30.44830	12.08836	3.062924	9.482947	44.91747
7	406.3386	25.15740	13.61544	2.861938	9.813997	48.55123
8	443.3863	21.60662	14.78226	2.707020	9.998639	50.90546
9	475.6405	19.12476	15.66297	2.591628	10.11049	52.51016
ten	503.6694	17.32371	16.33370	2.505205	10.18243	53.65495

Source: Results from Eviews 10

The results show that, during the 10-year period of the study, financial resources in the non-state sector are mainly explained by itself and FX. In which, the explanatory level of FX is more than that of other variables (ranging over 14% and reaching 53.65%) by the 10th year. On the other hand, the influential role of FX is completely opposite to financial resources in the non-State sector. While FX tends to increase, financial resources tend to decrease and by the last year, the role explained by financial resources itself no longer accounted for the largest share. Next, GDP and IR tend to increase and remain more stable than other variables, but still explain only below 20%. The smallest explanatory role is the inflation rate, which remains below 5% and does not affect financial resources in the non-state sector much.

Table 11: Foreign-invested Sector Variance decomposition results

Variance Decomposition of D(LNFIC):						
Period	SE	D(LNFIC)	LNGDP	D(LNI)	D(LNIR)	D(LNFX)
first	28.51348	100,0000	0.000000	0.000000	0.000000	0.000000
2	33.00979	81.94212	5.447036	0.005880	10.07048	2.534483
3	34.57424	74.82744	5.095852	7.386654	9.897933	2.792119
4	35.48177	72.98010	5.088207	7.772615	9.606629	4.552452
5	35.94388	72.40242	4.986601	7.593561	9.415144	5.602272
6	36.06677	72.08461	4.970412	7.660343	9.386320	5.898313
7	36.08922	72.00370	5.000177	7.705708	9.379630	5.910782
8	36.09950	72.00272	5.008574	7.703993	9.376038	5.908672
9	36.10294	71.99924	5.007853	7.706139	9.377548	5.909221
ten	36.10394	71.99530	5.008125	7.709707	9.377954	5.908916

Source: Results from Eviews 10

The results of the analysis of variance show that, during the 10-year period of the study, the financial resources of the foreign-invested sector are mainly explained by itself. If its own explanation is the largest and gradually decreasing (from 81.9% in the 2nd year to 72% in the 10th year), the independent variables I, IR, FX all tend to increase. Specifically, in the 10th year, the explanation of inflation I only increased by 0.003% over the previous year, IR increased by 0.0004% over the previous year, and FX reached 5.9%. GDP growth rate also has an effect on the financial resources of the foreign-invested sector. However, it accounts for only a small part and unstable over the years and always remains below 5.5%.

4 . DISCUSSION AND CONCLUSION

The model results are completely consistent with previous studies and the hypothesis proposed by the author. Besides, the tests show that the VAR model is appropriate, stable and provides reliable results. Specifically, the model testing results show that macroeconomic variables have an impact on the financial resources of enterprises in Vietnam: GDP has a proportional relationship with the financial resources of businesses, while inflation, interest rates and exchange rates produce results that are inversely proportional to the financial resources of businesses. This result coincides with the initial hypothesis of the model.

4.1. Some achievements

In recent years, the increase in GDP has contributed to increasing income for the economy, thereby increasing investment of businesses, contributing to expanding financial resources for interprises. Meanwhile, interest rates are kept at a stable level by the State Bank, ensuring businesses can access financial resources from financial institutions to expand production and business activities. Although inflation levels fluctuated, especially in the period 2011-2015, basically with the application of flexible and proactive fiscal and monetary policies, inflation was gradually controlled, prices wewe stabilized. Changing the exchange rate management mechanism to the central exchange rate helps reflect the correct market value and helps businesses easily participate in the international market.

From the estimation results, it can be seen that among the macro factors affecting the financial resources of state-owned enterprises in Vietnam, the economic growth factor has the strongest impact. When GDP increases and contributions to the State Budget increase, the State has the conditions to increase financial resources for state-owned enterprises. For the remaining businesses, GDP also has certain effects on the increase in financial resources of businesses. Especially with the non-state enterprise sector, which is considered the growth engine of the economy, the role of GDP tends to increase over the 10 years of research, reflecting an expanding economy over time, businesses in this area also accumulate more and more renewable energy for production and business.

In addition, Vietnam controls inflation quite well and does not adversely affect the financial resources of businesses. In general, for the period from 2005 to 2022, the inflation rate is always under the control of the Government, always maintaining a rate that is neither too high nor too low. However, in some periods such as from 2011 to 2014, inflation decreased deeply but was still within the allowable adjustment level of the State, did not cause the economy to stagnate, and at the same time still helped enterprises' financial resources. industry increased slightly.

Finally, the decrease in interest rates and thanks to the market regulation of the Government have also contributed to helping businesses save costs and increase profits. Opening economy policies and operating the central exchange rate mechanism flexibly according to market fluctuations have helped non-state sector enterprises expand their consumption markets and gain advantages in the international market. Accordingly, businesses can increase financial resources from operating in these markets.

4.2. Some limitations

Besides the achieved results, some limitations still exist. Specific:

Firstly, the influence of GDP on the financial resources of non-state and foreign-invested sector' s enterprises are still quite modest while they have much influence on state-owned enterprises, showing positive results that the growth results have not really created a positive transmission mechanism to businesses in these two sectors.

Secondly, inflation in the research period fluctuated, showing that despite the government's control policies, the economy is still easily affected by external shocks.

Thirdly, interbank offered rates in Vietnam are not stable, increase or decrease erratically, often changing, affecting the business operations of the enterprise.

Fourthly, the VND/USD exchange rate in recent years has concentrated to decrease but remains at a high level, making firms unable to save input costs, thereby reducing profits. The influence of the exchange rate on the financial resources of non-state enterprises is very large, showing the great dependence of these enterprises on the foreign market.

In summary, the research results have confirmed the impact of macroeconomic variables on the financial resources of businesses. This result is completely consistent with the original research hypothesis. Therefore, it is necessary to combine macroeconomic policies, including fiscal policy, monetary and other policies, to control macro indicators. In this way, the financial resources of enterprises for their operation and development are ensured.

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A RESEARCH ON THE IMPACT OF REDUCING VALUE-ADDED TAX ON THE PRIVATE ECONOMY IN VIETNAM FROM THE PERSPECTIVE OF EQUITY- EFFICIENCY - FEASIBILITY

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Abstract: This article aims to analyze the impact of VAT reduction on the private economy from three perspectives of efficiency, fairness, and feasibility of VAT through the application of Decree No. 15/2022/ND-CP dated December 28, 2022, and Decree No. 44/2023/ND-CP dated July 1, 2023. These Decrees were implemented to promote the strong development of Vietnam's economy in the current difficult context and have shown certain effects, especially meaningful to the private economy. The study analyzed the impact of the VAT reduction policy on the private economy and showed that it ensures equity - efficiency - feasibility and based on that it made policy implications to help the private economy be supported development in the further.

Keywords: Reducing VAT rate, private economy, equity-efficiency-feasibility of taxation.

1. INTRODUCTION

In 2022, to support the recovery of the country's socio-economic development after the impact of the Covid-19 pandemic, the National Assembly and the Government have issued legal documents on fiscal and monetary policies to support this recovery. Accordingly, the Government issued Decree No. 15/2022/ND-CP dated January 28, 2022, stipulating the Value Added Tax (VAT) exemption and reduction policy effective from February 1, 2022 until the end of the year, based on Resolution No. 43/2022/QH15 issued on January 11, 2022, of the National Assembly. The biggest purpose of Decree No. 15/2022/ND-CP is to reduce VAT to reduce commodity prices and stimulate consumption in the economy. Although implemented in a short time, this policy has had certain effects. In 2023, Vietnam's economy will continue to face many difficulties and major challenges such as: The economic growth rate has begun to show a downward trend from the fourth quarter of 2022, and economic growth in the first quarter of 2023 has not improved yet [11]. A number of key industries and many key industrial localities declined or had low growth. In addition, the world economic, political, and security situation continues to become complicated and unpredictable: global economic growth is declining; The risk of recession, the escalating war between Russia and Ukraine, increased risks in financial, currency, real estate markets, etc. are also external disadvantages that have a major impact on the Vietnam economy. Therefore, to contribute to reducing the cost of goods and services, promoting production and business for businesses, and creating jobs for workers, the Government continues to issue Decree No. 44/2023/ND-CP July 1, 2023, stipulates a 2% VAT reduction policy according to Resolution No. 101/2023/QH15 dated June 24, 2023 of the National Assembly. Accordingly, a series of goods and services have a VAT rate of 10% reduced to 8% until the end of 2023 (except for the following: telecommunications, information technology, financial services, banking, securities, insurance, real estate trading, metals, fabricated metal products, mining products, refined petroleum, chemical products and items subject to excise tax.) The Government assessed that in the short term, if the 2% VAT reduction policy is applied in the last 6 months of 2023, the expected state budget revenue will be reduced equivalent to about 24 trillion VND [14], but it will help economic sectors in general and private economic in particular benefit and overcome difficult times. Therefore, this policy receives

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support from the people, experts, and enterprises in the country. Previous studies by Sajadifar et al. (2012), Miller, Webster, & Yanti (2013), Erero (2015), Zhang et al. (2018), Chuanwang Sun et al. (2020), Yue Mei Guo et al (2021), ... research from an overall national perspective have shown that policy reducing taxes in general will help support businesses' production and business activities to recover soon and reduce inflationary pressure, leading to economic growth. However, currently, there are not many in-depth works focusing on researching the impact of VAT reduction policies on enterprises in the private economic sector in Vietnam. Hence, this paper was conducted to analyze and evaluate the impact of VAT reduction policies on the private economy sector in Vietnam in the period 2022-2023, the study approached from equity, effectiveness, and feasibility. On that basis, some recommendations are made to promote private economic development in Vietnam in the future.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. THEORETICAL FRAMEWORK

2.1.1. THE VALUE ADDED TAX

A value-added tax is a tax imposed on the added value of goods or services; it is levied on the price of an item at each stage of importation, production, processing, and trading. Accordingly, the tax bearer is an organization or individual that ultimately consumes goods and services in the Vietnamese territory through the purchase of goods and services at prices inclusive of VAT. Tax declarers and payers (essentially an intermediary for collection and payment) are the organizations and individuals that manufacture, trade taxable goods and services in Vietnam and individuals that import goods or purchase services from abroad. This tax plays an important role in mobilizing state budget revenue [4].

There are three VAT tax rates in Vietnam, including: 0% (applied to exporty goods and services, and considered exported), 5% (applied to essential goods and services), and 10% (applies to remaining goods and services). Reducing the VAT rate leads to a reduction in the amount of VAT payable by VAT payers.

Joseph E. Stiglitz et al. (2015) proposed five basic characteristics of a good tax: efficiency, simplicity, flexibility, transparency, and fairness and they submitted that those five characteristics there can be condensed into three extremely important characteristics of a tax: Equity, efficiency, and feasibility. Specifically:

(i) Equity: Policy-makers often refer to two types of fairness of taxation: the one is horizontal equity of taxation, i.e. taxpayers have the same legal status and participate in the same activities that give rise to legal tax obligations, they have the obligation to pay taxes to the state. The other is vertical equity of taxation, i.e. taxpayers with the unequal incomes will be taxed differently [4].

(ii) Efficiency: The effectiveness of a tax is measured by the Deadweight loss (DWL) caused by the tax, also known as the social loss. This concept is more clearly defined in microeconomics: DWL is the decrease in total social surplus including producer surplus, consumer surplus and government surplus caused by taxation. The effectiveness of a tax will decrease if the DWL is greater and vice versa. This means that, for all taxes in general and indirect the VAT in particular, most of them create DWL. The DWL increases when the price of goods and services is more elastic or the tax rate of goods and services is higher [26].

(iii) Feasibility: In a broad meaning, the feasibility of a tax is the ability of the provisions in tax legal documents to be implemented in practice and whether it is likely to be highly effective or not. In a narrow meaning, the feasibility of a tax is understood as the amount of tax collected must be greater than the total costs spent to implement that tax. The cost of the tax includes administrative expenses and compliance costs. Administrative expenses are the costs for the state to organize tax collection, compliance costs are the costs which taxpayers and others incur in meeting obligations imposed under tax legislation. In addition, feasibility also refers to issues related to the process of implementing tax collection policies, indirectly affecting state budget revenue [25].

2.1.2. THE PRIVATE ECONOMY

The private economy is the segment of a national economy that is owned, controlled, and managed by private individuals or enterprises. That mean the private economy is an economic sector outside the state economic sector, including domestic and foreign enterprises, in which the private sector holds over 50% of investment capital.

The private economy is associated with the type of private ownership, including the individual economy, the smallholder economy and the private capitalist economy based on private ownership of the means of production. The private economy exists in forms such as private enterprises, limited liability companies, joint stock companies and individual business households.

Resolution of the 5th Plenum of the 9th Central Committee determined: The private economy is an important component of the national economy. Private economic development is a long-term strategic issue in socialist-oriented multi-sector economic development, making an important contribution to successfully implementing the key tasks of economic development, industrialization, modernize and enhance the country's internal strength in international economic integration.

For nearly 40 years of renovation, Vietnam's economy has been gradually asserting its position in the region and in the world. A significant contribution to that success is the strong development from the private sector - the area which is considered the most dynamic sector and plays a big role in promoting national economic development [30].

2.1.3. THE IMPACT OF THE VAT REDUCTION POLICY ON PRIVATE ECONOMY

In terms of the impact of VAT reduction on businesses, the VAT has the effect of encouraging businesses to develop production, export, and investment, promote business accountings, and contribute to increasing revenue. Strengthen the management of business activities of the enterprise. In other words, the VAT reduction policy contributes to reducing production costs and product prices, thereby helping businesses increase their ability to recover and expand production and business activites [4].

In general, the VAT reduction policy can help reduce the tax burden on enterprises and improve the vitality of their in the market, thereby reducing recessionary pressure on the economy. Other documents also point out that reducing VAT is an important measure to optimize the tax structure and strengthen supply-side structural reform [33]**.** Besides, the VAT reduction policy can help expand markets, stimulate investment, and improve production efficiency of businesses [3]**.**

The VAT reduction is applied to stimulate consumer demand, in accordance with the difficult economic context, thereby promoting production and business activities of enterprises to soon recover and develop to contribute again to the state budget revenue as well as the economy.

2.2. LITERATURE REVIEW

To study the impact of increasing or decreasing VAT on the economy from an overall perspective, previous studies have taken many different approaches such as Tao Thi Hoang Anh (2007), La Xuan Dao (2012), Urzua (2001), Emran & Stiglitz (2005), Sajadifar et al. (2012), ... They researched the impact of VAT on the country's economy by using econometric models to verify and evaluate the impact of increasing or decreasing VAT on national economy. Specially, Urzua (2001) studied the welfares received in tax reforms in Mexico and shown that the tax system is progressive so it satisfies vertical equity. In some other studies such as Zaman (2012) has pointed out that increasing VAT raises concerns that the relevant social aspects are completely ignored and therefore the increase in VAT is not optimal in terms of society, it causes inequality in society because most of the revenue of these taxes comes from poor households, increasing taxes will affect people with low income because VAT is regressive in income. On the other hand, Chuanwang S., et al. (2020) explore the impact of VAT incentives at the micro-enterprise level according to the DID (Difference In Difference) method and the financial panel data of Chinese listed companies. The results of the study indicate that VAT incentives are ineffective in stimulating corporate returns on equity (ROE) and the authors also find that the policy impact has a time lag and change significantly over time. Nguyen Thi To Nga (2022) researches the VAT reduction policy from the perspective of public finance. The results show that the VAT reduction policy ensures fairness and effectiveness, but the level of feasibility is reduced.

Some other authors' research using Computable General Equilibrium (CGE) models to simulate and forecast tax policy impacts such as Nguyen Chan et al. (1999) used the CGE model in evaluating tariff policy in Vietnam, the study focused on VAT reform. The results indicate that Vietnam can gain benefits from direct VAT reform, but the redistributive effects associated with these reforms are large and may overshadow those benefits. Giesecke J., A. & Tran. N., H., (2009) developed a model that models some of the intricacies of the VAT system as it is implemented by tax authorities in the Vietnamese economy. The authors modeled multiple tax rates, multiple exemptions, and multiple refund levels for commodity users and multi-product businesses. Detailed VAT framing is important for accurate VAT modeling in a general equilibrium model. Such a framework is also valuable in accurately representing the distribution of indi.rect taxes in the general equilibrium model database, a prerequisite for accurate welfare analysis. The authors use this model to analyze the impact of simplifying Vietnam's complex VAT system, simplifying the system by moving from three tax rates to a tax rate. Yue Mei Guo et al. (2021), using a CGE model to estimate the impact of a VAT reduction policy on local fiscal pressures in China in the COVID-19 pandemic, the authors show that reducing VAT helps reduce the operational burden for businesses and enhances their vitality in the market, but it will certainly lead to a significant decrease in tax revenue for the local budget, thereby leading to increasing the local financial pressure. Nguyen Thi Huong (2022) studied the reduction of VAT on changes in macroeconomic indicators based on the use of the Dynamic Computable General Equilibrium model (DCGE) and concluded that the reduction of VAT from 10% to 8% does not reduce state budget revenue in the long term but also increases GDP and trade surplus. As a result, with the VAT reduction policy, it not only increases people's welfare, stimulates consumption, but also promotes investment and removes difficulties for businesses. The Government will achieve the goal of restoring the economy after the impact of the Covid-19 epidemic. In the long term, total state budget revenue from taxes will be improved more. Institute for Economic Research and Policy (VERP) (2018) combines CGE and Demand Function models to forecast the impact of increasing VAT on the economy and household welfare. The results show that increasing taxes increases budget revenue and total investment, but it sharply reduces total income and total household expenditure.

Thus, it can be seen that there are many previous studies researching the impact of increasing or decreasing VAT on the economy from different methods, but there is no research on this issue on the firms of the private economic sector from the perspective of equity, efficiency, and feasibility in the period 2022 - 2023 in Vietnam. This article uses the methods of analysis, synthesis, comparison, and secondary data collection to determine this issue.

3. ANALYZING THE IMPACT OF VAT REDUCTION ON THE PRIVATE ECONOMY IN EQUITY, EFFECTIVE, AND FEASIBLE TAXATION

3.1. IN TERMS OF EQUITY OF TAXATION

In horizontal equity of taxation, the reduction of VAT for items with VAT rates from 10% to 8% ensures equality among all sectors of the economy. Because, according to regulations, all enterprises in the private economic sector or state economic sector are the same VAT obligations (they are all allowed to buy goods and services with reduced VAT capacity). This means that all kinds of firms are treated equally in fulfilling tax obligations and reducing VAT equally.

In vertical equity of taxation, reducing VAT rates improves vertical equity of taxation. Considering the nature of VAT, it does not ensure vertical fairness but reducing the VAT rate will reduce the unfairness of this tax, leading to increased vertical fairness for VAT. This is because tax rates on goods and services are generally regulated for all taxpayers, so businesses in general or enterprises of private economic in particular, which are facing difficulties or disadvantages (have poor business results or negative profits...) all pay the same tax rate according to regulations with businesses in general or private economic in particular that have more advantages (good business results, positive profits, enjoy preferential policies, ect). Thus, this does not ensure vertical equity of taxation because vertical equity means that taxpayers with the ability to pay more tax must pay more tax than other subjects. But when the VAT rate is reduced, it means that the amount of VAT payable by all businesses is reduced equally for consuming the same items, however, when it comes to the ratio of tax payable to profit, there is a difference among businesses because the reduction rate of difficult businesses will be higher than the businesses with advantages. Thus, reducing VAT rates leads to improved vertical fairness of taxation, which is especially meaningful for taxpayers who are enterprises in the private economic sector, they are more vulnerable and receive less support than enterprises belonging to the state economic sector or foreign investment sector. After applying Decree No.15/ND-CP, March 30, 2023, there are about 897,297 enterprises doing business: There are 50,113 newly established enterprises; the number of businesses terminating business decreased by 3.83% compared to 2022 (31,356 businesses); the number of businesses temporarily suspending business decreased by 15.14% compared to 2022 (29,029 businesses). They are mainly private businesses, the support for VAT reduction also creates more favorable conditions and increases fairness for them return to the market [10].

3.2. IN TERMS FEASIBILITY OF TAXATION

In a broad meaning, in the context of needing to stimulate economic recovery, the implementation of VAT reduction according to Decree No. 15/2022/ND-CP and Decree No. 44/2023/ND-CP is considered a solution to support businesses because they were reduced a part of the burden tax causing of VAT, therefore, it has a positive impact and is highly appreciated and responded to by businesses, ensuring the feasibility of taxation.

In a narrow meaning, the VAT reduction policy is still feasible when the total amount of tax VAT collected is still higher than total the costs incurred, even though though VAT reduction has an indirect effect on state budget revenue in the short term, but reducing VAT stimulates consumer demand, from which the government will collect additional taxes involving such as income tax, excise tax, fees, ect. from the increased amount of goods and services consumed to compensate for the reduced state budget revenue. For example, product A has a selling price of 1,000,000 VND/piece and customers consumes 1 million of product A. When product A has a 2% VAT rate reduction means the price of this product is reduced by 200,000 VND/piece, to 800,000 VND/piece but thanks to that, the number of product A consumed increased to 1.2 million pieces. As a results, the government collects VAT on 1 million products A initially and collects VAT on 200,000 products A extra, and also collects taxes involving such as corporate income tax, excise tax, fees, etc. arising from 1.2 million products A instead of 1 million products A initially. This demonstrates the superiority of the VAT reduction policy and shows its multi-dimensional impact, helping businesses increase consumption of products, and helping the economy develop, which in turn increases state budget revenue for the government. Thus, reducing the 2% VAT rate ensures the feasibility of VAT when applied.

According to the report on the results of implementing the VAT reduction policy according to Resolution No. 43/2022/QH15 on results achieved in 2022, the government shown this policy has supported enterprises and people about 44.5 trillion VND in 11 months of application (an average monthly decrease of about 4 trillion VND). The implementation of VAT reduction according to Resolution No. 43/2022/QH15 has indirectly stimulated domestic consumption demand to increase, total retail sales of goods and services revenue in 2022 increased by 19.8% compared to the previous year, domestic VAT collection did not decrease but increased by 10% over the same period [14].

If this policy is applied for a longer period of time, it is clear that businesses will benefit and the economy will recover faster, but this policy also needs to be appropriate in the economic context and especially necessary must come from the provisions of law. That means tax reduction does not change the state budget revenue balance approved by the National Assembly. If taxes are reduced for too long a time and for all goods and services, it will affect the picture of state budget revenues and expenditures and lead to many other problems. However, in the current context of needing to stimulate economic recovery, the VAT reduction policy has many effects and ensures good feasibility.

In addition, initially, the implementation of Decree No.15/2022/ND-CP caused great difficulties for enterprises due to confusion when making separate invoices for goods and services with reduced 2% VAT rates. This might be the cause of increased tax compliance costs for enterprises and tax collection costs for tax authorities. However, this difficulty has been promptly resolved by the Government with Decree No. 41/2022/ND-CP. Accordingly, enterprises do not have to issue separate invoices, that is, if they sell many items with different tax rates, the invoice must clearly state the tax rate of each good and service. With such regulations, businesses save time making invoices, save costs of using invoices, and are convenient in accounting and tax declaration. Thereby, reducing administrative procedures for businesses, reducing the cost of using invoices, reducing tax compliance costs, facilitating production and business activities of businesses, indirectly helping to increase the feasibility of VAT reduction policy.

3.3. IN TERMS EFICIENCY OF TAXATION

According to the concept of DWL of microeconomics above, goods and services with high tax rates cause large DWL or large social losses. Therefore, when VAT rate is reduced, prices of goods and services go down and the DWL of VAT will decrease. That is, when the VAT rate is reduced, the effectiveness of the VAT will increase because of the decrease in DWL. Described in Figure 1. follows: the initial VAT rate which is symboled (T), the initial DWL will correspond to the area of trapezoid BCED, if the tax rate T is reduced from T to T', new DWL after reducing the tax rate at T ' will correspond to the area of triangle ABC. Observing in the figure bellow, seeing that the area of triangle ABC is smaller than the area of trapezoid BCED. This means that the DWL is reduced or in other words, the effectiveness of VAT is increased.

After 7 months of 2023, applying Decree No. 44/ND-CP on reducing 2% of VAT, the total retail sales of goods and consumer service revenue of enterprises is estimated to reach over 3 million billion VND, an increase of nearly 11 billion VND. % compared to the same period in 2022. In Ho Chi Minh City's market, in the first 6 months of 2023, the total retail sales of goods and consumer service revenue of businesses reached more than 560,000 billion VND, an increase of more than 7% compared to the same period in 2022. It is estimated that in the last months of 2023, this number will increase further according to according to the expectation of the 2% VAT reduction of Decree No. 44/ND-CP [11].

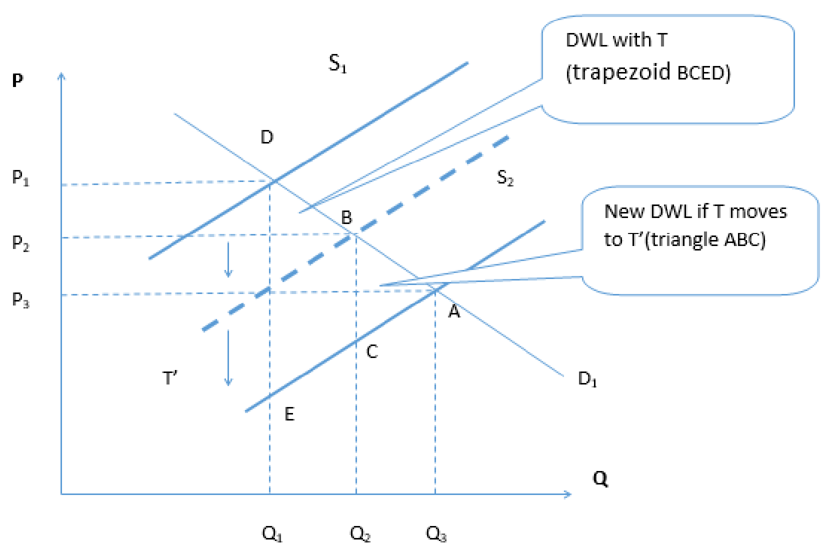

Figure 1. The reducing VAT affects DWL

3.4. THE DISADVANTAGES OF VAT REDUCTION ON THE PRIVATE ECONOMY

Although, the policy of reducing VAT from 10% to 8% from July 1, 2023 to December 31, 2023 of Decree No.44/2023/ND-CP according to Resolution 101/2023/QH15 is being implemented. It is expected to help businesses overcome economic difficulties in the current context. However, besides the achievements, some limitations of the VAT reduction policy are still revealed as follows:

First, Decree No.44/2023/ND-CP still only allows a 2% VAT reduction for some goods and services instead of the entire. While the economy is a continuous entity, if there are difficulties, every industry will face difficulties, more or less. Therefore, if the 2% VAT reduction policy is only selective for a number of industries according to current regulations as applied in 2022, it will create discrimination among businesses, thereby leading to decreasing fairness of this VAT reduction.

Second, the 2% VAT reduction according to Decree No.44/2023/ND-CP only applies in the last 6 months of 2023, which is obviously significantly shorter than Decree No.15/2022/ND-CP lasts for nearly the whole of 2022. During the VAT reduction period, the current economic context has not yet improved due to major impacts from the end of the third quarter of 2022 until now. Thus, if the tax reduction period is short, the size is not deep enough, the final consumer does not benefit in the long term, and it does not have enough impact on manufacturing enterprises when the price of goods is faster and lasts longer, leads to not enough for a basic economic recovery process. Hence, the effectiveness of VAT reduction may be affected. The impact of this policy will be somewhat limited, making it difficult to promote the effect of stimulating demand and providing growth like in 2022.

Third, nowadays, enterprises have been operating in multiple industries, buying and selling many items so reducing VAT rates on only a few goods and services makes tax declaration and payment very complicated for enterprises. They are worried that if they incorrectly determine the items being reduced, they will risk being fined and disciplined later, which in turn partly affects the feasibility of the 2% VAT tax reduction policy.

4. CONCLUSIONS AND POLICY IMPLICATIONS

After implementing the decrees stipulating tax exemption and reduction policies according to Resolution No. 43/2022/QH15 of the National Assembly on fiscal and monetary policies to support the socio-economic recovery program in the following context after the Covid-19 pandemic, although these decrees have urgent and some problems, they have shown that the policy is to come to life as quickly and conveniently as possible. This policy has had many effects. From a business perspective, the VAT reduction policy has shown certain effectiveness in supporting increased demand for goods, stimulating the circulation of goods, helping businesses release inventory, and return to business production again. When businesses have recovered and developed production, they will create more jobs and better resources, and the Government will collect additional related taxes. Compared to other policies, VAT reduction has shown to be the most direct support solution of the Government for taxpayers, especially, this policy will best support businesses in the private economic sector, which are the most vulnerable compared to the state economic and investment foreign sectors to overcome the crisis period.

The study analyzed the impact of the VAT reduction policy on the private economy from the perspective of: Equity - efficiency - feasibility and based on that it made policy implications to help the private economy be supported development in the further:

Firstly, the Government should consider expanding the scope of subjects eligible for VAT reduction to all groups of goods and services that are currently subject to a 10% tax rate because currently, all types of business sectors are facing difficulties not just any field. Thus, expanding the scope of subjects eligible for VAT reduction will be consistent, creating comprehensiveness in implementation and increasing the feasibility of VAT reduction itself.

Secondly, the Government needs to consider extending the VAT tax reduction policy until the end of 2024 so that the 2% VAT tax reduction policy has enough time to have a deep enough impact. Both the final consumer and manufacturing businesses can benefit for a long time when cheaper commodity prices last longer. Thereby, the effectiveness of the new VAT reduction policy is increased, helping the economy recover.

Thirdly, to put the policy into practice more effectively and avoid causing problems that may cause difficulties in tax compliance for businesses as in the case of Decree No. 15/2022/ND-CP, the tax authorities should issue a Circular with clearer instructions. In addition, tax officials should also have programs to update tax policies and specifically answer the question of enterprises so that the process of implementing new policies can be quickly, practical, and effective.

In addition, although the VAT reduction policy is appropriate for the current context, however, it has directly affected state budget revenue (expected state budget revenue in 2023 will decrease by VND 20,000 billion), so the Government needs to continue its actions. Measures to stimulate demand include removing bottlenecks to increase disbursement and promote the effectiveness of public investment spending in the economic recovery package rather than continuing policies that impact budget revenue reduction. Along with that is strengthening inspection and supervision to prevent tax loss. These amounts will ensure budget balance.

Moreover, the Ministry of Finance should continue to reform and modernize the tax system in accordance with international practices. To have an effective tax system, taxes need to have low and appropriate tax rates, therefore, with VAT, it is necessary to expand the VAT base by reducing the number of essential goods and services that are not subject to VAT, and goods and services are subject to a tax rate of 5%; moving towards basically applying a tax rate below 10%.

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CORPORATE SOCIAL RESPONSIBILITY IMPACT ON TAX AVOIDANCE: EMPIRICAL EVIDENCE IN VIETNAM

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Abstract: The study was conducted to evaluate the impact of corporate social responsibility (CSR) on tax avoidance in Vietnam, when having moderating effect of chief executive officers' power (CEO power). The study uses a data sample of 499 listed non-financial companies in the period 2016 to 2022 with 3,493 observations. We use the feasible generalized least squares model to assess the impact of CSR with the moderating effect of CEO power on tax avoidance. The research results confirm that if listed companies which have powerful CEO disclose more CSR information, tax avoidance behaviors increase. In addition, the study acknowledges that audit firm quality, financial leverage have a negative impact on tax avoidance, but there is no evidence showing that industry has impact on tax avoidance. The article has added empirical research to the background theory of tax avoidance, providing a basis for other future studies.

Keywords: Corporate social responsibility (CSR), tax avoidance, CEO power, Vietnam

JEL: M40, M41, M49

1. INTRODUCTION

Corporate social responsibility (CSR) has become a decisive factor in business efficiency, determining the sustainable existence of businesses in the competitive environment (Buckingham, 2012; Mark, 2012; Yinyoung et al., 2016; Enric, 2018), and it is a concern in the context of worry about social and environmental issues. Therefore, Vietnam recently has issued many legal documents related to promoting social responsibility disclosure, such as Circular 155/2015/TT -BTC, Circular 96/ 2020 / TT -BTC replaces Circular 155 on social responsibility disclosure, requiring businesses to carry out social responsibility in their business activities. Then, CSR compliance in Vietnam is compulsory, that is one of factors contributing to fair presentation of financial reporting.

With the increasing in awareness of the international community and related parties about environmental and social issues, the aim of businesses is not only increasing profits and benefits for investors, or increasing the level of contribution to the budget, but also paying attention to the environment and contributing to the community, as well as reaching the goal of sustainable development (Carol, 1979; Chapple & Moon, 2005). Therefore, in the 1970s, there was a view of research that the obligation to pay taxes is the social responsibility of businesses, and Friedman (1970) represented that viewpoint when admitting "The main responsibility of an enterprise is to generate profits to fulfill tax obligations for the State, and the responsibility of governments is to spend taxes effectively for community and society. An enterprise is considered to perform well on social responsibility when it has fulfilled its tax obligation to the State and its business activities must be transparent and comply with the provisions of the law".

Basing on both orientation of sustainable development and regulations on corporate social responsibility, the leader of an organization – for example, the chief executive officer (CEO) in a company - plays the important role in building a culture of ethical behavior and social responsibil-

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ity. If a business is run and led by CEOs who have professional vision, reputation, experience, always adhere to business ethics, and always aim for the common interests of the community, it will create a strong connecting with employees, connecting with stakeholders, thereby helping the unit realize its sustainable development goals. Senior managers can influence policy implementation regarding CSR (Waldman & Siegel, 2008). From these basis, we conduct an empirical analysis to see whether the abiding by CSR regulations helps entities behave more responsibly, by transparently presenting relevant information on financial statements and complying with regulations on corporate income tax. At the same time, we also use superiority theories to analyze whether CEO characteristics can predict differences in CSR among companies. Therefore, this study was conducted to test whether businesses complying with CSR regulations do tax avoidance or not, and if CEO power really moderates this relationship?

After the introduction, the article mentions the overview and hypothesis. Then, the article describes the data, methods, and scales of variables in the model. The next part of the paper is the research results and finally the conclusions and related policy implications.

2. LITERATURE REVIEW AND HYPOTHESES

Legitimacy theory holds that for a company to continue to develop sustainably, it must comply with legal regulations, and it must operate within the boundaries and norms that society defines. Unerman & Deegan (2011) define legitimacy as a social contract between an organization and the society in which it operates, understood as an explicit social desire or an implicit understanding between the organization and another organization. This theory also believes that when a company complies with legal regulations in business activities, it will maintain the social trust from community and contribute to sustainable development. Companies disclose information through CSR reports to ensure transparency and to gain social recognition (Omran & Ramdhony, 2015).

There are some concepts of tax avoidance, but the term tax avoidance lacks a common definition because it can mean "different things to different people" (Hanlon & Heitzman, 2010). In fact, many scholars argue that corporate tax avoidance activities are often misdefined (Desai & Dharmapala, 2009b), because it is difficult to distinguish practices of tax avoidance and tax evasion, then the difference between the two is vague (Weisbach, 2003), while there are views that tax avoidance is a legal action, but tax evasion is illegal. However, terms "tax management" and "tax planning" are used interchangeably in the previous reseaarch mean tax avoidance (Chen et al., 2010; Dyreng et al., 2008; Lanis & Richardson, 2011 ; 2012; Minnick & Noga, 2010)

Agrawl (2007) states that "Tax avoidance is considered the act of reducing tax liability while still complying with the provisions of the law rather than in writing through tax planning". Dyreng et al. (2008) stated that tax avoidance is "the ability to pay a low tax per dollar of reported pre-tax accounting income", while Desai & Dharmapala (2009) state that "tax avoidance is the use of legal method, exploiting loopholes in tax regulations to minimize the amount of tax payable by an individual or a business. This is usually done by making the most of reasonable expenses, restructuring transactions in a way that reduces tax liability, such as purchasing local bonds, using tax deductions and take advantage of tax incentives" or as Armstrong et al. (2012), argue that "tax avoidance is the avoidance achieved by arranging personal or professional affairs to take advantage of loopholes, uncertainties clarity, irregularity or other deficiencies of tax law".

Legal tax avoidance reduces tax costs, and these reduced costs may lead to increase managers' compensation or serve shareholders (Aminad et al., 2018), then it is considered managers' motivation to perform tax avoidance behavior. But this activity in the long run will affect the reputation and value of the business.

Thus, tax avoidance is legal action based on the use of loopholes in the law to reduce the amount of tax payable. Meanwhile, the act of tax evasion is an act of an organization or individual through illegal activity to avoid paying enough a true tax liability. However, the distinction between the two has led to much debate because it is difficult to clasify them, and in many cases it is not possible to confirm an action is a tax avoidance or tax evasion (Slemrod & Yitxhaki, 2000).

The theory of social responsibility and tax avoidance behavior points out the complex relationship between these two issues. Carrol (1979) believes that CSR is the entire scope of a company's responsibility to society in terms of economic responsibility, legal responsibility, ethical responsibility and other responsibilities. Huseynov & Klamm (2012) argue that paying enough tax obligations is a topic within the scope of CSR. If an enterprise fulfills its tax payment obligation, it is an important contribution to society; if it does not pay attention to its tax obligation to contribute economically to society, then social responsibility is at risk of not reachable. Nevertheless, if enterprises reduce income tax costs, there is an increasing in profits, then tax avoidance can basically be seen as a kind of CSR in economic terms, the first and most important responsibility of enterprises (Carrol, 1979).

When enterprises carry out activities related to CSR, it will incur higher costs and then reduce their profits, so they may deal with this problem through other adjustment activities to cover the costs. These activities may be input choices, pricing strategies, or illegal practices such as non-compliance with labor regulations, environmental restrictions, or tax laws. It means that those companies try to avoid paying taxes through appropriate transfer pricing policies, offering appropriate location options, or using appropriate tax legislation. When taxes are reduced, profits increase, helping the company better position when entering the market. So, in those cases a reduction in tax payments can be considered a socially acceptable activity (Huseynov & Klamm, 2012).

Besides, views on tax avoidance also differ between companies (McIntyre et al., 2011), so it is found that the issue of tax avoidance is still a controversial topic.

Hoi et al. (2013) examined whether aggressive tax evasion behaviors are related to CSR practices. The study used a sample of US companies in the period 2003-2009. Its results acknowledge that firms that do not disclose CSR information are more likely to deliberately evade taxes. With the same results, Lanis & Richardson (2015) used a data sample of 434 observations in the period 2003 - 2009 (including 217 observations of businesses with tax avoidance behavior and 217 observations of businesses without tax avoidance behavior) to consider if enterprises disclosing social responsibility information relate to tax avoidance or not. In this study, the authors measured independent variable representing tax avoidance using book tax difference (BTD). Empirical results admit that if US companies do more CSR activities, their tax avoidance would be lower. The result is similar to that of the researches of Ki (2012) in Korea and Liu & Lee (2019) in China.

Fuadah & Kalsum (2021) used a data sample of 29 manufacturing companies in Indonesia, in the period 2017 - 2019 to evaluate the impact of CSR disclosure and tax liability on corporate value. The study uses a linear structural model based on partial least squares. The tax avoidance variable is measured using the effective tax rate (ERT). The research results confirms that CSR and tax avoidance have a negative and significant impact on corporate value, and the lower the level of CSR disclosure is, the higher corporate income tax avoidance is. However, this study only uses data of listed manufacturing companies, then it does not reflect the relationship between social responsibility and tax avoidance behavior in general.

Contrary to the above results, Davis et al. (2016) uses 5,588 annual observations of US companies in the period 2006-2011 to find that companies that disclose more CSR information are more likely to avoid taxes. This study interprets their findings that CSR and taxes act as substitutes because firms engaged in tax avoidance deliberately increase their CSR activities to offset any negative perceptions from community. Watson (2015) uses corporate profits as a moderator to explain relationship between CSR and tax avoidance. Using 7,297 annual observations of US companies for the period 2003-2009, he finds that there is a significant relationship between CSR and tax avoidance in low-margin firms, but this relationship weakens or disappears in highly profitable firms. Then the research concludes that the relationship between CSR and tax avoidance depends on the company's profits.

Zeng's study (2018) was conducted basing on companies in different countries with the aim of examining the impact of CSR on tax avoidance activities of enterprises in different countries. This study found strong evidence that CSR is positively related to tax avoidance. In countries with weak national governance, firms with higher CSR scores are less likely to evade taxes, implying that CSR and national governance are related. In the meanwhile, Abid &Dammak (2021) admit that firms with high CSR scores are more likely to engage in tax avoidance behavior. Besides, the findings show that companies audited by high-quality auditors have less tax avoidance behavior.

For reviewing studies related to the topic, Issah & Rodrigues (2021) collected research published from 2003 to 2020 to build a map explaining the relationship between social responsibility and tax avoidance behavior. The authors' report shows that there were not many publications before 2012 on social responsibility and tax avoidance. The number of publications related to social responsibility and tax avoidance increased slightly from 4% to 9% from 2012 to 2018 with an average of five to twelve articles per year. The number of publications has skyrocketed in 2019 with 24 articles and 39 articles in 2020. Research results have acknowledged that concerns about social responsibility and tax avoidance are gaining more academic interest, in the context of publication of the Global Reporting Initiative (GRI) Tax Standards.

CEO is considered the most powerful person in an organization, he or she is the person who sits at the top of the management team. CEOs can lead companies in pursuing goals and getting positive opportunities (Barnard, 1983), and control the financial structures and strategies of the companies (Woodward, 1965; Lawrence & Lorsch, 1967). As the external business environment changes rapidly, becoming more volatile, CEOs play more important role when they are expected to create jobs, provide quality products and services, and give high return on investment for shareholders (Boatright, 2009). Previous studies have suggested that CEOs who are founders and have financial-accounting expertise will be the most powerful CEOs (Gao & Jain, 2012 ; Gounopoulos & Pham, 2018; F. Li & Mr. Srinivasan, 2011). F. Li & Srinivasan (2011) find that in companies where the CEO is the founder, he or she is given more privileges than that in the other companies, then they have more power that affects process of decision making (Adams et al.,

2009) , and it also impact on the strategies and goals of the company (Stockmans et al., 2010) . In addition, superiority theory (Hambrick & Mason, 1984) argues that CEO characteristics influence the process of making decisions in joint stock companies (Sanders & Carpenter, 1998) . Another study suggests that if the process of decision making is more complicated, the characteristics of CEOs have higher impact on that process (Bernard et al. , 2018 ; Zhang et al., 2021) . Wernicke et al. (2021) contributes to these results of relationship when showing that CEO characteristics explain about 30% of the variation in CSR.

Therefore, with the opinions of the authors and the issues presented above, we propose the following hypothesis:

H1: CSR disclosure with the moderator of CEO power has a negative effect on tax avoidance.

3. RESEARCH METHODS

3.1. Research database

The data sample in this study is all companies listed on HOSE and HNX with a fiscal year starting from January 1 and ending on December 31 of the year from 2016 to 2022. The data for the period of 2016 – 2022 is collected for the reason that Circular 155/2015/TT -BTC took effect January 1st 2016. The data excludes the following cases:

- Financial institutions and insurance companies (because this field is regulated by a completely different financial mechanism and regulations);

- Enterprises that do not have enough financial statement data for the year 2016 to 2022, because a lack of data will lead to unbiased panel data and affect the results of the regression model and; and

- Enterprises with negative accounting profit because there is not enough data to determine the dependent variable of tax avoidance in the research model.

This data sample includes 499 companies with 3.493 observations.

3.2. Regression model

Using quantitative research method, based on table database, using stata 16 software, this research was conducted to build regression model with dependent variable (Tax – Tax avoidance) and independent variable (CSR with moderating of CEO power) and control variables (company size – Size; financial leverage – Lev and Industry -IND). Our model testing research hypothesis is formatted as follows:

$$TAX_{it} = \alpha_0 + \beta_1 CSR{*}\ CEOPOW_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 BIG4_{it} + \beta_5 IND_{it} + \pounds_{it}$$

Where:

- TAX is the tax avoidance, tax avoidance is measured by using the calculation of Effective Tax Rate (ETR)
- CSR*CEOPOW is independent variable in the model.
- SIZE, LEV, BIG4, IND are controlling variables.
- $\beta_{1,} \beta_2, \beta_3, \beta_4, \beta_5$ are coefficients of regression.
- $\boldsymbol{\varepsilon}_{it}$: is the error term.

3.2. Measuring the dependent variable in the regression model

Dependent variable In this study, tax avoidance is measured by using Effective Tax Rate - ETR (Chen et al., 2010; Dyreng et al., 2017; Kurniash et al., 2017). It is calculated as follows.

$$\text{ETR} = \frac{\textit{Income tax expense}}{\textit{Earning before income tax}}$$

In the view of the above researchers, when the ETR rate is lower than the current statutory tax rate, the business is likely to avoid the tax. Then we use a dummy variable to represent the ETR with the rule that if the ETR is less than 20% (current tax rates apply to companies), the value is 1, otherwise, the value is zero.

Independent variable

Independent variable CSR

Literature provides several methods for measuring CSR: content analysis of CSR measurement through independent CSR reports (Dhaliwal et al., 2011 -2012); measure CSR through the number of CSR pages in the annual report (Cowen et al. , 1987); measure CSR through the number of keywords in annual reports and CSR reports (Gamerschlag et al., 2011); measuring CSR through the use of databases covering three aspects: economic, environmental and social (Nguyen Thi Minh Thuy, 2016). In Vietnam, with the introduction of Circular 155/2015/TT-BTC on guidance about information disclosure on the stock market, regulations on the presentation of annual reports clearly state general standards on CSR disclosure in the appendix. IV. Therefore, within the scope of the study, the authors base on the CSR disclosure rules prescribed by the Ministry of Finance for listed companies as the basis for calculating and measuring CSR. At the end of 2020, the Ministry of Finance issued Circular 96/2020/TT -BTC on instructions for information disclosure on the stock market, effective from January 1, 2021 to replace Circular 155/2015/TT -BTC. Compared to Circular 155, Circular 96 changes the scope and time of corporate information disclosure, but it does not change content of CSR information need to dislose. Therefore, in this study, our team decided based on the criteria in Appendix IV circular 155 to measure CSR. Specifically, there are 20 criteria in 3 aspects: environmental issues, human issues and community service activities. Current studies show that disclosure can be quantified using a weighted or unweighted approach (Bose et al., 2018). In this study, we use the unweighted approach. Basing on Ben Amar & Chakroun (2018) and Rashid et al., (2020) , we apply a binary variable measuring CSR disclosure, the company is assigned value "1" if a regulatory entry is published in the annual report, otherwise value is "0" if it is not declared. With a total of 20 items to be disclosed, CSR is measured as the ratio between the total number of information receiving the value 1 to the number of items related to the social responsibility disclosure.

$$CSR_i = \frac{\sum_1^n SCORE_i}{\text{n}}$$

Measuring the moderator variable (CEOPOW)

Previous studies have shown that there are many factors that constitute important characteristics of a CEO; among these factors, founder and financial expertise are the most important factors that constitute a CEO with most powerful (Gao & Jain, 2012; Gounopoulos & Pham, 2018; Li & Srinivasan, 2011). Li and Srinivasan (2011) found that companies with a CEO who is a founder provide more perks to the CEO than companies where the CEO is not a founder. Founders, based on their position, will participate in all financial and business policies of the company and have a great influence on the company's culture, strategy, and goals (Stockmans et al., 2010).

CEOs with financial expertise understand accounting policies and tax regulations, so they take advantage of their related knowledge and skills to influence profits for many different purposes (Fraser & Greene, 2006); Gounopoulos & Pham, 2018). Therefore, in this study, we combine two characteristics CEO is founder (CEFOUND) and CEO has financial expertise (CEOEXP) [1]into a composite variable CEO (CEOPOW). Then the CEO will have full authority, and it is a composite index representing the role of CEO with two characteristics. If CEO is the founder, it receives value 1, otherwise it receives value 0; if CEO have financial expertise, it takes value 1, otherwise it takes value 0. *Thus, the CEO composite index (CEOPOW) is a dummy variable that takes the value 1 if the company's CEO is also the founder (CEOFOUND) and has financial expertise (CEOEXP), otherwise the value is 0.*[2]

Controlling Variables

The controlling variables are selected based on prior studies. This study includes four variables to control other factors influencing tax avoidance. According to Dewi and Jati (2014), firm size is the size of a company as reflected in its total assets (Khairunisa et al., 2017). Hidayanti (2013) argues that the larger the company's size, the more likely it is to use its resources for good tax planning (Hadi & Mangoting, 2014). Financial leverage is a ratio measuring a company's debt financing (Kasmir, 2013). Companies with high debt ratio tend to avoid tax (Sari, 2019). In addition, audit quality variables also impact tax avoidance. Therefore, we add the audit quality variable measured by BIG4 as a control variable with the argument that audit quality limits tax avoidance behavior (Richardson et al., 2013; Gaaya et al., 2017; Abid & Dammak, 2022). IND represents the business sector. According to Alkurdi (2020), some industries have a strong connection between CSR disclosure and tax avoidance. If a company operates in the manufacturing sector, then IND takes the value of 1 and otherwise takes the value of 0.

4. EMPIRICAL RESULTS

4.1. Descriptive statistics of variables

First, the study will use descriptive statistical techniques to summarize the characteristics of the variables in the research model. The statistical results shown in Tables 1 and 2 provide full information about the variables in the model. Specifically, out of a total of 3,493 observations, there are 1,623 observations with tax avoidance behavior, accounting for 46.48%, there are 968 cases audited by Big Four with a proportion of 27.71%, and CEOs with expertise in finance, accounting and founders account for 31.75% of listed companies. Besides, there are companies that disclose information about CSR with the highest rate of 95% of items requiring information disclosure, but there are also companies that just disclose very little information about CSR with about 5% of information items needs to be announced. In addition, out of the total 3,493 observations, 1,288 observations are in the manufacturing industry, accounting for 63.13%, the rest are non-manufacturing industries.

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[1] According to Aier et al. (2005), the author measures the CEO's financial expertise using past experience as a CEO or experience as a chief financial officer; degrees and certificates related to finance and accounting

[2] Based on the research of Le et al. (2020) on building a composite variable representing CEO

Table 1: Descriptive statistics of quantitative variables

Variable	Observations	Mean	Std. Dev.	Min	Max
CSR*CEOPOW	3.493	0.2279	0.3445	0	0.95
LEV	3.493	0.4771	0.2067	0.1	0.97
SIZE	3.493	11,9999	0.7031	10.18	14.76
CSR	3.493	0.5215	0.2137	0.05	0.95

Note: *Where in table 1, CSR*CEO: The degree of social responsibility disclosure with the regulation of CEO power; LEV is financial leverage; SIZE is company size; CSR is degree of social responsibility.*

Table 2: Descriptive statistics of qualitative variables

TAX	Frequence	Percentage
0	1. 869	53.52%
1	1,624	46.48%
Total	3.493	100.00 _
BIG4	Frequence	Percentage
0	2. 525	72.29%
1	968	27.71%
Total	3.493	100.00 _
CEOPOW	Frequence	Percentage
0	2. 384	68.25%
1	1.109	31.75%
Total	3.493	100.00 _
IND	Frequence	Percentage
0	2. 205	63.13%
1	1,288	36.87%
Total	3.493	100.00 _

Note: Tax is tax avoidable; Audit is audit quality; ceopow is the power of the CEO; IND is industry of business.

4.2. Correlation Analysis

Next, the study examines the correlation between the variables in the research model with the results shown in Table 3. The analysis results admit that the correlation between the independent variables is within the allowable limit, which is difficult multicollinearity can occur (correlation coefficient < 0.8 and VIF < 10). Therefore, the model is valid enough to predict the impact of CSR with moderating of CEO power on tax avoidance.

Table 3: Pearson Correlations and VIF Values

	TAX	CSR*CEOPOW	BIG4	LEV	SIZE	IND	VIF
TAX	1						
CSR*CEOPOW	0.0469	1					1
BIG4	0.0517	-0.0198	1				1.28
LEV	-0.1620	0.0016	0.0101	1			1.17

SIZE	0.1071	-0.0053	0.4455	0.3370	1		1.45
IND	0.0194	0.0118	0.0278	-0.1075	-0.0130	1	1.01
Mean VIF							1.18

4.3. Multiple Regression Analysis

Table 4 : Estimating regression using POOLED OLS , FEM, REM, FGLS

TAX	POOLED OLS		FEM		REM		FGLS	
	Coef.	P>t	Coef.	P>t	Coef.	P>t	Coef.	P>t
CSR*CEOPOW	0.04842	0.0042***	0.0499	0.035**	0.0498	0.003***	0.04842	0.0042***
BIG4	-0.0436	0.035**	-0.045	0.029**	-0.045	0.029**	-0.0436	0.035**
LEV	-0.5496	0.000***	-0.5569	0.000***	-0.5569	0.000***	-0.5496	0.000***
SIZE	0.1536	0.000***	0.1567	0.000***	0.1565	0.000***	0.1536	0.000***
IND	-0.0017	0.919	-0.0119	0.908	-0.0019	0.909	-0.0017	0.919
_cons	-1,118	0.000***	-1.152	0.000***	-1.149	0.000***	-1,118	0.000***
Statistics F/Waldchi2	F(5, 3486)=43.67***		F(5, 3480) =44.70***		Wald Chi2(5) = 223.62***		Wald chi2(5) =218.74***	

Table 4 shows that three models POOLED OLS, FEM and REM all have F and Wald values with Prob values less than 1%, so all 3 models are considered appropriate. At the same time, we performed the F test, LM test, Hausman test with the results Prob>F = 0.000, Prob>Chibar2 =0.000; Prob>Chi2 = 0.9979 respectively. The test results have confirmed that the REM model is the most suitable model to explain the results.

In addition, in order for the research model to have sufficient estimated value, we perform two tests of variance and autocorrelation. The results of the White test and Woolridge test have Prob>Chi2 = 0.000 (less than 5%) and Prob>F = 0.1938 (greater than 5%). This means that the model violates the variable variance assumption and this reduces the effectiveness of the REM model. In case the model is violated with variable variance assumption, we use the feasible generalized least squares (FGLS) estimation method for the result estimation, as Beck and Katz (1995) suggest, the study was unbiased and efficient.

According to the FGLS regression results in Table 4 , it can be assumed that CSR disclosure with the moderating of CEO power has a positive impact on tax avoidance at 1% significance level. This means that in companies with powerful CEOs, the more information about CSR is disclosed, the greater the possibility of tax avoidance is. This issue can be explained that if CEOs have expertise in finance and accounting, they will understand the provisions of the law on information disclosure as well as understand the policies used to regulate the tax obligation to avoid as much taxes as possible. This research result is contrary to previous research views that the more information a company discloses about CSR, the less tax avoidance behavior it have (Lanis &Richardson, 2015; Ki, 2012; Liu et al., 2019; Fuadah & Kalsum, 2021); the result agrees with the view that when publishing more information increases costs, increases tax avoidance (Davis et al. , 2016; Zeng, 2018; Abid & Dammak , 2022). Therefore, this study gives evidence which shows that the firms disclosing more CSR information with the moderating effect of CEO power tend to have more tax avoidance. The results indicate that CSR is a subsitute for tax amount rather than a complement for it. This is supported by the view that high tax amounts deter innovation in organizations, reduce employment, and lower the firms' contribution to social welfare, which aligns with characteristics of Vietnam's economy.

Besides, the FGLS regression results in Table 4 also show that audit quality and financial leverage have a negative impact on tax avoidance at the significance level of 10%, 5%, respectively. This shows that if companies are audited by Big Four companies, or if they have highger debt ratio, they have less tax avoidance behaviour. Meanwhile, firm size is positively related to tax avoidance at 1% significance level, meaning that the larger the firm size, the higher the tax avoidance ability. In addition, the study also found no evidence that manufacturing or non-manufacturing sectors have an impact on tax avoidance.

5. CONCLUSIONS

The main objective of this study is to examine the impact of social responsibility with the moderation of CEO power on tax avoidance. The study has provided evidence that the level of CSR information disclosure with regulation by CEOs with expertise in accounting and finance and being founders increases tax avoidance behavior. Furthermore, the study also acknowledges that audit quality and debt ratio limit tax avoidance behavior, but lager companies do more tax avoidance than the smaller ones.

Paying enough taxes is also demonstrating the responsibility of enterprises to society, which is the foundation for sustainable development. Therefore, listed companies should try to limit tax avoidance to comply with the law and have a good image about their CSR. From the results of the study, the board of directors need to consider appointing the founder of the unit to hold the CEO position to avoid excessively increasing power, increasing tax avoidance behavior. Besides, companies may use financial leverage, or use auditing services from Big4 to reduce tax avoidance.

However, the research also has some limitations. That research has not mentioned ownership characteristics, company culture, CEO profile as well as corporate governance characteristics related to tax avoidance. We hope these issues will be studied in the future.

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SUSTAINABLE FINANCE IN THE CONTEXT OF GLOBALIZATION AGAINST CLIMATE CHANGE

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Abstract: *As the level of globalization increases, business risk, uncertainty and change, has forced firms to consider adopting sustainable development strategies to survive competitively. Adopting technological innovations has, without doubt, open the door for old and new firms to thrive, however, this transformation process has occurred as a result not solely of businesses adopting new technologies, however, shifting their business culture. Behind the globalization of business activity there is not only a business transformation but an entrepreneurial cultural reinvention. This process has been accelerated by globalization, as the survival of businesses has become linked to how they achieve sustainable development through the management of greater social, cultural, political, and economic interdependence. Vietnam has made significant progress in its energy sector with widespread electrification and a diverse energy mix dominated by hydropower, gas, and coal. However, to sustain these achievements and meet climate targets, substantial investments, especially in renewables, are needed. Failing to do so will increase reliance on imported coal, with negative environmental, health, and economic impacts. Recommendations include fostering private investment and strengthening the domestic financial market to support the energy sector's funding needs.*

Keywords: *Globalization, Climate change, Renewable energy, Sustainable finance, Sustainable Framework,*

I. INTRODUCTION

In recent decades, humanity has slowly begun to realize that the unregulated development or growth that has taken place in the environment of our planet's limited resources has been unsustainable for a long time. It is necessary to replace it with something more sustainable in the interest of both humanity and the biosphere. In 1987, the UN General Assembly adopted the report "Our Common Future", in which sustainable development was defined as a development that is capable of meeting the needs of current generations without jeopardizing future generations' ability to meet their own needs. In particular, this definition contains the basic principle of sustainability, an ethical leitmotif, the principle of accountability to future generations. We always talk about sustainable development when we realize the link between human needs and natural resources. Sustainable development is the way to find and find solutions that benefit people, the economy and the environment in the long term. Thus, sustainable development is, rather than a scientific solution, a moral challenge for society. It responds to the current and important need for future development, based on a new relationship between people and their relationship to the environment in which they live. She refuses to overcome the idea that economic, technical and environmental goals are against each other.

II. RESEARCH OVERVIEW AND METHODOLOGY

- **Urgency of the study:**

The development of sustainability and climate change mitigation is a top concern and priority for international organizations and countries worldwide. Since late 2008, the United Nations Environment Programme (UNEP) has launched the "Green Economy Initiative" with the goal of enhancing international cooperation to address financial crises alongside global issues, aiming for sustainable economic development in a post-crisis world.

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In Vietnam, the National Green Growth Strategy, approved by the Prime Minister in Decision No. 1393/QD-TTg on September 25, 2012, has identified green growth as a crucial element of sustainable development, ensuring rapid, efficient, and sustainable economic development.

Some previous studies in Vietnam such as those of the General Department of Environment (2013), Nguyen The Chinh (2014), Assoc.Prof.Dr. Tran Thi Thanh Tu and a group of authors from the University of Economics - Hanoi National University (2017) also pointed out solutions to learn from experiences from countries with developed economies to build sustainable finance in Vietnam. But so far it has not been possible, because each country and each market has a different approach depending on the institution, the need for green capital as well as the investor base. Therefore, sustainable financial development in Vietnam should be considered based on the internal aspects of the current financial system. Besides, in Vietnam, there has not been any research that fully considers the potential of the components that make up sustainable finance, specifically financial intermediaries and capital markets. . For the reasons above, the author has chosen the research topic on sustainable financial development in Vietnam, especially in the field of sustainable financial intermediary development and green capital markets, applying suitable for practice in Vietnam.

- **The objectives, scope, and research methods:**

Research Objectives: The objective of the thesis is to provide a theoretical basis for green finance, evaluate the current status of green finance development in Vietnam, and make recommendations and policy proposals for green finance development in Vietnam, particularly in the development of sustainable financial intermediaries and green capital markets.

Research Subjects, Methods, and Scope: The research subject of the thesis is the current status of green finance development in Vietnam. The research primarily utilizes qualitative research methods, involving data collection, synthesis, analysis, comparison, and drawing implications. The specific scope of the research is as follows:

- Regarding the timeframe, the data studied covers the period from 2012 to 2022.

- Regarding the spatial scope, the thesis researches the current state of sustainable finance development in Vietnam.

- **Summary of Research Situation:**

Based on the research objective, the thesis first provides a comprehensive theoretical framework for sustainable finance, including the definition, characteristics, and the role of sustainable finance in the economy. The paper also elucidates the components of the sustainable financial market and the development areas surrounding these components. Through the statistical results compiled from government documents, literature, and related materials on the topic of sustainable finance, the author also clarifies the current state of green finance in Vietnam with specific data.

In addition, the author conducts comparisons and relates the findings to other countries in the Southeast Asia region to better understand the potential for sustainable finance development in Vietnam. After analyzing the assessed status quo, the author identifies opportunities and challenges for sustainable finance development in Vietnam in the future and proposes comprehensive solutions. These solutions serve as the basis for Vietnam to formulate appropriate policies for sustainable finance development.

III. THE CONTEXT OF GLOBALIZATION AND SUSTAINABLE FINANCE

1. The context of globalization on sustainable development against climate change

The context of globalization in sustainable development against climate change involves the interaction between the processes of globalization and the goals and principles of sustainable development. Globalization refers to the increasing interconnectedness and integration of economies, cultures, societies, and technologies worldwide, and it has deep implications for achieving the objectives of sustainable development. This context encompasses both opportunities and challenges arising from globalizing trends and their impacts on environmental, social, and economic aspects.

The impact of globalization on sustainable development against climate change:

Positive Impacts:

Technology Transfer: Globalization facilitates the transfer of climate-friendly technologies and innovations across borders. This can accelerate the adoption of renewable energy, energy-efficient practices, and sustainable agricultural techniques in various regions.

International Cooperation: Globalization fosters collaboration among countries, businesses, and organizations in addressing climate change. International agreements and platforms provide opportunities to share knowledge, resources, and best practices.

Access to Resources: Globalization allows for the sharing of resources and expertise needed to address climate challenges. Countries can access funding, expertise, and technology from global partners to implement sustainable development projects.

Green Finance: Global financial markets provide avenues for raising capital for sustainable projects and initiatives. Green bonds, sustainable investment funds, and other financial instruments enable funding for climate-resilient infrastructure and clean technologies.

Awareness and Advocacy: Globalization enables the rapid spread of climate awareness and advocacy efforts. Social movements, such as youth-led climate strikes, can gain international attention and drive policy changes.

Challenges and Considerations:

Climate and Environment: Globalization can lead to increased resource use and pollution in production and transportation. This conflicts with efforts to combat climate change and protect the environment.

Economic Vulnerability: Reliance on global markets for essential resources can make countries economically vulnerable to disruptions caused by climate-related events.

Supply Chain Emissions: Globalized supply chains can lead to increased emissions from the transportation of goods across long distances. This poses challenges for achieving emission reduction targets.

Trade-offs in Policy Goals: Trade-offs between economic growth and environmental protection can arise in the pursuit of globalization. Striking a balance between these goals is crucial for sustainable development.

Inconsistent Regulations: Different countries have varying levels of environmental regulations and climate policies. This can create regulatory disparities that impact sustainable development efforts.

Social Inequality: Globalization can exacerbate social inequalities within and between countries. Vulnerable populations may be disproportionately affected by climate change impacts due to limited resources and unequal access to adaptation measures.

Loss of Cultural Diversity: Globalization can lead to the homogenization of cultures and the loss of traditional practices and knowledge that could contribute to sustainable development and climate resilience.

Thus, the impact of globalization on sustainable development in the context of addressing climate change is a complex interplay of opportunities and challenges. Balancing the positive and negative aspects of globalization requires international cooperation, regulatory alignment, equitable resource sharing, and holistic policies that prioritize social, economic, and environmental well-being. Effective strategies must navigate these dynamics to ensure that sustainable development is promoted while addressing the urgent need to combat climate change.

2. Sustainable Finance

2.1 Sustainable finance definition:

Sustainable finance definition refers to the integration of environmental, social, and governance (ESG) criteria into financial decision-making processes. It involves considering not only the potential financial returns of an investment but also its impact on environmental and social factors, as well as the overall governance and ethical practices of the companies or projects being invested in.

The main goal of sustainable finance is to align financial activities with long-term sustainable development objectives. This can include investing in companies that have positive environmental and social practices, avoiding investments in industries that are harmful to the environment or society, and actively supporting projects that contribute to a more sustainable and equitable future.

The growing awareness of climate change and environmental issues has led to increased interest in sustainable finance from both businesses and investors. Governments, financial institutions, and international organizations are working to create frameworks and standards to facilitate the expansion of sustainable finance, encouraging more sustainable practices across various sectors of the economy.

Sustainable finance can take various forms, including green loans, green bonds, sustainability-linked loans, and other financial products that encourage environmentally responsible activities. These financial instruments often come with specific criteria and requirements that ensure the funds are used for eco-friendly purposes:

Green Loans: Financial institutions provide loans for projects with environmental benefits.

Green Bonds: Debt securities fund projects with positive environmental impacts.

Sustainability-Linked Loans: Interest rates are tied to achieving sustainability goals.

Eco-Friendly Investment Funds: Investors support environmentally responsible companies or projects.

Carbon Offset Financing: Funds are invested in emissions-reducing initiatives like reforestation and clean energy.

Sustainable finance benefits both the environment and businesses. It enables companies to access capital for green projects while improving their sustainability profile, which can attract environmentally conscious investors and customers. As the urgency to address climate change grows, sustainable finance plays a pivotal role in driving positive environmental and economic outcomes.

2.2 Why institutions need to implement sustainable finance?

First, risk Mitigation and Long-Term Resilience: Sustainable finance helps institutions identify and manage risks associated with environmental, social, and governance (ESG) factors. By integrating these considerations into financial decisions, institutions can assess potential risks such as regulatory changes, climate-related impacts, and reputational issues. Addressing these risks proactively enhances the institution's ability to navigate challenges, minimize losses, and maintain stability over the long term.

Second, alignment with Regulatory Trends and Fiduciary Duty: Regulations are increasingly demanding that institutions incorporate ESG factors into their strategies. Compliance with these regulations ensures that institutions are not only meeting legal requirements but also fulfilling their fiduciary duty to act in the best interests of their clients or beneficiaries. Recognizing that ESG factors can materially affect investment outcomes, institutions demonstrate their commitment to prudent financial stewardship.

Third, capturing Market Opportunities and Stakeholder Expectations: Embracing sustainable finance allows institutions to seize emerging market opportunities in the transition to a more sustainable economy. This includes investing in renewable energy, sustainable technologies, and projects that contribute positively to society and the environment. As clients and investors become more conscious of sustainability, institutions that cater to this demand can attract and retain a broader customer base. Moreover, sustainable finance practices enhance stakeholder relationships by demonstrating a commitment to ethical and responsible business practices, thereby fostering trust and collaboration.

Forth, client Demand: Investors are showing growing interest in sustainable investments. Meeting this demand can attract and retain clients, enhancing the institution's reputation and market position.

2.3 Implementation Sustainable Finance in finance institution

Enhancing strategy and governance structures

Banks consider their sustainable objectives and organizational models to select the appropriate strategy and governance structure. This proactive approach ensures that sustainable finance is embedded within the core operations of the banks, leading to enduring success.

In the context of promoting sustainable financial practices, governance plays a pivotal role in shaping a bank's effectiveness in the long run. Consequently, banks have taken steps to reinforce their strategy and governance structures:

Comprehensive Sustainability Strategy: Banks are developing all-encompassing sustainability strategies that include investment approaches and organizational activities.

Reinforced Governance Structure: To effectively implement sustainable finance, banks are appointing Chief Sustainability Officers (CSOs) in some cases. These CSOs oversee sustainability initiatives and ensure alignment with the bank's overarching goals. Additionally, banks are establishing dedicated departments for promoting sustainable finance, adopting either an integrated approach that covers all sustainability aspects or a specialized approach focusing solely on sustainable finance activities for clients.

Enhance the ability to evaluate environmental and social risk management systems

A Environmental and Social Management System is a set of policies, procedures, tools and internal capacity to identify and manage a financial institution's exposure to the environmental and social risks of its clients/investees.

To enhance the capability of assessing environmental and social risk management systems, it's important to understand that an Environmental and Social Management System (ESMS) comprises a collection of policies, procedures, tools, and internal expertise. Its purpose is to identify and effectively manage the exposure of a financial institution to the environmental and social risks associated with its clients or investees.

In simpler terms, an ESMS is a structured framework that enables a financial institution to recognize and address potential environmental and social risks tied to its clients' or investees' activities. This system empowers the institution to make informed decisions, apply appropriate risk mitigation measures, and ensure that its operations align with sustainable and responsible practices.

By strengthening the capacity to assess ESMS, financial institutions can better navigate the complexities of environmental and social risks, align with international sustainability standards, and contribute to more sustainable economic practices.

Implementing Sustainable Finance Frameworks

Implementing Sustainable Finance frameworks involves integrating environmental, social, and governance (ESG) factors into banking operations and decision-making processes.

This framework plays a vital role in two distinct capacities:

- It is instrumental for specific transactions, such as issuing green bonds to secure investment capital. In such cases, the issuer must formulate and disclose a Green Bond Framework.

- It extends to encompass the range of financial products offered by the bank to its customers. For instance, the bank might establish a Sustainable Loan Framework (encompassing green loans, social loans, and sustainable linked loans) for its corporate clients.

Due to banks' limited ability to independently evaluate scientific and technical sustainability data, the development of sustainable accounting necessitates the involvement of ESG consultants. These experts assess and verify the alignment of sustainability practices with established market standards, ensuring accurate "labeling" of sustainability.

IV. SUSTAINABLE FINANCE PROSPECTIVE IN ASEAN. IMPLEMENTATION IN VIETNAM

1. ASEAN context

Given its location and proximity to oceans, ASEAN is one of the most vulnerable regions to the impact of global warming. In recognize the risks, the region has set decarbonization targets, climate reduction plans in their nationally determined contributions (NDCs), and passed laws and policies to address change.

In 2022, the green, social, sustainability, sustainability-linked, and transition (GSS+) debt market across ASEAN experienced a 32% year-on-year contraction, mirroring the global trend of a 24% YoY reduction (USD858.5 billion in 2022 compared to USD1.1 trillion in 2021). Despite this decline, volumes remained robust, nearly doubling the levels observed in 2020. Notable positives include increased sovereign issuances and a variety of policy and market development initiatives that have bolstered the regulatory and technical framework. Significant growth in GSS+ issuance was particularly evident in Indonesia and the Philippines, attributed mainly to strong sovereign issuance and substantial amounts issued in the categories of green Sukuk and social bonds.

The ASEAN region witnessed larger deal sizes and longer tenors in 2022. A notably higher portion of deals (71% in 2022 versus 52% in 2021) were benchmark-size (USD500 million and above), and a notable milestone was reached with the issuance of the first sustainability bond with a tenor of over 20 years (excluding perpetual) in the Philippines. Among the six covered markets (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam), Singapore led in most debt segments, accounting for 63% of the cumulative volume and 60% of the total volume in 2022.

Sovereign issuances played a pivotal role in stimulating market activity and development across the ASEAN region. Singapore and the Philippines joined the ASEAN's Sovereign club in 2022. Sovereign issuance was particularly concentrated in sustainability bonds, which enable governments to secure funds for both green and social projects.

The year 2022 was marked by active policy and market development initiatives in the ASEAN region. This included the introduction of regional ASEAN Sustainability-Linked Bond Standards and stakeholder consultations on the inaugural version of the ASEAN Taxonomy, conducted throughout the year. Additionally, individual ASEAN Member States pursued a range of national-level sustainable finance initiatives and measures, spanning disclosures, transition finance, and taxonomies.

Key Highlights of ASEAN Member States:

Singapore: Singapore boasts the largest and most diverse thematic debt market in ASEAN, with USD81bn issued from 127 issuesrs (the latter being one of the highest country figures globally), and heavily dominated by green debt and SLLs, representing 96% combined in terms of amount issued.

Malaysia: Malaysia has seen issuances across the thematic debt spectrum throughout the years, with sustainability bonds accounting for 99% of the 2022 volume, attributed to issuers seemingly keen to finance the social dimension along with projects delivering environmental benefits.

Indonesia: Indonesian deals and issuers are relatively large, with the issuance volume dominated by its sovereign transactions. The largest green sovereign Sukuk issued thus far by the Indonesia Government came in 2022 worth USD1.5bn; but there were no sustainability sovereign bonds during the year, following one in 2021.

Thailand: Whilst Thailand's market has had diversity overall in terms of thematic issuances, the country has been dominated by sovereign sustainability issuance in recent years. Thailand has seen social bond issuance every year since 2019 (which is scarce across the rest of ASEAN).

Philippines: The Philippines has a growing and increasingly diversified thematic debt market. 2022 was an important year with its inaugural sovereign issuances: three deals totalling USD2.3bn. All were sustainability bonds financing a variety of green and social categories. This complemented volumes in other segments, including green and sustainability-linked instruments.

Vietnam: Vietnam's plans and commitments align with global efforts to mitigate climate change and reduce dependence on fossil fuels. The targets set by the Power Planning Development and the net-zero commitment signal the country's proactive stance towards a sustainable energy future.

2. SUSTAINABLE FINANCE IN VIETNAM

Overview

Vietnam has been making significant strides in its renewable energy efforts. Renewable sources, including wind, solar, and biomass, contributed 26.88 billion kWh of electricity, equivalent to 11.5% of total production in 11 months of 2021. This achievement aligns with Vietnam's Power Planning Development VIII strategy, spanning 2021-2030 with a vision to 2050, aiming for renewable energy to comprise 30.9% - 39.2% of the energy mix by 2030 and increase further to 67.5% - 71.5% by 2050. To fulfill these goals, Vietnam engages in international collaborations, notably through the Joint Public-Private Task Force (JPTP), leveraging partnerships to reach its target of 47% renewable energy by 2030. This commitment aligns with Vietnam's participation in COP26, where the Prime Minister pledged to achieve net-zero emissions by 2050, signifying a resolute commitment to combating climate change and transitioning towards cleaner energy sources.

Vietnam is one of 8 ASEAN countries has announced national targets to achieve net-zero GHG emissions or to become carbon neutral by 2050, respectively to the 1.5°C target set by the Intergovernmental Panel on Climate Change (IPCC). Vietnam has seen an increasing diversification of thematic issuances in recent years, both in terms of instrument types and themes.

Policy and Development

Supportive efforts and policies on sustainable finance were advocated by the Vietnamese Government, with the release of a guidance on environmental risk management in credit extension activities by the State Bank of Vietnam, alongside the announcement of a national programme to support private enterprises in sustainable business development till 2025

Building on the Just Energy Transition Partnership, which will see an initial USD15.5bn of financing to transition the Vietnam's energy sector, the government is also committed to improve the country's green finance legal framework to further spur interest in this space2

Issuance

Only loans (green and sustainability-linked) were issued during 2022, with five deals all from different issuers.

The largest was a USD500m green loan from automotive company Vinfast Trading and Production (a subsidiary of the larger conglomerate Vingroup JSC), its second transaction following a USD400m green loan in 2021. Another Vingroup subsidiary, Vinpearl JSC, had come to market with a USD425m sustainability bond in 2021, the only one from Vietnam so far.

2.1. Motivations for Accelerating Sustainable Finance in Vietnam

The motivations to accelerate sustainable finance in Vietnam encompass environmental concerns, climate action, economic vitality, global recognition, regulatory compliance, energy security, social progress, SDG achievement, market competitiveness, and the pursuit of enduring prosperity.

Environmental Preservation: Vietnam is committed to addressing environmental challenges and reducing its ecological footprint. By integrating sustainable finance practices, the country aims to channel investments into projects that promote environmental protection, energy efficiency, and sustainable resource management.

Climate Change Mitigation: As a climate-vulnerable nation, Vietnam recognizes the urgency of mitigating climate change. Accelerating sustainable finance enables the funding of climate-resilient infrastructure, renewable energy initiatives, and emission reduction projects.

Economic Resilience: Sustainable finance contributes to building a resilient economy. Investments in green projects enhance resource efficiency, create jobs in emerging sectors, and foster long-term economic stability.

Global Reputation: Embracing sustainable finance enhances Vietnam's global reputation as a responsible and forward-thinking nation. International investors are increasingly prioritizing environmentally and socially responsible investments.

Regulatory Alignment: With global shifts towards ESG-focused regulations, aligning with sustainable finance positions Vietnam as a proactive player in the international financial landscape, potentially attracting more foreign investments.

Energy Security: Developing sustainable energy sources and reducing reliance on fossil fuels through sustainable finance enhances energy security, reducing the nation's vulnerability to energy price volatility.

Social Development: Sustainable finance supports socially inclusive projects, such as affordable housing, healthcare, and education. These investments improve the overall quality of life and well-being of Vietnamese citizens.

Sustainable Development Goals (SDGs): Integrating sustainable finance aligns with Vietnam's commitment to achieving the United Nations' Sustainable Development Goals, contributing to poverty reduction, social equality, and environmental stewardship.

Market Competitiveness: Businesses embracing sustainable practices are likely to gain a competitive edge in the evolving market. By integrating sustainable finance, Vietnamese companies can position themselves as leaders in responsible business practices.

Long-Term Prosperity: Sustainable finance ensures investments are directed toward endeavors that generate positive impact over the long term, contributing to a more prosperous and resilient future for Vietnam.

2.2. Financing for renewable energy projects in Vietnam

2.2.1. Key Policy Regulations Related to Renewable Energy Financing

Starting from 2011, the Vietnamese government has introduced a series of regulations aimed at facilitating the financial support for the implementation of renewable energy (RE) projects within the country.

Additionally, the Vietnamese government has taken further regulatory actions to address the escalating concerns regarding national climate change risks. The global emphasis on achieving low-carbon and climate-resilient development within the country has also contributed to this focus. Pertinent policies and regulations in this context encompass:

The National Target Program to Respond to Climate Change (NTP-RCC): In 2008, the Government of Vietnam underscored climate change actions by prioritizing them through the issuance of Decision No. 158 by the Prime Minister. This program lays out strategic measures for responding to climate change on a national scale.

Establishment of the Vietnam Environment Protection Fund (VEPF): Decision No. 82/2002 set up the VEPF, aimed at collecting funds for environmental protection initiatives. The Ministry of Finance and the State Bank of Vietnam were designated as members of the VEPF. Subsequently, Decision No. 35/2008 elevated the VEPF's legal status, converting it into a revolving fund with VND 500 billion in charter capital.

Support Program to Respond to Climate Change (SP-RCC): Decision No. 5613/VPCPQHQT introduced this program, specifically designed to mobilize climate finance from international sources. The program's primary objective is to provide support for national climate change programs and infrastructure investment projects. The SP-RCC has been widely regarded as a successful initiative in Vietnam due to its substantial funding support and extensive involvement of various donors and government entities, both at the national and local levels.

2.2.2. Renewable Energy Investment in Vietnam

Vietnam had been making significant efforts to promote renewable energy investment and transition towards cleaner sources of power. The Vietnamese government recognized the need to reduce its reliance on fossil fuels and address environmental concerns. Here are some key points about renewable energy investment in Vietnam up to that point:

Feed-in Tariffs (FiTs): The Vietnamese government introduced attractive feed-in tariffs to encourage investment in renewable energy projects. These tariffs guaranteed a fixed price for renewable energy generated over a certain period, providing investors with a predictable return on their investments.

Wind Energy: Vietnam has substantial potential for wind energy, particularly along its coastline. The country had been actively developing wind farms, with various projects in different stages of planning, construction, and operation.

Solar Energy: Solar energy had seen rapid growth in Vietnam, driven by declining solar panel costs and supportive government policies. The country was working on both utility-scale solar projects and rooftop solar installations.

Hydropower: While hydropower is a renewable energy source, it had faced environmental and social concerns due to the displacement of communities and ecosystem impacts associated with large dams. Despite this, hydropower had been a significant contributor to Vietnam's renewable energy capacity.

Biomass and Bioenergy: Biomass and bioenergy projects, utilizing agricultural waste and other organic materials, were being explored as well. These technologies can help address waste management issues while producing energy.

Investment Opportunities: Vietnam was considered an attractive market for renewable energy investment due to its growing energy demand, supportive government policies, and abundant renewable resources.

Challenges: Despite the positive momentum, Vietnam faced challenges related to grid integration, infrastructure development, regulatory complexities, and financing. Additionally, ensuring a reliable and stable grid to accommodate intermittent renewable sources was a concern.

International Support: International organizations and financial institutions had been collaborating with Vietnam to support its renewable energy goals through funding, expertise, and knowledge sharing.

2.2.3. Financial Incentives for Renewable Energy Projects in Vietnam

In the context of unlocking Vietnam's renewable energy potential, feed-in tariffs (FITs) play a pivotal role as financial incentives that can drive a surge of renewable energy adoption within the market. In addition to FITs, the regulations encompass investment incentives to foster renewable energy developments:

Long-Term Standard Power Purchase Agreement (20 yrs PPA): A standardized power purchase agreement is established for a duration of 20 years.

Income Indexed to Exchange Rate (except for small hydro): Income is tied to the exchange rate quoted in US dollars, excluding small hydro projects.

Import Duty Exemption on Equipment: Imports of goods for constructing fixed assets, such as raw and manufactured materials, are exempt from import duties.

Corporate Income Tax Exemption and Reduction: New investment projects for renewable energy production benefit from a corporate income tax rate of 10% for the initial 15 years.

Land-Related Incentives: Investors may be exempt from land use fees for up to 11 years or, in regions facing extreme socioeconomic challenges, up to 15 years. During the capital construction phase (up to 3 years from the effective date of land lease contracts), investors are exempt from land and water surface rents. The government also provides land clearance compensation and support in accordance with the Law on Land. Provincial People's Committees handle land leases and allocations for renewable power projects.

Although the Vietnamese government introduced a feed-in tariff for various types of renewable energy, where the Electricity of Vietnam (EVN) holds sole responsibility for purchasing the entire electric output from these projects, the current subsidized tariff is considered less attractive compared to other ASEAN countries. For instance, wind power FITs are 19 US cents/kWh in Thailand and 21.8 US cents/kWh in the Philippines. Moreover, concerns have been raised by potential foreign producers about purchasing prices, as the current cost of electricity generated from renewable power plants remains relatively high due to substantial technical investments. Without raising FITs to regional levels and a clear roadmap for power purchase agreements (PPAs), attracting private investment could prove challenging.

2.2.4. Financial Instruments for Promoting Green Energy Deployment in Vietnam

A central objective of the Macro Economic Reform, notably the Green Financial Sector Reform Component, is to establish a policy framework and financial instruments that channel funds for sustainable development in Vietnam through innovative financial tools. The government is focusing on introducing pivotal instruments within the financial market to bolster the development of renewable energy (RE).

a. Green Bond for Long-Term Loan Instruments

Vietnam aims to embrace sustainable development and combat climate change through green finance, particularly green bonds. These bonds fund eco-friendly projects and align with the UN's Sustainable Development Goals. However, concerns about 'greenwashing', or misleading claims, have arisen. To address this, Vietnam needs a clear green bond 'taxonomy' based on ASEAN and EU standards.

Vietnam's commitments were highlighted at COP 26 and COP 27, where it pledged to transition to a green economy and achieve net-zero emissions by 2050. The government plans to increase renewable energy production significantly. Despite being a major green bond issuer in ASEAN, the lack of a legal framework remains a challenge.

Collaborations with international organizations and a pilot program with the German International Cooperation Agency (GIZ) reflect Vietnam's dedication. Yet, obstacles like limited application of global standards persist. To ensure credibility, attract foreign investment, and promote genuine sustainable development, a well-defined green bond taxonomy is essential. Balancing stringent regulations with incentives for issuers is key to achieving these goals.

b. Green Credit Programs to Facilitate Access to Finance for RE Projects and Green SMEs in Vietnam

Creating an enabling framework, encompassing clear rules, economic incentives, and information, is crucial. Traditional banking norms, like the strict Basel II standards mandating higher reserves for risky loans, have led banks to be cautious about lending to specific sectors, including renewable energy and energy efficiency. This is especially the case for newer technologies, which are less familiar to Vietnamese banks accustomed to dealing with state-owned enterprises and conventional business activities.

Moreover, while larger firms have predominantly engaged in large-scale grid-connected projects, the potential role of Small and Medium Enterprises (SMEs) in RE development is gaining recognition. With SMEs comprising 98% of total enterprises, their involvement can significantly contribute to achieving the goals of greening the energy sector. To facilitate this, the State Bank of Vietnam (SBV) initiated a pilot green credit program for SMEs, amounting to approximately $100 million. Participating banks offer loans to renewable energy, waste management, and organic agriculture projects at rates 1%–3% lower than market rates. The SBV refinances the participating banks at rates 1% lower than usual.

c. Provincial Green Index

The Provincial Green Index evaluates and ranks environmentally friendly regions in Vietnam based on their business practices. It considers factors like eco-friendly technology adoption, environmental governance, and commitment from local authorities. The index's main purpose is to promote a balance between economic growth and environmental protection. It provides information to aid local governments in policy planning, foster eco-friendly business environments, and attract sustainable investments.

Announced by the Vietnam Chamber of Commerce and Industry (VCCI), the first edition was launched in April 2023. It includes various indexes for 2023, covering pollution reduction, climate change mitigation, compliance with environmental standards, provincial governments' environmental roles, and support for businesses' environmental efforts.

The Green Index complements the Provincial Competitiveness Index, enhancing environmentally friendly business and investment environments. Its results will be part of the annual Provincial Competitiveness Index report.

A workshop highlighted the need for eco-friendly investment environments. Input from local agencies, businesses, and associations will refine indicators for future assessments. Tra Vinh province's high Green Index score showcased its commitment to environmental protection and sustainable development.

The Green Index reflects Vietnam's dedication to a green economy, aligning with climate change strategies. It recognizes and rewards regions prioritizing environmental responsibility, encouraging sustainable practices nationwide.

2.3 Challenges for renewable energy development in Vietnam

The development of renewable energy (RE) in Vietnam faces several significant challenges, including issues related to policies and mechanisms, economic and financial constraints, and technological aspects:

2.3.1. Challenges on Supporting Policies and Mechanisms

First, the RE market lacks clear policies and legal procedures, deterring investor interest. Stable policies and predictable revenue streams are needed to create an attractive investment environment.

Second, support mechanisms have not provided a long-term orientation. Changes in support mechanisms, such as the transition from feed-in tariffs (FiTs) to bidding mechanisms for solar and wind power projects, can create uncertainty for investors.

Third, the uniform application of FiT prices across the country leads to concentration development in areas with high economic potential, straining power grids and causing imbalanced investments.

Forth, the application of FiT prices regardless of project size can lead to inefficiencies. A differentiated approach based on project scale is proposed to ensure fair compensation.

Fifth, shortcomings in supporting rooftop solar power projects include regulations that limit system capacity for certain users and a requirement for selling all produced electricity, leading to double taxation. Recommendations include separating regulations for different users and adopting net metering mechanisms.

2.3.2. Economic and Financial Constraints:

First, RE projects require high initial capital, face a lack of financial institutions, limited investors, competition from fossil fuels, and fewer subsidies.

Second, Difficulty accessing domestic credit due to perceived riskiness, high capital ratios, and high interest rates.

Third, domestic investors often collaborate with foreign counterparts to access foreign loans with lower interest rates.

Forth, Insufficient budget subsidies for RE projects. The suggestion is to impose environmental fees on fossil fuel use to support the Sustainable Energy Development Fund.

2.3.3. Technological Problems:

First, asynchronous development between RE projects and the transmission grid leads to bottlenecks in transmission capacity.

Second, lack of synchronization between RE source development and grid expansion requires improved coordination between stakeholders.

Third, variable capacity of wind and solar projects impacts power system operations as their share in the energy mix grows. Solutions are needed to ensure grid stability.

Forth, to address these challenges, a holistic approach is required, involving policy reforms, financial incentives, improved coordination among stakeholders, and technological innovations. These efforts aim to create an environment conducive to RE investment, allowing Vietnam to tap into its renewable energy potential while ensuring a stable and sustainable energy supply.

2.4 Solutions to promote the development of renewable energy for Sustainable Finance in Vietnam

To achieve net zero emissions by 2050, Vietnam needs to dramatically increase RE capacity, especially solar and wind power. This will require significant investment: Vietnam's Power Development Plan 8 recently estimated annual financial needs of more than $11 billion, much of which will be devoted to energy regenerative. Historically, almost all RE investments in Vietnam have come from domestic and regional sources. However, sustaining the rapid expansion of RE depends on Vietnam's ability to expand international investment.

Vietnam has made an impressive record of attracting domestic private investment to rapidly scale up solar from virtually nothing in 2017 to more than 16,000 MW in 2017- 2022, far beyond the Government's targets. While it is not clear exactly how much solar and wind energy will be included in Power Development Plan 8 in the future, it is clear that this energy system is developed to scale up energy.

Here are some solutions to promote the development of RE in Vietnam in the coming time:

2.4.1 Revise the energy erice policy to result in a more reasonable energy price and feed-In Tariff

The need to revise Vietnam's energy price policy and Feed-In Tariffs (FITs) is highlighted. Adopting market mechanisms for electricity pricing and privatizing power generation and transmission could attract private investors and sustain state-owned entities' profitability.

The current low electricity price hampers private sector involvement in renewable energy. Revising energy pricing to be more reasonable and supportive of bankable renewable projects is suggested. While concerns about fossil fuel subsidy removal's impact on remote areas and vulnerable businesses exist, research suggests the benefits outweigh the drawbacks, boosting GDP and long-term social welfare.

The government's commitment to market-oriented pricing is encouraged to reduce coal demand and promote cleaner energy alternatives. This move is deemed cost-effective, enhancing social welfare instead of energy subsidies. To ensure EVN's financial sustainability and investment attraction, a yearly energy price increase of about 10% is proposed, exceeding inflation. Reworking electricity pricing and reducing fossil fuel subsidies would foster renewable technology investment and equitable competition.

In summary, updating Vietnam's energy pricing and FITs is crucial for private investment, renewable energy growth, and sustainability targets.

2.4.2 Increase the Creditworthiness of EVN

Enhancing the creditworthiness of EVN is crucial to support pricing reforms and attract private investment in Vietnam's renewable energy sector. This requires comprehensive reforms, including reducing and phasing out government subsidies and restructuring energy State-Owned Enterprises (SOEs). These changes demand substantial government commitment.

Improving EVN's financial health is essential to build private investor trust in RE development. The key threats to EVN's financial stability are the debt and asset imbalance and the vulnerability to exchange rate fluctuations.

To ensure sustainability, restructuring the debt portfolio with an appropriate balance between short-term and long-term loans is essential. Effective risk management strategies, especially concerning foreign exchange rate risks, are vital if foreign currency-denominated debt remains a significant part of the total debt.

While addressing these issues, policies should be developed to elevate the creditworthiness of EVN and other SOEs. This multifaceted approach contributes to fostering a favorable environment for private investment, ensuring financial stability, and advancing the development of renewable energy projects in Vietnam.

2.4.3 Implement Fiscal Policy Reform Discouraging CO2-Intensive Sectors and Facilitating the Deployment of RE Technology

Securing funding for renewable energy projects within limited budgets, especially in developing countries with constrained state finances, remains a significant challenge. One key solution is the implementation of a carbon tax system, where taxes collected are used to finance green energy technologies.

In the context of electricity, particularly renewable energy, being a public good, governments bear the responsibility of investing in infrastructure projects to maximize their potential. Alternatively, offering sufficient investment incentives is essential to attract private funding. Utilizing the spillover effect from carbon taxes to redirect funds toward renewable energy projects, which the private sector can finance, is a promising approach. This fiscal strategy, executed through taxation, serves the dual purpose of curbing CO2 emissions and creating a funding source for domestic renewable energy initiatives.

For Vietnam, according to the revised Power Development Plan 7 (PDP 7), fossil fuel subsidies are projected to exceed $540 million in 2025 and $2.56 billion in 2030. Thus, it becomes crucial to establish a viable financial source generated from taxes or fees associated with fossil fuel consumption and generation to offset these expenditures. A possible action could involve imposing a carbon tax of $5 per ton on fossil fuels such as coal, oil products, and natural gas, proportionate to their consumption levels. The resulting revenue could be channeled into a Renewable Energy Development Fund, enabling investments in renewable energy projects.

2.4.4 Develop a Wide Range of Financial Vehicles to Facilitate Long-Term Finance and Risk Mitigation

To address the challenge of financing renewable energy (RE) projects with limited budgets, especially in developing countries, various financial strategies need to be developed. One major solution is to establish a carbon tax system, utilizing the taxes collected to fund green energy technologies.

Yoshino and Taghizadeh-Hesary (2018) emphasize that as electricity, especially from renewables, is a public good, governments should invest in infrastructure projects. Alternatively, providing attractive incentives for private investment is crucial. A successful approach involves using the spillover effect from carbon taxes to redirect funds towards renewable energy projects. This fiscal policy not only discourages CO2 emissions but also creates a financial source for RE initiatives.

In the context of Vietnam, where fossil fuel subsidies are substantial, it’s important to establish a reliable financial source derived from taxes/fees related to fossil fuel consumption. Implementing a carbon tax, such as $5/ton on coal, oil, and natural gas, could generate revenue for a Renewable Energy Development Fund to reinvest in RE projects.

In conclusion, the introduction of a carbon tax system combined with reallocating funds from carbon tax revenues towards renewable energy projects offers a promising solution to funding constraints for RE initiatives in countries like Vietnam.

V. CONCLUSION

Environmental protection has become a serious issue. Transforming environmental protection into business objectives is now a necessary step, not just a sign of goodwill. Various solutions are already available in the world enough to make a company willing to change its situation and invest its time and money. One of the biggest polluters is transport, which is part of logistics. The gradual transition to green logistics is a successful foundation where a business can benefit from cost cutting, improving competitiveness, expanding a good image on the market, possible tax breaks, or other state bonuses.

Sustainable finance refers to the integration of environmental, social, and governance (ESG) considerations into financial decision-making processes. It encompasses a range of financial activities and instruments that aim to promote positive environmental and social impacts while ensuring long-term financial stability and returns. The core goal of sustainable finance is to align financial practices with broader sustainability objectives, including addressing climate change, promoting social equity, and supporting responsible business practices.

The pursuit of Vietnam's green growth strategy, as committed by its government, hinges on the development of renewable energy (RE). Integrating RE into the energy system serves as a crucial step towards ensuring national energy security, a response to the growing reliance on energy imports. Additionally, the severe consequences of climate change and local environmental pollution, partly driven by fossil fuel usage, necessitate the adoption of alternative sources. Vietnam, with its potential richness in wind power, solar power, and biomass, stands poised to benefit.

However, Vietnam lags significantly behind neighboring countries in terms of non-hydro RE investments. Meeting the annual 13% growth in energy demand requires substantial investments in the green energy sector. But given the constraints of the state budget and the low creditworthiness of energy State-Owned Enterprises (SOEs), it's projected that 50% of the total RE investment must come from the private sector. The government has sought to attract private investment through incentives like Feed-In Tariffs (FITs), preferential tax rates, and fees. Nonetheless, these incentives, coupled with a low electricity tariff driven by subsidies, raise concerns about the viability of RE projects. These projects demand significant initial investments and remain susceptible to political and environmental shifts.

Compounding these challenges are underdeveloped domestic financial systems, inadequate finance infrastructure, and limited financial avenues for securing long-term loans.

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THE INTEGRATION OF CLIMATE-RELATED FINANCIAL RISK INTO CREDIT RISK MANAGEMENT- INTERNATIONAL EXPERIENCE AND POLICY IMPLICATIONS FOR VIETNAM

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Abstract: Climate change can create significant risk for banks, which potentially alter the borrowers' capacity to repay their debts. As the impact of climate change becomes severe, it is of paramount importance for financial institutions to integrate climate-related financial risks into their credit risk management. This article reviews the inclusion of climate-related financial risks during credit risk management process conducted by international financial institutions. The article, then, provide some implications for the credit institutions in Vietnam to integrate the climate-related financial risks in credit management process in the future. These solutions involve the development of the analytical framework as well as preparation of data, expertise and other related resources to integrate climate-related financial risk into credit risk modelling.

Key words: climate change, credit risk, modelling, credit institutions, environmental risk

1. INTRODUCTION

1.1. Background of the research

Over the past decade, there has been an escalation in climate-related financial hazards, impacting both the micro and macro levels. At the microeconomic level, these factors already provide a potential risk to the stability and integrity of financial institutions such as banks, insurers, and the broader financial system. This finding holds significant consequences for the financial system. With the observed rise in occurrences of severe weather events and alterations in climate patterns, there is a likelihood for these hazards to amplify in the near future. Consequently, the significance of incorporating measures to mitigate climate-related financial risks into the current regulatory and supervisory frameworks has escalated in recent years.

Banks assume significant and proactive functions in the realm of sustainable development primarily due to their intermediary function in the allocation of capital for the purpose of industrial expansion and development. The international evidence has demonstrated that financial and reputational risks can be imposed onto a bank as a result of environmental and health detriments stemming from the activities conducted by its clients. By employing environmental risk management strategies and utilizing proactive tools, the banking sector possesses the potential to facilitate advancements in environmental management across various industries. Furthermore, it may play a pivotal role in promoting the adoption of cleaner technology through investment initiatives.

In the context of Vietnam, there has been a recent recognition among commercial banks regarding the potential dangers and opportunities linked to environmentally sustainable development. There is a discernible trend towards heightened expectations for banks to assume a more proactive stance in addressing environmental concerns. The management of environmental

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credit risk plays a crucial role in mitigating environmental risks for banks, enhancing the utilization of economic instruments for governmental environmental management, and fostering the advancement of green growth in Vietnam.

Against this backdrop, the paper aims to examine the current international best practices in integrating climate-related financial risk into credit risk management then provide some implications to the Vietnamese commerical banks.

1.2. Literature review

There is a few publications on the topic of intergrating climate-related financial risk into credit risk management adopted by commerical banks in the world. A handbook published by the Network for Greening the Financial System (NGFS) (2020) provide the theoretical foundation as well as an overview of Environmental Risk Analysis by Financial Institutions. NGFS (2020) also summarises some current practices adopted by banks all over the world when these banks integrate climate-related financial risk into their credit risk management.

There are some papers providing more detailed analysis of country context as well as banks' specific practices. For instance, examining Chinese commerical banks, Emtairah et al. (2005) report that in the early awareness of environmental risks, many Chinese commercial banks, remains in a defensive phase, wherein it mainly disregards the importance of environmental risks and possibilities in its economic operations. Additionally, if some banks desire to incorporate environmental considerations, they often experience anotable absence of a structured methodology and effective distribution of internal resources and training capabilities.

Reviewing the Canadian commericial banks, Weber (2012) conclude that Canadian banks demonstrate a proactive approach towards doing environmental assessments of loans, highlighting the necessity for enhanced accounting-based reporting on environmental risk management within financial institutions.

Adopting several approaches and sampling South African banks, Bimha (2020) confirms that during the period from 2010 to 2017, banks have shown a lack of comprehensive integration of environmental risk throughout the loan value chain or process. Nevertheless, the examination of carbon risk reveals a significant reliance on carbon sources for essential inputs in the manufacturing processes of South African enterprises. Failure to address this issue will have repercussions on the credit portfolios of banks.

Feridun and Güngör (2020) provided some recommendation to integrate the environmental risks into the management of banks. Firstly, there needs to be a focus at the board level on recognizing and understanding climate risks, and incorporating them into the internal governance structures of the organization. Secondly, climate risks should be integrated into the overall strategies and risk management frameworks of the organization, ensuring that they are considered in decision-making processes. Thirdly, it is important to identify material exposures to climate-related risks and disclose relevant key metrics to stakeholders. Lastly, organizations should assess the potential impact on capital from climate risks by conducting scenario analysis and stress testing.

1.3. Reasearch method

The paper relies on the review of the current practices in environmental credit risks management adopted by several international banks. This step aims to highlight some of the best existing practices in the industry. Then, the paper adopts the content analysis of the Vietnamese banks' Annual Reports, and other sources of reliable information to provide the assessment about the current state of this practice among Vietnamese banks. Given the different between the interntional best practices and the current situtation in Vietnam, the paper finally provides some recommendations to improve the practice.

2. CLIMATE-RELATED FINANCIAL RISK AND ITS POTENTIAL IMPACT ON CREDIT RISKS

2.1. Definition of climate-related financial risk

Climate change can create significant risk for banks, investors, and the economy. There are two main drivers of the climate-related and environmental risks (FSB 2022)

• Physical risk refers to the financial impact of a changing climate, including more frequent extreme weather events and gradual changes in climate, as well as of environmental degradation, such as air, water and land pollution, water stress, biodiversity loss and deforestation. This can directly result in, for example, damage to property or reduced productivity, or indirectly lead to subsequent events, such as the disruption of supply chains.

• Transition risk refers to an institution's financial loss that can result, directly or indirectly, from the process of adjustment towards a lower-carbon and more environmentally sustainable economy. This could be triggered, for example, by a relatively abrupt adoption of climate and environmental policies, technological progress or changes in market sentiment and preferences.

2.2. The potential impact of climate financial risk on credit risks

Credit risks are often evaluated based on the borrower's general capacity to make timely and agreed-upon loan repayment. The ability of the borrower to earn sufficient income to service and repay its debt, its capital, and the collateral available to support the loan all play significant roles in assessing credit risk.

+ The first dimension is reliant on the cash flows of the borrower. Financial institutions examine a company's historical cash flow records to estimate expected operating profits. This takes into account a number of factors, including the borrower's profitability, how its working capital is managed, or its financial capability to handle operations and expansion.

+ Based on the financial resources of the borrowers, the second dimension evaluates the business's financial structure, the size of its equity, and its capacity to raise more equity, if necessary.

+ The nature and worth of the collateral is the third dimension of credit assessment.

Given that they have an impact on all three of the aforementioned dimensions, climate-related hazards are increasingly important risk factors that could increase both the probability of default (PD) and the loss given default (LGD), which are the two key elements to quantify the impact of credit risks. The former refers to the probability that the obligator or counterparty will default on its contractual obligations to repay its debt. The latter refers to the percentage of exposure the bank might lose in case the borrower defaults.

3. APPROACH TO INTEGRATE CLIMATE-RELATED FINANCIAL RISK INTO CREDIT RISK MANAGEMENT- SOME INTERNATIONAL EXPERIENCE.

3.1. Climate financial risk identification

Some examples of the potential impacts of climate-related risk on credit risk is presented in Table 1. Table 1 also reveals some potential sources of credit risks originated from climate financial risks, which can be used by financial institutions during the first stage of credit risks management (i.e risk identification).

Table 1: The financial impact of climate-related and environmental risks on credit risks

	Transition risk	Physical risk
Impact on firms' cash flows	Transition risks can affect cash flows in several ways, including: + R&D expenditures in new and alternative technologies. + Costs to adopt and deploy new practices and processes. + Reduced demand for carbon-intensive products and services. + Increased production costs due to changing input prices (e.g. for energy and water) and output requirements (e.g. for carbon emissions and waste treatment).	Physical risks can have a negative impact through several channels such as: + Reduced revenue from decreased production capacity (e.g. due to supply chain interruptions and worker absenteeism) and lower sales (e.g. due to demand shocks and transport difficulties), + Increased operating costs (e.g. due to the need to source inputs from alternative more expensive supplies) and increased capital costs (e.g. due to damage to facilities).
Impact on capital and collateral	The transition to a low-carbon economy can also significantly affect the value of households' and firms' assets through: + Potential re-pricing of stranded fossil fuel assets + Changes in real estate valuation (e.g. due to stricter energy efficiency standards).	Physical risks can reduce the value of households' and firms' assets both through: + Direct damages on assets (e.g. to houses and factories during extreme weather events) +Write-offs of assets situated in high-risk locations.

Source: Adapted from NGFS (2020).

2.2 Credit risk measurement

At the second stage of the credit risk management process, financial institutions often measure the sizes of their exposures to climate financial risks (e.g., 15% loans exposed to certain risks) as well as estimate the probabilities and magnitudes of financial losses arising from these risks (using traditional methods such as scenario analysis and stress test). The results of these exercises could feed into risk mitigation at the following stage.

2.2.1. Physical risk quantification

To quantify the physical risk impact, financial institutions first develop some specific climate/ disaster scenarios; then develop financial models to capture the impact of climate risks on company financials. The climate/ disaster scenarios could be constructed in line with IPCC's climate scenarios [1]or adjusted specifically for the type of local disasters. The financial impact, such as declining revenues or rising costs, can be the direct result of environmental or climate events that cause property and other damages, or an indirect or secondary effect of physical events. The most common secondary impact is business interruptions and reduced economic activities. The resulting changes in financial statements are then integrated into financial models (e.g., PD and LGD models) to quantify the financial risks both on a portfolio basis and individual transaction/ client basis.

For instance, the Tsinghua University followed this approach to develop a climate physical risk assessment framework for banks to analyze credit risks arising from the impact of physical risks (NGFS, 2020). The university assessed the impact of future typhoons on the PD, LGD, and EL of

1 https://www.ipcc.ch/report/emissions-scenarios/

mortgage loans for properties in 40 coastal cities in China under various stress scenarios. It first estimated the outstanding amounts of mortgages loans in these cities, then mapped the geographical locations of the properties to potential disaster damages. A simulated model was then used to assess the impact of typhoons' frequency and intensity under various climate scenarios on bank credit loss. To model the financial impact, the university identify household income and loan-to-value ratios (LTV) as the key determinants of the mortgage PD and LGD model. The study shows that under the worse climate scenario, the expected credit loss of mortgage loans in 2050 could increase by 260% compared with the base-line scenario (assuming no change in climate conditions).

2.2.2. Transition risk quantification

In a climate-related transition risk analysis, the typical first step is the creation of temperature-based or event-based scenarios using underlying models, such as sector-specific models, macroeconomic models. Given these scenarios, the financial models can then quantify the impact of energy transition policies (e.g., increasing carbon prices and contracting demand for fossil fuel products) and technology changes (e.g., causing downward pressure on the sales and prices of fossil fuel products) on companies' revenues and costs in carbon-intensive sectors such as oil & gas, coal mining, coal-fired power generation, steel, cement and transportation. These changes in corporate financial statements are then integrated into risk models to assess financial risks (e.g., credit and market risks) both on a portfolio basis and an individual transaction/client basis.

In 2015, the Industrial and Commerce Bank of China (ICBC) developed its first environmental stress test to analyze the impact of environmental policy changes – a type of transition risk related to environmental policy change – on banks' credit risk (NGFS, 2020). It was first applied to loans extended to sectors such as thermal power and cement that generate significant air pollution. The first step of this process is to construct scenarios related to environmental-policy and regulatory changes (i.e. government levies on air pollution), which would have an impact on the costs and/or revenues for companies in high-polluting sectors. The impact of such policy changes on companies' financial statements are estimated, and the resulting changes in financial variables, such as costs, revenues, profits, and asset/liability ratios are fed into valuation models or PD models to quantify the changes in credit risks of the affected companies. The environmental stress tests show that, for both the thermal power and cement industries, tougher environmental standards would impose cost pressure on firms, especially on small- and medium-sized firms, and would generate impact on their credit risk. For those thermal power companies currently with a AA rating or above, 81% would experience a rating downgrade under the heavy stress scenario, 75% would experience a rating downgrade under the medium stress scenario, and 68% would experience a rating downgrade under the light stress scenario. For the cement industry, under the heavy, medium and light stress scenarios, percentages of credit rating downgrades of firms that currently have a rating of AA or above might amount to 81%, 62% and 48%, respectively.

2.2.3. Credit risk mitigation

Given the output of the risk quantification stage, financial institutions will take action to mitigate the credit risk impact. One of the possible immediate responses is to adjusting the internal credit rating system to account for the impact of physical risk and transition (i.e lower credit rating of borrowers that are highly affected by these climate financial risks with assumptions that no mitigation policies are implemented). Following this adjustment, banks could adjust their loan pricing; they can either charge higher interest rate or lower loans to value ratios for these borrowers. At the wider scale, banks can also set aside proper amount of loan loss provisioning or even adjust capital adequacy ratio to account for the future impact of these climate financial risks in the longer term.

3. CURRENT PRACTICES TO INTEGRATE CLIMATE-RELATED FINANCIAL RISK INTO CREDIT RISK MANAGEMENT IN VIETNAM

Vietnam is one of the most vulnerable countries to climate change with the increase in extreme weather events (storms, heavy rains, floods, droughts, high tides...) being predicted. Given the current economic model, if Vietnam's GDP doubles, then environmental pollution will increase three times; for every 1% increase in GDP, the damage caused by environmental pollution will lead to a loss of 3% of GDP (ADB, 2018).

Recognizing the importance of promoting green bank credit to contribute to green growth towards sustainable development, the Government has directed the banking sector to promulgate many documents, policies and implement them. Specifically, the Decision No. 1393/QD-TTg (2012) on "Approval of the National Strategy on Green Growth 2011-2020 and Vision to 2050", issued by The Prime Minister serve as the highest legal framework for green credit activities in Vietnam. Under this vision, in 2015, the State Bank issued Directive No. 03/2015/CT-NHNN "*On promoting green credit growth and managing environmental and social risks in credit granting activities*" then issue a handbook (i.e a manual) on environmental - social risk management for 15 economic sector. Recently, The State Bank of Vietnam also issued the Circular 17/2022/TT-NHNN dated December 23, 2022 guiding the implementation of environmental risk management in credit extension activities of credit institutions and foreign bank branches. These documents provide legal framework for financial institutions in Vietnam to integrate environmental or climate-related risks during its credit appraisal and decision making.

As guided by the legal framework, several credit institutions have actively researched and gradually applied environmental and social risk management in credit granting activities such as: promulgating regulations; regulations on environmental and social management contents; integrating environmental and social risk assessment into the credit appraisal process; adding content about customers' compliance with regulations on environmental protection into the credit agreement.

According to reports of credit institutions, as of June 30, 2022, credit outstanding for green projects has increased 2.54 times compared to 2017; in which, medium and long-term loans accounted for 92.79% of green credit balances, short-term loans accounted for 6.21% of green credit outstanding loans. Green credit loans mainly focus on green agriculture (accounting for 31% of total green credit outstanding), sustainable water management in urban and rural areas (12.05% of total green credit outstanding), sustainable forestry (accounting for 5.18% of total outstanding loans) and renewable energy, clean energy (accounting for more than 47% of total green credit outstanding). Outstanding credits that have been assessed for environmental and social risks are about VND 2,283 trillion, with more than 1.1 million loans; in which short-term credit balances assessed for environmental and social risks reached more than 1,276 trillion VND with more than 446 thousand short-term credit items, medium and long-term credit balances assessed for environmental and social risks reached more than 1,006 trillion VND with more than 700 thousand credit facilities (Vu 2022).

Given this background, it appears that credit institutions in Vietnam has been gradually aware of the importance and necessity of environmental risk assessment in credit granting activities. These institutions have also included the credit screening for environmental risks for some specific borrowers in some specific sectors during its credit appraisal process.

4. SOME RECOMMENDATIONS FOR CREDIT INSTITUTIONS TO INTEGRATE CLIMATE-RELATED FINANCIAL RISK INTO CREDIT RISK MANAGEMENT IN VIETNAM

In the future, credit institutions in Vietnam could take further step to take into account of the climate-related financial risks into their existing credit management system. These are some of relevant recommendations to prepare for this practice:

+ Developing analytical framework to integrate climate-related financial risk into credit risk modelling.

Credit institutions should develop an analytical framework to analyze the impact of climate-related financial risks. Technically, the first step could be defining the set of physical climate change scenarios and the measures that will be taken to manage the transition to a low-carbon economy. At the second step, economic agents (e.g. firms and households) affected by the climate change scenarios should be identified; the direct and indirect economic impacts on these economic agents are assessed. Subsequently, these impacts will be reflected on the borrower's cash flows and balance sheets. At the final stage, once the assessment of financial impacts on the economic agents is finished, it is then necessary to compute how changes in cash flows and balance sheets will affect borrower's creditworthiness. This can be measured in terms of the probability of default (PD), the loss given default (LGD) and the credit ratings.

Given the internal credit risk management, credit institutions should tailor and adjust their existing system step by step to incorporate these technical requirements for a climate-financial risk management framework.

+ Preparing databases to integrate climate-related financial risk into credit risk modelling.

International experience shows that one of the main challenges is a lack of historical data to assess the impact of climate change on credit risk losses. Past data is a poor predictor of future evolutions of physical risks. Similarly, no long-term transition policy experiments have been tested or observed. As a result, credit institutions should develop its own databases as soon possible based on their existing internal data system (i.e personal and corporate loans histories) as well as collect environmental or climate-related data provided by local authorities or international bodies.

+ Provide training, capacity development program to prepare its human resources.

Credit institutions should ensure that a growing share of its staff are equipped with sufficient climate-related financial risk knowledge to effectively integrate these climate risks into their current work. The training programs could take form of internal seminars where those most involved with climate risk speak with their colleagues, but they can also include external training and support. The objective of these trainings should be to highlight the relevance of climate-related financial risks, the best industry practices in modelling and quantification of their impact on credit risks, etc…

+ Promote international co-operation.

There are various international bodies providing support to the central banks and financial institutions around the world to cope with arising climate issues. Some notable examples are the

"Network for Greening the Financial System- NGFS" and Finance UNEP Initiative. Over the past few years, financial supervisors and institutions around the world have worked to develop good practices regarding climate-related risk management and modelling. The credit institutions in Vietnam can benefit from the experiences of peer institutions on these topics to develop relevant climate/ environmental scenarios, model the financial impact of climate risk and overcoming other climate-related data challenges./.

5. CONCLUSION

Climate change can create significant risk for banks, which potentially alter the borrowers' capacity to repay their debts. As the impact of climate change becomes severe, it is of paramount importance for financial institutions to integrate climate-related financial risks into their credit risk management. To further improve this practice among Vietnamese commerical banks, some solutions are provided including the development of the analytical framework as well as preparation of data, expertise and other related resources to integrate climate-related financial risk into credit risk modelling.

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THE FACTORS AFFECTING JOB SATISFACTION – CASE STUDY IN STATE COMMERCIAL BANK OF VIETNAM

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Abstract: *The role of employees is vital for service businesses. Therefore, maintaining employee satisfaction plays a significant role in the performance of service companies. The topic shows a comprehensive picture of the level of job satisfaction of officers and employees working in the commercial banking system in Ho Chi Minh City through 09 aspects of satisfaction. Regression results of the study prove that job satisfaction in the aspect of "Communication of information" has the most substantial impact on the "General satisfaction" of employees. Meanwhile, the "Income" aspect has the lowest impact on the "General satisfaction level." From the above research results, there is a basis for employers to develop solutions to improve the overall satisfaction level of employees at their agencies.*

Keywords: Labor, satisfaction, motivation, banking.

1. INTRODUCTION

The 4.0 Industrial Revolution had a profound impact on every industry, and banking was not outside the influence of this revolution. In the future, the most obvious consequence of the impact of Industry 4.0 on the banking sector is that modern technology banks will gradually replace traditional banking systems. In the context of promoting industrialization, modernization, and international integration, especially when Vietnam is in the period of the 4.0 Industrial Revolution, the issue of human resources is considered a breakthrough, and human resource development has become the foundation for sustainable development and increase the national competitive advantage. According to a report by the International Labor Organization (ILO), the need for new training of human resources in the Finance and Banking industry in the period 2016 - 2020 of Vietnam is over 1.6 million people. By 2020, the total number of human resources About 300,000 people work in the banking industry. The primary and existing challenges of the Banking industry before the 4.0 Industrial Revolution are the scarcity of high-quality human resources - the decisive factor for success and competition for high-quality resources is the factor that makes success possible in integration (Brett King, 2017).

According to the Ho Chi Minh City Human Resource Forecasting Center, despite high salaries, the Finance - Banking industry has the highest rate of employee resignations. Some studies show that to deal with high turnover rates, and businesses must take action right from when personnel are still attached to the business and pay attention to signs of "rifts" in relationships. A raise or promotion is one of many solutions because it only has a temporary effect. The core to increasing employee engagement, effort, and loyalty must still be to combine 'pull and push' strategies. 'Pull' employees' emotional and rational efforts through the working environment, stimulating employee group cohesion. 'Push' with self-motivation through supporting and helping them better feel the five factors that increase motivation: work meaning, mental and physical health, compatibility, connection, and self-esteem owner," the report recommends…. Ho Chi Minh City is a locality with the most vibrant banking system in the country, and the demand for human resources in the banking industry is also on the rise. According to data from the Center for Forecasting Human

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Resource Needs in the City. HCM, in the period 2016-2025, only in City. Ho Chi Minh City will have an additional 10,800 working positions in finance, banking, credit, insurance ... However, the personnel situation at banks also has constant fluctuations. Incidents causing loss of customer assets and irresponsible handling by management serve as a reminder for "following instructions," a widespread behavior at banks. In addition, credit risks that have frequently occurred recently are also a factor that significantly impacts the psychology of Bank employees in general.

2. LITERATURE REVIEW

According to Maslow's individual needs perspective, job satisfaction exists when the job and surroundings meet an individual's needs. The hierarchy of needs focuses on five types of needs arranged in ascending order of importance: physiological, safety, social (communication), esteem needs, and self-actualization needs, achievements). After a particular need has been satisfied, the next higher-level need will appear. Although no need is ever completely satisfied, there is no more motivation if a need is essentially satisfied. Therefore, when one of the above needs is satisfied, the following needs dominate. Maslow divided five types of needs into high and low levels. Basic and safety are lower-order needs, and social, esteem, and self-actualization are higher-order needs. The difference is that higher-order needs are satisfied internally (within the person), while lower-order needs are easily satisfied externally (by things like salary, contract, and position).

Research on job satisfaction became more complicated with the introduction of Herzberg's two-factor theory. This theory divides factors into two categories: motivating factors and maintaining factors. Motivational factors include achievement, recognition of others, nature of work, job responsibilities, promotion, progress, and prospects for growth. If employees are satisfied, it will bring satisfaction in their work, and vice versa; employees will not have satisfaction. Sustaining factors include company policy, supervisory supervision, salary, relationship with superiors and Co-workers, working conditions, personal life, job position, and job security. If it is met, there will be no job dissatisfaction; on the contrary, it will lead to dissatisfaction. Thus, Herzberg (1959) has relatively separated these two groups of factors and said that only motivating factors can bring satisfaction to employees, and if not done well, maintenance factors will lead to employee dissatisfaction.

Vroom's Expectation Theory (1964): Victor Vroom's Expectation Theory states that people's behavior and work motivation are not necessarily determined by reality but by people's perception of expectations—their hopes for the future. Unlike Maslow and Herzberg, Vroom does not focus on human needs but on results (Robbins, 2002).

John Stacey Adams (1963) suggested that employees tend to judge fairness by comparing their efforts with what they receive and comparing their proportions with their peers' careers in the company. If the result of that comparison is equality, then they will continue to maintain their efforts and performance. If the remuneration received exceeds their expectations, they will tend to increase their effort in the job; conversely, if the remuneration they receive is lower than their contribution, they will tend to decrease effort or find other solutions, such as being absent during working hours or quitting their job.

The theory mentioned above can also be considered from the perspective of the topic of this thesis. Employees can only be satisfied if they realize they are being mistreated from salary, training, and promotion opportunities to support from superiors.

Quarstein, McAfee, and Glassman (1992) developed the conditional performance theory of job satisfaction. The two main components of this theory are condition characteristics and condition manifestations. Qualifying features include salary, advertising opportunities, working conditions, company policies, and supervision. Individuals tend to evaluate the characteristics of conditions before they accept a job.

Conditional expressions are evaluated after accepting a job. Conditional expressions can be positive or negative. Positive manifestations include giving workers a break for particular work or placing a microwave oven in the workplace. Such negative manifestations include, for example, confusing emails and harsh comments from Co-workers. The authors hypothesized that overall job satisfaction combines conditioned features and conditional expression. The results of their study support the above hypothesis. According to the researchers, a combination of condition characteristics and condition expression may be a stronger predictor of overall job satisfaction than individual factors of the condition itself.

Table 1: Summary of studies on job satisfaction

Authors Elements	Boeve (2007)	Hsu (2008)	Worrell (2004)	Trần Kim Dung (2005)	Châu Văn Toàn (2009)	Nguyễn Thị Thu Thủy (2011)	Phạm Đức Kỳ (2011)
Nature of work	X	X		X		X	
Salary/Income	X	X		X	X	X	X
Training and promotion	X	X	X	X	X	X	X
Co-worker	X	X		X	X	X	X
Leader/Superior/Supervisor	X	X		X	X	X	X
Job characteristics		X			X	X	
Workplace		X	X				
Policy/Procedure			X				
Working time	X						X
Welfare					X		
Working conditions					X	X	X
Love of work							X
Information communication							X
Bonus							X
Job support							X
Feedback							X
General satisfaction							X

Job satisfaction

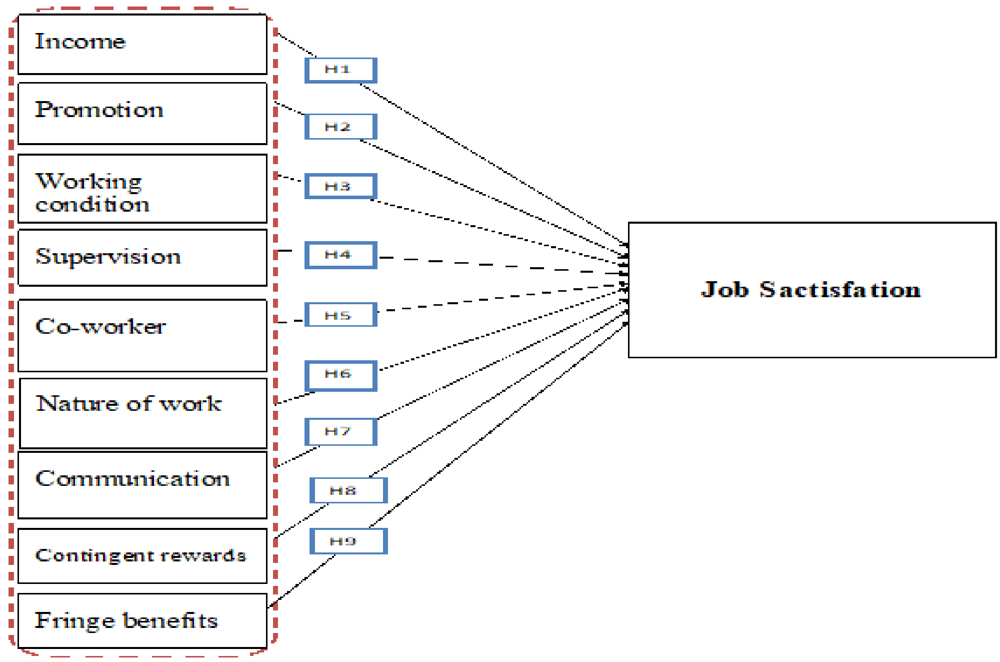
According to Ellickson (2002), job satisfaction is the degree to which employees love their work, which is an attitude based on the employee's perception (positive or negative) about the job or their work environment. Simply put, the more the work environment meets the employee's needs, values, and personality, the higher the job satisfaction.

Schermerhorn (2002) considers job satisfaction an emotional response to different aspects of an employee's job. The author emphasizes the causes of job satisfaction, including job position, supervision by superiors, relationships with co-workers, job content, compensation and rewards, promotions, the working environment's physical conditions, and the organization's structure.

According to Kreitner and Kinicki (2007), job satisfaction mainly reflects the degree to which an individual enjoys his or her job. Thus, there are many definitions of job satisfaction, but if a person is considered to have job satisfaction, that person will feel comfortable and at ease with his work.

In this research topic, job satisfaction is how much people enjoy their jobs and aspects of their jobs. It is an attitudinal variable because it is a general evaluation (Spector, 1997). According to Maslow's (1943) personal needs perspective, job satisfaction is said to exist when work and the surrounding environment meet an individual's needs..

Proposed research model:



The Factors affecting job satisfaction

H1: As the level of satisfaction with income increases, the overall satisfaction level of agency employees also increases.

H2: As the level of satisfaction with promotion increases, the overall level of satisfaction of agency employees also increases.

H3: As the level of satisfaction with working conditions increases, the overall satisfaction level of agency employees also increases.

H4: As the level of satisfaction with supervision increases, the overall satisfaction level of agency employees also increases.

H5: As the level of satisfaction with co-workers increases, the overall satisfaction level of agency employees also increases.

H6: As the level of satisfaction with the nature of work increases, the overall level of satisfaction of agency employees also increases.

H7: As the level of satisfaction with information communication increases, the overall satisfaction level of agency employees also increases.

H8: As the level of satisfaction with Contingent reward increases, the overall satisfaction level of agency employees also increases

H9: As the level of satisfaction with fringe benefits increases, the overall satisfaction level of agency employees also increases.

3. RESEARCH METHODS:

The research was carried out through 2 phases: preliminary and formal. Preliminary research with in-depth interview techniques of employees working in the banking sector to correct the survey form in terms of semantics and adjust the scales in the survey. The draft survey was then conducted to test 30 employees. The formal study was conducted quantitatively with the survey method by structured questionnaire with 38 variables by the convenience sampling method because of the limitation in constructing the sample frame. The number of samples is 212, guaranteeing the minimum sample size when conducting EFA analysis. The study used linear regression analysis to find out the research results.

4. THE RESEARCH RESULTS

Two hundred fifty questionnaires were distributed, and 230 were collected. After removing 18 unsatisfactory survey questionnaires, the results of 212 questionnaires were entered. After conducting data cleaning, the remaining primary data set with 212 tables was selected for analysis. All 212 questionnaires were coded and entered into SPSS software, then AMOS was used to test the scale and research hypothesis. Table 1.1 shows the results of descriptive statistics of the study sample:

Table 2: Descriptive statistics Overall job satisfaction

Position					
		Tần số	**Tỷ lệ %**	**% hợp lệ**	**% tích lũy**
Position	Transaction staff	66	31.1	31.1	31.1
	Credit staff	77	36.3	36.3	67.5
	Managers	12	5.7	5.7	73.1
	Head and deputy levels of departments	29	13.7	13.7	86.8
	Other	28	13.2	13.2	100.0
	Total	212	100.0	100.0	
Age					
		Frequency	Percentage	Valid percentage	Cumulative percentage
Age	<=25	136	64.2	64.2	64.2
	26 - 30	48	22.6	22.6	86.8
	30 - 35	20	9.4	9.4	96.2
	Trên 35	8	3.8	3.8	100.0
	Total	212	100.0	100.0	
Education					
		Frequency	Percentage	Valid percentage	Cumulative percentage
Education	Diploma	20	9.5	9.5	9.5
	Bachelor	164	77.4	77.4	86.9
	Graduate	28	13.1	13.1	100.0
	Total	212	100.0	100.0	100.0
Working time					
		Frequency	Percentage	Valid percentage	Cumulative percentage
Working time	<= 5 Year	106	50.0	50.0	50.0
	>5 - 10 Year	31	14.6	14.6	64.6
	>10 - 15 Year	40	18.9	18.9	83.5
	>15 Year	35	16.5	16.5	100.0
	Tổng	212	100.0	100.0	
Income (VND)					
		Frequency	Percentage	Valid percentage	Cumulative percentage
Average income	<= 10 Milion/Month	52	24.5	24.5	24.5
	> 10 - 15 Milion/Month	87	41.0	41.0	65.6
	>15 - 20 Milion/Month	58	27.4	27.4	92.9
	>20 Milion/Month	15	7.1	7.1	100.0
	Total	212	100.0	100.0	

Results of KMO analysis and Barlett's test

Table 3: KMO coefficient and Barlett test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.825
Bartlett's Test of Sphericity	Approx. Chi-Square	4546.406
	df	630
	Sig.	.000

Correlation analysis and multiple linear regression

Consider the linear correlation relationships between the dependent variable and each independent variable as well as between the independent variables through Pearson correlation analysis. If the correlation coefficient between the dependent and independent variables is significant, it proves a relationship between them, and regression analysis is appropriate. On the contrary, if the independent variables also have large correlation coefficients with each other, multicollinearity may occur in the regression model under consideration. The results of the correlation analysis are shown in the following table:

Correlation analysis

Table 4: Results of correlation analysis

Correlation matrix											
		INC	PRO	WKC	SUP	COW	NOW	COM	COR	FRB	SPSS
INC	Pearson correlation coefficient	1	.357**	.036	.216**	-.110	-.055	.085	.021	.095	.239**
	Sig.		.000	.600	.002	.111	.428	.219	.762	.168	.000
	N	212	212	212	212	212	212	212	212	212	212
PRO	Pearson correlation coefficient	.357**	1	.072	.442**	.125	.373**	.186**	.189**	.204**	.486**
	Sig.	.000		.297	.000	.069	.000	.007	.006	.003	.000
	N	212	212	212	212	212	212	212	212	212	212
WKC	Pearson correlation coefficient	.036	.072	1	-.074	-.076	-.046	.044	.197**	.214**	.250**
	Sig.	.600	.297		.285	.272	.504	.528	.004	.002	.000
	N	212	212	212	212	212	212	212	212	212	212
SUP	Pearson correlation coefficient	.216**	.442**	-.074	1	.426**	.417**	.511**	.323**	.144*	.601**
	Sig.	.002	.000	.285		.000	.000	.000	.000	.036	.000
	N	212	212	212	212	212	212	212	212	212	212
COW	Pearson correlation coefficient	-.110	.125	-.076	.426**	1	.554**	.523**	.408**	.199**	.613**
	Sig.	.111	.069	.272	.000		.000	.000	.000	.004	.000
	N	212	212	212	212	212	212	212	212	212	212
NOW	Pearson correlation coefficient	-.055	.373**	-.046	.417**	.554**	1	.364**	.410**	.104	.596**
	Sig.	.428	.000	.504	.000	.000		.000	.000	.132	.000
	N	212	212	212	212	212	212	212	212	212	212
COM	Pearson correlation coefficient	.085	.186**	.044	.511**	.523**	.364**	1	.412**	.214**	.684**
	Sig.	.219	.007	.528	.000	.000	.000		.000	.002	.000
	N	212	212	212	212	212	212	212	212	212	212

COR	Pearson correlation coefficient	.021	.189**	.197**	.323**	.408**	.410**	.412**	1	.234**	.579**
	Sig.	.762	.006	.004	.000	.000	.000	.000		.001	.000
	N	212	212	212	212	212	212	212	212	212	212
FRB	Pearson correlation coefficient	.095	.204**	.214**	.144*	.199**	.104	.214**	.234**	1	.404**
	Sig.	.168	.003	.002	.036	.004	.132	.002	.001		.000
	N	212	212	212	212	212	212	212	212	212	212
SPSS	Pearson correlation coefficient	.239**	.486**	.250**	.601**	.613**	.596**	.684**	.579**	.404**	1
	Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	212	212	212	212	212	212	212	212	212	212
**. Correlation with statistical significance level 1%											
*. Correlation with statistical significance level 5%											

Through Table 4, we see a correlation between the independent variables and the dependent variable. This correlation is relatively high, especially the INFORMATION COMMUNICATION (COM) variable has a pretty high correlation with GENERAL SATISFACTION LEVEL (SPSS) (0.684), and the lowest correlation level is the variable INCOME (INC) (0.239). Through preliminary correlation analysis results, it is found that independent variables can be included in the model to explain factors affecting the GENERAL SATISFACTION LEVEL (SPSS). However, checking for multicollinearity among the multiple regression analysis variables is necessary.

Multiple Linear Regression Analysis

The multiple linear regression method tests the fit between the nine influencing factors INC, PRO, WKC, SUP, COW, NOW, COM, COR, and FRB on the SPSS dependent variable. The values of the factors used to run the regression are the mean values of the observed variables. Through regression analysis, the model.

After building the linear regression model, the first concern is to consider the model's suitability for the data set through the value. To test the suitability of the overall regression model, we need to test the hypothesis Ho: β¬i= 0 (where β¬i are the regression coefficients of the independent variables, respectively). Table 4.30 shows that the statistical value with a significance level of 0.000 is much smaller than the significance level of 0.01, so we reject the Ho hypothesis with 99% confidence. Thus, it can be concluded that the independent variables in the regression model have a linear relationship and explain the variation in the "GENERAL SATISFACTION LEVEL."

Table 5: ANOVA cho kiểm định F

ANOVAa						
Model		Variability	Df	Average	F	Sig
1	Regression	73.845	9	8.205	108.150	.000b
	Phần dư	15.325	202	.076		
	Tổng	89.170	211			

Table 6 evaluates the model's fit with coefficients and corrections (Adjust R Square). The adjustment will be safe when evaluating the model's suitability because it will increase when adding independent variables. The model's calibration is 0.82, which means that the independent variables explain 82% of the variation in Overall Job Satisfaction. Thus, the fit of the model is relatively high.

Table 6: Adjusted R2 coefficient

Bảng tóm tắt mô hình					
Model	**R**	**R2**	**R2 Adjusted**	**Standard Deviation SE**	**Durbin-Watson**
1	.910a	.828	.820	.275	1.907
a. Predictors: (Constant), FRB, INC, NOW, WKC, COM, COR, PRO, SUP, COW					
b. Dependent variable: SPSS					

Check for multicollinearity problem

Table 7: Results of multiple linear regression analysis

Factors affecting the satisfaction of bank employees								
Impact factor B		**Regression weight**		**Normalized Beta**	**t**	**Sig**	**Multicollinearity**	
		Sai lệch chuẩn (SE)	**B**			**Tolerance**	**VIF**	
1	(Constant)	.063	.135		.465	.643		
	INC	.084	.019	.145	4.447	.000	.798	1.254
	PRO	.086	.021	.153	4.151	.000	.625	1.601
	WKC	.122	.019	.198	6.357	.000	.874	1.144
	SUP	.063	.020	.121	3.090	.002	.557	1.794
	COW	.123	.022	.222	5.452	.000	.515	1.942
	NOW	.139	.027	.204	5.167	.000	.547	1.829
	COM	.181	.023	.295	7.753	.000	.587	1.704
	COR	.089	.022	.141	4.002	.000	.685	1.459
	FRB	.088	.020	.138	4.388	.000	.858	1.166
a. Biến phụ thuộc: SPSS								

The linear regression equation predicts factors affecting overall job satisfaction as follows:

SPSS=0,063+0,145*INC+0,153*PRO+0,198*WKC+0,121*SUP+0,222*COW+0,204*NOW+0,295*COM+0,141*COR+0,138*FRB + ε

Statistics of variables, checking for multicollinearity, introducing sample characteristics, and regression analysis are presented in this chapter. Of the 36 observed variables, all 36 variables are qualified to explain the model, extracted into nine factors: Income (INC), Promotion (PRO), Working conditions (WKC), Supervision (SUP), Co-workers (COW), Nature of work (NOW), Information communication (COM), Contingent reward (COR), Fringe benefits (FRB). The results of multiple regression analysis in Table 4.31 show that at the 5% significance level, all 09 independent variables are meaningful in explaining 72.055% of the variation of the dependent variable: General satisfaction level (SPSS). The most vital influencing factor is the Information Communication variable (COM), and the lowest is the Income variable (INC).

Statistical results describe quantitative data variables of factors affecting job satisfaction. In the Income factor, "Opportunity to get a raise" has the highest level of agreement; In the Promotion factor, "Correlation between promotion and suitable job" has the highest level of agreement; In the Working Conditions factor, "Work is hindered by bureaucracy" has the highest level of agreement; In the Supervision, "Supervisor's ability at work" has the highest level of agreement; Co-worker factor, "Relationship with Co-worker" and "Working together with Co-worker" have the highest level of agreement; In the Nature of Work factor, "Job Interest" has the highest level of agreement; In the Information Communication factor, "Complete level of explanation in work assignment" has the highest level of agreement; Contingent reward factor, "Recognition of a job well done" had the highest level of agreement; In the Welfare factor, "Lack of fringe benefits received" has the highest level of agreement.

About factors affecting overall job satisfaction

Multiple linear regression method was used to determine the level of impact of each aspect of job satisfaction on the overall level of satisfaction; the results of all nine independent variables are statistically significant with a confidence level of 95% are Income, Promotion, Working Conditions, Supervision, Co-worker, Nature of Work, Communication, Contingent reward, Fringe benefits. The Information Communication variable has the highest influence on the Overall Satisfaction (SPSS), and the lowest is the Income variable.

One of the critical objectives of the study is to give recommendations to employers to improve job satisfaction for officials and employees working in the commercial banking system in Ho Chi Minh City. Therefore, the results of this study have specific meanings. First, with the average overall job satisfaction level of 3.85 being relatively low, employers need to take many measures to increase the job satisfaction of their employees. When there is high job satisfaction, employees will strive to complete their work better, always trust, and be loyal to their organization. Thus, employees' performance and work efficiency will be higher, helping the organization survive and thrive in today's very competitive economic environment.

Regression results show that 09 factors affect job satisfaction, including income satisfaction, promotion, working conditions, supervision, Co-worker, nature of work, communication, Contingent reward, and fringe benefits. The intensity of the influence of these factors is reflected in the regression coefficients of the variables in the regression equation to help employers see what they should impact and which factors to improve job satisfaction faster the work of officials - employees who are working in the State-owned commercial bank system in Ho Chi Minh City.

5. DISCUSSION AND CONCLUSION:

The research results of the project "Measuring factors affecting job satisfaction of officials - employees working in the state-owned commercial banking system in Ho Chi Minh City" provide information about the subjects working here and show that employers and managers in banks need to have reasonable solutions and behaviors to improve the level of job satisfaction of their employees. Because once employees are satisfied with their work, this helps them persistently strive to complete their work better, trusting and loyal to the organization they are serving. Therefore, employee performance and work efficiency will be higher, helping the organization survive and develop in today's very competitive economic environment.

The topic shows a comprehensive picture of the level of job satisfaction of officers and employees working in the state-owned commercial banking system in Ho Chi Minh City through 09 aspects of satisfaction. The regression results of the study demonstrate that job satisfaction in the aspect of "Information communication" has the most substantial impact on the "General level of satisfaction" of employees. Meanwhile, the "Income" aspect has the lowest impact on the "General satisfaction level." The above research results provide a basis for employers to develop solutions to improve the overall satisfaction level of employees at their agency.

Information communication

Regarding satisfaction with Information Communication, because this is the most influential or essential factor in improving the job satisfaction of bank employees, employers need to pay attention. According to the statistical table describing observed variables measuring Information Communication factors, the average satisfaction level is relatively low. According to Maslow (1943), information communication belongs to the group of social needs; it is a type of higher-level need that is satisfied within a person, so it is more difficult to satisfy than groups of needs that are satisfied externally. Therefore, employers need to strengthen information communication channels. The priority employers need to implement in this factor is enhancing organizational communication (COM1). The organization needs to share information between two or more individuals or groups to achieve a common understanding, and the organization's common goals need to be shared to achieve a common understanding.

Co-workers

Regarding satisfaction with colleagues, this is also the second most vital influencing factor in improving job satisfaction, so employers also need to pay attention. According to Herzberg (1959), relationships with colleagues belonging to the maintenance group, if met, will not result in job dissatisfaction; on the contrary, it will lead to dissatisfaction. Based on the statistical table describing the observed variables measuring Colleague factors, the average level of satisfaction is at a relatively low level, especially the two observed variables "Colleagues' incompetence" and "Colleagues' incompetence" and "Colleagues' incompetence." Arguing and arguing at work." Therefore, to improve the satisfaction level of this factor, priority should be given to improving the two issues mentioned above. To improve the abovementioned problem, organizations need to create more fairness in work assignments. To ensure fair and transparent work assignments, employers first need to assess the capacity of each employee, to ensure that work assignment is appropriate to each person's ability. Avoid having employees feel like they must do more work because their colleagues need more work capacity. Besides, because the district is newly established, building a culture of behavior within the agency is also necessary, creating a civilized, fun, and sociable working environment.

Nature of work

The nature of work is the third most vital influencing factor on the overall job satisfaction level of officers and employees. According to Herzberg (1959), the nature of work belongs to the group of motivating factors. If met, it will bring job satisfaction; otherwise, employees will not be satisfied (not dissatisfied as the group of factors maintains). According to the statistical table describing the observed variables measuring the Nature of Work factor, the satisfaction level of the variables is at an average level. However, to increase the satisfaction level of this factor, priority should be given to the job content (which has the lowest satisfaction level in the group Mean = 3.79).

Employers need to assign their employees jobs that suit their abilities and strengths, help them clearly understand their work, and let them see the importance of their work, as well as empower them to decide on several things that are within their ability. Employees will only have high job satisfaction if they clearly understand the nature of their work and their relationship with other employees in the same agency. Employers must convey to their employees the awareness that each job position in the organization has particular importance to the organization's overall operations to help them feel the meaning of their work, creating excitement in their work.

Working conditions

Satisfaction with working conditions, in general, is when a job can bring that employee general satisfaction and good work performance. The statistical table describing variables measuring working conditions related to job design must have clear regulations and administrative procedures that do not make work difficult or are not hindered by bureaucracy. In general, job satisfaction in this aspect is relatively low, especially the observed variables "Procedures hinder work performance" and "Work is hindered by bureaucracy." Therefore, to improve the satisfaction level of this aspect and increase overall job satisfaction, priority should be given to enhancing the two observed variables mentioned.

Promotion

According to the statistical table describing the observed variables measuring the Promotion factor, the level of satisfaction in this aspect is average. Promotion refers to employees' satisfaction with their opportunities for promotion. According to Maslow (1943), advancement is the need for self-actualization, a high level in his hierarchy of needs that is difficult to satisfy compared to other needs.

Most employees want to be promoted or improve their working capacity after a certain period. Organizations must create conditions for employees to enhance their knowledge and working skills and create promotion opportunities for capable employees. Organizations must demonstrate to all employees that those with the ability and effort will be allowed to advance. When a vacant management position or a new one appears, the organization must prioritize reviewing, thoroughly evaluating, and publicly disclosing those who have contributed to the organization. This will help motivate capable people to try to do a good job and even give those who have not done well the motivation to develop better.

Income

According to Maslow's theory of needs (1954), income belongs to human physiological and safety requirements, and only when employees' needs are met can they be satisfied at work. The regression results show that income (INC) is one of three variables with a low influence on the overall job satisfaction of officials and employees at the Bank. Statistical results describing the observed variables measuring the income factor show that the satisfaction level of this factor is lower than other factors. The order of priority that employees need to do in this factor is to create more fairness in the distribution of rewards for work (INC1- Fair rewards depending on performance (Mean = 3.7)).

Fairness here depends significantly on the organization's employees' awareness, so employers must find ways to help employees realize that they are paid relatively income and bonuses. According to Adams (1963), employees tend to evaluate fairness by comparing the effort they put in with what they receive and comparing their ratio with that of their colleagues in the organization. They will try to complete the job if the comparison results are fair. Moreover, employees can only be satisfied with their work when treated fairly. Therefore, organizations need a detailed job description for each position, helping employees see their posts, roles, contributions, and other organization members. Doing so will help employees feel that they are paid their income fairly. In addition, employers must be careful to avoid providing income incentives to people with (public) relatives because this will affect other employees' perception of fairness.

Regarding creating fairness in employee rewards, organizations need to develop a clear and comprehensive reward and punishment policy with specific reward levels for each achievement and receive comments to improve the above procedure. Organizations will implement rewards and penalties based on the issued regulations when considering bonuses and penalties.

Rewards

According to Maslow (1943), reward is a higher need that is satisfied within humans and is very difficult to satisfy. The statistical table describing the observed variables measuring the Reward factor shows that the level of satisfaction in this aspect is average. According to the regression results, the Reward variable is one of three variables that have the same impact on overall job satisfaction. The priority order that organizations need to improve in this factor is "Reward for effort" and "Proper evaluation of work performed."

Research results show that survey respondents feel their work is not appreciated and their work efforts are not adequately rewarded. Therefore, the recommendations here are similar in terms of income factors. For employees to feel appropriately valued, the organization needs to have a detailed job description, responsibilities, and authority of each position and publicize it. In addition, organizations need to develop a scale to evaluate work completion results to have a basis for classifying employees' work. On that basis, there is an accurate and fair reward and punishment regime.

Welfare

Benefits are the benefits a person gets from their organization and the money they earn. Welfare includes monetary and non-monetary interest. According to statistical results, the table shows that the current level of satisfaction with employee benefits could be higher. Therefore, to increase satisfaction with this benefits aspect, priority should be given to improving the current employee benefits organization. Organizations need to consult, review, and compare the benefits of employees in their organization with employees of other organizations operating in the same industry, correctly assessing the position and role of each employee to Determine appropriate benefit levels for each employee.

Supervision

Supervision refers to the supervisor's ability to provide emotional support, technical support, and guidance with relevant job tasks. Control in this topic relates to the satisfaction with the supervision of direct management. Statistical results show that employees' perception of their boss's fairness is low. At the same time, in employees' perception, the boss pays too little attention to subordinates' feelings.

Therefore, superiors must pay more attention to employees, protect them from others when necessary, recognize their contributions, and treat them fairly. Leaders must learn about their employees' strengths, weaknesses, and preferences. They can only show appropriate and proper care when superiors clearly understand their subordinates. Adequate care from superiors will create respect for their employees. In addition, superiors need to recognize employees' efforts when they achieve set goals, and praise and rewards are necessary when subordinates do good work. At the same time, superiors need to create fairness in treating employees.

In addition, superiors should regularly learn and improve their qualifications and professional knowledge. When necessary, show subordinates your abilities because associates will truly feel admired by their boss when they see their supervisor's leadership talent and professional expertise.

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EFFECTS OF EXECUTIVE DIRECTORS' AGE AND DUALITY TO THE QUALITY OF FINANCIAL REPORTS AT INDUSTRIAL GROUP OF COMPANIES – EVIDENCE FROM VIETNAM

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Abstract: Research objectives are to measure the influence of age and duality of the CEO to the quality of financial reports of industrial group of companies listed on the Ho Chi Minh City Stock Exchange (HOSE). The official study sample includes 89 industrial group of companies listed on HOSE with a sample size of 267 observations between 2018 and 2020. The panel data regression methods POOL, FEM, REM, and FGLS are used to validate the research model. The study result provides further empirical evidence on the quality of financial reports of industrial group of companies that are negatively influenced by the age of the CEOs. The result also recommends that industrial group of companies should not recruit or appoint CEOs who are too old to increase the quality of financial reports.

Keywords: quality of financial report, chief executive officer (CEO), age of CEO, CEO concurrent positions

1. INTRODUCTION

The financial report plays an important role and provides useful information for users (Mackenzie et al., 2012). The quality of the financial report is of interest to many domestic and foreign researchers because quality financial reports will increase investment efficiency (Biddlw and Halary, 2006). The Chief Executive Officer (CEO) is the executor who represents the business owner in related tasks and policies, is responsible for all production and business activities of the enterprise, and is directly responsible for the information presented on the financial report or the quality of them. Some CEOs may for self-interest abuse their authority to manage profits in a way that benefits individuals, invisibly falsifying information on financial reports, leading to the quality of financial reports being affected.

Many studies indicate that CEOs' behavior is governed by their characteristics, such as age, gender, work expertise, tenure, ownership ratio, and incentives of salary, bonus, and other long-term benefits (Hambrick and Mason, 1984; Nirosha, 2011; Bao et al., 2021; Huang et al., 2012; Cheng and Farber, 2008). Scholars point out that these characteristics of the CEO have a significant impact on the performance of the business and can be used to predict the transparency and accuracy of financial reports. Thus, the CEO's behavior will affect the quality of the financial report. CEO behavior is influenced by CEO characteristics (Knechel and Sharma, 2012), including the factors of CEO's age and duality.

The industrial group has with large investment capital and production scale. Company size is in the same direction as profit quality because large companies often incur fixed costs to maintain internal control procedures during the financial reporting process (Ball and Foster, 1982). In contrast, small companies often have weak internal control systems and are more likely to have to revise previously reported profit targets.

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The study focuses on measuring the age and duality of the CEO affecting the quality of financial reports, the research results will be one of the arguments for investors as well as users of financial reports to be able to partially evaluate the quality of financial report through the age and tenure attributes of the CEO. On the other hand, this will also be one of the bases for businesses to recruit CEOs or appoint CEOs who need to separate two functional positions: Chairman of the Board of Directors and CEO.

2. THEORETICAL BASIS AND PREVIOUS STUDIES

2.1. Theoretical basis

Management theory: Hypothesize that managers are not influenced by personal goals, they have motivations that align with the owner's goals. Managers who act in the best interests of shareholders are considered good managers. This theory argues that executives can operate effectively not only because they are competent, but also because they share the same goals as beneficiaries (Donalson and Davis, 1991).

Agency theory: Developed by Berle and Means (1932), the focus of agency theory is based on the relationship between the proprietor (who has ownership) and the agent (who has control). Jensen and Meckling (1976) analyze the conflicting relationship between the proprietor and representative (manager), managers who do not always act in the best interests of the owner. Therefore, the business owner must supervise the manager and cost supervision. At the same time, managers will accept to bear the binding costs. Conflicts of interest also create additional losses due to unmaximized welfare. The total cost of monitoring, binding costs, and additional losses are called representative costs. The difference in interests between the proprietor and the agent leads to a potential conflict of interest, which incurs costs to resolve (authorization costs). To limit the authorization costs, companies need to create an effective internal control system that separates management decisions from control decisions (Fama and Jensen, 1983). In addition, separating CEO duality can establish better monitoring and control mechanisms.

Asymmetric information theory: The asymmetry of information is that there is a difference in the amount of information held between the manager (the representative) and the business owner (the authorized party). The International Accounting Standards Board (IASB) mentioned that the more clearly the information on the financial reports reflects the economic conditions and business performance of the enterprise, the more it helps reduce the information asymmetry between investors, managers and business owners (shareholders). To reduce asymmetry information in joint stock companies, managers must provide useful information to shareholders. On the other hand, it is necessary to establish a monitoring mechanism through the shareholder's representative, the board of directors. Therefore, it is recommended that businesses should separate the two positions of CEO (with executive functions) and Chairman of the Board of Directors (with supervisory functions).

2.2. Perspectives on the financial report quality

Many scholars studied the quality of financial reports. Besides, the methods used to measure the quality of financial reports are also diverse such as methods of measuring accruals; reaction coefficient of income; timeliness of information disclosure; representation of financial report; and information characteristics according to accounting standards... The study focused on exploiting the quality of financial reports through the quality of information on financial reports from the perspective of the

International Accounting Standards Board (IASB, 2018), information quality characteristics include: (1) Relevance: accounting information must be able to make a difference in the decision-making of users. The information must have the predictive value, validation value, or both; (2) Faithful representation: information that is fully described, neutral, without subjective opinions, and more substantive than formal; (3) Comparability: comparability allows users to distinguish and understand the similarity or difference in items, information about one business will be more useful if it can be compared with similar information in another enterprise or in the same enterprise in different periods; (4) Verifiability: helps to assure users that the information presented truthfully concerning economic phenomena; (5) Timeliness: means having information available for users to make timely decisions; (6) Understandability: the information that can be classified, described and presented concisely.

2.3. Role of Chief Executive Officer (CEO)

The Chief Executive Officer (CEO) is the highest executive position of an organization, in charge of the general management of a company; is the representative of the business when speaking to shareholders, government agencies, and the public; responsible for giving direction, strategic vision, setting and implementing goals of the enterprise, coordinating, and monitoring the company's activities. Thus, the managers must perform different roles and are classified into 3 groups: Human Relations Role Group, Information Role Group, and Decision Role Group (Mintzberg, 1973). In Vietnam, the CEO is known as "General Director" or "Director". According to the National Assembly (2020), the CEO is the person who runs the day-to-day business of the company; reports to the Board of Directors; takes responsibility before the Board of Directors and law for the exercise of assigned rights and obligations. The CEO is responsible for all issues related to the preparation and presentation of financial reports. Therefore, it can be said that the role of the CEO greatly affects the quality of financial reports that business publishes.

2.4. Overview of the Studies

Here are some studies by the authors that show the influence of factors CEO's age and duality on the quality of financial reports.

There exists a multidimensional result demonstrating the relationship between CEO's age and financial report quality. The typical studies on CEO's age affects the quality of financial reports include Hambrick and Mason (1984), Peterson et al. (2001), Sundaram and Yermack (2007), Huang et al. (2012). There exists a positive link between age and morality, profit management behavior is widely interpreted as unethical, especially after the famous accounting scandals of the early 2000s and the introduction of the SOX Act in the US (Grasso et al., 2009). Ali and Zhang (2015) argue that CEOs are more likely to manipulate income when they are young or nearing retirement age. Hambrick and Mason (1984) argue that older CEOs are less likely to make high-risk decisions, they are more cautious, and ethical behavior increases with age. In the same vein are researchers such as Mudrack (1989), Dawson (1997), Peterson et al. (2001), Sundaram and Yermack (2007). According to Huang et al. (2012), the age of the CEO has a relationship in the same direction with the quality of financial reports, In the research sample of 3413 enterprises in the period 2005 – 2008, the quality of financial reports is measured through the representation of financial report – Financial restatement.

Ali and Zhang (2015) agree that CEOs are more likely to manipulate earnings when they are young or close to retirement age. To manipulate earnings, CEOs will have a negative impact on the quality of financial report. It means the CEO's age has a negative relationship with the quality of financial reports when the CEO is young or too old. Gibbons and Murphy (1992) show that the level of career interest of CEOs will gradually decrease as they near retirement. These authors also show that retiring CEOs will receive a higher salary ratio according their performance. This may further increase their motivation to engage in profit management. According to research by Isidro and Gonçalves (2011), older CEOs tend to manage earnings more, it means the older the CEO is, the lower the quality of financial reports.

In Vietnam, Vo Van Nhi (2016) shows that the older CEOs are, the more mature and ethical behavior they have to prepare high-quality financial reports, and they demonstrate their role with the responsibility to disclose information for relevant parties.

On that basis, the research hypothesis about duality is set up as follows: Hypothesis H1: Older CEOs have higher financial report quality.

The studies on CEO's duality affect the quality of financial report include Dechow et al. (1996), Byard et al. (2006), Firth et al. (2007), Alves (2021), Donaldson and Davis (1991), Abed et al. (2012). The first view emphasizes the need to separate the positions of CEO and chairman of the board to ensure independence and improve transparency within the company (Jensen, 1993). According to Dechow et al. (1996), if there is a concurrent position between the CEO and Chairman of the Board, it will increase the likelihood of violations of accounting principles in businesses. Byard et al. (2006) argue that the presence of a CEO who is also chairman of the board is associated with poor-quality of financial information. Similarly, Beekes et al. (2004); and Firth et al. (2007) indicate that a financial report is more appropriate in the case of separation of the positions of CEO and chairman of the board for UK and Chinese businesses. Klein et al. (2002) argue that abnormal accruals have an inverse relationship with the quality of financial report information, the more concurrently the chairman of the Board of Directors, the more abnormal accrual behavior increases and the more the quality of financial report information decreases. Some other studies have similar results such as Wang and Liang (2008), Roodposhti and Chashmi (2010), Nekhili et al. (2016), ... they said that the abnormal level of accrual increased when leading the Board of Directors and CEO. Alves (2021) studies the relationship between CEO's duality right and profit quality. The study used a fixed-effect regression model to examine the effect of the CEO's duality right on profit quality for a sample of non-financial companies in Portugal listed between 2002 and 2016. Research results show that a CEO's duality will reduce the quality of profits; The second view is that the duality of the chairman of the board creates consensus and unity when decisions need to be made, it is better and faster than separating two different people between the two positions (Donaldson and Davis, 1991). Other studies have similarly suggested that a CEO duality business performs better than a non-CEO duality business (Tian and Lau, 2001). However, contrary to these two views, other authors did not significantly detect a link between CEO duality and information quality in different contexts of the study (Moradi and Salehi, 2012; Abed et al., 2012; Nguyen Ha Linh, 2017).

From the above theoretical basis, a basis for the authors to build a research hypothesis: Hypothesis H2: duality rights will have a negative impact on the quality of financial report.

Methods for measuring the quality of financial report: Methods for measuring the quality of financial reports such as methods for measuring accruals (Healy and Wahlen, 1999; Dechow et al., 1995), the response factor of income (Holthausen and Watts, 2001; Nichols and Wahlen, 2004;

Schipper and Vincent, 2003), timeliness of disclosure (Leuz et al., 2003; Barth et al., 2008; Ball and Shivakumar, 2005), representation of financial report (Wu, 2001), each of them has its advantages and limitations. In this study, the authors selected the financial report quality characteristic scale according to the method based on the information quality characteristics of Beest et al. (2009) and the information quality regulations of the IASB.

According to Beest et al. (2009), the technique of measuring information quality characteristics is to check the usefulness of information on financial reports, with the advantage of focusing on and directly measuring the quality of financial reports. The IASB specifies information quality characteristics as "understandable", "appropriate", "reliable" and "comparable".

3. RESEARCH MODEL, METHODOLOGY, AND DATA

3.1. Research model

The proposed research model is based on the theoretical framework and empirical research results of Beest et al. (2009), Jensen and Meckling (1976), Huang et al. (2012), Alves (2021).

Detailed research model:

Financial Report Quality ($FRQ_{i,t}$) = $\beta_0+\beta_1 Age_{i,t}+\beta_2 Dual_{i,t}+\beta_3 Size_{i,t}+\beta_4 Big4_{i,t}+\varepsilon_{i,t}$

Therein:

i: the number of companies (i runs from 1-89); t: the number of years (t runs from 1-3).

Table 1. Research scales and hypotheses

Variable (variable code)	Measure	Hypothesis	Expectations	Bibliography
Financial Report Quality * (FRQ)	Measurement of information characteristics according to the IASB			Beest et al. (2009)
Independent variables				
CEO Age (Age)	Fiscal Year - The year of birth of the executive	H_1	positive	Huang et al. (2012), Serfling (2014), Yim (2013), Isidro and Gonçalves (2011), Hambrick and Mason (1984), Peterson et al. (2001)
Concurrent rights (Dual)	The value is 1 if the CEO is the chairman of the board, the opposite is 0	H_2	negative	Alves (2021), Abed et al. (2012), Fama et al. (1983), Klein (2002), Firth et al. (2007), Dechow et al. (1996), Byard et al. (2006), Beekes et al. (2004)
Control variables				
Enterprise Size (Size)	Logarithmic total assets			Ball and Foster (1982), Kazemian and Sanusi (2015), Zalata and Roberts (2017),
Big4 auditing firm (Big4)	The value is 1 if the auditing firm is Big4, the others are 0			Huang et al. (2012)

*The FRQ variable scale was designed according to Beest et al. (2009), and measured based on IASB information quality characteristics. The scale has 21 items consisting of 5 quality characteristics: appropriate, truthful presentation, comparable, understandable, and timeliness. In Vietnam, some items cannot collect data such as explanation of data on the balance sheet and income report, page number of the glossary; adjustment of data from previous accounting periods; the metric compares to other units so the authors removed these attributes. After eliminating non-conforming items, in the end, there were only 17 items left to measure the quality of financial report. The study uses a 5-point

Likert scale to evaluate each item, of which a score of 1 is for the item with the weakest level and a score of 5 for an item that meets the very good level of the set standard.

The authors evaluated the quality of financial reports based on 17 quality attributes in two steps. Step 1, the authors conducted observations of related documents (annual reports and financial reports) to score each attribute. The scoring of each attribute of the financial report information quality characteristics was based on the "Question" and "Scale" columns to determine the score level from 1 to 5, to reduce subjectivity in the scoring process, the authors proceeded to step 2. Step 2, scored qualitative attributes, then compared them with the first scores. In case there is a difference between the scorings, the authors will review each attribute again to get the final score.

3.2. Research methodology and data

To perform the audit, the authors used quantitative methods, and regression techniques on table data including POOL, FEM, and REM. Data was collected from the financial reports of 89 industrial group of companies listed on HOSE from 2018 - 2020 with a total of 267 observations (3 years * 89 companies). The data was analyzed on the Stata 14.0 software in the following order: (i) Descriptive statistics (ii) POOL, FEM, and REM model regression, (iii) Verification of appropriate model selection, (iv) Testing the assumption of constant variance and independence between cross units are violated, (v) Remedy model defects using FGLS method (Feasible Generalized Least Squares).

4. RESEARCH RESULTS

4.1. Data Descriptive Statistics Results

Table 2. Descriptive statistics of research indicators

Quota	Unit of measurement	Average	Standard deviation	Largest	Smallest
Financial Report Quality (FRQ)	Point	58,38	6,27	72,00	43,00
CEO Age (Age)	Age	49,92	8,21	77,00	27,00
Enterprise Size (Size)	Billion VND	4.895,49	10.023,66	83.176,37	200,86

Statistical results (Table 2) show that the general characteristics of industrial group of companies have *relatively high CEO age (on average* nearly 50 years old*), relatively large enterprise size* (on average nearly 5000 billion VND, so they are classified as large-scale companies), *concurrently with a low ratio (65/267 observations = 24.34%), the* quality of financial reports is good *(average score of 58.38 points, get 72% higher than the largest score),* Big4 auditing company with a low ratio *(75/267 observations = 28%, proving that the reports of companies are almost audited by other companies)*.

4.2. Regression results and tests

Table 3. Correlation between variables in the study model

	FRQ	Age	Dual	Size	VIF
FRQ	1,00				
Age	0,02	1,00			1,02
Dual	-0,02	0,07	1,00		1,01
Size	0,46***	0,08	0,01	1,00	1,19
Big 4	0,19***	0,09	-0,06	0,40***	1,20

Note: Notations ***; ** and * respectively represent significance levels of 1%, 5%, and 10%. The results of the correlation coefficient test (Table 3) show that do not have the pair of independent and control variables have a correlation coefficient greater than 0.5, This indicates that there is no self-correlation between the variables. According to Gujarati (2004) the VIF coefficient (Variance Inflation Factor) – is an important indicator to identify the ability of multicollinearity in the model, if this index is greater than 10, it is an indication of the phenomenon of high multicollinearity. The results (Table 3) show that the factor components in the model for the VIF coefficient are all very small (VIF < 2), demonstrating that the model does not cause serious multicollinearity.

Table 4. Regression results according to models

Dependent variables Financial Report Quality (FRQ)	**Regression model**			
Independent variables	POOL	FEM	REM	FGLS
Age (Age)	-0,017	0,018	-0,004	-0,042*
	[-0,40]	[0,29]	[-0,09]	[-1,85]
Concurrent rights (Dual)	-0,338	-1,551*	-1,077	-0,511
	[-0,42]	[-1,74]	[-1,45]	[-1,48]
Enterprise Size (Size)	5,100***	4,851***	5,202***	5,131***
	[7,64]	[2,65]	[5,63]	[13,99]
Big4 auditing firm (Big.4)	0,201	-2,299	-0,845	-0,153
	[0,24]	[-1,50]	[-0,83]	[-0,53]
Constant	-3,345***	-1,017	-4,744	-2,966
Model fit	F (4,262)	F (4,174)	Wald chi2 (4)	Wald chi2 (4)
Statistics F/Wald chi2	17,76***	2,91**	36,29***	208,682***
Hausman accreditation Hausman test (chi2 (4))			2,68	

*Note: Notations ***; ** and * respectively represent significance levels of 1%, 5%, and 10%. Statistics t in brackets [ ].*

The results of Table 4 show that all 3 models POOL, FEM, REM have statistical indicators F, Wald with Prob value < α = 5%, so all 3 models are evaluated as suitable.

POOL or FEM selection: The F test results with a Prob value of > F = 0.023 (< α = 5%) with F (4.174) = 2.91 (Table 4) demonstrating a significance level of 5%, There are sufficient grounds to prove that there exist specific differences between companies in the study model. The FEM model is selected.

FEM or REM selection: The Hausman test results show a value of Prob>chi2 = 0.613 (> α = 5%) with chi2(4) = 2.68 (Table 4), the REM model is more suitable than the FEM model when studied on the data of the study. Therefore, the REM model will be used for further analyses.

Table 5. Check for self-correlation and variance changes

Verify the phenomenon of variable variance	Chibar2	Prob > chibar2
Breusch and Pagan Lagrangian multiplier test	142,15***	0,0000
Verify the phenomenon of self-correlation	F (1, 88)	Prob > F
Wooldridge test	43,669***	0,0000

The test results in Table 5 show that the Chibar2 value has Prob > chibar2 less than 5% and F (1.88) has Prob > F less than 5%, showing that the REM model has the phenomenon of variable variance and self-correlation. This will reduce the effectiveness of the REM model. In the condition that the assumptions of constant and independent variance between cross units are violated, the Feasible Generalized Least Squares (FGLS) is the most suitable choice, so that the estimation results are not skewed and effective (Beck and Katz, 1995). The estimation results of the REM model are adjusted by the FGLS method (Table 4) showing that Age and Size variables have an impact on the quality of financial Report (FRQ).

Discuss regression results:

Table 6. Aggregate expected results and statistical significance levels

Variables	Hypothesis	Expectation	Result	Significance level	Hypothesis testing
CEO Age (Age)	H_1	+		10% of the significance level	Accepted
Concurrent rights (Dual)	H_2	-	-	Do not make sense	Not accepted

The hypothesis H1 is accepted (Table 6). This means that the CEO Age variables are inversely related to the quality of financial reports (FRQs). From FGLS estimation, the research model is formulated as follows: $FRQ_{i,t} = - 2.966 - 0.042\ Age_{i,t} + 5.131\ Size_{i,t} + \varepsilon_{i,t}$

The study found evidence of an inverse correlation between CEO age and financial reporting quality. The results of the FGLS estimate show that the beta coefficient of -0.042 indicates that under the condition of other factors remains constant if the age of the CEO increases by 1, the quality of financial report decreases by 0.042 points, and vice versa (with a significance level of 10%). This result is consistent with the research of Isidro and Gonçalves (2011): CEOs age and nearing retirement age, the behavior of profit management increases. The implication is that the older the CEO gets, the more negative it will have on the quality of financial report. Because the older the CEO is and the closer he is to retirement age, the possibility of fraud will be higher due to the psychology of not having to take responsibility once he leaves his job.

5. CONCLUSIONS

Many studies focus on the relationship between the characteristics of executives or characteristics of the board and the quality of information reported. However, few studies show the impact of a CEO's age and duality on the quality of financial reports. This study analyzed the influence of age and duality of executives on the quality of financial reports of industrial group of companies listed on the stock market in the period 2018 –2020. The appropriate FGLS method was used in this study. The audit results show that the age variable of the CEO negatively affects the quality of financial reports and the CEO's duality right does not impact the quality of financial reports. By assessing the influence of age and the duality of the CEO, the authors propose the following recommendations:

Firstly, on the part of listed companies, especially companies belonging to industrial groups listed on the Ho Chi Minh City Stock Exchange. To recruit CEOs, age data is extremely important, and the results of the study can be a reference in CEO appointment and recruitment policy. Listed companies of industrial groups should not hire or appoint CEOs who are too old.

Second, on the part of investors, to evaluate the quality of financial report of the enterprise, they can consider the behavior of influential people in the business or people involved in the preparation of the financial report and the CEO is an influential person, directly responsible for preparing and presenting the financial report. The results of the study contribute a part to these supporting documents and serve as a basis for stating that: the older CEO, the lower the quality of financial report.

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ROLE OF BANK CREDIT TO THE PRIVATE SECTOR AND PRIVATE INVESTMENT IN LOW – CARBON ECONOMY TRANSITION: EMPIRICAL EVIDENCE IN VIETNAM

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Abstract: *This paper examines the role of bank credit to the private sector and private-sector investment in the transition to a low-carbon economy in Vietnam regarding other macroeconomic factors, such as GDP growth rate and electricity consumption from renewable energy. From 1986 to 2021, chronological classification was used. Through the ARDL regression model, the experimental results show that in the short term, credit to the private sector and private-sector investment initially help the economic transition to be effective. However, in the long run, the activities of the private sector lead to more emissions, such as CO2. Therefore, to reduce pollution, it is necessary to adopt policies on financially supporting the production and use of environmentally friendly technologies and to establish effective environmental regulations concerning the production and consumption of energy, especially the energy extracted from renewable resources.*

Keywords: *bank credit to the private sector, private invstmnet, CO2 emissions, Vietnam*

1. INTRODUCTION

Due to global warming, in the past two decades, climate change has become an issue that has received much special attention. Many believe that the increase in carbon dioxide emissions (CO2) has led to climate instability, causing global warming (Cho et al., 2013; Gozgor, 2017; Haseeb et al., 2017; Kasman & Duman, 2015). To tackle this issue, the priority is to balance the development of macroeconomic variables and climate change risks since most economic variables affect the emissions of CO2 (Sallahuddin Hassan, 2018). With their efforts, the governments of many nations have come to many agreements, decisions, and regulations to achieve net-zero emissions in 2050. This has become a more significant concern for developing economies such as Vietnam, where the growth of economic variables and environmental sustainability are both important.

From one of the poorest countries in the world to a dynamic emerging market, Vietnam might face increasingly severe risks from climate change, threatening the country's goal to become a high-income economy by 2045 (World Bank Report, 2022). Vietnam's rapid economic growth, urbanization, and industrialization have depended on the energy from coal, which is mainly the cause of greenhouse gasses (GHG) emissions. Although it does not contribute much to the global emissions rate, accounting for only 0.8%, in the past two decades, Vietnam has become one of the countries with the fastest-growing GHG emissions per capita (WB, 2022). In November 2021, at COP26 in Glasgow, the Prime Minister of Vietnam made many commitments, including the goal of achieving net-zero greenhouse gas emissions by 2050. In this regard, the private sector - an essential contributor to the economic growth and industrialization of the country - is indispensable. With about 800,000 businesses in operation, the private sector contributes nearly 45% of the country's GDP and more than 40% of investment in improving society, creating jobs for 85% of the total labor force (Ministry of Finance, 2021). The private sector plays an increasingly important role in the economy, thereby

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having a significant impact on environmental issues. However, domestic and foreign empirical studies rarely mention the examination of the private sector's activities on the environment. Because of these reasons, this study aims to analyze the role of bank credit in the private sector and private-sector investment. Controlling the impact of bank credit activities are other macro variables, such as the annual GDP growth rate and energy consumption, in terms of Vietnam's transformation into a low-carbon economy through the ARDL (Auto Regressive Distributed Lag) model from 1986 to 2022. In conclusion, some recommendations are made to ensure sustainable linkages in the private sector's economic activities towards environmental issues.

2. THEORETICAL AND LITERATURE REVIEW

2.1. Theories

Theoretically, Yuxiang & Chen (2011) argued that financial development through banked credit in the private sector can impact CO2 emissions through four channels. (i) *The first channel is called the capitalization effect*, whereby financial development can reduce CO2 emissions by investing in and consuming sustainable products. However, this can have adverse effects because it increases the use of goods that consume energy; (ii) *The second channel is called the technology effect,* but it has both positive and negative impacts on CO2 emissions: on the one hand, financial development supports innovators to develop green products (Hoang and al., 2019), on the other hand, new technology may increase the demand for natural resources. (iii) *The third channel is called the income effect*. Expanding bank credit helps many households buy and use more environmentally friendly products. However, this channel can also increase CO2 emissions as higher income leads to higher demand for energy-containing products. (iv) The last channel is the *regulatory effect*, whereby bank loans are regulated to finance environmentally friendly investment projects that can help reduce CO2 emissions.

The STIRPAT model proposed by York et al. (2003) is based on the IPAT model (Paul Ehrlich, 1971) on the random effects of macro variables: affluence, population, and technology on environmental quality. This model examines the leading causes of CO2 emissions; however, over the years, according to different research purposes, the STIRPAT model has been expanded with many additional variables such as economic growth, economy, foreign direct investment, trade openness, industrialization, urbanization… Investment is a prerequisite for economic activities, therefore leading to changes in CO2 emissions (X. Zhao et al., 2016). With economic growth and technology spillover, investment activities can effectively create production scale effects due to the improved level of science and technology. On the other hand, it can have an ambivalent effect on CO2 emissions (Shao et al., 2016), as it can either increase or reduce CO2 emissions, depending on whether the investment objective is to save energy or to scale up production and improve productivity.

2.2. Literature Review

The relationship between bank credit activities and CO2 emissions has been analyzed in many academic studies since the 2007-2008 global financial crisis (Tamazian et al., 2009; Tamazian & Rao, 2010, Al-murali et al., 2015; Shahbaz et al., 2013; Shahbaz et al., 2014; Ziaei, 2015, Dogan & Seker 2016; Shahbaz et al., 2017, Shahbaz & Hoang, 2019, Abbasi et al., 2022; Aljadani, 2022). The results of experimental research on the relationship between bank credit to the private sector and CO2 emissions are divided into two main groups, as the theory previously proposed by Yuxiang & Chen (2011). *Firstly,* an increase in the private-sector bank credit will increase CO2 emissions, therefore slowing the process of transforming Vietnam's economy to a low-carbon one. Using PMG to study the G7 countries in the period 1990-2014, (Raheem et al., 2019) argued that financial development (measured through the ratio of private-sector bank credit to GDP) is the cause of the slight increase in emissions. However, in India during 1980-2019, using the ARDL regression model, (Qayyum et al., 2021) confirmed that the credit to the private sector significantly increased emissions in this country. Similar results were also confirmed in the research of Pata, U.K. (2018) on Turkey, Maji et al. (2017) on Malaysia's transportation and oil and gas industry, Duan et al. (2023) and Jian et al. (2019) on China.

In contrast, *the second group* believes bank credit to the private sector will reduce emissions. Using The Principal Component Analysis method when studying the impact of bank credit on the private sector at the provincial level in China during 2001–2020, B. Zhao & Yang (2020) confirmed that the credit activity could slow down the increase in CO2 emissions. Similar observations were made in the study of Lahiani, A. (2020) on China, Islam et al., 2013 on Malaysia, and Shahbaz et al., 2013 on Indonesia. From 2000 to 2016, in 37 Sub-Saharan Africa (SSA) countries, through Regression Analysis Techniques - the pooled mean group ARDL calculator - Emenekwe et al. (2022) also showed that this credit activity reduced CO2 emissions in the nearby region and supported the Environmental Kuznets Curve (EKC) hypothesis. An increase in bank credit to the private sector positively affects CO2 emissions by affecting scale and structure, but adverse effects by technology account for the majority (Xu et al., 2022). Thus, the influence of private-sector bank credit on CO2 emissions has not come to a consistent result when researching different countries and regions.

Private-sector investment is a variable rarely discussed in studies concerning CO2 emissions. Some of the case studies are those of Hassan, S. (2018), Zhao et al., 2016), Fu et al. (2014), and Meisner (2001); the relationship between private sector investment and CO2 is also not explicit enough to clarify the role of this activity in the transformation into the low-carbon economy in several countries. In a case study, Fu et al. (2014) say that investment activity increases CO2 emissions in China, and most emissions are generated from the construction and manufacturing sectors. From 1976 to 2013, Hassan, S. (2018) researched the private sector›s investment in energy consumption and financial development variables; then, he studied the impact of economic growth on CO2 emissions in Malaysia using an autoregressive distributed lag model. The results showed a long-term correlation between the different variables and proved that private investment positively impacted CO2 emissions in Malaysia.

3. DATA AND METHODOLOGY

3.1. Data

Tim series data from 1986 to 2022 was collected from secondary sources (with annual frequency) as the materials for the analysis of the study. Specifically, data on bank credit to private (BCP) and annual GDP growth rate is collected from the World Bank (WB) statistics; data on the private investment in fixed assets (INP) is collected from the International Monetary Fund (IFM); and data on the amount of CO2 per capita and electricity consumption from renewable energy (EC) is collected from https://ourworldindata.org/.

3.2. Methodology

Based on the research of Hassan, S. (2018); Meisner (2001), Fu et al. (2014), Abbasi et al. (2022), Ahmad et al. (2018), Aljadani (2022), Chishti & Sinha (2022); Nguyen (2023), this study assesses the influence of private investment and bank credit in the private sector on two control variables, GDP growth rate and energy consumption per capita, during the process of transforming into a low-carbon economy through an econometric model as follows:

$$CO2 = f(BCP, INP, GDP, EC) \quad \textbf{(1)}$$

Note: CO2 is the average carbon dioxide emissions per capita, BCP is bank credit in the private sector (% compared to GDP), INP: is private sector investment (Ratio of total fixed capital compared to GDP: %), GDP: annual GDP growth rate (%), EC: is the amount of electricity consumption from renewable energy per capita (TWh). According to Shahbaz et al. (2012), the linear model in logarithmic form provides more accurate results than the simple linear model. Therefore, in this study, model 1 is rewritten as follows:

$$lnCO2_t = \propto_0 + \propto_1 lnBCP_t + \propto_2 lnINP_t + \propto_3 lnGDP_t + \propto_4 lnEC_t + \varepsilon_t \quad \textbf{(2)}$$

With $\propto_0$ - $\propto_4$ are regression coefficients, are statistical error, ln: natural logarithm of the variables.

ARDL method

The research used the ARDL cointegration technique developed by Im et al. (2003) and Pesaran et al.(2001) to quantify the relationship between variables. The ARDL approach, from holistic to analytic, has many advantages over the cointegration approach of Johansen (1988), as the model avoids the integration order problem, is suitable for both large samples and small samples, and provides unbiased estimates even when some of the explanatory variables are endogenous. Besides, the F-Bound tests in ARDL analysis estimate the long-run equilibrium relationship through an error correction model. Thanks to that, the calibrated ARDL parameters can provide more accuracy regarding short-term and long-term estimations and adjustment speeds.

The ARDL model is conducted in the following steps: (1) F-bound tests determine the cointegration between different variables and the long-run relationship between them; (2) Determine the lag of variables in the ARDL model using the Schwarz information criterion (SBC) or Akaike information criterion (AIC); (3) Estimate the ARDL model with defined lags to test the long-run relationship between the variables in the model.; (4) Calculate the short-term effects of variables by using the error correction model (ECM) based on the ARDL approach to cointegration.

The ARDL model estimates the short-term and long-term relationships between the variables and CO2 emissions in this study as follows:

$$\Delta lnCO2_t = \propto_0 + \begin{array}{l} \sum_{i=1}^{p} \propto_1 \Delta lnCO2_{t-i} + \sum_{i=1}^{p} \propto_2 \Delta lnBCP_{t-i} + \sum_{i=1}^{p} \propto_3 \Delta lnINP_{t-i} + \sum_{i=1}^{p} \propto_4 \Delta lnGDP_{t-i} + \\ \sum_{i=1}^{p} \propto_5 \Delta lnEC_{t-i} + \partial_1 lnCO2_{t-1} + \partial_2 lnBCP_{t-1} + \partial_3 lnINP_{t-1} + \partial_4 lnGDP_{t-1} + \\ \partial_5 lnEC_{t-1} + \varepsilon_t \end{array} \quad \textbf{(3)}$$

Note: Δ is the Forward Difference Operator, $\propto_0$ represents the constant coefficient of the model and εt is the statistical error.

are the coefficients showing the long-run relationship between variables;

represent the short-term relationship. After confirming the long-term association between the variables, we will now estimate the short-term association by building an ARDL-based error correction model (ECM).

4. RESULTS AND DISCUSSIONS

4.1. Descriptive statistics Descriptive statistics

The descriptive statistics results among variables in terms of standard deviation, mean, maximum, and minimum are presented in Table 1. The results from Table 1 show that the difference among these values is mostly not more significant than 10%; therefore, the variables in the model all follow the Gaussian distribution.

Table 1. Description of the model's variables.

Variables	Obs	Mean	Std. Dev.	Min	Max
lnCO2	36	4.3041	0.948	2.8563	5.8318
lnBCP	31	3.9879	0.7131	2.6142	4.8392
lnINP	34	2.3244	0.4343	1.3299	2.8003
lnGDP	37	6.6224	1.1368	4.5657	8.3341
lnEC	37	2.9532	1.1907	0.3249	4.9108

Source: Results are computed by authors

4.2. Unit root test results

In this study, the unit root test specifications ADF (Dickey-Fuller) and PP (Phillips-Perron) are used to test the stationarity of the regressors. The results of Table 2 show that most of the variables are stationary at the first level difference with a significance level of 1%, and only the lnGDP variable stops at the root level with a significance level of 10%. Such results confirm the suitability of the ARDL model to test the short-run and long-run relationships between variables.

Table 2. Outcomes of unit root analysis

Variables	I(0)		I(1)	
	ADF	PP	ADF	PP
lnCO2	-3.062	-11.140	-5.414***	-30.429***
lnBCP	-1.155	-3.520	-4.801***	-28.342***
lnINP	-1.713	-3.520	-7.050***	-44.433***
lnGDP	-3.327 *	-10.071	-4.665 ***	-28.754***
lnEC	-2.826	-8.275	-5.414***	-27.038***

*Note: *, **, *** represent 10%, 5%, and 1% significance level, respectively*

Source: Results are computed by authors

4.3. The optimal lags

Determining the optimal lags for chronological data when using the ARDL model helps ensure that the variables used in the model do not lead to heteroscedasticity and autocorrelation. Results in Table 3 show that the model has an optimal lag of 3 based on the minimum AIC information criterion (Perasan & Shin, 1997). Models with low statistical observations based on the SBIC information criterion will give better and more stable results (Liew et al., 2008). Therefore, to be suitable for this study, the SBIC information criterion will be used to determine the optimal lag of the variables in the model. The optimal lags of lnCO2, lnBCP, lnINP, lnGDP and lnEC variables are 1, 1, 2, 4, 2 respectively.

Table 3. Outcomes of the optimal lags

Lag	LL	LR	Df	p	FPE	AIC	HQIC	SBIC
0	31.1133			0.000	7.8e-08	-2.1761	-2.111	-1.9306
1	166.252	270.28	25	0.000	8.5e-12	-11.3543	-10.9637	-9.8817
2	194.183	55.863	25	0.000	9.1e-12	-11.5986	-10.8824	-8.8989
3	247.987	107.61*	25	0.000	2.3e-12	-13.9989*	-12.9571*	-10.0721*
4	.	.	25	.	2.7e-45*	.	.	.

Source: Results are computed by authors

4.4. Cointegration Test

After checking the stationarity of the data series to see if the variables in the model have a long-term relationship, research is done to test the cointegration between the variables. The results of this test are shown in Table 4.

Table 4. Outcomes of Cointegration Test

Variables: lnCO2, lnBCP, lnINP, lnGDP, lnEC	F - value= 3.651		t- value= -3.944	
	Critical value F-statistic		Critical value t-statistic	
Critical Values	Lower bounds I(0)	Upper bounds I(1)	Lower bounds I(0)	Upper bounds I(1)
1%	3.74	5.06	-3.43	-4.60
5%	2.86	4.01	-2.86	-3.99
10%	2.45	3.52	-2.57	-3.66

Source: Results are computed by authors

The results of the table above show that the F value is larger than the critical value of the upper limit I (1), with a significance level of 10%; besides, the t-test also shows that the t-test value is less than the critical value of the upper limit I (1), with all three levels of the significance level of 1%, 5%, and 10%. Thus, the cointegration test results show a cointegration relationship between the variables in the model. In economic terms, it means a long-run relationship exists between bank credit in the private sector, private sector investment, GDP growth, and energy consumption, which is in correlation with CO2 emissions in Vietnam.

4.5. Short-run and long-run estimates

The results of the ARDL model analysis on the short-term and long-term relationships between variables are presented in Table 5.

Table 5. Results of ARDL bound test model

Variables	Coefficient	Standard Error	p- value
Long-run estimates			
lnBCP	0.2847	0.1178	0.033
lnINP	0.5359	0.2818	0.082
lnGDP	0.1658	0.2344	0.493
lnEC	0.4248	0.2795	0.055
Short-run estimates			
lnBCP	-0.1917	0.1431	0.025

lnINP	-0.1153	0.1545	0.47
lnGDP	-0.2965	0.2534	0.265
lnEC	-0.5025	0.1013	0.000
R2	0.8278		
Adjusted value of R	0.6269		

Source: Results are computed by authors

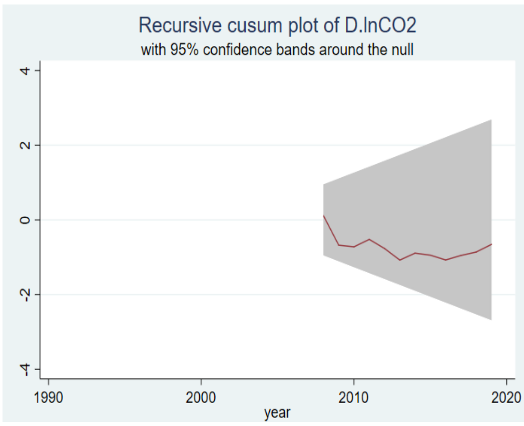
The above table shows that in the short term, all factors reduce CO2 emissions in Vietnam, although the lnINP and lnGDP variables are not statistically significant. Under the condition that other factors remain constant, expanding credit activities in the private sector has been confirmed to reduce CO2 emissions (Islam et al., 2013; Shahbaz et al., 2013; B. et al., 2020; Emenekwe et al., 2022). These experimental studies all prove that increasing credit activity in the private sector can attract more foreign investment in energy-saving projects, reducing energy consumption and thereby reducing emissions. This result confirms the capitalization and technological effect of private investment activities on CO2 emissions in Vietnam, as Yuxiang and Chen (2011) concluded. At the same time, increasing energy consumption from renewable sources also positively affects environmental quality, supported by other macroeconomic variables.

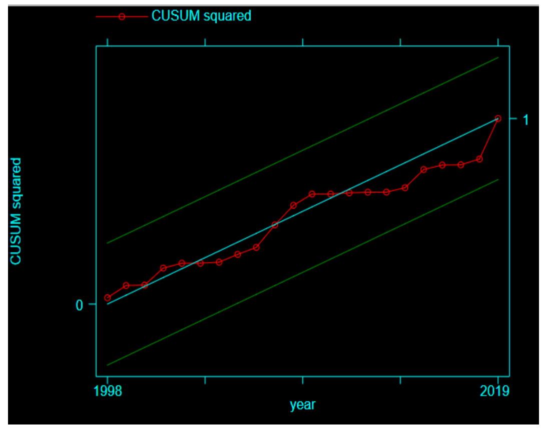
However, in the long run, credit, investment in the private sector, and energy consumption increase the significance level of CO2 emissions by 5% and 10%, respectively. This result is consistent with previous studies by Jian et al. (2019) and Raheem et al. (2019). The leading cause of this phenomenon in Vietnam is as follows: the continuous flow of consumer credit given to the private sector over a long period has created more cash flow in the economic system, which stimulates the buying and using of high-energy consumer goods for example, motorcycles, cars, air conditioners, refrigerators, and building houses… This activity has increased energy consumption, but the electricity source generated from renewable energy is not enough, so alternative energy sources must be found, leading to an increase in emissions. For the business sector, the scale of private credit business is increasing, helping businesses access more abundant capital and increasing investment activities. The results from Table 5 also show that with the 10% significance level, if the business's investment in fixed assets increases by 1%, there will be an increase of 0.53% in emissions as long as other factors are consistent. This correlation is suitable with the previous assertion in the study of Hassan, S. (2018), Zhao et al. (2016), and Fu et al. (2014). Thus, financial support is increasingly favorable for developing private enterprises, helping them continue expanding production, thereby increasing energy consumption demand and increasing emissions, hence the increase in both the demand for energy consumption and emissions in Vietnam. As a developing country, increasing private investment (especially FDI) will positively affect the environment. However, in the long term, with more significant capital needed for economic growth, in the context that environmental regulations are still relatively lax in Vietnam, and businesses to maximize profits, this will have specific consequences concerning the environment. Although not statistically significant, in the long term, a 1% increase in GDP growth rate also increases CO2 emissions by 0.16% because for Vietnam - a developing country, the growth of its economy remains one of the top goals; therefore, the damage caused to the environment is inevitable.

Besides, the study uses CUSUM and CUSUMsq tests (Brown et al., 1975) to measure the effectiveness of the regression model. Figure 1 shows that the critical values are below the 5%

significance level, indicating that all estimated parameters are stable over the sample period (the kink does not lie outside the limits of the straight line). Therefore, this confirms that the ARDL model is appropriate and reliable.

Figure 1. Results of CUSUM and CUSUMsq test





Source: Results are computed by authors

5. CONCLUSIONS AND POLICY IMPLICATIONS

This study examines the role of bank credit in the private sector and private investment during Vietnam's transformation into a low-carbon economy under the control of two variables: GDP growth and energy consumption. For this purpose, data from 1986 to 2021 are in the suitable ARDL regression model. The experimental results of the study show that bank credit in the private sector and private sector investment reduce CO2 emissions in the short term but increase CO2 emissions in the long term, making Vietnam's goal of becoming a low-carbon economy more difficult. As a result, for the country to achieve net-zero emissions, it is necessary to pay attention to the following points:

Firstly, the current expansion of bank credit in the private sector in Vietnam is only effective in the short term. Consequently, in the long term, because the private sector will have an advantage in promoting capitalization, technology, and income effects, it is essential to consider reforming financial activities and prioritizing lending activities, especially environmentally friendly projects. In the current situation of scarce business capital, expanding credit activity will help businesses have the opportunity to access more abundant money to invest in new technology, which consumes less energy or green technology.

Secondly, private investment also negatively affects the environment ultimately. Consequently, continuing to create more abundant capital for the economy, such as opening activities for attracting foreign investment, should go hand in hand with more specific and complete constraints and regulations in terms of the environment. This creates a great set of rules for investment activities while "greening" the economy.

Thirdly, it is encouraged to consume goods that use energy sparingly and exploit and use solar and wind energy sources better. In addition, it is advisable to facilitate the production and exploitation of renewable resources to reduce pressure on the government and, simultaneously, open up new business opportunities contributing to the country's sustainable economic growth.

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THE IMPACT OF FINANCIAL DECISIONS ON DEFAULT RISK A STUDY BASED ON VIETNAM LISTED CONSTRUCTION ENTERPRISES

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Abstract: *This study aimed to examine the impact of financial decisions on default risk of Vietnam listed construction enterprises, including three decisions: financing, investing and distribution. The research analyzed a sample of 16 construction companies listed in the Hochiminh Stock Exchange of Vietnam, from 2012 to 2021 by using panel data regression models such as Pooled OLS, FEM, REM. The results indicate that financing and investing decisions are the most influential on default risk, in which current liabilities to total capital and current assets to total asset ratios are the most significant indicators.*

Keywords: Financial decisions, default risk, financing decision, investing decision, dividend decision, Vietnam listed construction enterprises

1. INTRODUCTION

The business is always tied to financial decisions and these financial decisions can lead to different financial risks, including the risk of default. The trade-off relationship between profit and risk has become a classic theory in corporate governance in general and financial management in particular. Research on financial risk has been studied for a long time and has many opinions. The issue of default risk and financial decisions is always a matter of concern in practice, in the business environment. The goal of corporate financial management is to maximize the value of the enterprise or to maximize the value of shareholders' ownership, which can be understood as maximizing the market value of the enterprise. Making financial decisions to maximize shareholder equity can lead to default risk, so it is necessary to study the effect of financial decisions on default risk.

Determining the effects of financial decisions on default risk will help investors have a clearer overview of the business they are investing in rather than following the crowd vaguely. Currently, Vietnam still does not have a systematic and open risk assessment organization for investors. Only the Credit Information Center of the State Bank is a public agency with the function of national credit registration; collecting, processing, storing and analyzing credit information; scoring, credit rating, but most investors, especially individual investors, cannot access that information. Therefore, understanding the impact of financial decisions on the risk of default will help corporate administrators and market regulators to take timely measures and solutions.

The stock market has also experienced many fluctuations, recently the world financial crisis in 2007 has affected the stock market in particular and the Vietnamese economy in general. In recent years, the business environment has become more and more difficult, complicated, and affected business activities of enterprises. Climate problems, natural disasters, especially Covid-19 have significantly affected the solvency and default risk of enterprises. In Vietnam, there have been many large and small businesses of different industries affected by Covid-19 and many businesses have fallen into bankruptcy since the pandemic occurred. Thus, the study aims to examine the impact of financial decisions on default risk of listed construction firms.

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The rest of this paper is organized as follows: Section 2 reviews the prior literatures and develop the hypothesis. Section 3 presents the data and methodology, while Section 4 shows the empirical findings and discussion. Finally, conclusions are presented in Section 5.

2. LITERATURE REVIEW

In the world, Frank H. Knight said: "risk is the uncertainty that can be measured". Expressing more specifically, the authors C. Arthur William, Jr. Michael, L. Smith in the book "Risk management and insurance" - Risk management and insurance wrote: "Risk is the potential volatility of the results. Risks can appear in almost any human activity.

The goal of financial decisions is to maximize shareholder value and revolve around three main decisions: investment decisions, capital raising decisions, and income distribution decisions. Decisions made to invest or raise capital or decisions on income distribution that have the potential to increase the value of the enterprise are evaluated as good decisions (Damodaran, 2014). Financial decisions include investment decision, financing decision and dividend decision.

Default risk:

Measuring default risk has been studied for a long time and there are many approaches. Synthesis of popular measurement methods through Altman's Z score model. This is a well-tested and widely accepted method today. This index can help investors better assess risks, and even predict the bankruptcy risk of businesses in the near future. The bankruptcy risk coefficient, or Z score, was established by American economist Edward I. Altman, a lecturer at New York University. This coefficient only applies to businesses, not to financial institutions such as banks or financial investment companies. In the US, the Z-score has been relatively accurate in predicting bankruptcy of businesses in the near future. About 95% of business failures are predicted by Z score one year before the closing date, but this rate drops to just 74% for 2-year forecasts.

Binh and Duc (2017) in their study to find the right model to predict bankruptcy and financial distress for Vietnamese listed companies, proved that the Z-score is one of the two key models to give signals about the financial viability of the company. bankruptcy of enterprises. It can be said that Altman's Z''-score model has proven to be a good predictor model, which can be applied effectively and accurately in emerging markets, especially for countries that do not have such a system. unified credit rating assessment, including the Vietnam market.

The research model to evaluate the impact of financial decisions on the default risk of enterprises is written in the form of the following equation:

$$ZS = a.F_i + b.I_j + c.D_k + Size_s + \varepsilon_m \quad (1)$$

In which:

ZS: Default risk

F: Financing decision

I: Investment decision

D: Dividend decision

Hypothesis

The study on the default risk of Chinese enterprises by Law and Roache in the IMF report (2015) has tested the correlation between the independent variables representative for the profitability ratios: the ratio of EBIT to the total assets, the ratio of retained earnings to the total assets; liquidity measured by the ratio of working capital to total assets, leverage ratio, debt structure measured by short-term debts to long-term debts, size and age of companies to dependent variable (Z score) . The study uses the panel data regression method to analyze and give the results. The results of the study show that *in terms of profit distribution decisions, the larger the share of profits for shareholders, governments and creditors on total assets, the higher the Z-score – or the lower the probability of default*. And the greater the ratio of retained earnings to total assets, the lower the probability of default. *Regarding capital decisions, Chinese enterprises tend to increase their liabilities, increasing the possibility of default.* In particular, the higher the ratio of short-term debt to long-term debt, the higher the risk of default. *Regarding investment decisions, the ratio of working capital to total assets also positively and significantly affects the risk of default.* The greater the amount of working capital a company maintains, the lower the probability of default. *For the indicators of liquidity or size and age, there is no significant statistical significance*.

In another study of Khurshid, M.R (2013), also used the method of regression analysis of array data with nearly similar variables. The dependent variable is also the Z score calculated according to Altman's research and the independent variable includes liquidity, solvency, profitability and profit margin. *The results show that liquidity, profitability and solvency are negatively correlated with the dependent variable.* For example, an increase in the ratio of liabilities to total assets will decrease the Zscore thereby increasing the probability of default. In theory, when a business has a high net profit to sales ratio, it means that the business is operating very efficiently, but the results of the study show that *ROS has the opposite effect with Zscore*. That is, when ROS increases, Zscore decreases and default risk increases. This result is quite exceptional compared to the normal theory. And the EBIT-to-Total assets return is positively correlated with Zscore.

In the study on the determinants of China's default risk by Xuan Zhang et al. (2020) studied the polynomial logit method and concluded that the *default risk of enterprises is lower when interest rates are high.* Because when interest rates are high, the debt-to-total assets ratio will decrease and reduce the risk of default of enterprises. In addition, *businesses may face a high risk of default when they hold many highly liquid assets*.

Abor et al. (2009) in their research on risk pressures and corporate finance policy in emerging markets concluded that firms with more intangible fixed assets would rely more on external debt than enterprises with a proportion of tangible fixed assets. In addition, *enterprises with a high proportion of fixed assets in the asset structure will have less external debt, so default risk is also reduced*. Moreover, the dividend payout ratio shows the firm's more debt reliance, even at the 10% significance level. Businesses with a low dividend-to-capital ratio often have cash constraints and may have difficulty meeting their debt obligations when their debts come due. *Firms in emerging markets that can maintain high dividend payouts are more liquid and more likely to attract investors for loans.*

Hypothesis 1:

Ho: Financial decisions do not impact on default risk of Vietnam listed construction enterprises.

H1: Financial decisions have an impact on default risk of Vietnam listed construction enterprises.

Hypothesis 2:

Ho: Investment decisions do not impact on default risk of Vietnam listed construction enterprises.

H1: Investment decisions have an impact on default risk of Vietnam listed construction enterprises.

Hypothesis 3:

Ho: Dividend decisions do not impact on default risk of Vietnam listed construction enterprises.

H1: Dividend decisions have an impact on default risk of Vietnam listed construction enterprises.

Variables and metrics

The dependent variable of the model is ZS calculated from Altman's formula for predicting default probability Z" in emerging markets such as Vietnam.

Z"= 3.25 + 6.56 R1 + 3.26 R2 + 6.72 R3 + 1.05 R4

The independent variable includes a group of 3 financial decisions, namely investment decision, financing decision and profit distribution decision.

Table 3.1: Describe independent variables in the model

Signal	Name	References	Expected direction
F2	Current Liabilities/Total E+L	Nenu and partners (2018)	+/-
F3	Total Liabilities/Total E+L	Rommer (2005)	-
I1	Current Assets/ Total Assets	Ngo Thu Giang (2015)	+
I2	Fixed Assets/Total Assets	Ngo Thu Giang (2015)	+
D2	EPS	N/G	+
Size	Size	Ln (Total assets): Book value of total assets (Vo and Phan, 2013)	+

3. RESEARCH METHODOLOGY AND DATA

3.1. Research data

The topic is limited to companies in the sample of 16 construction companies listed on HOSE. The data of listed companies is the annual financial statements of companies. Financial reporting data of companies in the sample are collected from reliable aggregated sources.Financial report data is aggregated according to groups of criteria that suit the requirements of the topic.The result of this process is that the data is gathered in the form of a panel (panel data), the observations are made on many companies over a time series (from 2012 to 2021).

3.2. Research methodology

This study uses the method of regression analysis of panel data using Stata software.

First, the author runs the loop to test the reliability of the variables in the model because for each decision the author has included representative criterias. After selecting suitable variables, the author will conduct descriptive statistics, regression using panel data, FEM and REM models to give the better model and defects for the model.

4. RESULTS AND DISCUSSION

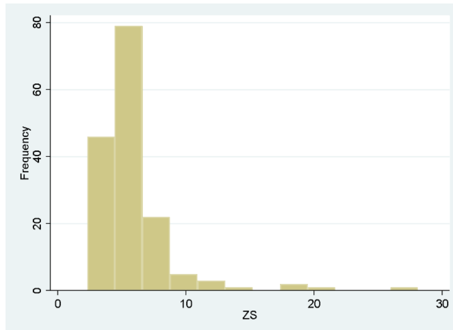

Figure 4.1: Zscore distribution histogram (Source: Stata 17 software)

Looking at the graph describing Zscore, almost 80% of the Z coefficients appear with a value greater than 5, more than 40% of the Z coefficient appear with a value less than 5. There are also few sales. Firms appear with Zscores greater than 10. This means that firms selected within 10 years all have Z-scores in the gray and safe zones.

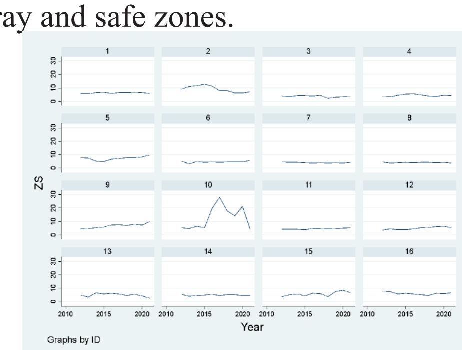

Figure 4.2: Zscore distribution histogram in accordance to stock code (Source: Stata 17 software)

Looking at the Zscore distribution chart by stock code, most of the enterprises in the sample have stable Zscore and are in the safe threshold. Although even during the Covid-19 period, businesses of different industries were significantly affected, the enterprises in the research sample all balanced the Z coefficient. However, stock code No. 10 (NHA) is the most volatile (14), there are years when the Z coefficient is close to 30 at an extremely safe threshold.

Descriptive statistic

Table 4.1: Descriptive statistics of variables

Variable	Obs	Mean	Std. dev.	Min	Max
ZS	160	5.915406	3.18939	2.282983	28.09145
F2	160	.4628014	.2144418	.0228328	.8400835
F3	160	.590317	.2060765	.0454678	.8632241
I1	160	.6354639	.2559101	.020389	.9669799
I2	160	.1916607	.2245826	.0041247	.915833
D2	160	1806.751	2217.708	-5652.699	7984.809
Size	160	28.0552	1.434109	25.49669	32.75029

It can be seen that the average Zscore of the sample is 5.91. This number is higher than 2.6, showing that the selected enterprises are in the safe zone similar to the statistical section of the default risk table.

Among the selected variables, only the D2 boundary (EPS) has the smallest value which is negative. This is also possible because while doing the research data, the author has also seen that there are years when the business has a loss leading to negative EPS.

Correlation matrix (alpha =5%)

Table 4.2: Correlation matrix (source: Stata 17 software)

	ZS	F2	F3	I1	I2	D2	Size
ZS	1.0000						
F2	-0.4038*	1.0000					
F3	-0.6729*	0.5991*	1.0000				
I1	0.0536	0.7888*	0.2581*	1.0000			
I2	0.0652	-0.6514*	-0.1519	-0.8394*	1.0000		
D2	0.2743*	-0.0466	-0.1196	-0.0008	0.0661	1.0000	
Size	-0.4460*	0.2741*	0.5327*	-0.0402	-0.1033	-0.0696	1.0000

In general, financing decisions are negatively related to ZS and investment decisions and profit distribution decisions are positively correlated with the dependent variable. To be specific, F2 and F3 have the most correlation with the dependent variable and inverse. I1, I2 are positively correlated. Moreover, the correlation coefficients between the explanatory variables still consider and take care of multicollinearity in the model.

Multicollinearity test VIF coefficient

Table 4.3: Multicollinearity test VIF coefficient

Variable	VIF	1/VIF
I1	7.05	0.141920
F2	4.96	0.201728
I2	4.15	0.240702
F3	2.43	0.410895
Size	1.80	0.555289
D2	1.04	0.962601
Mean VIF	3.57	

The VIF coefficient is used to test for multicollinearity. The coefficients have no multicollinearity when the mean is less than 10. Looking at the table, it can be seen that mean VIF = 3.57 shows that the variables do not have multicollinearity. This is also evident when the VIF coefficient of each variable is less than 10.

Table 4.4: Results

Variables	Dependent variable: ZS		
	FEM	REM	FEM robust
Constant	5.076601 (0.643)	9.930362 (0.125)	5.076601 (0.661)
F2	-12.5449 (0.000)	-10.20519 (0.000)	-12.5449 (0.028)
F3	-3.325117 (0.080)	-5.293529 (0.001)	-3.325117 (0.129)
I1	10.37218 (0.000)	7.797026 (0.000)	10.37218 (0.001)
I2	-2.592642 (0.182)	-0.2475053 (0.885)	-2.592642 (0.222)
D2	0.0002473 (0.021)	0.0002769 (0.003)	0.0002473 (0.000)
Size	0.0736563 (0.850)	-0.0561297 (0.801)	0.0736563 (0.870)
Hausman Test	Chi2(6)=14.80 Pro>chi2=0.0113		

Ho: There is no correlation between unobserved effects and explanatory variables (random effect exists, REM is the chosen model)

H1: There is a correlation between unobserved effects and explanatory variables (random effects do not exist, FEM is the chosen model)

Prob > chi2 = 0.0113. This figure is lower than 0.05, it means reject Ho, accept H1. Hence, it proves that the FEM model is more optimal than the REM model. So, the final model is the FEM model. The author tests the variable variance for the defective result and then apply FEM robust.

4.2 Regression results

FEM: (2)

Through the process of testing the correlation between financial decisions and default risk, it is also clear that there is a close relationship between how to raise capital, how to invest and how to distribute profits with bankruptcy of the enterprise. Sometimes we cannot avoid going into debt, but by coordinating financial decisions together, businesses will not fall into the gray area - high probability of bankruptcy. For example, businesses that do not invest in low-liquidity assets such as inventory, fixed assets, and already invested should choose high-quality assets, using maximum effort. At the same time, companies find ways to increase revenue and save all kinds of costs from production costs, selling expenses, and administrative expenses.

Financing decisions have a negative impact on default risk, in which, F2 (Current Liabilities/ Total Capital) has the most influence on default risk. Thus, the more debt a business uses in its total capital, the lower the Z' score, which means the risk of default is high. This is logical and consistent with the theory because it is clear that when a business has a lot of debt, the risk of bankruptcy will be higher than that of a business with little debt. This conclusion is similar to studies in China (Law and Roache, 2015) in Vietnam (Nguyen Thi Vu Khuyen, 2019).

Investment decisions have a positive effect on default risk, the ratio of current assets to total assets has the most influence on the risk of default in investment decisions. This is also evident because the proportion of current assets accounts for the majority of the assets structure of enterprises in the sample. This result shows that if the enterprise increases asset investment, the Z' coefficient is high, which means that the risk of default is low. This is consistent with theory and practice, when businesses invest in assets and manage assets effectively, they will develop firmly and avoid the risk of default.

It can be seen that the dividend decision has no significant effect on the default risk because the percentage is the lowest in the research model. It seems that the decision on how much to distribute profits does not seem to affect default risk too much. D2 (EPS) has a positive effect on the coefficient Z'. This means that the higher the EPS, the higher the Z' coefficient, the lower the risk of default. This positive relationship shows that if businesses try to increase revenue, save costs to increase profits, the risk of default is lower. Effective business is still a safe measure to help businesses survive.

Impact of size to default risk: Research results of 16 construction enterprises show that the variable size has no effect on default risk. It is also possible that because the enterprises selected in the sample are large, and listed companies, they are more resilient to events and have better financial capacity than smaller companies. However, some studies in France (Rommer, 2015), Jordan (Zeitun, 2006) show that the scale fluctuates in the same direction with ZS.

5. CONCLUSION

In correlation with default risk, enterprises all show that debt structure is a very important factor. In the construction industry, the results show that increasing current liabilities reduces the risk of default. In addition, the ratio invested in short-term assets reduces the risk of default. Regarding financial decisions, the maintenance of capital structure has a great influence on the default risk of enterprises. When the debt structure is too high, especially short-term debts, it means that businesses have to face many short-term debts to pay, if they do not have enough money to pay, businesses will easily fall into bankruptcy. In terms of investment decisions, how enterprises choose to structure their assets will also affect the default risk. When enterprises increase the proportion of current assets, it will reduce the default risk. This is also reasonable because after all, businesses always have to trade-off between risk and profit. When increasing the proportion of assets structure makes more production and profits increase, default risk will also decrease. Based on the profit distribution decision, the conclusion shows that EPS has a positive relationship with Z', the higher the EPS, the lower the default risk. Dividend distribution will also affect the financing and investment decisions of enterprises, so this is also a factor that should be considered by enterprises when making financial decisions. Construction enterprises need to develop appropriate business strategies to increase profitability, financial management capacity, and reduce financial risks.

The number of samples given in the model is still limited and quite small. The implementation cannot be without errors, so the level of interpretation and accuracy of the model is still limited because the truthfulness and transparency of the financial statements are still not really guaranteed. However, the results of the study can be the direction for many other future studies on this topic

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PROMOTING VIETNAM - ISRAEL TRADE RELATIONSHIPS IN THE CONTEXT OF THE SIGNING OF VIFTA AGREEMENT

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Abstract: The Vietnam - Israel Free Trade Agreement (VIFTA) was officially signed on July 25, 2023. This is the first new-generation FTA that Vietnam has signed with a country in the Middle East. The signing of VIFTA has opened up great opportunities for economic cooperation between Vietnam and Israel, especially international trade. Through VIFTA, Vietnamese goods can not only enter the Israeli market, but from Israel, Vietnamese goods can also penetrate the prospective markets of many Middle Eastern countries such as the United Arab Emirates (UAE), Kuwait, Saudi Arabia, Turkey... On the other hand, Israeli goods can also easily enter the Vietnamese market and the ASEAN market through Vietnam. The article focuses on studying the current state of Vietnam-Israel trade relations since the two countries began negotiating VIFTA in 2016 until now. From there, it draws conclusions on the results achieved and limitations in trade relations between the two countries. On the basis of the current status of trade relations between Vietnam and Israel and commitments in VIFTA, the article proposes solutions to promote trade relations in the context of the two countries signing the VIFTA Agreement. .

Keywords: Vietnam - Israel Free Trade Agreement, VIFTA, Vietnam - Israel trade relations

1. INTRODUCTION

Although Vietnam and Israel are geographically distant, they have many favorable factors: the products of the two countries do not compete with each other but complement each other, Israel needs many Vietnamese products and vice versa. While the Israeli market is not large, it is the gateway for Vietnamese goods to enter the markets of prospective countries in the Middle East. Vietnam is also a gateway for Israeli goods to enter the ASEAN market. Realizing the great potential and opportunities of both parties, Vietnam and Israel have negotiated to sign the VIFTA Agreement with a very high level of commitment.

The problem for Vietnam is finding ways to take advantage of the VIFTA Agreement to promote economic cooperation between the two countries, especially international trade relations.

The article includes the following main sections:

- Introduction to research methods and overview
- Analysis of the current state of Vietnam - Israel trade relations in the 2016 – 2022 period
- Evaluation of Vietnam - Israel trade relations in the 2016 – 2022 period
- Propose some solutions to promote Vietnam - Israel trade relations in the context of the signing of the VIFTA Agreement

2. RESEARCH METHODS AND OVERVIEW

2.1. Research methods

The article uses several research methods commonly used in the field of social sciences such as qualitative analysis, comparison, synthesis, descriptive statistics, analytical statistics, case study

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methods. The article uses the above research methods to analyze and forecast based on available survey data, data of scientific works, reports of domestic and foreign agencies and organizations, available official statistical data.

2.2. Research overview

As relations between Vietnam and Israel have not been close and the VIFTA Agreement has just been signed, there are not many research works on this topic. Here are some studies on Vietnam-Israel economic and trade relations as well as research on the VIFTA Agreement:

- Research by Hoang Kieu (2021) in the article: "The potential for Vietnam-Israel cooperation is huge, especially in the field of technology" published on the online newspaper vov.vn. The article points out Israel's strengths, especially in techniques and technologies such as agriculture, defense and information technology, etc. If Vietnam manages to take advantage of and exploit these technologies, it will bring great benefits for Vietnam.

- Research by Uyen Huong (2020) in the article: "Vietnam-Israel promotes the signing of a Free Trade Agreement" published on the online newspaper of the Vietnam News Agency. The article points out the great potential for trade cooperation between Vietnam and Israel as the two countries' products complement each other but do not compete with each other, helping Vietnam to have access to high-tech Israeli products, contributing to reducing production and business costs, thereby improving the competitiveness of Vietnamese goods.

- The article: "Tightening relations with Israel" published on the People's electronic newspaper on May 13, 2022 on the occasion of the working visit of the Communist Party of Vietnam delegation to Israel, pointed out that Vietnam is Israel's No. 1 trade partner in Southeast Asia, with the rapid growth of two-way trade reflecting the huge goods exchange needs of the two sides. Israel is committed to supporting policies and programs on technology transfer to Vietnam in areas of strength such as start-up nation, digital transformation, renewable energy, information technology, artificial intelligence; it actively promotes the early signing of a Free Trade Agreement (FTA) and a Labor Cooperation Agreement between the two countries.

The above studies are only general and suggestive. They have not yet deeply analyzed the theoretical and practical bases and do not provide systematic and long-term solutions.

3. RESEARCH RESULTS

3.1. Actual state of export activities from Vietnam to Israel in the 2016 – 2022 period

** In terms of scale, export growth rate*

In the first three years since the negotiation of the VIFTA Agreement (2016 to 2018), Vietnam's exports to Israel tended to increase, but not evenly. In 2020, when the Covid-19 pandemic broke out, Vietnam's exports to Israel decreased sharply, but increased sharply again from 2021, and will continue to increase in 2022 but slowly. This is a very positive sign.

Table 3.1: Vietnam's export turnover to Israel in the 2016 – 2022 period

Year	Export turnover ((Million USD)	Growth (%)
2016	554.15	4
2017	712.10	28.5
2018	779.84	9.2

2019	774.03	-0.7
2020	683.38	-11.3
2021	780.60	14.2
2022	785.67	0.6

Source: Compiled from data of the Ministry of Industry and Trade and General Department of Customs

** In terms of export items*

Vietnam's export products to the Israeli market are not abundant or diverse and only focus on a few items such as mobile phones & components; aquatic products, cashew nuts; coffee; textile; footwear… These are also Vietnam's strong products.

Table 3.2: Some of Vietnam's exports to Israel in the 2016-2022 period

Unit: Million USD

Year / Items	2016	2017	2018	2019	2020	2021	2022
Mobile phones & accessories	287.00	393.48	420.87	424.20	315.23	355.69	293.21
Seafood	48.29	74.24	95.68	65.44	54.13	76.10	80.36
Cashew	40.32	46.66	54.59	53.27	48.64	57.86	59.75
Coffee	21.83	21.40	22.82	18.00	19.12	20.26	24.31
Textile	15.26	17.78	21.61	22.47	22.37	25.20	32.77
Footwear	36.87	43.46	41.82	51.12	42.91	61.29	92.30
Other goods	113.55	115.10	122.45	139.50	180.93	184.23	202.97
Total	554.15	712.10	779.84	774.03	683.38	780.60	785.67

Source: Compiled from the data of General Department of Customs

In the structure of Vietnam's exports to Israel, mobile phones & components account for the highest proportion but have been in decline (in 2019 they were the highest, reaching 54.8%, but in 2022 only 37.4%).

Footwear and seafood have the second and third highest proportion respectively and textiles ranks third. These items all had increasing significance in the structure of Vietnam's exports to Israel from 2016 to 2022 (Ha Anh, 2023).

3.2. Actual state of import activities to Vietnam from Israel in the 2016 – 2022 period

** In terms of scale, import growth rate*

Table 3.3: Import turnover of Vietnam fromIsrael for the 2016 – 2022 period

Year	Import turnover ((Million USD)	Growth (%)
2016	683.75	-43
2017	345.30	-49.8
2018	420.50	21.7
2019	381.92	-9.1
2020	893.20	133.9
2021	1,109.70	24.3
2022	1.442.19	31.1

Source: Compiled from data of the Ministry of Industry and Trade and General Department of Customs

From 2016 to 2022, Vietnam's imports from Israel were relatively erratic, with sharp decreases in some years and strong increases in others. Imports have seen a particularly big increase from 2020, which may not be a positive trend.

** In terms of imported goods*

Vietnam imports a number of products from Israel such as vegetables and fruits; fertilizer; computers & electronic products, components; machinery, equipment and spare parts.

Table 3.4: Vietnam's imports from Israel in the 2016 - 2022 period

Unit: Million USD

Year / Items	2016	2017	2018	2019	2020	2021	2022
Vegetables	2.13	2.07	2.48	4.15	2.53	3.07	3.8
Fertilizer	46.10	38.21	58.39	52.1	55.29	96.5	92.8
Computers, electronic products, components	505,36	217.04	259.7	220.9	754.25	911.97	1,209.7
Other machinery, equipment and spare parts	81.40	42.35	63.85	66.18	40.7	49.62	59.3
Other goods	48.76	45.63	36.23	38.62	40.2	48.52	76.58
Total	683.75	345.3	420.5	381.92	893.2	1,109.7	1.442.19

Source: Compiled from data of the Ministry of Industry and Trade and General Department of Customs

Over the years, Vietnam has not imported many types of products from Israel. Among them, computers, electronic products, components and fertilizers have the highest quantities, with the most significant turnovers.

Other machinery, equipment and spare parts are also imported with relatively considerable turnover into Vietnam. The quantity of consumer goods imported into Vietnam from Israel are insignificant. Most of the goods imported from Israel are input production materials for economic sectors that contribute to promoting development of production; inputs with advanced technologies have particular significance. This is a favorable sign (Huyen My, Thy Thao, 2021).

3.3. The current situation of Vietnam - Israel trade balance in the 2016 - 2022 period

Table 3.5: Vietnam - Israel trade balance in the 2016 - 2022 period

Unit: Million USD

Year	Export turnover	Import turnover	Trade balance
2016	554.15	683.75	-129.6
2017	712.10	345.30	366.8
2018	779.84	420.50	359.34
2019	774.03	381.92	392.11
2020	683.38	893.20	-209.82
2021	780.60	1,109.70	-329.1
2022	785.67	1.442.19	-656.52

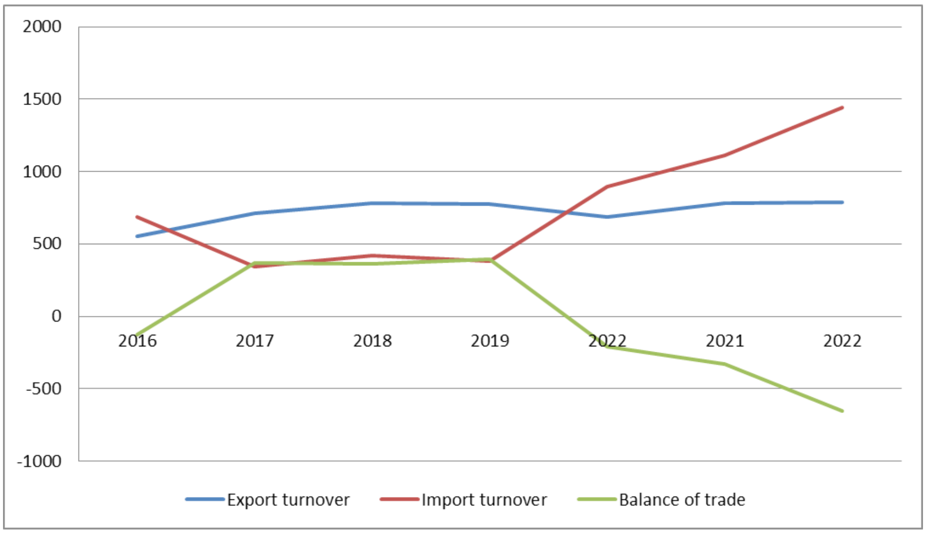
Source: Compiled from data of the Ministry of Industry and Trade and General Department of Customs

In 2016, when the Vietnam-Israel FTA negotiations began, the trade balance between Vietnam and Israel had a deficit of 129.6 million USD.

In 2017, 2018 and 2019 Vietnam's exports to Israel grew considerably while imports to Vietnam from Israel increased insignificantly. As a result, Vietnam's trade balance with Israel was in surplus for 3 consecutive years, with the surplus quantity increasing from $366.8 million in 2017 to $392.11 million in 2019.

In 2021 and 2022, Vietnam's exports to Israel increased slowly, while imports from Israel experienced a surge, making Vietnam's trade deficit with Israel increasingly severe (Le Thai Hoa, 2023).

Unit: Million USD



Source: Compiled from data of the Ministry of Industry and Trade and General Department of Customs

Figure 3.1: Import and export turnover and Vietnam - Israel trade balance in the 2016 - 2022 period

4. EVALUATION OF VIETNAM-ISRAEL TRADE RELATIONS IN THE PERIOD OF 2016 - 2022

4.1. Achievements

4.1.1. Considerable two-way trade growth

Despite many obstacles due to Vietnam and Israel not yet signing an FTA, lack of incentives between the two countries and geographical distance, two-way trade between Vietnam and Israel are growing rapidly.

Table 4.1: Two-way trade between Vietnam and Israel in the period of 2016 -2022

Unit: Million USD

Year	Export turnover	Import turnover	Two-way trade	Growth (%)
2016	554.15	683.75	1.237.9	-28
2017	712.10	345.30	1,057.4	-14.5
2018	779.84	420.50	1,200,3	13.5
2019	774.03	381.92	1,155.9	-3.7
2020	683.38	893.20	1,576.9	36.4
2021	780.60	1,109.70	1,890.3	19.9
2022	785.67	1.442.19	2.227.9	17.9

Source:Compiled from data of the Ministry of Industry and Trade and General Department of Customs

Trade relations between the two countries have ups and downs. In general, trade relations between both parties have increasingly grown, especially from 2020 to 2022 despite the whole world being heavily affected by the Covid-19 pandemic. This proves that the two countries have seen each other's potential and want to strengthen their commercial ties (Ha Anh, 2023).

4.1.2. Many Vietnamese products are popular with Israeli consumers

Vietnamese products favored by Israeli consumers are agricultural products, especially spices, seafood, food, consumer goods...

For seafood products, Israel has been in the Top 22 leading markets out of over 100 seafood export markets of Vietnam every year. Notably, in 2022, tuna exports to Israel reached 36.63 million USD and Israel ranked fourth among the 10 largest tuna import markets of Vietnam (after the US, Canada and Japan)..

Canned tuna, frozen shrimp and squid, pangasius, coffee, pepper, cashew nuts, clothes, shoes... have a stable foothold in the market and are favored and appreciated by Israeli consumers. In addition, fragrant, long grain, 5% broken rice, packed in 5 kg bags; dried, processed foods, dried or canned processed fruits (mango, banana, passion fruit, dragon fruit, pineapple), dried fruits and vegetables, confectionery, soft drinks of all kinds... continue to penetrate in small quantities and values, but have begun to be distributed in the Israeli market.

Currently, Israeli businesses have increasing interest in the Vietnamese market and partners and considering Vietnam among the important stable goods suppliers in Asia. Vietnamese products are favored by Israeli consumers for their quality and unique flavor, which Vietnam needs to maintain.

4.1.3. Complementary items

Vietnam, on the basis of its conditions and advantages, has built a structure of import and export goods complementary with Israel's. The goods that Vietnam exports to Israel are those that Israel does not have advantage in, and conversely, the goods that Israel exports to Vietnam are the goods that Vietnam lacks and has no advantage.

Import and export goods of the two countries are not mutually exclusive, hardly compete but complement each other (Huyen My, Thy Thao, 2021).

4.1.4. Vietnam imports a number of important inputs for economic sectors

Vietnam's science and technology level remains low compared to worldwide standards. In the context of rapid developments in the 4.0 industrial revolution, Vietnam's technological limitation is a bottleneck, making it difficult to close the gap in development level with highly developed countries.

Israel is a country with a relatively high level of scientific and technological development, capable of providing inputs with high technological content. In recent years, although the VIFTA Agreement has just been signed and has not yet taken effect, two-way trade has grown quite well. Especially, Vietnam has imported machinery, equipment and spare parts with relatively high intellectual and technology content, contributing to Vietnam's rapid transition to a knowledge and digital economy.

4.2. Shortcomings and limitations

4.2.1. Vietnam's exports to Israel increased slowly and imports increased rapidly, making Vietnam's trade deficit larger

Vietnam - Israel trade relations are not commensurate; in the period of 2019 and earlier, Vietnam basically had trade surplus. However, from 2020 to now, Vietnam has an increasingly large trade deficit in trade relations with Israel.

Vietnam's overall trade balance has been in surplus for nearly 10 years. In particular, there are a number of markets where Vietnam has large trade surpluses such as US, EU and others with large trade deficits such as China, Korea, Japan, and Taiwan. Vietnam's trade deficit from Israel is not large compared to other countries. However, if the level of trade deficit from Israel and some other countries continues to increase, Vietnam may lose the overall trade surplus, which has taken decades to achieve.

4.2.2. The processing level of Vietnamese products exported to Israel is not high

Vietnam's biggest export items to Israel are mobile phones and accessories. These items have a high level of processing, intellectual and technology content. However, these items are mainly produced and exported by FDI enterprises.

Vietnam's real commodities exported to Israel are agricultural products, seafood, footwear and textiles. These items have a low level of processing, intellect and technology. Processed agricultural products are only dried, while seafood is also dried or slightly more processed, canned and seasoned. Footwear and textiles are mainly processed for foreign companies. As the processing level of Vietnamese products exported to Israel is not high while intellectual and technology content are only modest, added values, export prices and export turnovers are low.

4.2.3. Among Vietnam's trade relations with the world, the proportion of the Israeli market is still quite small

Countries in West Asia (Middle East) have very prospective markets. Some high-income countries have big demand for imports. Vietnamese goods can enter many Israeli markets, which could serve as a springboard to enter the markets of West Asian countries, especially prospective markets such as United Arab Emirates (UAE), Saudi Arabia, Kuwait...

In recent years, Vietnam's trade relations with the world have developed at a rapid pace. However, this development is uneven as relations with some areas have not grown as expected, including West Asia, which consists of Israel.

Israel is the gateway for Vietnamese goods to enter West Asia, but two-way trade relations between Vietnam and Israel has only made up 0.31% of Vietnam's worldwide relations recently. Meanwhile, the figures with countries similar to Israel in Asia, such as Singapore, are four times higher, reaching 1.26%; Taiwan is even greater, up to 3.79% (Asia-Africa Market Department, 2023)

4.2.4. Trade promotion activities in the two countries' markets are not as effective as in other markets

While in other markets such as China, Japan, Korea, EU, USA... Vietnam has been very focused on organizing trade promotion activities such as exhibitions, fairs, ... in a large-scale and organized manner with high budgets, in some markets with insignificant import and export turnover like Israel, little attention is paid to organizing these activities both in Vietnam and Israel. This is somewhat sensible because markets that bring in large import-export turnover require much attention to trade promotion. However, markets with insignificant current turnover but have potential like Israel also demand more effort. If only the domestic market of Israel is taken into account, the market is indeed small. However, it should be noted that Israel is a springboard and a gateway for Vietnamese goods to enter the vast and prospective West Asian market, with many rich countries with large import and export demand. On the other hand, Vietnam is also a gateway for Israeli goods to enter the Southeast Asian market. Therefore, both Vietnam and Israel need to make considerations for their future benefits.

5. SOME SOLUTIONS TO PROMOTE VIETNAM-ISRAEL TRADE RELATIONS IN THE CONTEXT OF THE SIGNING OF THE VIFTA AGREEMENT

5.1. Accelerating the process of bringing the VIFTA Agreement into effect

The VIFTA Agreement was signed on July 25, 2023, but the two sides still have plenty of work to do for the Agreement to come into effect. This requires great effort from both parties. In the following period, the State and National Assembly of the two countries will evaluate and approve the Agreement; after some time it will officially take effect. In order for this Agreement to take effect in 2024, the two Governments, Ministries of Foreign Affairs, Ministries of Industry and Trade, National Assemblies, etc. have plenty of active work to undertake.

Since the beginning of 2023, the Israeli Government has had to devote their time and resources to resolve security issues such as unrest due to protests against judicial reform plans and tense conflict between the Israeli army and Islamic armed force Hamas.

That leaves the Government and State agencies of Israel with little room for other matters. Therefore, Vietnamese officials need to actively urge Israeli agencies and leaders to accelerate the procedures and take the next steps.

5.2. Enhancing the roles and responsibilities of management agencies

To promote Vietnam-Israel relations, the two sides have established intergovernmental committees in different fields. Including the Vietnam - Israel Intergovernmental Committee on economic - trade and scientific and technical cooperation. This Committee plays the main and focal role in the promotion of bilateral economic - trade - scientific and technical relations. In particular, the decisive issue is to further enhance the responsibility and effectiveness of the Vietnam-Israel Intergovernmental Committee on economic, trade and scientific and technical cooperation as the agency in charge of implementing cooperative relations between the two countries. Special attention is paid to the role of the Trade and Investment Sub-Committee of the Intergovernmental Committee in monitoring the implementation of the action plan for the coming years (2023-2030), promoting two-way trade to achieve the goal of $3.5 billion by 2025 and $5 billion by 2030 that the leaders of the two countries have set. It is necessary to reform the structure and work methods of the sub-committees in the Vietnam-Israel Intergovernmental Committee to enhance the practical effectiveness of cooperation programs.

5.3. Overcoming trade barriers, complying with international trade principles

Some of the major barriers between the two countries are:

- Israel's standards are increasingly integrating with standards of the US, UK and similar countries and will get increasingly difficult for countries with low development levels like Vietnam to meet. To overcome this barrier, Vietnamese goods must constantly improve their quality mainly by applying new and advanced techniques and technologies and management processes that satisfy international standards.

- Kashrut or Kosher certification. They are not a legal requirement for importing food into Israel, with the exception of beef, poultry, and other meats and products. However, products without Kosher certification have much smaller market shares, as most supermarkets and hotels refuse to buy them. Therefore, in order to reduce difficulties when entering the Israeli market, Vietnamese exporters must thoroughly research the Kashrut or Kosher certification in order to comply.

- With Israel being the gateway and springboard for Vietnamese goods to extensively penetrate the predominantly Muslim Middle Eastern market, Vietnamese exporters must focus on HALAL certification for food products. It is forecasted that by 2025, food with HALAL certification marks will account for 20% of the total value of food consumed worldwide. HALAL certification for products is the key to opening the door to the Muslim market for businesses.

- The standards for assessing inspection results of imported and exported goods are not consistent between the two parties. The two countries have not yet signed an agreement to recognize inspection results of imported and exported goods. Therefore, goods that meet export standards from one country to the other must be re-examined for quality and technical compliance, causing excessive procedures and time wastage for importers and exporters.

In order to better support the business community with interests in each other's markets, the Governments of the two countries need to have policies to create a more favorable and open environment for exporters and investors of the two countries.

- The two governments should strengthen customs cooperation to support trade and investment development. In the immediate future, the customs of the two countries need to create favorable conditions for procedures, documents and processing time for enterprises of the two countries in importing and exporting goods.

- The involved ministries of the two countries should shortly announce the criteria, regulations and conditions on the quality of goods imported and exported to the two countries' markets.

- The business communities of the two countries should practice healthy competition, cooperate for mutual benefits, limit risks in the process of trade exchange, and choose the most trusted and high-quality goods and services to export, which would create favorable conditions for mutual development and enhance enterprises' brands and national prestige.

- Commercial banks of the two countries should provide import and export financing loans for businesses, giving priority to small and medium enterprises, with preferential policies on credit, interest rates, fees, payment. .

- Maintain comparative advantage in the structure of import and export goods between the two countries, harmonize and modernize procedures on origin, quality inspection, customs procedures, L/C payment, apply modern logistics systems to reduce transaction costs incurred in import and export contracts of the two countries' enterprises. Businesses should aim to perform transactions via the two countries' local currencies or other strong non-USD currencies to avoid dependence on changes in the USD exchange rate.

- The General Department of Standards, Metrology and Quality of Vietnam and the Israel Quality Management Agency should come to an agreement on the standards for evaluating inspection results of imported and exported goods. There is particular need for congruence between the two countries on veterinary inspection procedures and negotiations to soon reach an agreement on mutual recognition of import and export inspection results.

5.4. Strengthening cooperation in the field of finance and banking to create favorable conditions for businesses

One of the major obstacles in the development of trade and investment between the two countries is the limited payment mechanism and implementation of credit transactions through banks.

The authors propose the establishment of a Vietnam - Israel Joint Venture Bank similar to the Vietnam - Russia Joint Venture Bank (VRB) which has been operating since 2006. The Vietnam - Israel Joint Venture Bank would be established under a collaborative agreement between the two Governments of Vietnam and Israel. This would be a joint venture bank between a State-owned commercial bank, possibly Vietcombank, Vietinbank, BIDV... and a reputable Israeli bank. This bank would apply advanced automation and electronic technology, connecting payments directly between Vietnam and Israel through a number of currencies, mainly VND, ILS, AED, USD, EUR. Vietnam - Israel Joint Venture Bank would open branches in key economic regions of Vietnam such as: Hanoi, Ho Chi Minh City, Vung Tau, Khanh Hoa, Da Nang, Hai Phong and have branches in major Israeli cities.

In addition, the Governments of the two countries should promote activities in the financial and banking sectors in the direction of:

- Continuing to strengthen financial capacity, expand networks, develop and diversify products and services, especially payment services to satisfy demands from businesses and people of the two countries.

- Continuing to improve the payment mechanism to support Vietnamese and Israeli businesses in commercial cooperation, import and export of goods between the two countries by advanced payment methods complying with international practices, creating trust and equal business efficiency for enterprises of the two countries. Vietnamese commercial banks should negotiate with Israeli counterparts to discount export documents through financial companies or third-country banks. In cases of necessity, they should be allowed to grant credit lines to Israeli commercial banks, creating favorable conditions for Israeli businesses to be financed and guaranteed when importing Vietnamese goods.

- Diversifying resources and building investment funds to promote trade and investment activities between the two countries.

5.5. Expanding trade promotion, promoting Vietnamese and Israeli goods in the two countries' markets

a. Establishment of trade centers

In the coming time, the Government needs to support the establishment of Vietnamese trade centers in major Israeli cities including Jerusalem, Tel-Aviv, Haifa and Be'er Sheva… due to the current lack of these malls in major Israeli cities.

The government needs to aid Vietnamese businesses to expand on trade promotion activities due to high costs and complicated procedures. These activities include: Organizing periodic exhibitions of Vietnamese exports in Israel and Middle Eastern countries. Expanding on activities to promote Vietnamese exports in the Israeli market, including participation in exhibitions, fairs, presentation of samples, catalogs, films, video tapes, etc. Organizing and supporting Vietnamsese trade delegations to survey the market, exchange information and promote trade as well as seek new business and investment opportunities. Organizing information channels about the Israeli market for Vietnamese businesses.

However, such conferences or trade promotion activities have not been held on a regular basis. Vietnamese businesses need to pay active attention to and invest in exploiting the Israeli market; Specifically, they should proactively survey and research the market, attend fairs, exhibitions, trade promotion and connection events held in Israel, hold direct meetings with trade partners to recognize cooperation demand, thereby contributing to promoting exports to this market.

The fairs are mainly held in Israel, but rarely in Vietnam to attract Israeli businesses to explore business and cooperation opportunities. Concerned parties should take particular notice of this fact and organize more domestic promotional events. Israeli enterprises have demand to find suppliers and partners in Vietnam, help verify legal status, organize trade promotion and connection events, attend exhibitions presenting Vietnamese export products and businesses to support them in getting access to the market and establish cooperative relations with Israeli partners.

b. Developing export support services

The government also needs to showcase proactiveness in consulting, supporting, marketing and promoting information of Vietnamese businesses having interest in the Israeli market and presenting trade and investment opportunities in Vietnam to Israeli partners.

The Government should have policies to encourage the development of various types of export support services, including: research, market forecasting, information analysis and consulting for businesses; forwarding and customs clearance services; financial analysis services; legal services… Vietnam needs to have appropriate policies, including opening the market for foreign service providers, to quickly develop these types of services.

5.6. Enhancing the competitiveness of Vietnam's exports to Israel

The Israeli market is that of a well-developed country with high standards comparable to those of the EU and the United States. Therefore, if Vietnamese goods fail to improve their competitiveness, they will experience great difficulties in entering the Israeli market, let alone competing with other countries' goods there. After all, in order to flourish in the Israeli market as well as that of other developed countries, businesses need to strive to improve the competitiveness of Vietnamese exports in general and exports to Israel in particular. Other favorable factors are only beneficial in the beginning. It is competitiveness that is the decisive factor in the long run. To improve competitiveness of goods, first of all, the quality of products must be improved, where improvement and equipment of state-of-the-art technology plays a decisive role. Enterprises need to focus on adequate investment in technology. Enterprises need to grasp the worldwide technological situation and import technology when domestic equipment is inadequate, giving priority to importing from countries in the same association or international economic organizations to receive incentives. Companies should limit the import of cheap but obsolete and eco-unfriendly technology, but prioritise advanced and source technology within their financial capabilities.

For the Israeli market, businesses need to strictly implement the delivery regime with the right model and quality as agreed. Due to the considerable transport distance, transportation expenses account for a large proportion of the goods' overall costs, so efforts should be made to reduce production and intermediate costs, as well as handle transport parameters in prices to create more competitive power for Vietnamese goods in the Israeli market.

5.7. Focusing on exporting products with high added value

Israeli business practices and habits are a tendency to buy finished, processed products with high added value, pre-packed with complete packaging, especially for food products and consumer goods (seafood, cashew nuts, coffee, pepper, beverage, confectionery, cinnamon, textiles, footwear, etc.) and also electronics and household goods for consumers to use immediately after purchase from distribution channels or retail supermarket chains. These are favorable factors for Vietnamese manufacturing and exporting enterprises to seize opportunities in exporting high-value-added goods to the Israeli market.

Therefore, Vietnamese manufacturing and exporting enterprises need to focus on offering processed products with high added value, competitive prices and suitable quality, quickly respond to inquiries in transactions with Israeli buyers and comply with the requirements of new Israeli import regulations and standards.

In addition, businesses also need to regularly monitor political and security developments in Israel, because this is a sensitive area with conflicts and instability affecting the entire region, to have prompt countermeasures on transactions including purchase and sale contracts, transporting import and export goods and protect their business benefits.

5.8. Media promotion

As Vietnam historically has had little trade relations with the Middle East region in general and Israel in particular, businesses and the people have little interest in this market and information is limited. The VIFTA Agreement has been signed and will come into effect shortly. In order for the business community to have increased understanding of the Israeli market, recognize lucrative opportunities from the VIFTA Agreement such as tariff reductions, market opening and be prepared to seize them, the information work Propaganda is very important and necessary. First of all, the Ministry of Industry and Trade and media agencies need to promote communication on many information channels about the VIFTA Agreement and the Israeli market. In the context of the 4.0 industrial revolution and developments in information technology, there are a variety of effective means to perform this task such as the Internet, social networks, websites, etc that agencies, organizations and businesses need to ultilize to their advantage.

The Ministry of Industry and Trade, the Vietnamese embassy and trade agency in Israel should issue publications and manuals providing information on the Israeli market, regulations on standards of import and export goods, import and export policies, business guidance, export orientation, trade opportunities, direct introduction of business partners, listing of Israeli business companies wishing to find suppliers and partners in Vietnam and seeking help to verify legal status…

5.9. Improving the quality of human resource training

In order to improve the quality of human resources to promote Vietnam-Israel trade relations, it is necessary to focus on a number of solutions such as:

- Vietnam and Israel need to negotiate and sign an agreement on the equivalence of education and training degrees between the two countries

- Further implementing the project of selecting Vietnamese students to train in Israel with the proposal of training officials in Israel with the Vietnamese State's budget and funding from the Israeli Government and its organizations.

- Creating favorable conditions for eligible Israeli educational and training institutions to open representative offices, affiliates, and independent establishments to perform educational activities in Vietnam. The two countries could consider establishing a Vietnam-Israel University similar to the Vietnam-Germany University model being implemented in Vietnam as a cooperation between the Vietnamese Government and the German Federal Government.

- Strengthening cooperation in training at undergraduate and postgraduate levels between the two countries, enhancing exchange of lecturers, focusing on granting scholarships for Vietnamese students to study in Israel, especially in Israel's advantageous fields.

The state budget plays an important and leading role in human resource training. However, limited resources from the state budget brings a need for socialization, i.e. mobilizing social resources to invest in training. Harmonious collaboration between the state and the private sector is crucial, including contributions from students' families, business and professional associations. Corporations, State-owned enterprises and private economic groups with vast resources need to take the lead in cooperating to train personnel for their own projects and strategies to develop and strengthen their bilateral trade and investment. This would create a chain effect pushing small and medium companies to develop their own human resources.

CONCLUSION

The Israeli market is not large but has plenty of potential. Upon realizing the great opportunities between the two countries, the governments of Vietnam and Israel have negotiated and signed the VIFTA Agreement. The article proposed a number of solutions to promote Vietnam-Israel trade relations in the context of implementing the VIFTA Agreement, contributing to the penetration of Vietnamese goods into the Israeli market and the highly prospective Middle East region.

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THE IMPACT OF AUDIT FIRM ROTATION ON AUDIT FEES: EMPIRICAL EVIDENCE IN VIETNAM

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Abstract: This study aims to examine the relationship between audit firm rotation and audit fees. Ordinary Least Squares regression is used to test this relationship. Using data from 72 companies listed on the Vietnamese stock exchanges on HOSE and HNX, with a total of 286 observations from 2017 to 2020, this study manually collects audit firm rotation and audit fees. The results show that audit firm rotation is positively related to audit fees. The findings support audit firms in determining audit fees as well as support the authorities in building a fee framework for independent audit activities to improve audit quality. Audit firms need to pay more attention to audit firm rotation when making arrangements related to audit fees. When there is an audit firm rotation, audit firms are unfamiliar with the new client and the need for a broader review of the work process of the new client (to maintain the quality of the audit work), audit firms should spend more time and cost in the first years of the audit.

Keywords: Audit fees, Vietnam, audit firm rotation.

1. INTRODUCTION

In an environment with high competition among audit firms, determining a reasonable audit fee will help audit firms acquire new clients, retain old clients, and ensure and improve audit quality. The topic of factors affecting audit fees has been interesting to professionals, authorities and academia. In Vietnam, the Law on independent auditing provides a number of grounds for determining audit fees, including such as content, volume and nature of work; working time and conditions used by practising auditors to perform services; qualifications, experience and reputation of practising auditors, of audit firms, of branches of foreign audit firms; the degree of responsibility and duration required by the performance of the service (Congress of the Socialist Republic of Viet Nam, 2011). In addition to the provisions of the audit law, many previous studies around the world have investigated factors affecting audit fees (Ferguson et al., 2003; Khalil et al., 2008; Yan & Wheatley, 2010; Xu, 2011; Johl et al., 2012; El-Gammal, 2012; Hallak & Silva, 2012; Kikhia, 2015; Nor, 2015; Urhoghide & Izedonmi, 2015; Kimeli, 2016; Musah, 2017; AL-Mutairi et al., 2017; Khasharmeh, 2018; Samsuri & Arifin, 2018; Kanakriyah, 2020; Fisabilillah & Praptiningsih, 2020; Karaki & Thuneibat, 2022; Salehi et al., 2022). These studies discussed most of the factors that play an important role in determining audit fees, including audited firm size, complexity, auditee risk, profitability, audit firm size and audit report lag (Abuyahia & Al-Thuneibat, 2019; Bouqalieh & Nour, 2019). Many discussions are going on regarding audit firm rotation and audit fees. When there is an audit firm rotation, audit firms are unfamiliar with the new client, which creates additional challenges for auditors and the need for a broader review of the work process of the new client (to maintain the quality of the audit work) so audit firms should spend more time and cost in the first years of the audit and therefore their effect on audit fees must be considered (Salehi et al., 2022). Therefore, it is necessary to study the influence of audit firm rotation on audit fees of listed companies. The results of previous studies in the world on the influence of audit firm rotation on audit fees are different; some studies showed a positive influence of audit firm rotation on audit fees. (Kwon et al., 2014; Hassas et al., 2016). Some studies showed the opposite result (Corbella et al., 2015), but some studies did

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not find evidence of this relationship (Narayanaswamy & Raghunandan, 2019; Salehi et al., 2022). In Vietnam, a number of studies have investigated the factors affecting audit fees, among which the main factors are the audited firm size, complexity, reputation and size of an audit firm, audited client industry, and auditor's tenure (Phan, 2012; Le, 2017; Nguyen & Tran, 2017; Vo, 2021). So far, in Vietnam, there are very few studies on the influence of audit firm rotation on audit fees. Therefore, we conduct this study with the main objective of examining the influence of audit firm rotation on the audit fees of companies listed on Vietnamese stock exchanges. This study has both theoretical and practical contributions. Theoretically, the research results provide evidence of the influence of audit firm rotation on audit fees, which is rarely done in Vietnam. In addition, we have also reviewed previous research on the influence of audit firm rotation on audit fees. This result can be used as a reference for further studies on the influence of audit firm rotation on audit fees. In practical terms, the research results have proven that audit fees are higher if there is rotation of audit firms.

After the introduction, this study is structured into five main sections: Section 2 provides regulations on a rotation of audit firms in some countries around the world, section 3 provides a literature review and hypothesis development, section 4 explains the sample and research model, section 5 provides the findings and discussions, and section 6 concludes the study.

2. Regulations on a rotation of audit firms

The tenure of the audit firm is the period during which the audit firm performs the audit for the client (Salehi et al., 2022). Audit firm rotation is the conversion of an audit firm after a set period of having been appointed to audit a client. After the collapse of the world's leading companies, including the fault of the audit firm, the regulations on audit firm tenure limits or mandatory rotation of audit firms have been promulgated by most countries in the world. The rotation of audit firms or term limits enhances independence, reduces the risk of familiarity and thus improves audit quality, and this increases audit fees. Most countries around the world have a rotation policy, for example, in Thailand, which requires rotation of the audit firm for listed companies every five years. The requirements on rotation are also widely applied in other countries such as Bangladesh, China, Japan, etc. The regulations on audit firm tenure in Asian countries are shown in Table 1. In Vietnam, the professional ethical standards for accountants and auditors (effective January 1, 2016) also have regulations on the term of audit. There is a big difference between the regulations of Vietnam and some countries in the world on the term of the audit firm. The current regulations of Vietnam only refer to the term of the auditor in charge of the overall audit, not the audit firm, whereby a member in charge of the overall audit is not allowed to sign an audit report for more than three consecutive years for an audit client that is a public interest entity (Vietnamese Ministry of Finance, 2015).

Table 1: Term of an audit firm of some Asian countries

Country	Mandatory audit firm
Bangladesh	Yes - Every three years for listed companies
India	Yes - Every four years for banks, privatised insurance companies and Government companies
China, Pakistan, Singapore, Thailand	Yes - Every five years for listed companies
Indonesia	Yes - Every six years for all companies
Hong Kong, Japan, Malasia, Phillipines, Srilanka, Taiwan, Vietnam	No
Korea	Yes - Every six years for KSE-listed companies or KOSDAQ registered except foreign-invested companies and/or listed on foreign exchange.

Source: Siregar et al. (2012)

3. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Audit fees represent the cost paid by an auditee to cover charges required by an auditing firm in order to audit the financial statements (Asthana et al., 2019). Many previous studies in the world have shown a set of predictor variables affecting audit fees (Basioudis & Francis, 2007; Audousset-Coulier, 2009; Bedard & Johnstone, 2010; Xu, 2011; Johl et al., 2012; Vu, 2012; Picconi & Reynolds, 2013; Castro et al., 2015; Kikhia, 2015; Naser & Hassan, 2016; Musah, 2017; Gandía & Huguet, 2018; Musah et al., 2018; Narayanaswamy & Raghunandan, 2019; Kanakriyah, 2020; Khasharmeh, 2018; Fisabilillah & Praptiningsih, 2020; Salehi et al, 2022). Many researchers classified them on the basis of characteristics specific to auditee, including auditee size, auditee risk, complexity and profitability. In contrast, others based their classification on characteristics specific to audit firms, including audit size and audit tenure (Kikhia, 2015). After countries promulgated regulations on the limitation of audit firm tenure, many studies have been conducted on this topic. However, the research results are inconsistent. Some studies show a positive effect of audit firm rotation on audit fees; some other studies show the opposite results, and some studies do not find evidence of this relationship.

- Audit firm rotation is positively related to audit fees

The results of some previous studies show that audit firm rotation has a positive effect on audit fees. Kwon et al. (2014) examined the relationship between the rotation of audit firms and audit fees in Korea. This study showed that the mandatory rotation of audit firms has a positive effect on audit fees. In the Iranian market, Hassas et al. (2016) concluded that mandatory audit firm rotation has caused a significant increase in audit fees. In other words, when the rotation of audit firms is mandatory, auditors need to perform longer audit hours to assess existing risks better and gain sufficient knowledge of their new client's work environment, which in turn increases the fees charged by independent auditors.

- Audit firm rotation is negatively related to audit fees

In another study, Corbella et al. (2015) surveyed if higher audit fees are connected with audit firm rotation in Italy. Their findings suggested that following audit firm rotation, the total amount of fees paid to the auditor was lower for firms audited by big auditors and unchanged for firms audited by a less well-known auditor.

- Audit firm rotation is not related to audit fees

Contrary to the results of the above studies, many studies did not find evidence of the influence of audit firm rotation on audit fees. In the India setting, Narayanaswamy and Raghunandan (2019) concluded that mandatory audit firm rotation does not affect audit costs. In the Iranian market, Salehi et al. (2022) investigated the impact of mandatory audit firm rotation on audit fees at companies listed on the Tehran Stock Exchange (TSE). The research results show that the mandatory audit firm rotation does not have a significant effect on audit fees.

Although the research findings in the world on this topic are not consistent, the number of studies supporting the positive influence of audit firm rotation on audit fees accounts for a large proportion, and they are based on Vietnam's regulations on the basis for determining audit fees. Therefore, the hypothesis proposed in this study is:

H: Audit firm rotation is positively related to audit fees.

4. DATA AND RESEARCH MODEL

4.1. Data

In this paper, we use a sample of companies listed on Vietnamese stock exchanges for the period from 2017 to 2020. Our sample starts from 2017 because we wanted to study audit fees after Vietnam mandated important regulations on the accounting and auditing profession. Also, we end our sample in 2020 to avoid the possible impacts of the COVID-19 pandemic on audit fees.

We collect financial statement data from cafef.vn, mof.gov.vn. We start with companies listed in Ho Chi Minh City and Ha Noi Stock Exchanges and then exclude financial institution firms because these firms have different financial statement formats. We manually obtain audit firms' data from annual reports downloaded from cafef.vn. In some cases where not enough information can be collected on the above sources, we collect information from audit firms in conjunction with their clients. We also remove observations with missing data. Our final sample has 286 observations from 72 unique firms.

4.2. Research model

To test our hypothesis, we follow previous studies (Clatworthy et al., 2009; Kanakriyah, 2020; Salehi et al., 2022) with some suitable adjustments for Vietnam and run the following Ordinary Least Squares (OLS) regression by *STATA 13*:

$FEE_{it} = \alpha + \beta_1 ROTA_{it} + \beta_2 SUBS_{it} + \beta_3\ INVREC_{it} + \beta_4 AUDO_{it-1} + \beta_5 CONL_{it} + \beta_6 ROA_{it} + \beta_7 FINR_{it} + \beta_8 SIZE_{it} + \beta_9 INDS_{it} + \beta_{10} ACCO_{it} + \beta_{11} AUQU_{it}$ (1)

- Dependent variable:

FEE_{it} is audit fees, which is the natural log of audit fees in year t (Kanakriyah, 2020).

- Independent variable:

$ROTA_{it}$ is audit firm rotation, which is an indicator equal to 1 if there is an audit firm rotation in year t and zero otherwise (Narayanaswamy & Raghunandan, 2019).

- Control variables:

$SUBS_{it}$ is the number of subsidiaries, which is the natural log of the number of subsidiaries (Clatworthy et al., 2009). $INVREC_{it}$ is accounts receivable and inventory, which is equal to the accounts receivable and inventory of firm i in year t divided by lagged total assets (Johl et al., 2012). $AUDO_{it}$ is modified opinions, which is an indicator equal to 1 if the client had modified opinions in year t-1 and zero otherwise (Clatworthy et al., 2009). $CONL_{it}$ is contingent liabilities, which is an indicator equal to 1 if the client disclosed contingent liabilities in accounts and zero otherwise (Clatworthy et al., 2009). ROAit is the returns on assets, which is equal to the net income of firm i in year t divided by lagged total assets (Clatworthy et al., 2009). FINRit is financial risk, which is an indicator equal to 1 if the Z-score is below 2.073 and zero otherwise (Gul, 2006). $SIZE_{it}$ is client size, which is the natural log of the lagged total assets of the client in year t (Kanakriyah, 2020). $INDS_{it}$ is the client's industry type, which is an indicator equal to 1 if a client is a manufacturing company and zero otherwise (Kanakriyah, 2020). ACCOit is the audit committee, which is equal to the number of audit committee members with accounting and financial backgrounds of firm i in year t divided by the number of audit committee members (Johl et al., 2012). $AUQU_{it}$ is the audit firm's reputation, which is an indicator equal to 1 if firm i is audited by a Big Four auditor in year t, and zero otherwise (Kanakriyah, 2020).

5. FINDINGS AND DISCUSSIONS

5.1. Descriptive statistics and correlations

Table 2 reports the descriptive statistics of the variables in the research model. The findings show that:

- The mean of audit fees (FEE) is 18.111, showing that the average natural log of the audit fees is 18.111.

- The mean of audit firm rotation (ROTA) is 0.291, showing that the average audit firm rotation ratio is 29%.

- The mean of the number of subsidiaries (SUBS) is 0.673, showing that the average natural log of the number of subsidiaries is 0.673.

- The mean of accounts receivable and inventory (INVREC) is 0.453, showing that the average ratio of accounts receivable and inventory to total assets is 0.453.

- The mean of modified opinions (AUDO) is 0.062, showing that the average modified opinions ratio is 6.2%.

- The mean of contingent liabilities (CONL) is 0.052, showing that the average disclosed contingent liabilities ratio in accounts is 5.2%.

- The mean of returns on assets (ROA) is 0.057, showing that the average returns on assets ratio is 5.7%.

- The mean of financial distress (FINR) is 0.3, showing that the average ratio of Z-score < 2.073 is 30%.

- The mean of client size (SIZE) is 27.603, showing that the average natural log of the lagged total assets of the client is 27.603.

- The mean of the client's industry type (INDS) is 0.04, showing that the average manufacturing companies ratio is 4%.

- The mean of audit committee financial expertise (ACCO) is 0.386, showing that the average number of audit committee members with accounting and financial backgrounds ratio is 38.6%.

- The mean of the audit firm's reputation (AUQU) is 0.279, showing that the average Big Four auditor ratio is 27.9%.

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FEE	286	18.111	0.460	17.216	19.062
ROTA	286	0.291	0.315	0	1
SUBS	286	0.673	0.954	0	3.688
INVREC	286	0.453	0.206	0.11	0.8
AUDO	286	0.062	0.243	0	1
CONL	286	0.052	0.223	0	1
ROA	286	0.057	0.084	-0.576	0.409
FINR	286	0.300	0.459	0	1
SIZE	286	27.603	1.841	21.768	32.876
INDS	286	0.041	0.200	0	1
ACCO	286	0.386	0.153	0.333	1
AUQU	286	0.279	0.449	0	1

Source: Results analyzed from data collected from 2017 to 2020 by the authors

Table 3 shows the Pearson correlation of selected variables. The evidence shows that ROTA is positively associated with FEE, providing preliminary evidence that there is a positive relationship between audit firm rotation and audit fees. The table also shows that SUBS, INVREC, AUDO, CONL, FINR, SIZE, INDS, ACCO, AUQU are positively correlated with FEE. In addition, most of the correlation coefficients among the independent variables are small, while the variance inflation factors (VIF) range between 1.29 and 6.97, indicating that multicollinearity is not a concern.

Table 3: Pearson Correlations

Var		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	VIF
[1]	FEE	1.00												
[2]	ROTA	0.36***	1.00											1.45
[3]	SUBS	0.63***	0.30***	1.00										2.90
[4]	INVREC	0.73***	0.35***	0.54***	1.00									2.10
[5]	AUDO	0.41***	0.06	0.53***	0.40***	1.00								2.07
[6]	CONL	0.28***	0.05	0.33***	0.09***	0.26**	1.00							1.39
[7]	ROA	0.08	0.08	0.05	-0.02	0.04	0.07	1.00						1.29
[8]	FINR	0.12**	0.07	0.05	0.14**	-0.10*	-0.05	-0.43***	1.00					1.33
[9]	SIZE	0.76***	0.38***	0.60***	0.56***	0.40***	0.27***	0.16***	-0.05***	1.00				2.20
[10]	INDS	0.40***	0.25***	0.58***	0.35***	0.44***	0.49***	0.10***	-0.02***	0.45***	1.00			3.57
[11]	ACCO	0.55***	0.26***	0.77***	0.54***	0.69***	0.42***	0.09***	-0.04***	0.59***	0.79***	1.00		6.97
[12]	AUQU	0.72***	0.40***	0.44***	0.55***	0.25***	0.13**	0.09	0.07	0.55***	0.20***	0.32***	1.00	1.77

Source: Results analyzed from data collected from 2017 to 2020 by the authors

5.2. Baseline regression results

Table 4 reports the baseline regression results of Ordinary Least Squares regressions. The results show that the coefficient on ROTA is positive and statistically significant at 1% level (coef. = 0.142 and P>t= 0.002). In terms of economic significance, the coefficient on ROTA means that when there is an audit firm rotation, the natural log of the audit fees rises 14%. The findings support our hypothesis that there is a positive association between audit firm rotation and audit fees. Previous studies support the evidence that when there is an audit firm rotation, audit firms need to look at a broader review of the work process of the new client (to maintain the quality of the audit work), audit firms should spend more time, leading to higher audit fees (Kwon et al., 2014; Hassas et al., 2016).

Table 4: Baseline regression results

Variable	Coef.	P>t
ROTA	0.142	0.002
SUBS	0.055	0.011
INVREC	0.667	0.000
AUDO	0.105	0.141
CONL	0.208	0.001
ROA	0.173	0.284
FINR	0.097	0.001
SIZE	0.086	0.000
INDS	-0.126	0.265
ACCO	-0.242	0.243
AUQU	0.278	0.000

_cons	15.258	0.000
Number of obs	286	
Adj R-squared	0.8041	

Source: Results analyzed from data collected from 2017 to 2020 by the authors

Turning to control variables, I find that audit fees are positively related to number of subsidiaries (SUBS coef. = 0.055 and P>|t|= 0.011), accounts receivable and inventory (INVREC coef.= 0.667, P>|t|= 0.000), contingent liabilities (CONL coef.= 0.208, P>|t|= 0.001), financial risk (FINR coef.= 0.097, P>|t|= 0.001), client size (SIZE coef.= 0.086, P> |t|= 0.000), the audit firm's reputation (AUQU Coef.= 0.278, P>|t|= 0.000).

5.3. Cross-sectional tests

- Role of Big Four auditors

This section investigates whether Big Four auditors affect the relationship between audit firm rotation and audit fees. The available literature shows that big auditors are positively related to audit fees (Kikhia, 2015; Kanakriyah, 2020; Li & Wang, 2022). Therefore, we surmise that the relationship between audit firm rotation and audit fees is more evident for firms audited by Big Four auditors. To test this conjecture, we classify observations into two subsamples: Firms audited by Big Four auditors and firms audited by non-Big Four auditors. We then re-run the main regression using these subsamples. As reported in Table 5, we find that the coefficient on ROTA of the subsample of Big Four auditors [column (1)] is larger than that of the subsample of non-Big Four auditors [column (3)]. Importantly, we find that the coefficient on ROTA is positive and statistically significant in column [2], while it is not significant in column [4]. Overall, this finding supports our conjecture that the relationship between audit firm rotation and audit fees is more evident for firms audited by Big Four auditors.

Table 5: Cross-sectional tests - the Role of Big Four auditors

Variable	Big Four		Non-Big Four	
	[1] Coef.	[2] P>|t|	[3] Coef.	[4] P>|t|
ROTA	0.189	0.004	-0.026	0.254
SUBS	0.036	0.000	0.088	0.004
INVREC	0.114	0.009	0.897	0.000
AUDO	0.006	0.685	0.069	0.852
CONL	-0.005	0.815	0.346	0.003
ROA	-0.054	0.495	0.331	0.140
FINR	-0.001	0.928	0.106	0.019
SIZE	0.014	0.013	0.115	0.000
INDS	-0.080	0.009	0.076	0.764
ACCO	0.917	0.000	-2.032	0.069
_cons	17.545	0.000	15.060	0.000
F	271.05		35.98	
Prob > F	0.000		0.525	
Number of obs	80		206	
Adj R-squared	0.971		0.630	

Source: Results analyzed from data collected from 2017 to 2020 by the authors

- CEO-chairperson duality

Next, we examine whether CEO-chairperson duality (the CEO also serves as chairperson of the board of directors) affects the relationship between audit firm rotation and audit fees. When the CEO acts as the chairperson of the Board of Directors, he has much power to dominate other directors (Dunn, 2004). In these circumstances, powerful CEOs are more likely to negatively affect the board of directors' ability to protect the integrity of financial statements, including monitoring the independence and work of auditors. Therefore, we surmise that the relationship between audit firm rotation and audit fees is more evident for firms without CEO-chairperson duality. To test this conjecture, we create an indicator variable which takes the value of one if the CEO also serves as the chairperson and zero otherwise. We re-run the main regression using the subsamples of firms that have CEO-chairperson duality (CEO = 1) and firms that do not have CEO-chairperson duality (CEO = 0).

As reported in Table 6, we find that the coefficient on ROTA of the subsample without CEO-chairperson duality [column (3)] is larger than that of the subsample with CEO-chairperson duality [column (1)]. Importantly, we find that the coefficient on ROTA is positive and statistically significant in column [4], while it is not significant in column [2]. Overall, the finding supports our conjecture that the relationship between audit firm rotation and audit fees is more pronounced for firms that do not have CEO-chairperson duality.

Table 6: Cross-sectional tests - CEO-chairperson duality

	CEO = 1		CEO = 0	
	[1] Coef.	[2] P>|t|	[3] Coef.	[4] P>|t|
ROTA	-0.020	0.297	0.232	0.001
SUBS	0.026	0.002	0.073	0.023
INVREC	0.089	0.042	0.821	0.000
AUDO	0.001	0.942	0.240	0.515
CONL	0.006	0.757	0.161	0.256
ROA	0.011	0.912	0.173	0.407
FINR	-0.008	0.485	0.115	0.009
SIZE	0.009	0.045	0.114	0.000
INDS	-0.081	0.008	0.118	0.630
ACCO	0.936	0.000	-2.593	0.020
AUQU	0.039	0.015	0.162	0.001
_cons	17.663	0.000	15.270	0.000
F	250.89		36.17	
Prob > F	0.0000		0.000	
Observations	83		203	
Adjusted R2	0.971		0.6570	

Source: Results analyzed from data collected from 2017 to 2020 by the authors

6. CONCLUSIONS

This study investigates the relationship between audit firm rotation and audit fees. This study uses a sample of 286 observations from 2017 to 2020 of firms listed on Vietnamese stock exchanges. The study measures audit fees using the natural log of audit fees (Clatworthy et al., 2009; Kanakriyah, 2020; Salehi et al., 2022). The research results have shown that audit firm rotation is positively related to audit fees, and the relationship is statistically and economically significant. Cross-sectional analyses show that the relationship between audit firm rotation and audit fees is clearer for firms audited by Big Four auditors and for firms that do not have CEO-chairperson duality.

This study makes several contributions to the literature. Firstly, the research results provide further evidence consistent with the argument that when there is an audit firm rotation, audit firms need to look at a broader review of the work process of the new client (to maintain the quality of the audit work), audit firms should spend more time and cost in the first years of the audit (Kwon et al., 2014; Hassas et al., 2016). Second, this study is different from recent studies which explore Vietnamese data (Phan, 2012; Le, 2017; Nguyen & Tran, 2017; Vo, 2021). The study differs from Le (2017), who investigated the impact of auditor tenure on audit fees. In our study, we examine at the firm level. This study also differs from Nguyen and Tran (2017) and Vo (2021), who did not find the impact of audit firm rotation on audit fees.

Our article also has policy implications. With the evidence of the positive relationship between audit firm rotation and audit fees, we believe that when there is an audit firm rotation, audit firms are unfamiliar with the new client and the need for a broader review of the work process of the new client (to maintain the quality of the audit work), audit firms should spend more time and cost in the first years of the audit. Therefore, we recommend that, in order to improve audit quality, the Vietnamese government should not only pay more attention to the audit firm rotation when completing the fee framework for independent audit activities but also introduce regulations on the rotation of audit firms. The Vietnamese government has introduced regulations on mandatory audit firm rotation for listed companies after a set period of having been appointed to audit a client. The required period of rotation is determined based on the audit firm rotation regulations of other countries. In particular, it is necessary to carry out relevant research to determine a set period required for mandatory rotation.

This study has some limitations. Firstly, our study is based on a small sample size from 2017 to 2020. The sample is not really large because the number of listed companies with full-fee data in Vietnam has not been collected yet. Future studies could re-investigate the topic using a different sample. Secondly, our study results may be affected by other omitted variables related to regulatory change, such as the Fair Value Measurement. The information related to these factors has not been published, so the authors cannot collect it. Future studies could re-examine this topic once more information becomes available.

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CARBON TAX TO SUSTAINABLY DEVELOP THE BUSINESS ECONOMY: INTERNATIONAL EXPERIENCE AND SUGGESTIONS FOR VIETNAM

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Abstract: *Sustainable development of business economics is these days a top concern for countries around the world, including Vietnam. However, currently, Vietnam is a country with high CO_2 emissions and is severely affected by climate change. This has had a negative impact on the regular operation and sustainable development of the enterprise. Based on the above practice, this author conducted a study on the experience of several countries around the world in term of using Carbon taxes to reduce CO_2 emissions and promote the sustainable development of enterprises. On this basis, this article proposes a number of suggestions for issuing Carbon tax, thus ensuring the sustainable development of Vietnamese enterprises.*

Keywords: *Carbon tax, climate change, CO_2 emissions, sustainable development.*

1. INTRODUCTION

The 2018 Global Climate Report shows that Vietnam ranks 5th in the Climate Risk Index [1]. According to experts, there are many reasons for climate change, among which the main reason is the rising of greenhouse gas emissions (mainly CO_2). Large quantity of CO_2 causes the sun's heat to be retained in the atmosphere, leading to global warming and triggering a series of extreme weather events. Climate change has a significant impact on the manufacturing and commercial activities of enterprises. According to reports from the Vietnam Chamber of Commerce and the Asia Foundation in Vietnam, there are 10400 enterprises in 63 Vietnamese provinces (including over 8700 domestic private enterprises and nearly 1700 foreign-invested enterprises), and 54% of them reported production and business interruptions due to natural disasters. Otherwise, 51% of enterprises have also suffered a productivity decline due to adverse weather conditions [19].

Based on the above facts, in this article, the author mentioned the experience of applying carbon taxes to reduce CO_2 emissions in some countries around the world, and thus proposed suggestions for Vietnam. The emergence of a carbon tax may affect businesses and consumers via conducting a rise in the prices of products and service fees. However, in the long run, a carbon tax will promote the use of environmentally-friendly energy, reduce CO_2 emissions, and enhance environment reservation. When climate change is under control, implementing green production by enterprises will help maintain business continuity and stability, and establish trust and foothold in the market. This is the foundation for sustainable development of enterprises.

2. RESEARCH METHODOLOGY

Statistical method: This method is used to present data on CO_2 emissions and carbon tax levels related to the research topic. The data is arranged in logical order to ensure coherence and cohesion.

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Comparison method: This method is used to compare the carbon tax levels related to the economic development speed of some countries around the world, and thus proposing a suitable carbon tax rate on Vietnam in the near future.

Analysis method: Used throughout the entire content of the article, to clarify the role and impact mechanism of Carbon tax on the sustainable development of businesses.

Comprehensive method: The author will summarize the data and information collected based on each content and present it systematically for the research process.

3. THEORETICAL BASIS AND RESEARCH OVERVIEW

3.1. Theoretical basis

Carbon tax: Carbon tax is a tax levied based on the amount of carbon (or CO_2) generated by production and consumption activities. The basis for imposing a carbon tax is to set an additional cost for each ton of CO_2 emitted into the atmosphere. The calculation of carbon tax will offset the social costs of CO_2 emissions (such as the cost of solving environmental problems). Carbon taxes are implemented in many countries around the world, characterized by:

Taxable objects: Carbon taxable objects mainly include fossil fuels, such as gasoline, petroleum, methanol, naphtha, butane, and liquefied natural gas; Peat, coal... These are products that emit CO_2 into the environment during combustion.

Taxpayer: Carbon taxpayers are people who sell fossil fuels to the market for consumption. In other words, these are organizations or individuals that import or extract fossil fuels.

Tax rate: Carbon tax is calculated based on the damage caused by one unit of CO_2 emissions into the environment (usually calculated per 1 ton of CO_2). Therefore, carbon taxes are usually determined at the absolute amount of 01 tons of CO_2 per unit.

The purpose of a carbon tax is to offset the social costs caused by CO_2 emissions. Therefore, carbon taxes are usually used to protect the environment, mitigate climate change, and create a healthy environment for the sustainable development of enterprises.

Carbon tax and sustainable development of business economics: Due to the tax on fossil fuels aimed at reducing CO_2 emissions, carbon taxes play an important role in promoting sustainable development of enterprises. This is manifested from the following perspectives:

Firstly, carbon taxes can help alleviate climate change and create a healthy environment for sustainable development of enterprises.

The carbon tax regulates the behavior of CO_2 emissions into the environment. Therefore, enterprises that use fossil fuels (coal, oil, natural gas, etc.) are directly affected by carbon taxes. The determination of carbon tax is based on CO_2 emissions, which increases the production costs of enterprises. In order to reduce costs and improve business efficiency, companies are forced to find new ways to more effectively reduce the use or use of fossil fuels. This commercial behavior will help reduce CO_2 emissions in the atmosphere and reduce the risk of climate change. When climate change is controlled, extreme weather phenomena will be alleviated, which will help businesses sustain production and commercial activities, improve labor productivity, and increase income.

Secondly, carbon tax promotes the transition to use clean energy.

As mentioned above, carbon taxes increase the cost for businesses. This has led to competition between the carbon free industry and the traditional fossil fuel combustion industry. Therefore, in addition to effectively using fossil fuels, in the long run, companies must also seek and shift towards cleaner and more environmentally friendly energy sources (renewable energy). Clean energy is the foundation for ensuring sustainable development of enterprises. In addition, the carbon tax levied from CO_2 emitting actors will help the country provide more funding for the transition of enterprises from fossil fuels to renewable energy.

Thirdly, Carbon taxes help companies explore new markets.

Currently, countries around the world encourage the production and use of clean products. They proposed mechanisms to drive companies towards cleaner products, such as the EU carbon boundary mechanism. Therefore, when the government imposes a carbon tax on fossil fuels, fossil fuels will encourage enterprises to shift towards clean energy production of green products. Having products being labelled as "green product", companies can easily enter many global markets, thus contributing to the sustainable development for enterprises.

3.2. The Research Overview

- Reyer Gerlagh, Bob van der Zwaan (2006), *Options and Instruments for a Deep Cut in CO_2 Emissions: Carbon Dioxide Capture or Renewables, Taxes or Subsidies*? The Energy Journal [16]. The article studies the tax policy system aimed at reducing CO_2 emissions and protecting the environment, thus lay the foundation for the sustainable development of enterprises in some countries around the world. The core of this research is about Carbon Tax. This article points out that carbon tax is an effective tool for countries to control climate change and achieve sustainable development goals. This article also compares two carbon tax schemes: Levying a direct carbon tax on CO_2 emissions and impose a carbon tax on the use of fossil fuels (leading to CO_2 emissions). The article also points out that the choice of carbon tax scheme also depends on the socio-economic situation and specific goals of each country.

- Nguyen Thi Thu (2016), *Green Growth Tax Policies: Practical Applications in Various Countries including Vietnam,* Portal of the Ministry of Finance [12]. This article analyzes the content of several tax policies aimed at achieving green growth and sustainable economic development in various countries around the world, including carbon taxes. The article believes that imposing a carbon tax on fossil fuels can help countries effectively utilize natural resources and reduce environmental pollution, enhancing the ability to respond to climate change, thus creating a beneficial conditions and directions for the sustainable development of enterprises.

- OECD (2018), *Taxation of Energy Use in 2018*, February 2018 [14]. Research has shown that emissions from energy use cause damage to the environment and health, and have a significant impact on the sustainable development goals of countries. By calculating the cost of these losses, carbon taxes can reduce emissions while increasing tax revenue, providing funding for business operations. This study evaluated the extent and scope of carbon taxes imposed on energy by countries, major industries, and fuel groups in 2015. Research has shown that carbon taxes have had a significant impact on the CO_2 emissions activities and the achievement of sustainable development goals in 42 economies of the OECD and G20.

- Nguyen Thi Thu Hien (2022), *Carbon tax - an effective economic tool for promoting the reduction of greenhouse gas emissions*, Journal of Industry and Trade [13]. This article provides an overview of carbon taxes; Analyze and clarify the role of carbon taxes in reducing greenhouse gas emissions to achieve sustainable economic development goals. In addition, this article also analyzes Vietnam's current tax system and measures to protect the environment. Since then, this article has evaluated the feasibility of implementing a carbon tax in Vietnam and proposed some suggestions to promote the implementation of a carbon tax in Vietnam.

- Financial Journal (2023), *The Application of Carbon Tax Helps Sustainable Development*, March 2023 [5]. The article points out that the promulgation and implementation of a carbon tax will create revenue for the national budget and be used for investment research, developing renewable energy and low-carbon technologies can help ensure the sustainable development of countries. The article also points out that in order to achieve the sustainable development goals promised by COP26, Vietnam needs to mobilize all resources and flexibly apply various solutions, including carbon tax solutions. However, implementing a carbon tax in Vietnam remains difficult. Therefore, the Vietnamese government needs to study the experiences of various countries and the actual situation in Vietnam in order to formulate sensible policies.

4. RESEARCH RESULT

4.1. International experience

Currently, carbon taxes are being implemented in many countries around the world to promote sustainable business development and green economy. As of December 2021, 35 countries have imposed carbon taxes [4]. The first country to levy a carbon tax was Finland in 1990. After Finland, Sweden and Norway implemented a carbon tax in 1991. Since then, carbon taxes have been widely and widely applied around the world. Currently, Vietnam is researching and understanding carbon taxes. Vietnam's carbon tax in the near future needs to be based on practical conditions and learn from the experiences of various countries around the world.

4.1.1. Experience from Japan

In December 2009, Japan's green economy development strategy mentioned a low-carbon economy. In order to significantly reduce greenhouse gas emissions, Japan focuses on controlling medium to long-term CO_2 emissions. However, as of 2014, Japan remains the sixth largest emitter in the world [15]. Japan's CO_2 emissions and energy taxes are far lower than those of developed countries. This prompted the Japanese government to study and incorporate carbon taxes into the 2012 tax reform plan. In Japan's carbon tax law, the taxable objects are crude oil and petrochemical products, hydrocarbons, and coal. Since 2009, Japan's carbon tax rate has been continuously adjusted to ensure consistency between the Carbon Tax Law and economic conditions (Table 1).

Table 1: Carbon Tax rate in Japan

Tax rate (JPY/ CO_2)				
1. Global warming taxes		289		
2. Oil and coal taxes		Crude Oil and Petrochemical Products		779
		Liquefied hydrogen and carbon gas		400
		Stone		301
Execution phase				
Taxable object	Tax rate before 2012 (Japanese yen)	From 1-10-2012	From 1-4-2014	From 1-3-2016
Crude Oil and Petrochemical Products (/kl)	2.040	2.290	2.540	2.800
Hydrocarbons gas (/ton)	1.080	1.340	1.600	1.860

Coal (/ton)	700	920	1.140	1.370
Sale taxes	39.1 billion yen in the first year, 262.3 billion yen in the second year			

Source: MOE - Carbon Tax Details, page 2

The adjustment of carbon tax policy helped Japan achieve a record reduction in carbon emissions in 2020: Japan's carbon emissions in 2020 were 1.15 billion tons, a decrease of 5.1% from 2019, making it the lowest year since Japan began compiling emission data in 1993. The significant decrease in carbon emissions in Japan has created a favorable and sustainable environment for business operations. This result is mainly attributed to the impact of the carbon tax policy, which limits the use of fossil fuels and strengthens the development of clean and renewable energy in the country. The largest reduction in carbon emissions in Japan was in the industrial manufacturing and transportation industries, with declines of 8.1% and 10.2%, respectively [20]. Given the above achievements, the Japanese government is determined to reduce carbohydrate emissions by continuing to adjust carbon taxes to accommodate each stage.

4.1.2. Experience from Australia

A report released by the Australian Research Institute in August stated that Australia ranks fifth in the world in terms of fossil fuel carbon emissions (after China, the United States, Russia, and Saudi Arabia), with per capita annual emissions of approximately 57 tons of carbon dioxide, 10 times the average level [18]. This is because Australia is the world's third largest exporter of fossil fuels, second only to Russia and Saudi Arabia. Among them, coal is Australia's main export product. In this situation, the Australian government is researching and adding a carbon tax to the Australian tax system to limit greenhouse gas emissions, address climate change, and create a favorable business environment for sustainable development of enterprises.

According to the Australian carbon tax law, companies that emit over 25000 tons of carbon annually will be taxed. It is estimated that the 500 companies with the highest CO_2 emissions in Australia will pay AUD 23 per ton in the first three years. The tax rate that companies must pay in the coming years will increase from $25.94 per ton of CO_2 to $27.2 per ton [9]. These enterprises are mainly coal-fired power plants, mining companies, and metal workshops. In addition, to encourage businesses to invest in clean energy with the goal of reducing emissions by 80% by 2050, the Australian Government has issued a policy: businesses will be supported with 10 billion Australian dollars for 5 years when investing in wind energy, solar energy and other renewable energy sources. These days, Australia's carbon tax is the highest in the world, far higher than that of European countries. The Australian government has provided support to people affected by carbon taxes, especially low-income groups. About 97% of low and middle-income households receive government support, which comes from carbon taxes. If companies find it difficult to compete with competitors, the government will also allocate 40% of its revenue to clean energy [9].

Through the aforementioned carbon tax regulations, Australia has achieved significant achievements in reducing CO_2 emissions and achieving sustainable development goals.

In 2020, the waste generated by power generation in Australia significantly decreased.

In 2021, Australia's third largest source of pollution, transportation greenhouse gas emissions, decreased by 12% compared to 2020.

Thanks to the to increasing use of solar and wind energy, and reduced emissions from natural gas facilities. In 2021, Australia's CO_2 emissions decreased by 26.1 million tons (5%) compared to 2020, a decrease of 20.1% compared to 2005 [2].

Reducing fossil energy emissions, coupled with increasing the use of renewable energy, is the foundation for improving Australia's business environment, thus orienting the activities of the enterprise towards environmental protection, in order to achieve the goal of sustainable development in the future.

4.1.3. Experience from Singapore

Singapore was the first country in Southeast Asia to adopt a carbon pricing mechanism. Singapore will begin imposing a carbon tax on all facilities that emit 25000 tons or more of CO_2 annually in 2019, including refineries and power plants. Carbon tax will be collected from entities that emit greenhouse gases, but not all entities that emit greenhouse gases must pay carbon tax. The current carbon tax in Singapore is S $5 per ton of CO_2. In order to achieve the goal of reducing greenhouse gas emissions, the Singapore government has issued a roadmap for increasing carbon taxes: In 2024 and 2025, the carbon tax was S $25 per ton of CO_2. The CO_2 emissions in 2026 and 2027 were S $45 per ton, followed by S $50 to S $80 per ton over the next three years [10]. In order to help enterprises transition to a low-carbon sector, the Singapore government has allocated some of its carbon tax revenue to support enterprises. Because the main subjects paying the carbon tax are power generators, this will lead to an increase in electricity prices and directly impact consumers, so to mitigate this impact of the carbon tax, households with income low will receive support from the Government. In addition, according to the latest standards developed by the Intergovernmental Panel on Climate Change, according to the revised Carbon Tax Act of 2022, the Singapore government has reviewed and updated its greenhouse gas inventory. Subjects subject to Singapore's carbon tax currently include 6 types of gases: CO_2, CH4, N2O, HFCs, PFCs, SF. In order to implement government regulations, Singaporean companies must now assess their emissions based on the greenhouse gas inventory that the government imposes a carbon tax on.

The implementation of carbon tax has effectively promoted the development of the clean energy sector to achieve sustainable economic development. Singapore recently built the Keppel Energy Building. This is the first building in Singapore to be certified as a positive energy building. Currently, Keppel generates approximately 600000 kilowatts of electricity annually from solar panels, which is more than twice the annual consumption of the building. This means that the building is not only energy-efficient, but more than 100% of its energy comes from on-site renewable energy [21]. In addition to promoting energy transformation, carbon taxes have also greatly increased the revenue of Singapore's national budget. The Singapore government has invested carbon tax revenue in science and technology to achieve a low-carbon future. The transition to clean energy and investment in science and technology are important steps forward for old enterprises. The transition to clean energy and investment in science and technology are important steps for Singapore's businesses and economy to achieve sustainable development in the future.

4.2. Suggestions for Vietnam

Currently, Vietnam is one of the countries what are severely affected by climate change. The continuous increase in CO_2 emissions in Vietnam (Figure 1) has a negative impact on business activities and people's lives.

Unit: Million tons

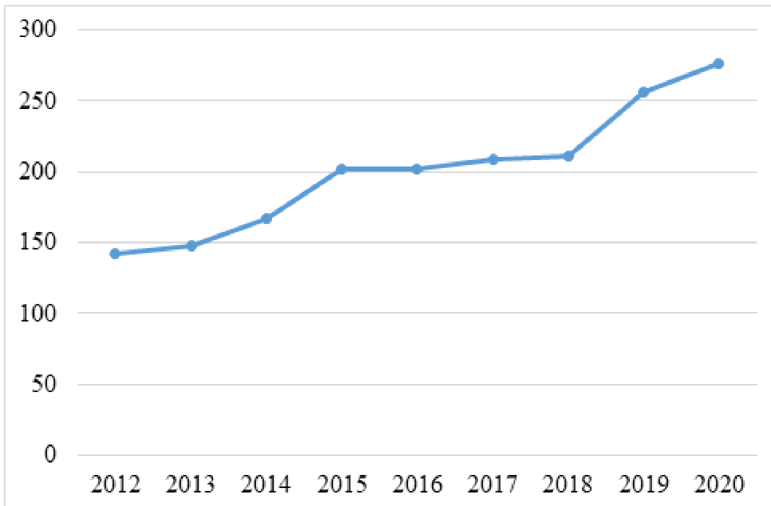

Figure 1: Vietnam's CO_2 emissions in the period 2012-2020

Nguồn: Worldbank and author's compilation

Through Figure 1, we see that Vietnam's CO_2 emissions are constantly increasing. If in 2012, Vietnam's CO_2 emissions were more than 140 million tons, then by 2020 it will be 276.3 million tons (increased 197,3% compared to 2012). During the period 2012-2020, 2019 Vietnam had the largest increase in CO_2 emissions (speed increased by 21,1%); Next, 2015 and 2014 had CO_2 emission growth rates of 20,8% and 13,4%. The large amount of CO_2 emissions has greatly affected the lives of Vietnamese people and businesses.

According to the Climate and Development Report, Vietnamese businesses and people are severely affected by excessive CO_2 emissions. Specifically, 300 coastal areas are facing flood risks, affecting production activities and reducing competitiveness; There are approximately 32000 businesses operating in the Mekong Delta, and due to rising sea levels, 50% of them are at risk of flooding, which has a negative impact on rice, fruit, and seafood production [22]. In the face of this situation, it is crucial for Vietnam to learn from the region and countries around the world to adjust tax systems to reduce CO_2 emissions and create a sustainable business environment for enterprises.

Currently, Vietnam's tax system includes nine different purposes of taxation. In particular, the promulgation of environmental protection taxes is aimed at regulating activities that may have a negative impact on the environment. However, the current environmental protection tax regulations have not clearly reflected the cost per unit of CO_2 emissions into the environment, so the impact of environmental protection taxes on reducing CO_2 emissions is negligible. In addition, Vietnam's environmental protection tax has not yet been separated from budget revenue at all levels to invest in the environmental sector. If Vietnam implements a carbon tax, these limitations of environmental protection tax will be overcome. This approach indicates that applying a carbon tax in Vietnam is feasible and necessary to reduce greenhouse gas emissions, help address climate change, and lay the foundation for sustainable economic development.

By studying the experiences of Japan, Australia, and Singapore, the author provides some suggestions for the application of carbon taxes in Vietnam:

Firstly, Vietnam needs to enact carbon tax laws as soon as possible to mitigate climate change and create a sustainable business environment for businesses. Vietnam's carbon tax law requires specific regulations for taxable objects, tax-free objects, and taxpayers, as follows:

Taxable objects: Materials and fossil fuels that are such as petroleum, methanol, butane, liquefied natural gas, peat, coal, etc.

Tax-free objects: Energy that does not generate CO_2 during combustion (such as wind, solar, hydropower, etc.).

Carbon Taxpayer: A facility that produces goods from energy that generates CO_2.

Secondly, Vietnam should establish carbon tax as an independent tax in its tax system. Currently, many other studies suggest that Vietnam should include carbon taxes in environmental protection taxes (adjusting environmental protection taxes to reflect carbon prices). However, according to Vietnam's national independent contribution report [6], the author suggests establishing a carbon tax as an independent tax coexisting with an environmental protection tax. At that time, Vietnam can expand the scope of taxation on existing environmental protection tax objects. In addition, when the carbon tax is determined in this way, the income from the carbon tax can be separated and directly used for environmental activities.

Thirdly, Vietnam needs to study a roadmap for imposing carbon taxes at appropriate tax rates. This means that Vietnam's carbon tax must be consistent with every stage of its economic development, as well as with the countries in the region and the economic organizations in which Vietnam participates. Due to the different CO_2 emissions of each material and fuel, Vietnam needs to study imposing a unified carbon tax on each metric ton of CO_2 emissions. This will make it easier for economies to calculate their carbon tax obligations- For countries like Vietnam that have received a carbon tax for the first time, this is a very necessary issue.

Based on the ratio between CO_2 emissions and the economic development or per capita income situation of Vietnam with Singapore and other countries, and analysis of international organizations and scientists, the author suggests implementing a carbon tax in Vietnam starting from 2025, with the following roadmap:

2025: Levy a carbon tax of $6 per ton of CO_2

From 2030: Carbon tax is $15 per ton of CO_2

Vietnamese government can use revenue from Carbon tax to support the development of low-carbon and clean technologies (such as investing in renewable energy research), and emission reduction operations, thus creating a healthy environment for the long-term and stable development of Vietnamese enterprises.

5. CONCLUSION

Carbon tax is seen as a measure to improve the business environment. It helps companies transition to new business types that are more environmentally friendly and sustainable. Nowadays, the role of carbon tax in sustainable development of enterprises is increasingly recognized and practiced by various countries.

Through studying the experiences of some countries, it shows that Carbon tax plays a huge role in minimizing the impact of climate change and improving the business environment for businesses. Therefore, in order to promote sustainable development of enterprises, Vietnam should research adding a Carbon tax to the tax system. However, imposing a carbon tax on poor and low-income households will be difficult for basic commodities. Therefore, in Vietnam's Carbon Tax Law, in addition to the specific implementation roadmap, it is also necessary to study the application of carbon tax incentives to enterprises and individuals. Therefore, in Vietnam's Carbon Tax Law, in addition to specifying the content and implementation roadmap, it is also necessary to study the application of carbon tax incentives to enterprises and individuals engaged in technological activities to create environmentally friendly products, thus creating a healthy business environment and promote sustainable business operations for enterprises. This is the foundation for Vietnam's economy to develop quickly and sustainably in the future./.

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EXECUTIVE MANAGEMENT CAPACITY OF VIETNAM COMMERCIAL BANK IN DIGITAL TECHNOLOGY AGE

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Abstract: *Currently, commercial banks (commercial banks) account for the majority of the Vietnamese banking system. In the period of 2018-2023, the commercial banking system has developed and been affected, with significant consequences from the Covid 19 pandemic. The bank's operation itself is a sensitive activity because it involves many stakeholders in the banking sector society. Any change by a bank can spread widely, affecting the bank's customers. Especially in the era of digital technology, the spread is very fast. Business growth and profit development are always the criteria for banks to implement and develop. Along with the development of science and technology, banking management and administration in the digital era is considered an important and urgent issue. Therefore, the issue of executive management capacity of commercial bank in the digital era is mentioned in the research. At the same time, the study also points out a number of results, experiences and new points in executive management capacity required at Vietnamese commercial banks in the digital era.*

Keywords: *Competence, management, administration, commercial banks, digital technology, executive management capacity of commercial banks in the digital technology era.*

1. INTRODUCTION

The operational efficiency of a commercial bank in the technology era depends largely on the executive management capacity of its leaders. With such characteristics, the bank's operations always require tough executive management capacity from the bank's leadership, ensuring that the bank's operations do not occur. To clarify the executive management capacity of commercial banks in the digital era, the article uses theoretical research methods combined with practice, within the scope of research at two typical banks, namely: Joint Stock Commercial Bank for Foreign Trade of Vietnam and Technological and Commercial Joint Stock Bank of Vietnam. Therefore, it is necessary to study the executive management capacity of Vietnamese commercial banks in the digital era.

2. THEORETICAL BASIS

2.1. Executive management at commercial banks

Setting the meaning of the word management in each context, each specific field, many economic experts have given the concept:

- According to Mary Parker Follett (born September 3, 1868) was an American social theorist best known for bringing the ideas of human psychology and human relations to industrial management in his work. The New State" in 1920 pointed out: Management is the art of achieving ends through others. Her concept, although it has the direction of a person specializing in psychology, contains many emotions from workers, but it is undeniable that her idea of "Management is an art" still valid until now.

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- According to James Stoner and Stephen. Robbins also in his book Management Principles taught at Gujarat University of Technology emphasized: " Management is the process of planning, organizing, leading and controlling the activities of the members of an organization. Organization and use all other resources of the organization to achieve the set goals. management is the purposeful influence of the management subject towards the management object in order to achieve the highest results with the organization. original target".

To summarize the above concepts, a general concept of management can be given as follows:

Management is the use of a finite resource to achieve maximum goals. In other words, make the best use of resources, use resources most effectively to achieve the set goals.

According to the Business Dictict.com dictionary, executive management is: "The design, implementation, and control of activities aimed at converting resources into desired goods and services, and executing the business strategy of the company". From this definition, it can be seen that executive management activities include activities that turn resources into usable goods and services, create value for the organization, and governance also linked to business strategy.

Executive management is a part of general management. Therefore, executive management has all the characteristics of management activities in general. *Executive management is the planning, organization and implementation of plans for business activities in order to create the highest possible level of efficiency in an organization. The direction of management is to balance costs with revenue to achieve the highest possible net operating profit.*

For commercial banks, the difference in the business characteristics of the bank - a business providing financial services, has created a difference in executive management.

Executive management is becoming crucial in the success factors of the commercial banking system. The purpose of commercial banks is to profit and increase profits. Therefore, executive management in commercial banks focuses on dealing with specific challenges and new trends that managers must address, related to the balance between cost optimization and requirements, growing business demand.

So, executive management commercial bank is the planning, organization and implementation of a banking business plan towards balancing costs with revenue to achieve the highest possible net operating profit.

2.2. Executive management capacity at commercial banks

Executive management is becoming important in the success factors of financial service providers, especially banks. Executive management focuses on specific challenges and new trends that administrators must address, related to the balance between cost optimization and growing business requirements.

Banking operations have evolved from data entry and labor intensive processes to highly automated process controlled environments. This work includes a mixture of practical and academic elements; it is designed to contribute to better functioning parts by providing tools to implement theoretical concepts in real, proven situations in everyday practice.

The term "capacity" as interpreted on the website https://hvdic.thivien.net/ means qualifications, in accordance with the provisions of the law, which may include rights, performance of obligations or to perform a specific task is assigned. Accordingly, competence emphasizes that a subject has the legal status to carry out a specified job in order to achieve the highest goal in that job.

From the above points of view, it can be understood:

Executive management capacity at commercial banks is the ability to develop strategic plans, organize the implementation of banking business plans in order to achieve specific goals in the future, in which the most important goals are: especially to balance revenue and costs, towards the highest net profit.

The bank's executive management capacity in the digital age is the ability to develop a strategic plan to change the business model from the traditional to the modern method of digitization, by applying new technologies. such as big data, cloud computing, internet of things, etc. to be able to change the operating method, leadership, working process, culture of the bank, namely: Management model, mechanism credit risk management model to suit the development trend of the world.

3. THE CURRENT SITUATION OF EXECUTIVE MANAGEMENT CAPACITY OF VIETNAM COMMERCIAL BANK IN THE DIGITAL TECHNOLOGY ERA

3.1. Overview of executive management capacity at Joint Stock Commercial Bank of Vietnam in the digital era

The article mentions the governance capacity of two banks: Joint Stock Commercial Bank for Foreign Trade of Vietnam (Vietcombank) and Vietnam Technological and Commercial Joint Stock Bank (Techcombank), these are two large banks. The leading bank can represent Vietnam's commercial banks, because it ensures good standards and competitive conditions, develops in the commercial banking system, and the two banks absorb the shock of 2020. In the case of a positive economy as well as a decrease in pressure from the epidemic, both banks have a lot of room for extraordinary income, which proves the banks' management ability in the digital era is very good.

3.1. Executive management capacity at Joint Stock Commercial Bank for Foreign Trade of Vietnam

3.1.1. Overview of executive management capacity at Joint Stock Commercial Bank for Foreign Trade of Vietnam in the digital age

As one of the largest banks in Vietnam, Vietcombank has taken many measures to improve management efficiency in the digital age. In particular, in 2018, Vietcombank innovated the way of executive management, but the results were not good. Therefore, it is still necessary to research and come up with effective solutions that focus on executive management capacity to improve business efficiency of Vietcombank.

About the management model:

Vietcombank chooses the form of management as a centralized management model in the process of operating and managing the bank based on online information from the branch to the Head Office - the use of information technology is always considered, is the most important factor in the operation of the bank. The Bank has gradually implemented the application of a management model in accordance with international standards and good practices, including: reorganizing business types according to customer objects in order to unify the entire system and according to the basic characteristics of the bank's business in the financial market, it consists of blocks (Block model): Wholesale banking, retail banking and Capital management and trading; in parallel with the establishment and reorganization of support types, including: Risk Management Division, Finance/Accounting Management Division and logistics and operations; continue to closely apply management models according to international practices. The thorough application of models makes full use of information technology sources.

About the internal management mechanism

Vietcombank has built and issued many synchronous management documents. Regulations on staff management, regulations on handling labor discipline and material responsibility, regulations on appointment, re-appointment, dismissal and resignation associated with substantive rewards and application of KPIs... Especially, a big change in awareness when internal processes and regulations have directed all organizations and individuals into customer-oriented activities. The obvious change is from passivity, the traditional way of doing things, the old and traditional way of doing things has been replaced by the initiative in finding customers, diversifying products and services, ... based on a digital platform. Modernization, the internet…

About credit risk management

In this period, Vietcombank applied the method of calculating the minimum capital adequacy ratio (CAR) according to the Basel I calculation formula. The standards in Basel I and the implementation and implementation roadmap are mainly aimed at the target, ensure the highest safety in the operating system of the bank. The bank's capital includes: original capital (tier 1 capital) and supplementary capital (tier 2 capital). The criteria for classifying capital are specified in detail. In order to motivate banks to constantly develop the size of tier 1 capital, not being too dependent on tier 2 capital, Basel has set the minimum level for tier 1 capital and the maximum capital level for tier 2 capital.

Capital adequacy level. The bank's equity assessment index is one of the most important indicators to ensure the bank's capital adequacy, because it shows the bank's level of assurance against losses caused by the risks. Risks or imbalances in macroeconomics. The group of Financial Soundness Indicators (FSIs) assesses the level of capital adequacy, equity and risk-weighted assets calculated according to Decision No. 457/2005/QD - The State Bank, dated April 19, 2005 of the State Bank, stipulating prudential ratios in the operation of credit institutions and Circular No. 13/2018/TT-NHNN, May 18, 2018 of the State Bank of Vietnam. The State Bank shall prescribe the internal control system of commercial banks and foreign bank branches. However, the calculation of the risk-weighted adjusted asset ratio is quite complicated and requires detailed items in the balance sheet of the Bank, so the content of this analysis cannot be done. perform the calculation of capital adequacy ratio CAR, which will take data from the financial statements and annual reports of Vietcombank as a basis for analysis and evaluation. The results show that Vietcombank's CAR for the period 2015-2020 still meets Basel I capital standards.

3.1.2. Overview of executive management capacity at Vietnam Technological and Commercial Joint Stock Bank in the digital age

For the Management level, Techcombank is committed to building and expanding the development of an open, transparent and safe Executive - Management system for customers, employees and capital contributors, based on the foundation. modern information technology platform for long-term sustainable development of the organization.

About management model and mechanism

In the context of Vietnam's legal conditions constantly changing in the direction of using corporate management regulations according to world standards, Techcombank has actively applied the Executive Management model, ensuring the most compliance, comply with the provisions of Vietnamese laws and meet the growing international conditions. From the regulations on the Executive Management structure of the Bank drafted by the Board of Directors, the Executive level commits to perfecting and implementing the organization based on the regulations of Public Executive- Management, specific regulations on authority, responsibility and ensure the safety of all levels. Councils at the Executive level are completed and put into practice according to fully regulated functions, with specific regulations on responsibilities and powers between levels and ensuring accuracy with full regulations. enough of the law. In addition to the councils formed to improve the quality of executive management on issues such as risk management, capital management and liquidity, the Board of Management also proactively introduced councils in the Executive Management - Articles of Association structure. To better unify, examine and manage the Bank's key issues, bring great value to customers and build longevity for the Management structure during the strong growth period of the organization.

About internal management in the bank

Techcombank's main Executive - Management structure is perfected and developed on the principle of publicity and the most benefits, in which there is a clear division between the Management and Executive levels, ensuring maximum roles and responsibilities of each member level, especially the responsibility of the Management level in indicating the direction, regulation and management of the Bank. At the same time, the management mechanism for all basic areas of the bank is also taken care of to better match the growth position of the organization, so that partners can safely invest capital in business and appreciate the organization.

In 2019, the implementation and improvement of the Executive- Management Structure has been gradually implemented in accordance with the regulations set forth by the Board of Directors, serving as the basis for the process of changing the business model and operating activities each year. working towards meeting international regulations and standards such as OECD, IFC and COSO guidelines. The Bank has actively researched and applied the Code of Corporate Management in accordance with the best standards issued by the State Securities Commission in collaboration with IFC in recent years. In order to better enforce the standards for listed companies and according to the standards on management, the Bank has appointed the position of Person in charge of corporate management, thereby supporting the Board of Directors in the mechanism of corporate management. implement, make decisions, ensure compliance with regulations, legal documents and the Charter of the unit. At the same time, the person in charge of managing the unit will manage, consult and advise the Board of Directors on legal requirements and all risks in business and development.

Techcombank is committed to completing and implementing the Executive - Management structure in order to enforce the legitimate regulations of the involved parties. To shareholders and investors, the Chairman's Message on Corporate Management for the Board of Directors, the bank is committed to perfecting and developing a most public and beneficial Executive - Management structure, ensure the interests of related parties, thereby ensuring the survival and development of the organization. It is necessary to maintain a flexible system that is most beneficial to help businesses achieve great value within the allowable risk level, with an appropriate Executive - Management team and an information disclosure mechanism. For State management units, the bank always ensures the highest banking management system to ensure safety for all involved subjects. For customers, the bank actively establishes entities at all levels to control and direct the important activities of the bank in order to best serve the capital needs of customers and absolutely guarantee the rights and interests of customers. Benefits customers when using all services of Techcombank.

About credit risk management

Currently, the credit risk management model at Techcombank is built according to Basel II standards, including three lines of defense. Techcombank has built and developed Switzerland's T24 core banking system since 2000 and continues to improve. All activities in the customer data system as well as the bank's accounting system and database are confirmed to meet international standards.

Since 2009, Techcombank has hired the world's leading consultant McKinsey to re-finish the structure system, along with strategic partner HSBC has been actively supporting the development of the risk management system. With this support process, Techcombank has developed a risk management framework according to a new model including "3 lines of defense" and "enterprise-wide risk management" into application. First, is the line of defense for risk management at direct business units including branches, Business Units and other operating units. Second, is the line of defense including the Risk Management Division and the Compliance Division, operational and legal risk management. The third line of defense includes an independent audit department.

More specifically, the first line of defense is to protect the Bank; the second line of defense will create policies, risk appetite, processes, product approvals, controls and immediate construction of early warning systems, development of debt collection plans and operating procedures, ensure specific safety tasks of each individual participating in the entire credit process, etc…; The third line of defense is under the control of the Board of Directors, so it has high independence, helping the Supervisory Board and the Board of Directors on the effectiveness of the unit throughout the operations of business divisions, operations and risk management department. After a period of using and implementing the above three lines of defense model, the 7,000 employees in Techcombank are well aware of each individual's responsibility for the bank's risk management. This helps strengthen credit, compliance and risk culture across the organization.

3.2. Results on executive management capacity at Vietnamese commercial banks in the digital age

The level of IT application in Vietnam's banking system has been improved. According to the Vietnam ICT Index 2019 Report: "The implementation of information security and safety measures has been focused. The rate of installing firewall devices at the main data center is 100%, the rate of deploying IPS/IDS solutions at the main data center is 90%, the rate of deploying Internet access control is 100%. The percentage of banks that have implemented Core banking is 100%, as well as the percentage of banks that implement interbank electronic payments is 100%" (Vietnam ICT Index 2019 Report)

According to this report: *"The level of technology application is still not high. Outdated IT infrastructure, the ratio of ATMs/total payment cards is 0.33%; POS machine/total payment card ratio is 0.39%. The rate of installation of information security analysis and warning system (SOC) at the main data center is only about 50%. In addition, the ratio of Internet bandwidth providing Internet Banking services to the total number of Internet Banking customers is still low, only about 0.66%. The human resource base has not been focused, the ratio of IT professionals/total bank staff is 2.4%, the percentage of IT professionals with international certificates in IT/total bank staff is 10.3%"* (Vietnam ICT Index 2019 Report)

Table 3.1: Some indicators of IT application of the Vietnamese commercial banking system

Ordinal Number	Targets	2019	2018
1	Proportion of banks achieving certificates of information security	46,7%	59,4%
2	Proportion of banks that have implemented Core banking	100%	100%
3	The degree of automation when processing transactions of Core banking system	83,3%	90,6%
4	Implement the risk management system	53,3%	53,1%
5	Resource Management (ERP)	36,7%	53,1%

Source: Vietnam ICT Index 2019

The new context of commercial banks is the race for "data collection and processing" mainly through modern applications such as AI, big data... through non-traditional channel systems. Systems such as: data channels on social networks, data channels on behavioral psychology, data channels on telecommunications, and data channels on phone usage... and through a combination with financial technology leaders (Fintech) to use the data array of these organizations. A number of credit institutions have now paid much attention to the development of digital banks and systems for making business decisions based on automated database system analysis. Has a foundation to continue promoting technology applications for automatic calculation and executive management work, for example, VIB has used the risk management system platform, this type is Transferred from supplier Commonwealth Bank of Australia (CBA), OCB as a consultant of Development Banking Singapore (DBS) has completed the automatic capital calculation as required by Basel II.

However, the rate of technology application in risk management of credit institutions is not the same because the amount of expenditure for investments is very large, ranging from several tens of millions of dollars. Along with large investment costs, cleaning and diversifying data (accounting for about 50% - 80% of the total time to implement information technology projects) is also more difficult in the process of digitizing the process. Risk management activities at Vietnamese credit institutions. Highly inconsistent statistics from information sources are given in statistical reports, in analytical reports. This is because credit institutions are considering applying many systems at a time such as Oracle's Flexcube, Temenos' T24, etc., thus losing the accuracy of statistical data systems. In addition, leaders with in-depth professional experience and high ability to analyze data sources and build statistical probabilistic models are still few, which is also one of the problems faced by Vietnamese credit institutions. faced in the process of digital technology risk management.

3.2.1. Results of executive management capacity at Techcombank in the digital era

Digital transformation plays a vital role for every business in today's technology age. Techcombank is a pioneer bank in digital transformation and data transformation to the cloud (cloud).

The desire to pioneer transformation has been established right in Techcombank's strategic vision of "Transforming the financial industry, raising the value of life". This vision is realized by the Bank, through development strategies based on the three pillars of "Digitalization - Data - Talent", in which cloud integration plays a pivotal role. With the name of the bank with the word "Tech - Technology". Therefore, during 30 years of operation, the Bank has always established a leading position in the process of technology transformation, which also demonstrates the management capacity of the bank's leaders in the digital era. The bank expects the investment cost for technology in 2023 to exceed 100 million USD, and the bank's leadership has made decisions for more than 1,000 employees who are devoting full-time to the technology, digitization and data fields at Techcombank, it can be said that this is a huge resource that not all corporations, even in the technology industry, can mobilize. Digitization and cloud technology are not merely a tool to achieve business goals, but conversely, this is the core element expressing Techcombank's identity for its executive management capacity in the digital age.

With the transformation in Techcombank's executive management capacity, the bank has achieved the following results:

+ Thanks to the leadership's decisions that are strategic investment decisions for digitization - data, Techcombank has successfully converted 43 data systems to the cloud in the past year. Along with that, 10 new platforms from the world's leading companies have been integrated into Techcombank's cloud system, and many of them are the first platforms available on the cloud in the banking industry in Vietnam.

+ At Techcombank, "Cloud First" has been applied in leadership decisions on strategic and operational initiatives, shortening implementation time. From the "Data center" on the cloud, NH has built and continues to refine the "Data brain", so that the bank can actively improve its ability to approve unsecured loans, while still ensuring credit quality assurance, especially for high-end individual customers and small and medium enterprises. This is the key to helping Techcombank shift the way it operates, from just providing what customers ask for, to proactively anticipating needs and providing solutions even before customers think about it. Techcombank's executive management capacity through leadership's decision to carry out digital transformation and data transformation to the cloud has kept the bank highly secure - thanks to its highly secure cyber security process. based on the cloud security platform of the world's leading corporation Amazon, and tight internal management mechanisms.

+ In addition, Techcombank's executive management capacity through the leadership's decision is also reflected in the bank's leadership having decided to build a fully automatic credit card issuance process in the cloud, and reduce the time it takes to issue a credit card, approval time from a few days to just a few seconds as soon as the customer completes the registration. The preparation time to launch a new NH activity has been markedly reduced, making it possible for a campaign or initiative that used to take weeks to launch, now starting immediately in a few days. The IT department is operating at much improved productivity and our operating income per employee has increased by 40% since 2020.

3.2.2. Results of executive management capacity at Vietcombank in the digital era

Vietcombank acted with the principle of sticking to the guidelines and resolutions of the Central Committee and the leadership and direction of the Party Committee of the Central Business Sector and the State Bank of Vietnam, putting policies into concrete actions with high determination to achieve the goal. Have a clear goal. With efforts, solidarity, initiative, creativity, and strong transformation in strategic planning, the entire Vietcombank system has unanimously agreed to conquer the journey of "Reaching out to the greater business environment", accelerating business, anticipate new trends in technology and banking management, successfully implement the vision and strategic goals set out. It is becoming the number 1 bank in Vietnam, one of the 100 largest banks in Asia, one of the 300 largest banking and financial groups in the world, one of the 1,000 largest listed companies in the world, have made great contributions to the development of Vietnam.

In order to achieve strategic goals, Vietcombank has determined a specific guideline for success, in which a central and urgent task is to become a leading bank in digital banking transformation, application of digital banking system, and more, system of the most modern technology, to welcome the industrial revolution 4.0. Accordingly, Vietcombank's technology has made strong steps, demonstrated by building and modernizing its organizational model, business strategy and especially by improving its IT application infrastructure to focus on building a building an advanced modern technology architecture, starting from innovating the core application system, building a service-oriented architecture, developing distribution channels and improving risk management capabilities. At the same time, actively research, invest and apply outstanding and appropriate technologies, in order to seize opportunities and expand the supply of diversified and convenient banking products and services to customers.

The drastic direction of Vietcombank's Party Committee in response to the requirement of "change for success" is clearly shown in closely directing the implementation of a series of transformation projects, improving the bank's governance capacity. Recognizing the importance of technology projects with Vietcombank's long-term development strategy, Vietcombank's Party Committee and Board of Directors established a Directing Committee for technology projects, in which the Secretary of the Party Committee, Chairman of the Board of Directors direct direction; the members are all members of the Board of Directors and senior management of the bank. When implementing projects, at least 1 member of the Board of Directors/Board of Management directly participates in the role of Project Director, taking the highest responsibility for the implementation and progress of the project. The limitations and delays in the implementation process are analyzed, evaluated, directed and adjusted in a timely manner, and the management methods and new and advanced technological trends of each project are approved by the Board of Directors. leaders are ready to put it into practice very soon, achieving qualitative changes to bring Vietcombank to new heights. Under the drastic leadership and spirit of acceptance of change and willingness to innovate by the Party Committee of Vietcombank, in the year 2019-2021 Vietcombank has successfully implemented a series of projects to improve management capacity, typically the Project Core Banking Project and Basel II Program.

Core Banking Project (Project to transform core banking system) - The largest and most influential project of the bank. The project was directly managed by the General Director, Deputy Secretary of the Party Committee of Vietcombank in the role of Project Director and two Deputy General Directors in charge of technical and professional activities; mobilize and concentrate resources of the whole system, bring into full play the creativity and responsibility of collectives and individuals. Under the close attention and direction of the Party Committee and Board of Directors of Vietcombank, the project was successfully implemented in January 2020 with record numbers: The highest number of integrated applications (more than 100 applications)), the fastest conversion time, customers can continuously maintain 24/7 service during the transition period… The project has helped Vietcombank to have strong transformation steps, have a distinct competitive advantage, especially is a highly extensible platform, easy to upgrade and integrate with other systems, ready for the process of bank digitization to move towards an independent digital banking model in the future. The results of the implementation of the "New Core Banking" project are also practical actions in Vietcombank's operations to welcome the Party Congress at all levels to the Party Congress of Vietcombank for the 2020-2025 term.

Standing behind but playing a fundamental role in the success of transformation projects and digital banking transformation towards customer experience and satisfaction are projects to build and complete public infrastructure. information technology - processing, storage and service transmission platform. Under the close direction of the Party Committee and Executive Board of Vietcombank in the professional work of information technology, the investment in the right direction and efficiency in the application of artificial intelligence, building a centralized and complete database. Improving the technology system management process, applying international safety and security standards (PCIDSS, 3DS, ITSM, IAM...) is an important factor to ensure Vietcombank's technology system operates safely and stably, determined, effective and meet the requirements of application development for strategy implementation.

Implementing the Resolution of the Party and the direction of the Government, Vietcombank's Party Committee has thoroughly understood in terms of awareness, played an important role in terms of orientation, directing the whole system to actively and actively participate in the revolution. industrial network in general and technology development and digital transformation at Vietcombank in particular. All officers and employees of Vietcombank under the leadership of the Party Committee and Executive Board have made constant efforts to contribute to the national digital transformation.

Vietcombank's Party Committee and Executive Board have given the right orientation, directed to focus on researching and taking advantage of outstanding technological achievements in order to comprehensively upgrade the digital banking system, identifying this as a political task, top importance. In 2020, right after completing the Core Banking project, with only 5 months of efforts to deploy, Vietcombank has launched a completely new digital banking service called VCB-Digibank for individual customers on the basis of consolidation of Internet Banking and Mobile Banking services. For the first time in Vietnam, customers have the opportunity to experience a uniform digital payment service on all types of devices, quick access, modern and convenient design, ensuring safety and security for customers, client. The comprehensive upgrade of the digital banking system creates a premise to serve the society's electronic payment activities, promoting non-cash payment activities. With more than 15 million regular customers, Vietcombank plays a big role in the cashless payment system in Vietnam; This is a huge responsibility in the national digital transformation.

Affirming its development strategy as a leading bank in the 4.0 Revolution in Vietnam, Vietcombank's Party Committee and Board of Directors have also taken pioneering steps for the digital transformation. In August 2019, Vietcombank put the Digital Banking Center into operation, demonstrating the drastic direction and realization of Vietcombank's goals in comprehensively developing the digitalization of banking activities. The trends of technology revolution 4.0 artificial intelligence (AI), big data (Big Data) and connected things have all been put into research and development by the Board of Directors, concretized by innovative initiatives. In each phase. Completing the above important tasks shows the role, importance and correct vision of the Party Committee and the Board of Directors of Vietcombank. Focusing on a strategy of fast and strong transformation, improving work efficiency towards customers, etc. Has been promoting Vietcombank's resources in the process of technological transformation, performing well its tasks. entrusted by the Party and State. The entire Vietcombank system has been and will continue to strive to maintain the role of the leader, realizing the goal of "The leading bank in digital transformation" to contribute to the banking governance in the field of digital transformation. Change the country number. (Department of management of technology projects - Vietcombank Headquarters Party Committee).

3.3. Some limitations in executive management capacity at Vietnamese commercial banks in the digital era

- The bank's apparatus and operation mechanism is not suitable and up to date with the development of international practices
- The change in mindset is very important, the bank's staff is the factor that creates the transformation process of the bank. Therefore, continue to develop high-quality human resources.
- Comprehensive digital transformation has not been carried out at the same time.
- There have not been diversified and rich extension activities.

4. SOLUTIONS ON EXECUTIVE MANAGEMENT CAPACITY AT VIETNAMESE COMMERCIAL BANKS IN THE DIGITAL TECHNOLOGY ERA

Through the results of the governance capacity of two large joint stock commercial banks in Vietnam of Vietnamese credit institutions in the digital age, the article offers some solutions as follows:

Firstly, commercial banks quickly perfect their apparatus and operating mechanism and management model according to international standards. Focus on strategy formulation and monitoring of the Bank's strategic goals. Restructure the Board of Directors with a reasonable number of members. The Board of Directors issues a Resolution directing business activities and assigning specific tasks to each member; at the same time, supervise the Board of Management to implement and comply with the provisions of the Charter of the Bank, the Regulation on organization and operation of the Board of Directors, the internal management regulations and other regulations. of the bank.

In addition, the members of the Board of Directors and the Board of Management necessarily put the interests of shareholders, the State and the Bank as the top performance criteria, perform well in their management direction and management, fulfill assigned duties and responsibilities. Complete the Human Resources Committees, Strategy Committees, Executive Boards. At the same time, perfecting the mechanism and regulations of the bank's management.

Secondly, commercial banks continue to develop high-quality human resources. First of all, raise the leadership's awareness of bank governance. Members of the Board of Directors, Board of Directors, Supervisory Board, chief accountants, directors of branches should make efforts to increase understanding, raise awareness and improve operational efficiency. Next, improve the professionalism of the Board of Directors, continue to enhance the professionalism of the Board of Directors through transparency and clear responsibilities. The board should continue to develop a proper "business culture".

Annually open professional training courses for 100% of senior managers (bank managers) and middle level (branch managers). At the same time, open professional training courses for 35%-40% of officials of departments, including updating professional knowledge about digital technology and knowledge of law. Building a culture that values performance, quality of work, respects and is always willing to benefit partners and the national economy. Striving for 100% of employees to always develop well, update their professional knowledge, legal understanding and have a good grasp of the bank's operations. The Bank always prioritizes the budget for the development, training and fostering of the bank's human resources.

Thirdly, in order to conduct a comprehensive digital transformation, commercial banks need to conduct digital transformation and modernize management, administration, and implementation of the Digital Strategy. On the other hand, banks need to establish a Digital Banking Center with the criteria to strengthen the digitization capacity of the whole banking system and directly plan and deploy digital platforms applying modern technology. Banks need to complete digital management by 2023-2025, connecting data with the entire banking system and with the national data portal.

Fourthly, in order to have diversified and rich expansion activities, it is necessary for commercial banks to strengthen international cooperation relations, and to expand strategic partners to jointly implement their commitments in the development of international markets. Develop the banking business in general and learn, apply and develop effective banking executive management in accordance with international practices. On the basis of developing two market development strategies, expanding the market share to the cooperating countries.

Every year, banks need to organize in-depth exchange seminars and expand cooperation, actively participate in domestic and foreign forums, economic and business conferences in order to grasp the new opportunities. development trend, while looking for more partners, business opportunities and sharing experiences with partner businesses. Participating in conferences and forums is an opportunity to promote cooperation between Vietnam's banking industry and leading global and regional financial firms and corporations with financial and technological potential. Promote and introduce the image of banks to the region and the world through media and the internet.

5. RECOMMENDATIONS ON EXECUTIVE MANAGEMENT CAPACITY AT VIETNAMESE COMMERCIAL BANKS IN THE DIGITAL TECHNOLOGY ERA

In the new context to develop technology application in business activities as well as management capacity of commercial banks with digital technology application, the State Bank of Vietnam needs to create favorable conditions in the direction of building a The legal and mechanism framework for commercial banks is as follows:

First, the State Bank needs to cooperate with foreign consulting units to consider, evaluate and forecast the banking ecosystem to be rebuilt according to the development trend of technology, thereby establishing orientations. guidelines to preserve financial markets from recovering from future shocks.

Second, the legal framework needs to be adjusted and improved, guiding commercial banks to meet international standards, of which banks must improve the quality of their internal management models, identify redefining or expanding the bank's current risk management framework to synchronously respond to 4.0 technology.

Third, the State Bank should actively agree with the Ministry of Information and Communications to develop a legal theoretical framework for general data protection regulations, a security law mechanism for passwords based on the new technology platforms such as AI, RPA, cloud computing...

Fourth, the list of international standard conditions for suppliers and partners in technology development should be implemented in order to create optimal conditions for commercial banks in the process of censorship and partner selection. Limit the level of risk from 3rd parties.

Fifth, the State Bank should proactively deploy and coordinate with foreign organizations to develop programs to support training in human resources, improving the skills of employees according to the speed of technology development. numbers at commercial banks.

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THE IMPACT OF GLOBAL MINIMUM TAX RATE IMPLEMENTATION ON FDI ATTRACTION IN VIETNAM

Dr. Nguyen Thi Bich Diep, Dr. Le Ngoc Thom[1]

Abstract: Implementing the global minimum tax rate will have an impact on the investment environment in general and attracting FDI in particular. The article aims to analyze the current status of FDI attraction in Vietnam in the past year and the basic content of the Global minimum tax rate. Then, analyzing the positive impacts as well as some limitations to attract FDI when implementing global minimum tax rate in Vietnam. From there, we provide some policy suggestions to improve the investment environment in the context of global minimum tax rate implementation.

Keywords: FDI, Global minimum tax rate, FDI attraction policies.

1. INTRODUCTION

To create a healthy and fair competitive environment between countries through the tax system and prevent tax loss, since 2013, the "Base Erosion and Profit Shifting (BEPS) Initiative" has been approved by the Organization for Economic Cooperation and Development (OECD) with two contents: (1) Division of taxing rights, assessment of profit distribution and profit distribution principles; (2) Ensure that all businesses operating internationally pay a minimum tax rate." At the 2021 BEPS Global Cooperation Forum (IF), a statement was issued on the "Two-pillar solution framework to address challenges arising from the digital economy", including: Pillar I includes: includes tax allocation content for digital activities and Pillar II regulations on global minimum tax rates. The content of Pillar II includes two main rules: combined internal law (GloBE) and source country's taxing rights (STTR). More specifically, GloBE rules include two rules: Minimum tax rate (IIR) and less than minimum taxable payment (UTPR). At present, more than 140 countries in the world have agreed and implemented the Two-Pillar Solution Framework, including Vietnam.

The global minimum tax rate is an international tax policy, so it will have certain impacts on investment incentive policies in particular and the investment environment in general in Vietnam - a country that attracts and receives foreign direct investment capital flows. In the theories of location advantage or the OLI model, investment incentive policies create a favorable environment for foreign investors and impact the profits of investors. Empirical studies by Kimono et al. (2007) or Ren (2012) have shown the positive impact of specific FDI preferential investment policies such as reducing costs, time, investment information, reducing risks when investment activities are carried out. It can be said that this is one of the conditions for foreign investors to easily access the market of the receiving country.

Therefore, the article aims to consider the implications of the global minimum tax rule affecting the investment environment to attract FDI through the investment incentive policy system in Vietnam and make some recommendations to improve the investment policies in the context of that scene.

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2. POLICIES ATTRACTING FDI IN VIETNAM

2.1. Situation of FDI attraction

Vietnam currently attracts investment from many countries around the world, however major investors mainly come from East Asia such as Korea, Japan and Singapore... In 2020, although the global investment trend was decreased, Vietnam for the first time was among the top 20 countries attracting FDI in the world. By 2021, FDI capital into Vietnam would continue to maintain stability and exceed the 31 billion USD, an increase of 9.2% over the same period in 2020.

After the historic 1986 Party Congress, opening a challenging and hopeful development path created opportunities for the economy to transform, including foreign direct investment. As soon as the Law on Investment (1987) was enacted, it marked an important turning point in receiving foreign investment in Vietnam.

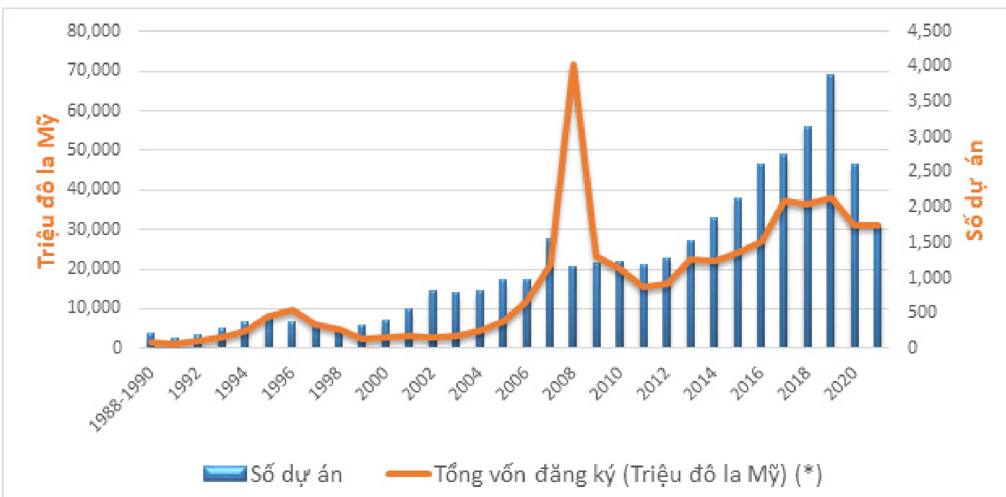

Figure1: Number of projects and FDI registered capital in Vietnam 1988 – 2021

Source: GSO

Vietnam gradually changes in accordance with the development situation of the region and the world as well as the current state of the global economy. The Government continuously supplemented and improved the Foreign Investment Law and in 2005 issued the Investment Law with many changes, including licensing and investment project management issues. In 2014, the new Investment Law was born and replaced the 2005 law to continue the open investment policy in accordance with the country's economic capacity and purpose of attracting FDI in each stage. Besides policy corridors, Vietnam also changes and prepares both hard and soft infrastructure to create pull points to attract FDI and promote the most effective sources of FDI capital such as infrastructure, management level, or quality human resources...

In the period from 2000 - 2015, the economy as well as the FDI attraction situation did not have any major changes due to the impact of the world financial and economic crisis of 2008-2009. Vietnam had timely policies in turn to support domestic and foreign businesses in many different forms, soon after that the number of projects and amount of registered capital improved. Since 2015, FDI capital has begun to show signs of increasing rapidly compared to previous years. Summarizing 30 years of attracting investment in 2018, FDI plays an important role in Vietnam's economy with a proportion of 55% of industrial production, 70% of export value, and 3.7 million jobs. Year 2019 was an important step when the highlight was a record high disbursed FDI capital of 20.38 billion USD.

In 2022, Vietnam had also attracted nearly 30 billion USD, showing positive signs for a return after the pandemic. However, if Vietnam applies the global minimum tax rate, it will directly affect FDI capital flows, so Vietnam will face many difficulties in attracting FDI through tax incentives.

2.2. Investment incentives policies attracting FDI

To promote economic development, stabilizing economic policies such as financial policy, monetary policy, etc. is always of concern to the government. For investors, especially foreign investors, investment incentive policies are one of the important contents when investing in Vietnam.

Foreign investment incentives mainly focus on: (i) Corporate income tax incentives, (ii) Import and export tax incentives and (iii) Land finance incentives. The current preferential policies to attract investment are implemented in accordance with the Investment Law 2014, the Law on Corporate Income Tax (2008 and revised 2013), the Law amending and supplementing a number of articles of the 2014 tax laws, Consolidation document 14/VBHN-VPQH merging the Law on Corporate Income Tax, the Law on Import and Export Tax 2016, Decree No. 118/2015/ND-CP detailing and guiding the implementation of a number of articles of the Investment Law, Decree No. Decree 123/2017/ND-CP amending a number of articles on land use levy collection, land rent collection, water surface rent, Decree 57/2018/ND-CP on business incentive mechanisms and policies investment in agriculture and rural areas, the Law on Non-Agricultural Land Use, etc.

Preferential tax policies in attracting investment in Vietnam (corporate income tax incentives; import tax exemption; exemption or reduction of land use fees, land rent, land use tax; accelerated depreciation, increased deductible expenses when calculating taxable income) is considered attractive compared to other countries in the region. With a competitive tax incentive policy, along with strengths such as: stable political and economic situation, large labor source..., foreign investment capital flow entering Vietnam has continuously increased over the years.

Currently, there are more than 300 projects with registered investment capital of over 100 million USD operating in the field of processing and manufacturing industries in economic zones and industrial parks and are enjoying incentives. Corporate income tax is lower than 15%, which is usually businesses in the high technology sector (such as Samsung, Intel, LG, Bosch, Sharp, Panasonic, Foxconn, Pegatron...). Accordingly, the total registered investment capital of these types of projects accounts for nearly 30% of total FDI capital in Vietnam (about 131.3 billion USD). These are projects that will likely be affected by the global minimum tax. If the global minimum tax is applied and Vietnam does not have timely response solutions, the benefits from preferential corporate income tax policies that projects enjoy in Vietnam will no longer exist and affect the attractiveness to loss of competitive advantage of the Vietnamese market in attracting foreign investment and affecting investment expansion plans of investors.

Regarding state budget revenue, in the period 2020 - 2022, the amount of corporate income tax revenue from the foreign-invested enterprise sector over the total corporate income tax revenue is as follows: Total income tax revenue Enterprise imports account for about 18 - 21% of total domestic budget revenue. Corporate income tax revenue from the foreign-invested enterprise sector is about 7.5 - 8.5% of total domestic budget revenue. Corporate income tax revenue from the foreign-invested enterprise sector accounts for about 39 - 41% of total corporate income tax revenue. If Vietnam does not apply the global minimum tax, state budget revenue from corporate income tax will not be affected. However, if Vietnam applies the standard domestic minimum tax regulations, Vietnam will have the right to impose additional taxes on FDI enterprises that are enjoying an effective tax rate in Vietnam lower than the minimum rate of 15%, thereby increasing state budget revenue. In case Vietnam does not collect additional corporate income tax, all preferential revenue for current businesses will be collected by developed countries with businesses investing in Vietnam into those countries' budgets. On the other hand, when Vietnam applies the global minimum tax (Regulations IIR and UTPR) to Vietnamese enterprises investing abroad that are subject to the global minimum tax and have subsidiaries in the country, If the actual corporate income tax is lower than the minimum level, additional corporate income tax will be collected from these enterprises, thereby increasing state budget revenue.

3. THE IMPACT OF GLOBAL MINIMUM TAX RATE TO ATTRACTING FDI

3.1. Global minimum tax rate

In the global economic with fierce competition between countries to attract investment; in June 2013, the Organization for Economic Co-operation and Development (OECD) initiated and was approved by countries in the group of leading developed and emerging economies in the world (G20) to prevent taxation basic erosion and profit shifting with the goal: "Dividing taxing rights, evaluating the profit allocation of businesses and building principles global profit allocation rules; ensure that all businesses engaged in international investment must pay a minimum tax rate."

Following that, the IF Joint Cooperation Forum adopted 15 actions to establish a modern and globally fair international tax system under the Tax Base Erosion and Profit Shifting Reform Program (BEPS). Widespread and consistent implementation is a key requirement for the effectiveness of the BEPS Program, especially the implementation of international tax rules. To implement, on July 9, 2021, Finance Ministers and Central Bank Governors of the G20 group agreed on the principle of a Two-Pillar Solution to address tax challenges arising in the economic digitalization process (referred to as the Global Minimum Tax Agreement), including: (i) The first pillar is tax allocation for digital-based business activities (reallocation of taxing rights to multinational companies between the place of headquarters and the place of business operations and income generation); (ii) The second pillar sets a global minimum corporate income tax rate of 15% for multinational companies to prevent these companies from shifting profits to low-tax countries to avoid income tax .

3.2. The impact of global minimum tax implementation on FDI attraction in Vietnam

According to data and preliminary statistical information from the global business database, there are currently about 1,017 foreign-invested enterprises in Vietnam whose parent companies are subject to the global minimum tax. Among them, there are at least over 100 large enterprises that are likely to be affected by the global minimum tax if applied from 2024. Thus, when it takes effect, the global minimum tax will have both positive and negative impacts for Vietnam's economy and investment, specifically:

- *Positive:*

First, participating in the implementation of the global minimum tax contributes to strengthening Vietnam's international integration in general and reforming the tax system in accordance with international practices and standards in particular. Actively participating and implementing OECD tools and legal frameworks will contribute to improving Vietnam's image in the eyes of foreign partners and investors. This will also contribute to improving Vietnam's tax legal framework and promoting amendments to Vietnam's FDI attraction policy in the direction of reducing tax incentives and enhancing competition by investment - business environment, infrastructure development, human resources...etc.

Second, developed countries may be larger beneficiaries of a global minimum tax. Establishing a global tax collection and control mechanism can be a point of success for developed countries when establishing a global tax mechanism, ending competition for tax incentives from developing countries development as well as increase tax revenue from multinational corporations and companies.

Third, the contents of the global minimum tax are agreed in principle, but some contents are still reserved and have not been regulated or guided in detail, which could affect the operations of corporations and businesses multinationals. According to the MLI Convention that Vietnam has signed, Vietnam has the right not to apply some content on applying the double tax elimination method, applying tax agreements to limit the taxing rights of resident organizations/individuals.

- *Limitation:*

First, the application of the global minimum corporate income tax will reduce competition in attracting investment in developing countries that mainly rely on tax incentives to attract FDI. The level of impact depends on the characteristics of the tax system, specifically the standard corporate income tax system of each country. Countries with low tax collection efficiency (with low tax rates and many preferential policies leading to low tax revenue) will be more affected due to potential knock-on effects on the CIT base and other tax calculation. In contrast, countries with average or above average tax rates with a large tax revenue source (low tax incentives) will be less affected by the application of global minimum tax.

Second, the application of global minimum tax may cause short-term disturbances in FDI capital flows. According to the OECD, a global minimum tax would increase global investment costs and could therefore reduce global GDP by 0.1 percentage point in the short term. It is expected that a part of FDI capital may return to developed countries when the incentive to avoid taxes is reduced and corporations will pay more attention to the investment - business environment and economic growth prospects when choosing to make decisions to invest while limiting investment capital in developing countries when tax incentives are no longer so attractive.

Third, the global production and supply chain may have certain changes. The global minimum tax will make multinational corporations consider more before deciding to move production and supply chains abroad or shift production between countries due to changes in tariffs, in when prioritizing ensuring stability of domestic production and supply chains.

Fourth, a global minimum tax may give multinational companies less incentive to shift profits to countries that are "tax havens" or countries with low corporate income tax rates. The application of preventing taxation global Base Erosion principles allows developed countries and countries with high corporate income tax rates where multinational corporations and companies are headquartered to increase additional tax revenue for with the profits that the above companies previously transferred to tax havens.

Fifth, the application of this global minimum tax may incur some costs for reforming the tax management system and administrative procedures in the investment sector, and implementation progress depends on management capacity of relevant ministries, branches and localities. The mechanism for sharing information, data and tax obligations of multinational corporations requires a capable tax administration system and coordinated efforts at the international level, which is also a big challenge for developing countries development with often inadequate tax management capacity like Vietnam. This requires stepping up tax reform, reform administrative procedures and innovate Vietnam's FDI attraction mechanisms and policies to be more consistent with GloBE rules in the near future.

4. RECOMMENDATIONS

Based on the analysis of the current situation and impact of the global minimum tax on attracting foreign direct investment in Vietnam, the authors propose a number of policy recommendations as follows:

Firstly, improve the institutional and policy environment to create favorable conditions for foreign direct investment activities in terms of both attraction and effective use: review the implementation of legal documents to avoid overlap between documents; Propose recommendations to develop and improve synchronous and unified investment policies and continue to improve administrative procedures in the direction of creating conditions for foreign investors, especially investors targeting priority areas.

Second, perfect policies other than taxes: According to research by the United Nations Industrial Development Organization (UNIDO, 2011), economic stability, political stability, raw material costs, domestic market, Labor costs and transparency of the legal framework in the host country are valued more highly by investors than tax incentives. Many other studies by international organizations (WB, IMF, ADB...) have also shown that tax incentives are only one of the factors that investors consider when deciding to invest. Therefore, along with considering amending the tax incentive policy to make it more reasonable, Vietnam also needs to research and create favorable conditions for investors on non-tax policies (such as exemption and reduction of land rent, improvement of land rent, administrative procedures to cut compliance costs for businesses, etc.)

Third, modernize socio-economic infrastructure: To meet the requirements of the country's new development period, the Government needs to pay attention to a number of solutions: (i) Complete the development of national sector plans and specialized technical plans to serve as a basis for supplementing, editing, improving quality and having a long-term vision for infrastructure plans, establishing specialized projects, and mobilizing investment capital, ensuring balanced and harmonious development between sectors, localities and territories. Develop planning and investment plans to build large logistics service centers with good connection to seaports, airports, and main transport routes. Review, supplement and adjust the planning for building infrastructure systems for digital economic development, ensuring integrated efficiency and systematicity, especially electricity networks, telecommunications infrastructure and information technology, data infrastructure, national broadband infrastructure, cloud computing infrastructure, national data management, trusted electronic authentication and identification service infrastructure. (ii) Improve mechanisms and policies, especially the Public-Private Partnership (PPP) method to attract more and more effective foreign investment capital including ODA, FDI and private investment capital of domestic private sector, effectively exploit resources from public assets to create investment capital for infrastructure development; Amend and supplement regulations on financial support policies, taxes, prices, fees, and concessions to increase the commerciality of projects and the responsibility of users to contribute, ensuring satisfactory benefits of Investors. (iii) Promote the application of high technology in the management and operation of energy infrastructure such as developing a smart power network with the ability to generate distributed power from many power generation points. Actively innovate and develop science and technology in the information technology - communications and energy industries to increase localization and master technology and equipment, helping to cut costs of importing and purchasing equipment from outside. Prioritize science and technology capital, capital from national programs to develop high technology, develop domestic products, services, and solutions to serve the construction and development of infrastructure systems for economic development.

Fourth, enhance the transparency of the economy. One of the factors of interest in a country's institutions is the corruption index to evaluate the transparency of a country.Therefore, governments at all levels need to continue to improve on this criterion. Investment management agencies need to publicize information about policies, laws, plans as well as the socio-political and economic situation and investment development orientations of the country, region, and each industry. for investors to understand. Along with that, it is necessary to reform administrative procedures, recruitment - training and the stage of receiving - processing information to access and increase reliability with investors. In the "Digital Government" reform, it is also necessary to use modern and unified means of providing information to help businesses access quickly and conveniently and limit corruption.

In summary, the solutions that need to be considered when implementing global minimum tax include: (1) Improving the institutional and policy environment; (2) Completing the non-tax policy system (3) Modernizing socio-economic infrastructure; (4)Increase the transparency of the economy.

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FACTORS EFFECTING THE ADOPTION OF IFRS: THE CASE OF MANUFACTURING COMPANIES ON HO CHI MINH STOCK EXCHANGE

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Abstract: *The main objective of this research paper was to analyse the factors influencing the implementation of IFRS in manufacturing Vietnamese enterprises. This was achieved through the utilization of descriptive statistical tools and logistic regression analysis based on a sample of 59 manufacturing enterprises in Vietnam from 2017 to 2021. The research methodology employed a mixed approach, combining both qualitative and quantitative methods. The findings indicate that higher levels of profitability, leverage ratios, firm size, and foreign capital increase the likelihood of implementing IFRS. Based on these results, appropriate recommendations have been provided to facilitate the effective implementation of IFRS in Vietnamese enterprises, aligning with the Ministry of Finance's IFRS application roadmap.*

Keywords: *IFRS, manufacturing companies, profitability, leverage, firm size, foreign capital, audit quality.*

1. INTRODUCTION

Globalization and internationalization of businesses as well as the associated need for comparable and reliable financial information has led to the harmonizing of financial accounting principles. This has resulted in many factors in the business and accounting community advocating for the standardization of accounting rules across the globe because standardized accounting principles can facilitate cross-border trading through increased comparability of financial information. As of April 2019, a total of 166 countries worldwide had adopted or planned to adopt IFRS for the comprehensive or substantial financial reporting obligations of their public entities, encompassing both listed corporations and financial institutions within their national jurisdictions (IFRS Foundation, 2019).

IFRS presents opportunities to enhance the quality of financial information for developing nations. For instance, Dante et al. (2018) collected data from 13 emerging countries and concluded that the adoption of IFRS led to an improvement in the quality of financial information on financial statements and helped mitigate earnings management. Vietnam's membership in the WTO since 1995 and the opening of its stock market in 2000 have marked significant milestones in the country's economic development. Additionally, the State Securities Commission (SSC) became an official member of the International IOSCO in June 2001. As a result of increased international economic integration, foreign trade, and exposure to foreign investment inflows, Vietnam has been motivated to establish a suitable accounting standard system.

There is a pathway of transition to IFRS in Vietnam. Decision 345/QD-BTC announces the phased implementation of IFRS in Vietnam. However, the application of IFRS in the Vietnamese market will have a significant impact on the financial reporting of listed companies. During this application process, the government will need to consider the market's sensitivity to continue making revisions and additions. Based on a review of previous studies, the research author has

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observed that in publications in Vietnam and studies conducted worldwide, there is a considerable focus on behavioural data analysis, while the application of IFRS based on secondary data or financial statements is less prominent. There are still gaps in the research that can be explored. Therefore, clarifying the issue that is currently highly emphasized in the accounting field in Vietnam can provide valuable insights for other emerging economies facing similar challenges.

2. LITERATURE REVIEW AND BACKGROUND THEORIES

2.1. Literature review

Worldwide, several studies have been conducted to identify the factors that influence the transition and adoption of IFRS. Bova and Pereira (2012) conducted a study in Kenya and indicated that higher levels of IFRS compliance are associated with the leverage ratio, corporate size, and profitability ratio. Research of Uyar et al. (2016) on elements affecting the preparation of IFRS in SMEs in Turkey indicates that several business features such as size, independent audit, and international integration do show influence on the preparation of SMEs. Lima et al. (2018) argue that large-scale enterprises, inter-national markets are important driving forces for compliance enterprises to apply IFRS, while profitability does not have a significant impact on IFRS compliance. Omri and Akrimi (2011) conducted a study using data from publicly traded companies in Tunisia and highlighted that international trade openness, and the type of audit are significantly related to the level of readiness to adopt IFRS by companies. The studied by Phang and Mahzan (2013) identified the significance of the national accounting regulatory body in influencing the level of readiness for IFRS convergence in Malaysia. Oyewo's study (2015) examined the factors influencing the application of IFRS by SMEs in Nigeria to adopt IFRS and indicated that control variables, including work experience and educational qualifications, had a positive impact on the level of application.

In Vietnam Le Tran Hanh Phuong (2019) on the macro and micro-level factors influencing the adoption of IFRS in Vietnam. The study used data from 500 large-scale companies in Vietnam and showed that the micro-level factors (including foreign participation, foreign investment, and audit quality) have an impact on the adoption of IFRS by large companies in Vietnam. Another similar study by Tran et al. (2019) illustrated that ROE has an impact on the adoption of IFRS by companies. Moreover, the study conducted by Nguyen Thi Kim Cuc and Nguyen Le Van Khanh (2018) collected 198 samples and identified factors such as capital structure, industry, and firm size that influence the voluntary adoption of IFRS in Vietnam. Tung (2022) using questionnaire survey of managers of 82 small and medium enterprises in Vietnam showed seven factors including pressure of international integration, legal system, size of enterprise, professional organizations at home and abroad, Qualifications of accountants, Benefits/Costs all have a positive influence on the application of international financial reporting standards.

Profitability (PRO)

Dumontier and Raffournier (1998) conducted a study on 28 publicly listed companies that adhere to Switzerland's accounting standards and 51 others that follow IFRS. They examined the relationship between the adoption of IFRS and various business characteristics such as internationality, ownership structure, size, capital, audit practitioners' reputation, and profitability. The findings revealed that there is no correlation between the adoption of IFRS and business outcomes. Conversely, Carmona and Trombetta (2008), as well as Ha and Kang (2019), concluded that highly profitable companies tend to adopt IFRS in order to ensure the reliability of their profit results. In this research, Return on Equity (ROE) is employed as an independent variable to reflect the operational status of companies. Lopes and Viana (2008) also analyzed financial information from 44 listed companies in Portugal that have adopted IFRS and observed a positive impact of net profit and equity on the accounting policies of these entities.

Leverage (LEV)

Meek et al. (1995) argued that voluntary information disclosure increases with financial leverage. Many companies that rely on debt financing aim to lower borrowing costs by providing more relevant information to creditors. These companies strive to build positive relationships with creditors by ensuring the quality of the information they publish. Mohamed and Fatma (2013) utilized the ratio of long-term debt to total assets as a measure of corporate debt level. This viewpoint is supported by the research conducted by Dinh and Pham (2020). Several studies have confirmed the impact of debt levels on the decision to adopt IFRS. For instance, Murphy (1999) and El-Gazzar et al. (1999) measured the level of debt using the total debt to shareholders' equity ratio. On the other hand, Affes and Callimaci (2007) employed the total debt to total assets ratio as a measure of leverage. Kolsi and Zehri (2013) utilized the long-term debt to total assets ratio as an approximation for the level of firm indebtedness. These various approaches highlight the importance of debt levels in understanding the adoption of IFRS in different studies.

Size of enterprise (SIZ)

Affes and Callimaci (2007) and Ha and Kang (2019) have highlighted the motivations behind early adoption of IAS/IFRS by German and Austrian listed companies. Through a logistic model and a sample of 106 German and Austrian companies, the findings indicate that larger companies are more likely to adopt IAS/IFRS at an early stage. This is because larger companies have a greater reliance on external funding and strive to differentiate themselves in the market by providing high-quality financial reporting. On the other hand, Marta et al. (2008) examined a sample of 56 companies listed on the Portugal Stock Exchange and found that smaller firms are less inclined to abandon their national accounting standards. In contrast, larger companies proactively implement higher-quality accounting policies even before the official adoption of IFRS.

Audit quality (AUQ)

Al-Basteki (1995) conducted a study on 26 companies listed in Bahrain that chose to disclose information according to IAS. The study examined various characteristics of these companies, including the reputation of the external auditor, industry sector, company size, level of foreign operations, and the degree of dependence on external financing. The findings indicate that the decision to adopt IFRS is strongly influenced by the type of external auditor, particularly those belonging to the Big 4 auditing firms. Similarly, Joshi and Ramadhan (2002) and Ha and Kang (2019) also investigated accounting practices and the extent of IFRS adoption in Bahrain. Their research sample consisted of 36 companies, and the results revealed that 86% of the companies applying IFRS were audited by a Big Four auditing firm.

Foreign capital (FRC)

Akinyemi (2012) highlights the increasing cross-border capital flows and foreign direct investment, facilitated by mergers and acquisitions in the era of globalization. This trend has necessitated the adoption of harmonized accounting standards worldwide, specifically through the application of IFRS. Francesco and Raynolde (2012) emphasize that foreign investors highly value enterprises that follow IFRS, as it helps to reduce information asymmetry compared to GAAP. Bae et al. (2008) also support this viewpoint, stating that foreign investors often request financial statements prepared in accordance with IFRS. Daske et al. (2008) argue that the implementation of IFRS is favoured by lenders, as globally consistent financial information enables them to proactively manage lending risks. However, enterprises seeking loans are often required to convert their financial statements from national accounting standards to IFRS. Consequently, this becomes a motivating factor for businesses to adopt IFRS swiftly (Le, 2019). It is important to note that the authors specifically mention borrowing from foreign countries through financial institutions and foreign banks as the context for their discussion.

2.2. Background theories

Agency theory

Managers' accounting choices and disclosure of financial information are analysed using agency theory, which suggests that these choices and disclosures are used to reduce agency costs. Compliance with IFRS may restrict accounting choices and require more disclosure, potentially reducing agency costs and explaining companies' attitudes towards IFRS compliance.

The theory also explains the impact of leverage and foreign capital on the adoption of IFRS. Excessive dividend policies pursued by shareholders can affect the equity guarantee for creditors. Adopting IFRS reinforces creditor confidence and facilitates external funding, especially from banks. When borrowing from foreign entities, financial institutions and foreign banks require clear, comparable, and transparent financial statements, making compliance with IFRS necessary.

In addition, agency theory explains how the type of auditor and firm size impact the approval of IFRS. Managers seek trustworthy auditors to ensure credibility of financial information, especially when applying complex international standards like IFRS. Reputable auditors, such as those from the Big4 firms, possess expertise and knowledge in these standards, facilitating compliance. Larger companies, with better access to external funding like foreign capital, must exhibit transparent financial reporting. Adopting IFRS enhances transparency and comparability, attracting foreign investors and lenders. Hence, larger firms are more motivated to adopt IFRS to improve their capital-raising and loan acquisition capabilities.

Foreign investors' participation and profitability factors are also explained by agency theory. Managers, who have more power in choosing accounting options, benefit from the approval of IFRS as it aligns their interests and provides compensation based on financial performance. By choosing IFRS, managers can enhance the book value, particularly equity and profits, which can positively impact their compensation, especially when stock options are involved.

Signalling theory

The theory of signalling demonstrates how the party possessing greater information can mitigate information asymmetry by effectively conveying that information to others. When applying signalling theory to financial disclosure, it implies that managers can utilize financial statements to signal their expectations and intentions. For instance, applying IFRS can serve as a signal to market participants that the company is willing to disclose a greater amount of information or adhere to more stringent accounting standards.

Signalling theory proposes various factors that can account for differences in the extent to which companies comply with IAS/IFRS standards. These factors include profitability, leverage, the auditor's type, and company size. It has been commonly suggested that these variables impact the voluntary adoption or adherence to IAS/IFRS by influencing the challenges associated with information imbalance in the market (Karim and Ahmed, 2005; Samaha and Stapleton, 2009; Al-Akra et al., 2010).

3. RESEARCH METHODOLOGY

3.1. Research Process

Building upon prior research related to the theoretical framework of IFRS adoption, the authors identify key factors that significantly impact the adoption of IFRS. These factors are assessed using appropriate accounting method, which involve the selection of suitable independent variables and a regression model. Subsequently, the authors gather relevant data to construct a suitable econometric model. The data for this research is primarily sourced from the audited financial statements of companies listed on the HOSE (Ho Chi Minh City Stock Exchange). The information is collected from two websites, namely finance.vietstock.vn and cafef.com.

after being collected, the primary data will be coded, and the secondary data will be systematized and calculated to transform them into indicators within the research model. For Statistical analysis and model validation, authors analyze the data with the assistance of SPSS 26 software and various analytical techniques, such as Descriptive statistics, Correlation analysis, Logistic regression analysis, Confusion matrix testing.

The dependent variable in this study pertains to IFRS adoption, characterized by two distinct values: “Yes” indicates the full, partial, or selective adoption of IFRS, whereas “No” indicates a lack of intent or unwillingness to adopt IFRS.

3.2. Sampling method

Since the research utilizes secondary data from manufacturing companies listed on HOSE, it is possible to determine the population size. Therefore, the research will employ the sampling formula proposed by Yamane (1967).

$$n= N/ (1+Ne^2)$$

In which:

n: the required sample size to be determined.

N: the population size. In addition, since the research collects data over a duration of 5 years with totaling 128 manufacturing company in the HOSE, the population size would be 640.

e: the allowable error, with ±0.05 being the most prevalent.

Therefore, Therefore, the minimum sample size should be 247 samples. In this research, there are 293 samples which indicates that the number of samples examined in the research project has satisfied the minimum sample size requirement.

3.3. Hypotheses

H1: Companies with higher profitability are more likely to adopt IFRS.

H2: Companies with higher Debt to Shareholders’ equity ratio are more likely to adopt IFRS.

H3: The larger the companies are, the easier to adopt IFRS.

H4: Enterprises that are audited by Big 4 are more likely to apply IFRS.

H5: The enterprises with foreign capital are more likely to apply IFRS.

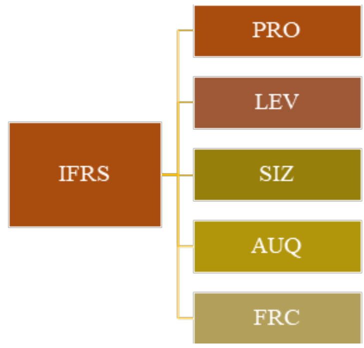

Figure 1: The proposed study

Table 1: Variables and Measurement

Variable	Measurement	Expected tendency direction
Dependent Variable (IFRS)	IFRS adoption: 1, if the firm has adopted IFRS 0, if the firm has adopted IFRS	
Independent variables		
PRO	Profitability – Net return on equity	(+)
LEV	Leverage – Total Debt / Total assets	(+)
SIZ	Size of enterprise – Logarithm of total assets	(+)
AUQ	Audit quality. 1, if Vietnam's enterprise audited by Big4. 0, if Vietnam's enterprise does not audit by the Big4	(+)
FRC	Foreign Capital 1, if the enterprise has had foreign funds. 0, if the enterprise has not had foreign funds.	(+)

From the above research model, the authors determine logit regression as follows:

LOGIT [IFRSi] = β0 + β1 * PROi + β2 * LEVi + β3 * SIZi + β4 * AUQ + β5 * FRCi + εi

Parameters: β0, β1, β0…., βn.

Error: ε

4. RESEARCH RESULTS

4.1. Descriptive statistics

Table 2: Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Application of IFRS	293	0	1	0.37	0.483
ROE	293	-0.115	0.588	0.16570	0.118534
LEV	293	0.102	0.839	0.45973	0.173093
Firm_Size	293	0.83	1.00	0.8784	0.03810
Audit Quality	293	0	1	0.46	0.499
Foreign investors	293	0	1	0.86	0.344
Valid N (listwise)	293				

The descriptive statistics presented in the table depict the minimum, maximum, mean, and standard deviation of both the independent and dependent variables. The dummy variables in the hypothesis include A_IFRS, AUQ, and FRC. Therefore, these three variables take a minimum value of 0 and a maximum value of 1. Specifically, the mean of A_IFRS is 0.37, indicating that 37% of the collected research samples have adopted IFRS, which amounts to 21 businesses. Among the gathered data from manufacturing companies, 46% of them are audited by Big4 firms, and a significant 86% of companies have foreign capital.

Based on the assessment of mean and standard deviation, it can be observed that among the collected data from 59 companies, there is no significant variation in terms of firm size. However, there is relatively large variation in leverage and ROE among these businesses.

4.2. Nonparametric Correlations

Table 3: Correlations

			A_IFRS	PRO	LEV	SIZ	AUQ	FRC
Spearman's rho	A_IFRS	Correlation Coefficient	1.000	0.743**	0.520**	0.201**	0.094	0.118*
		Sig. (2-tailed)	.	0.000	0.001	0.001	0.109	0.043
		N	293	293	293	293	293	293
	PRO	Correlation Coefficient	0.743**	1.000	-0.050	0.080	-0.013	0.006
		Sig. (2-tailed)	0.000	.	0.397	0.171	.822	0.923
		N	293	293	293	293	293	293
	LEV	Correlation Coefficient	0.520**	-.050	1.000	0.150*	-.073	0.022
		Sig. (2-tailed)	0.001	0.397	.	0.010	0.213	0.705
		N	293	293	293	293	293	293
	SIZ	Correlation Coefficient	0.201**	0.080	0.150*	1.000	.045	-0.021
		Sig. (2-tailed)	0.001	0.171	0.010	.	.446	0.727
		N	293	293	293	293	293	293
	AUQ	Correlation Coefficient	0.094	-0.013	-0.073	0.045	1.000	0.185**
		Sig. (2-tailed)	0.109	0.822	0.213	0.446	.	0.001
		N	293	293	293	293	293	293
	FRC	Correlation Coefficient	0.118*	0.006	0.022	-0.021	0.185**	1.000
		Sig. (2-tailed)	0.043	0.923	0.705	0.727	0.001	.
		N	293	293	293	293	293	293
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

By examining the significance values (sig.), it can be observed that figures for sig. of PRO, LEV, SIZ, and FRC are all less than 0.05. This indicates that these variables influence on the dependent variable A_IFRS. Conversely, AUQ does not exhibit an impact on A_IFRS (sig. = 0.109, greater than 0.05). Therefore, the variable AUQ is excluded from the model. Secondly, correlation coefficients are used to assess the degree of influence of the independent variables on the dependent variable. The correlations of PRO, LEV, and SIZ are 0.743, 0.520, and 0.201 respectively. Based on the support of SPSS26, these variables have a significant correlation at the 0.01 level (2-tailed). Additionally, the correlation of FRC (0.118) is significant at the 0.05 level (2-tailed). Thus, the order of impact of the independent variables on A_IFRS is as follows: PRO, LEV, SIZ, and FRC.

4.3. Logistic Regression

Table 4: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	69.500	5	.000
	Block	69.500	5	.000
	Model	69.500	5	.000

Since we are using the Enter method to simultaneously include all independent variables in the model, only Step 1 appears in the statistical results. In this table, the Sig value in the Model row is used to assess the goodness of fit of the model. Specifically, in this case, the sig value of the Chi-square test in the Model row is 0.000, which is less than 0.05. Therefore, the regression model is a good fit.

Table 5: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	316.209[a]	.538	.680

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

The table presents the Model Summary, which provides a summary of the model's performance. The Cox & Snell R Square and Nagelkerke R Square are pseudo-R-squared values. The Nagelkerke R Square value is commonly used as a measure of model fit, with a higher value indicating a better fit (approaching 1). In this case, the Nagelkerke R Square value of 0.680 indicates a relatively high level of model fit.

Table 6: Classification Table

Observed			Predicted		
			Application of IFRS		Percentage Correct
			0	1	
Step 1	Application of IFRS	0	161	24	87.0
		1	59	49	45.4
	Overall Percentage				71.7

a. The cut value is .500

The Classification Table displays the classification of objects into "Application of IFRS" and "No application of IFRS" based on two criteria: actual observations and predictions.

- Among the 185 observed cases of "No application of IFRS," there were 161 cases correctly predicted as "No application of IFRS," resulting in an accuracy rate of 161/185 = 87.0%.
- Among the 108 observed cases of "Application of IFRS," there were 49 cases correctly predicted as "Application of IFRS," resulting in an accuracy rate of 49/108 = 45.4%.

Therefore, the average prediction accuracy rate is (87.0% + 45.4%)/2 = 71.7%

Table 7: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	PRO	7.340	1.287	32.534	1	.000	1540.604
	LEV	2.989	.832	12.898	1	.000	19.860
	SIZ	10.596	3.634	8.501	1	.004	39960.177
	AUQ	.484	.283	2.933	1	.087	1.623
	FRC	.976	.462	4.459	1	.035	2.653
	Constant	-13.628	3.321	16.836	1	.000	.000

a. Variable(s) entered on step 1: ROE, LEV, Firm_Size, Audit Quality, Foreign investors.

The Sig value of the Wald test for PRO, LEV, SIZ, and FRC is less than 0.05 (at a 95% confidence level), indicating that these four variables (PRO, LEV, SIZ, and FRC) have a significant impact on A_IFRS. On the other hand, the variable AUQ has a Sig value of the Wald test equal to 0.087, which is greater than 0.05. Therefore, AUQ does not have an impact on A_IFRS. This result is consistent with the findings obtained from the Spearman correlation analysis.

β represents the unstandardized regression coefficients of the independent variables. These coefficients can have positive or negative values, indicating the direction and magnitude of the relationship between each independent variable and the dependent variable. After excluding the variable AUQ from the model, based on the results above, we can enter the following variables into the logistic regression equation:

LOGIT [IFRS]= -13.628 + 7.340*PRO + 2.989*LEV + 10.596*SIZ + 0.976 * FRC

5. DISCUSSION

The profitability, leverage, size, and foreign capital impact the decision to apply IFRS in Vietnamese manufacturing enterprises, while Vietnamese enterprises in the survey do not apply IFRS based on auditing by Big 4.

Audit quality does not significantly influence IFRS adoption in Vietnamese manufacturing companies. The main concern is the perceived higher cost of Big 4 audits compared to local firms. Big 4 audits assure unbiased evaluation of financial statements, upholding accounting standards like IFRS. The focus is on financial data precision. While engaging Big 4 offers expertise, it does not directly affect IFRS adoption. Adopting IFRS demands careful planning; professionals may aid a seamless transition. The choice of audit firm, whether Big 4 or not, is separate from IFRS adoption and should not heavily impact it.

High profitability strongly influences IFRS adoption in Vietnamese enterprises, similarly with Bova and Pereira (2012) and Tran et al. (2019). Robust profitability signifies operational capacity and solvency, attracting investor interest in stable growth. Moreover, adopting IFRS by highly profitable firms aims to enhance transparency and attract foreign investment, as credible and comparable financial information positively impacts investor perception.

Financial leverage significantly influences the adoption of IFRS among Vietnamese manufacturing firms, corroborated by findings by Bova and Pereira (2012), Nguyen Thi Kim Cuc, and Nguyen Le Van Khanh (2018). This highlights leverage's pivotal role in IFRS adoption decisions. Firms with greater financial leverage recognize the need to meet creditor expectations, fostering transparency and accountability through IFRS implementation. Enhanced information provision to creditors builds trust, fostering strong relationships. Higher leverage firms thus lean towards IFRS adoption, ensuring comprehensive and dependable financial reporting to bolster confidence.

Enterprise size significantly influences IFRS adoption, notably among larger firms, consistent with Uyar et al. (2016), Lima et al. (2018), Nguyen Thi Anh Linh (2019), Nguyen Thi Kim Cuc and Nguyen Le Van Khanh (2018), and Tung (2022). These studies underscore the positive correlation between size and IFRS adoption likelihood. Larger enterprises, often corporations or joint-stock firms in Vietnam, are more prone to embrace IFRS. This preference stems from their exposure to globalization, with many transitioning from state-owned origins. To navigate global impacts, these enterprises prioritize international accounting standards, particularly IFRS. Their substantial presence in international markets and with investors necessitates reporting alignment for credibility and comparability. IFRS adoption signals their commitment to global best practices, ensuring financial reporting conformity.

IFRS adoption in Vietnamese manufacturing firms is positively impacted by foreign capital involvement, in line with Bova and Pereira (2012) and Gordon et al. (2012). Firstly, foreign investors demand reliable, comparable financial information – met by IFRS adoption. IFRS offers a consistent framework and international standards for uniform reporting. This builds trust and attracts foreign investments. Secondly, foreign borrowing often mandates compliance with global regulations. IFRS adoption ensures reliable reporting, aiding access to foreign capital. Enterprises with foreign borrowing adopt IFRS to meet partner requirements and enhance their ability to secure foreign loans.

6. RECOMMENDATION AND CONCLUSION

6.1. Recommendation

Profitability is crucial for assessing a company's financial health. Robust profitability can be further enhanced through IFRS implementation, offering improved risk management by disclosing risks faced. Adhering to IFRS enhances risk practices, including identifying, assessing, and mitigating risks. This shields profitability and minimizes disruptions. Moreover, a solid understanding of IFRS principles and regulations is vital, necessitating a grasp of its financial standards and guidance.

Besides, manufacturing firms with high leverage must assess the exact effects of transitioning to IFRS on their borrowing practices. This evaluation aids in selecting borrowing methods beneficial to the business without harming shareholders. Policymakers should formulate regulations and detailed guidelines on disclosing financial leverage matters under IFRS adoption. To enhance understanding, research and development investments can be promoted by policy agencies. Sharing knowledge and guidance materials can aid businesses in navigating financial leverage and IFRS application.

Depending on the scale, businesses may consider implementing the following measures to effectively apply IFRS. Firstly, for large enterprises, they should enhance internal controls, risk management, capability such as human resources, information technology and compliance with IFRS regulations. Companies can employ internal audit methods to ensure the accuracy and reliability of financial reporting. For SMEs, companies can plan for a long-term conversion to mitigate financial impacts. Instead of an immediate conversion, companies can plan for a phased conversion, starting with the most significant factors or from the upcoming financial years.

The use of loans and international investment capital has pressured businesses to adopt IFRS in their accounting systems. Developing a well-structured conversion plan with clear stages, objectives, and timelines ensures a smooth transition with minimal disruptions. Providing training and expert guidance equips employees with the necessary knowledge and skills to comply with IFRS and meet investor requirements. By undertaking these measures, businesses can effectively incorporate IFRS, enhance their financial reporting practices, attract foreign investments, and thrive in the global marketplace.

6.2. Conclusion

The results identified four direct factors influencing the application, namely profitability, leverage, firm size, and foreign capital. The research also discovered the impact level of these factors on readiness. The findings indicate that profitability has the highest impact weight (0.743), followed by leverage (0.520), firm size (0.201), and foreign capital (0.118).

The research has achieved certain results but still has some limitations. The paper suggests future research directions for related topics. Firstly, the paper does not representative of the entire population. Therefore, future studies could utilize probability sampling methods to improve sample quality and enhance generalizability. Moreover, Future research could consider exploring a wider range of industries to provide a more comprehensive understanding of the factors influencing the adoption of IFRS across various sectors. This would contribute to a more holistic assessment of the readiness and challenges faced by different types of businesses in Vietnam.

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FACTORS AFFECTING THE INTENTIONS IN APPLYING MODERN MANAGEMENT ACCOUNTING OF MANUFACTURING ENTERPRISES IN THE CENTRAL PROVINCES OF VIETNAM

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Abstract: *This study assesses factors affecting the intention to apply modern management accounting (MMA) in manufacturing enterprises in central Vietnam. SPSS and SmartPLS software are used to process data collected from 150 senior leaders and chief accountants in manufacturing enterprises. Research result shows that there are eight factors affecting the intention to apply MMA, including Perception of usefulness, perception of the application's ease, manager's attitude, subjective norms, factors belonging to the business, low-cost strategy, differentiation strategy, and business environment. The manager's attitude has both a direct impact on the intention to apply MMA and an indirect impact on the intention to apply MMA. From the research results, several recommendations are proposed to promote the intentions of applying MMA to manufacturing enterprises in central Vietnam in particular and for all manufacturing enterprises in general.*

Keywords: *Modern management accounting; Modern management accounting application; manufacturing enterprises.*

1. INTRODUCTION

The 4.0 industrial revolution, the development of information technology, and the challenges of the competitive environment have created many new management tools called modern management accounting (MMA). Traditional management accounting is gradually showing limitations, such as focusing on short-term goals and ignoring long-term goals that can help businesses create competitive advantages and sustainable development. In order to overcome those limitations, MMA was born to help businesses achieve sustainable competitive advantage. MMA techniques such as Just-In-Time (JIT), Activity-Based Costing (ABC), and Balanced Scorecard (BSC)… not only provide information collected from within but also from outside the enterprise, with the purpose of not only serving short-term, operational decision-making but also supporting planning, determine and build a long-term vision and strategy. MMA techniques not only evaluate financial indicators but also non-financial indicators: customer satisfaction, delivery time, storage time, etc.

Enterprises in central Vietnam play an important role in the country's economy and society because the central region is the gateway to the sea of the central Highlands region, a pedestal and bridge for the Central Highlands provinces, connecting the route. East West Economic Corridor. Therefore, the issue of economic development in the central region is always focused. According to Thai Anh Tuan (2018), the majority of manufacturing enterprises in Vietnam are aware of the importance of management accounting in planning and making the most accurate and optimal decisions in business management. The application of management accounting is mainly in large enterprises with modern management platforms, but the organisation of management accounting in manufacturing enterprises is still in its infancy or only limited to traditional management accounting. Business administrators still mainly focus on daily management and operations

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through financial accounting data and often attach more importance to financial accounting than management accounting.

There have been many studies in the world and Vietnam on MMA, such as research by Shadi Maher Al-Khasawneh, Wan Anisah Endut, and Nik Mohd Norfadzilah (2020) "Factors affecting usage of MMA techniques in industrial companies listed in Amman Stock Exchange", the results show that factors external to the enterprise have a positive and significant influence on MMA techniques. Additionally, the results show that advanced manufacturing technology, differentiation strategy, and low-cost strategy have a positive and significant impact on the adoption of MMA. Dr Nguyen Quoc Hung (2021), in his research about "*Factors affecting the intention to apply MMA in Vietnamese enterprises*", shows that there are three groups of factors that directly affect the intention to apply modern MA, including (1) Managers (the attitude; subjective norms and expectation); (2) Enterprises (internal factors and unique characteristics) and (3) Environment conditions (competitive pressures; market volatility; information and communication; science and technology; institutional pressures). In addition, research also affirmed two factors that directly impact the attitude of managers, including perceived usefulness and perceived ease of use. In summary, there are many studies on the application of management accounting in businesses in Vietnam, but research projects on the intention to apply MMA are not yet popular, especially when researching enterprises operating in the manufacturing sector in the Central provinces, has not found any research.

Thus, to aim for sustainable development, manufacturing enterprises in general, especially manufacturing enterprises in the central provinces, should consider applying MMA in management and administration. This study will identify specific factors affecting the intentions to apply MMA, thereby serving as a basis for managers in Central enterprises to have policies to apply MMA in their businesses.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. Literature review

MMA is understood as providing financial and non-financial information to support and advise administrators in performing administrative functions such as strategic planning, organisational design, managing production and business activities, evaluating operational efficiency towards the future to create long-term value, increasing value for businesses and stakeholders, towards corporate sustainability (Nguyen et al., 2021). Thus, MMA always has characteristics that show differences compared to traditional management accounting, specifically:

- MMA has an outward and future-oriented focus;
- Information on MMA is both financial and non-financial information;
- Internal systems or set targets do not constrain MMA;
- Support orientation and implementation of long-term goals for businesses.

Thus, the role of management accounting is not limited to providing only internal past information. Still, management accounting needs to provide future-oriented and strategic information for development long-term development and increased value for businesses and stakeholders towards corporate sustainability. This is also the main goal of MMA. Besides traditional management accounting, it gradually shows limitations, such as focusing on short-term goals and ignoring long-term goals that can help businesses create competitive advantages and sustainable development.

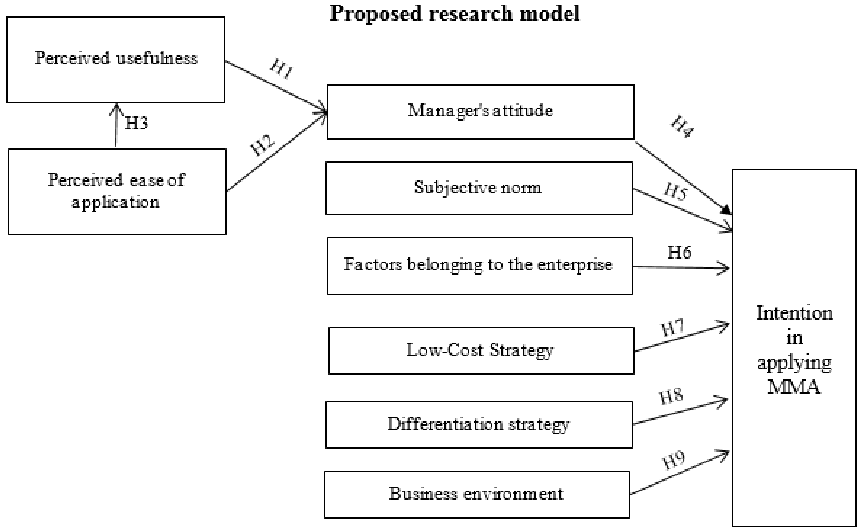
New management accounting techniques have appeared since the 1980s, supported by many authors such as Kaplan (1984), Sulaiman et al. (2015), and Ekbatani (2011). MMA techniques include Activity-Based Costing (ABC); Balanced Scorecard (BSC); Just-In-Time production (JIT); Total Quality Management (TQM); Target Cost; Kaizen costs; Life cycle Cost. These techniques represent basic functions of management, including Cost accounting and control methods; methods of planning, controlling, and measuring operational efficiency; and decision support. In the study, the authors mentioned the above management accounting methods in identifying factors affecting to the intentions in applying management accounting of manufacturing enterprises in the central provinces of Vietnam.

2.2. Research hypotheses and model

Through research, analysis, and comparison of theoretical models of previous scholars, the authors believe that the Theory of Reasoned Action (TRA) model of Fishbein and Ajzen (1975) and the Theory Of Planned Behavior (TPB) model of Ajzen (1991) has strengths in studying behavioural intentions. At the same time, the research team applied a combination of Diffusion of Innovations Theory (DOI), the intention to innovate the organization depends on factors belonging to the manager, enterprise, and organization; the Technology Acceptance Model (TAM) Theory of Davis et al. (1989) and the Technology Acceptance Resource Expansion Model (R-TAM) of Mathieson (2001), research to identify influencing factors to the intention to apply MMA includes Factors of perceived usefulness, perceived ease of application, manager's attitude, subjective norms, factors belonging to the business, low-cost strategy, differentiation strategy, and business environment.

Combining the application of the models of Ayadi and Affes (2014), Urquidi and Ripoll (2013), Sreekumar (2015), Haim Hilman (2014), and Shadi Maher Al-Khasawneh et al. (2020); We believe that business environment, differentiation strategy, and low-cost strategy also have an impact on MMA adoption intention. Therefore, the author added the element "Low-cost strategy" and the element "Differentiation strategy" to the research model.

Proposed research model



(Source: Suggested by author)

Based on research and background theory, we recommend the following hypotheses:

- Perceived usefulness: Perceived usefulness is defined as the degree to which an individual judges that adopting a new technology will lead to an increase in work efficiency (Davis et al., 1989). The factor "Perceived usefulness" that affects "Attitude" has been tested in the studies of Davis (1989) and Mathieson (2001) in the field of information technology application. Research by Subasinghe and Fonseka (2009) also suggests that perceived usefulness has an impact on managers' attitudes toward applying MMA. Therefore, the hypothesis is given as follows:

H1: *There is a positive relationship between the perceived usefulness of applying MMA and managers' attitudes.*

- Perceived ease of application: Perceived ease of application is defined as an individual's perception that using a new technology will not require much effort from that individual. Innovative technological systems that are perceived as easier to use and less complex are more likely to be accepted and used by potential users (Davis et al., 1989). Research by Mathieson (2001) suggests that "Perceived ease of application has an impact on managers' attitudes". Inheriting this research, perceived ease of application is considered one of the important factors affecting the application of MMA. Therefore, the authors hypothesise:

H2: *There is a positive relationship between the perceived ease of applying MMA and managers' attitudes.*

The studies of Davis (1989) and Mathieson (2001), both said that "Perceived ease of application" has an impact on "Perceived usefulness". Using this result, the authors propose the following hypothesis:

H3: *There is a positive relationship between the perceived ease of application and the perceived usefulness of MMA.*

- Manager's attitude: Attitude is defined as a mental readiness gained from experience, creating a direct influence on an individual's reaction to the objects or situations that he or she encounters-contact (Allport et al., 1935). Inheriting the research of Ajzen (1991), Davis (1989), and Mathieson (2001) said that the administrator's attitude will affect the intention to act, and the administrator's attitude will affect the intention to apply MMA. Therefore, the hypothesis is given as follows:

H4: *There is a positive relationship between the manager's attitude and the intention of applying MMA.*

- Subjective norms: Subjective norms are the perceptions of influencers who think that the individual should perform or not perform the behaviour. The ultimate determinant of behaviour is not attitude but behavioural intention (Ajzen, 1991). Inheriting the research of Ajzen (1991), Davis (1989), and Mathieson (2001) said that subjective norms will affect behavioural intentions. Therefore, the hypothesis is given as follows:

H5: *There is a positive relationship between the subjective norm and the intention in applying MMA.*

- Factors belonging to the enterprise: Factors belonging to the enterprise are a set of capabilities that the organization currently has. These factors are one of the conditions for administrators or leaders of organizations to intend to innovate that organization. Research by Pindaro (2007), Rogers (1995), and Venkatesh (2000) also confirm that factors belonging to the business affect innovation in organizations. Therefore, the hypothesis is given as follows:

H6: *There is a positive relationship between the factors belonging to the business and the intention of applying MMA.*

Competitive strategy is a company's long-term action plan to gain a competitive advantage over its competitors after assessing the strengths, weaknesses, opportunities, and threats in the industry and comparing them with themselves (Porter, 1985). The study by Sidra Shahzadi and colleagues (2018) also said that one of the factors within the organization that strongly affects the application of management accounting in management is the competitive strategy in business. Research work by Affes and Ayadi (2014), Urquidi and Ripoll (2013), Sreekumar (2015), Haim Hilman (2014), and Shadi Maher Al-Khasawneh, Wan Anisah Endut and Nik Mohd Norfadzilah (2020), the results for found that differentiation strategy and low-cost strategy have a positive and significant impact on the application of MMA. Therefore, the hypothesis is given as follows:

H7: *There is a positive relationship between the Low-Cost Strategy and the intention in applying MMA.*

H8: *There is a positive relationship between the differentiation strategy and the intention of applying MMA.*

- Factors in the business environment: Includes the impact of the social environment, partners, and legal regulations. In the research model, the authors inherit the research of Pindaro (2007), Rogers (1995), Venkatesh (2000), and Nguyen Quoc Hung (2021). Many businesses are qualified to apply MMA but do not apply it because they do not have external pressure. Therefore, the hypothesis is given as follows:

H9: *There is a positive relationship between the business environment and the intention of applying MMA.*

3. DATA AND METHODOLOGY

3.1. Data

In this study, the authors used the PLS-SEM tool to process data. With the PLS-SEM tool, use a minimum sample size of 10 times the largest formative observatory variable measured for a concept or 10 times the largest number of paths affecting a concept in the model (Barclay & al, 1995). In many cases, Hair and colleagues (2016) advise researchers to choose a standard sample size calculation formula according to Cohen (1992). Cohen in 1992 suggested that the minimum sample size needed to use in research depends on the number of arrows pointing to the structure in the PLS path model or independent variables used in the research model. Assuming the number of independent variables in the structural model is 05, 122 observations are needed to achieve statistical power (at a 5% significance level). This study has eight independent variables, so the sample number needed is at least 144.

In actually conducting the survey, the authors conducted over 150 research samples that met the requirements. The survey subjects of the project are senior leaders and chief accountants in manufacturing enterprises in the central provinces of Vietnam. Thus, with the expected sample size as above, it can be concluded that the sample size is large enough to run the model and is appropriate.

3.2. Methodology

The research was studied by combining the qualitative method and the quantitative method, done in two following steps: (1) *Qualitative research*: In this study, qualitative research was conducted through consulting with experts. After synthesising expert opinions, the authors grouped similar factors and evaluated their important roles, representing the characteristics of factors affecting the intention to apply MMA to manufacturing enterprises in the central of Vietnam. (2) *Quantitative research*: After being collected, the questionnaires were processed on SPSS 22.0 and SmartPLS 3.0 software to perform data analysis through the following steps: Descriptive statistics, scale reliability testing measure, evaluation measurement models, and evaluation structural models. The measurement scales and coding of variables are shown in Table 1.

Table 1: Summary of measurement scales and coding of observed variables

Variable	Name	Observed variable	Source
Perceived usefulness (HI)	HI1	MMA information helps administrators control production costs effectively.	Davis (1989), Mathieson (2001), Subasinghe và Fonsseka (2009)
	HI2	MMA information helps administrators plan better strategies.	
	HI3	MMA information helps administrators avoid risks when making decisions.	
	HI4	MMA will help administrators control business activities better.	
	HI5	MMA knowledge is useful for administrators.	
Perceived ease of adoption (AD)	AD1	MMA information is presented in an easy-to-understand manner and provides timely information to users.	Davis (1989), Mathieson (2001)
	AD2	Applying MMA methods is quite easy.	
	AD3	MMA reports can be presented simply without depending on any regulations.	
	AD4	Administrators without accounting expertise can also read and understand the Management Accounting Report.	
	AD5	Administrators with knowledge of economic management can read and understand the Management Accounting Report.	
Factors belonging to the enterprise (DN)	DN1	The enterprise size has an impact on the application of MMA.	Pindaro (2007), Rogers (1995), Venkatesh (2000)
	DN2	The specific characteristics of an enterprise's production and business organisation model have an impact on the application of MMA.	
	DN3	A professional management team trained in management accounting in business has an impact on the application of MMA.	
	DN4	The enterprisehas the infrastructure and management equipment has an impact on the application of MMA.	
	DN5	The enterprisehas a communication team that guides and reorganises the management process, which has an impact on the application of MMA.	
Low-Cost Strategy (CS)	CS1	The enterprise fully exploits resources to serve management work.	Ayadi and Affes (2014), Haim Hilman (2014), Sreekumar (2015), Urquidi và Ripoll (2013)
	CS2	The enterprise focuses on innovating processes in management accounting	
	CS3	The enterprise focuses on minimising costs in management.	
Differentiation strategy (DS)	DS1	The enterprise focuses on creating uniqueness in management.	Amara và Benelifa (2017), Ghasemi etal., (2015), McLellan và Moustafa (2011)
	DS2	The enterprise always creates motivation to promote innovation in management.	
	DS3	The enterprise always demonstrates outstanding value in management.	
Manager's attitude (TD)	TD1	Applying MMA is necessary to make accurate decisions.	Ajzen, I.(1991), Davis (1989), Mathieson (2001)
	TD2	Not applying MMA makes us often have difficulty deciding on the optimal solution.	
	TD3	Without applying MMA, we can easily make mistakes when making decisions if we rely on emotions and experience.	
	TD4	Not applying MMA means we do not have timely information to make decisions.	
	TD5	Not applying MMA makes us feel unsafe in management.	

Subjective norms (CM)	CM1	Administrators should be properly aware that competitive pressure is a factor motivating businesses to apply for MMA.	Ajzen, I.(1991), Davis (1989), Mathieson (2001)
	CM2	Administrators should be properly aware of the effects of MMA information.	
	CM3	Administrators need to appreciate the role of MMA in management work.	
	CM4	Administrators need to apply MMA in management is necessary.	
	CM5	Administrators need to use MMA information because of the importance of them to decision-making.	
Factors in the business environment (MT)	MT1	The uncertainty and ever-changing nature of the market cause businesses to apply MMA.	Pindaro (2007), Rogers (1995), Venkatesh (2000), Nguyen Quoc Hung (2021)
	MT2	Market information is increasingly abundant and diverse, making it difficult to choose the optimal solution, requiring the application of MMA.	
	MT3	The professionalism of competitors pushes businesses to change their management.	
	MT4	Media information such as the message "improving management capacity" of the Prime Minister at business forums, the 4.0 technology era... has motivated businesses to apply for MMA.	
	MT5	The development of information technology is putting pressure on businesses to change their management methods.	
	MT6	Institutional pressure (such as Circular 53 - Guidance on enterprises applying management accounting) has an impact on the intention to apply MMA in enterprises.	
Intention in applying MMA (YD)	YD1	We will learn about modern management economics.	Ajzen, I.(1991), Davis (1989), Mathieson (2001)
	YD2	We will participate in training courses on MMA to consider and apply it.	
	YD3	We are interested in applying scientific management measures.	
	YD4	We need time to prepare before applying for MMA.	
	YD5	We intend to apply MMA in the future.	

(Source: Suggested by author)

4. RESULTS AND DISCUSSION

To test the influence of factors on the intention to apply MMA, we use SPSS 22 and SmartPLS 3.0 software.

4.1. Descriptive Statistics

The research variables are summarized in the following table:

Table 2: Description of characteristics of manufacturing enterprises in the Central provinces of the research sample

Characteristic	Quantity	Ratio (%)
1. Type of company		
Private enterprise	6	4.0
Limited liability company	98	65.3
Joint Stock Company	44	29.3
Enterprises with foreign investment capital	1	0.7
Other	1	0.7
2. Total number of employees of the entire enterprise: (People)		
Under 50	34	22.7
From 50 - 100	51	34.0
From 100 - 500	43	28.7
Over 500	22	14.7
3. Total business capital: (Billion VND)		
Below 5	11	7.3

From 5 - 10	48	32.0
From 10 - 50	63	42.0
Over 50	28	18.7
4. Enterprise age: (Years)		
Below 5	24	16.0
From 5 - 10	38	25.3
Over 10	88	58.7
Total	150	100

(Source: Compiled from survey data by the author, 2022)

From the obtained results, 150 questionnaires were used as a research sample classified by business age, size, and type of business. Of the total 150 survey samples, the proportion of samples belonging to the Limited Liability Company type is the highest, accounting for 65.3%, more than half of the research sample. This result is consistent with current reality. Next, the survey sample of the Joint Stock Company type is second with a rate of 29.3%, and the remaining types are Private Enterprises and other types with a low rate. Total number of employees of the entire enterprise: 34% of the sample participating in the survey work in enterprises with 50 - 100 employees. This result is consistent with the general characteristics of manufacturing enterprises in the central provinces of Vietnam. Meanwhile, the number of survey samples working in large-scale enterprises (500 employees or more) accounts for the lowest proportion of 14.7% of the total 150 research samples. According to total business capital, The majority of research samples focus on capital of 5 to 10 billion, accounting for 42% of the total sample surveyed. The survey sample only had capital of less than 5 billion, accounting for the lowest percentage, only 7.3%. By enterprise age: Out of the total 150 survey samples, the proportion of enterprises with a business age of over 10 years is the highest, accounting for 58.8%, more than half of the research sample. Next, businesses with a business age of 5 to 10 years are ranked second with a rate of 25.3%; the remaining are businesses with a business age of less than five years, accounting for a low rate.

4.2. Results of testing the reliability of the scale

The data processing results in Table 3 and Table 4 show that the scales all have Cronbach's Alpha coefficients greater than 0.8, the combined reliability of the scales is greater than 0.7 and the external loading factor is greater than 0.8. (outer loading) of the observed variables are all greater than 0.4. Thus, the scales in the model are highly reliable.

Table 3: Measurement results of external factor loadings (OL)

	CM	CS	DA	DN	DS	HI	MT	TD	YD
CM1	0.829								
CM2	0.877								
CM3	0.932								
CM4	0.919								
CM5	0.875								
CS1		0.880							
CS2		0.895							
CS3		0.848							
DA1			0.615						

DA2			0.847						
DA3			0.798						
DA4			0.899						
DA5			0.888						
DN1				0.840					
DN2				0.855					
DN3				0.895					
DN4				0.820					
DN5				0.864					
DS1					0.907				
DS2					0.921				
DS3					0.913				
HI1						0.817			
HI2						0.922			
HI3						0.903			
HI4						0.919			
HI5						0.895			
MT1							0.913		
MT2							0.899		
MT3							0.905		
MT4							0.911		
MT5							0.763		
MT6							0.796		
TD1								0.899	
TD2								0.844	
TD3								0.847	
TD4								0.858	
TD5								0.886	
YD1									0.879
YD2									0.902
YD3									0.847
YD4									0.924
YD5									0.866

(Source: Results of research data analysis by the author, 2022)

Table 4: Results of measuring reliability and convergent validity

Observed variables	Cronbach's Alpha Coefficient	Composite reliability (CR)	Variance Average extraction (AVE)
CM	0.932	0.949	0.787
CS	0.850	0.907	0.764
DA	0.871	0.908	0.666
DN	0.908	0.931	0.731
DS	0.901	0.938	0.835

HI	0.936	0.951	0.796
MT	0.933	0.947	0.751
TD	0.917	0.938	0.752
YD	0.930	0.947	0.781

(Source: Results of research data analysis by the author, 2022)

Based on the results in Table 3, Table 4 shows that the external loading coefficients of the observed variables are all greater than 0.7, and the AVE values in the model all reach values greater than 0.5. Therefore, the proposed scales all meet the requirements for convergent validity.

4.3. Evaluate the model

The research results in Table 5 show that the scale's discrimination is very good. All values of the Heterotrait-monotrait ratio (HTMT) are smaller than the threshold of 0.85. This proves that the proposed scales all meet the requirements of discriminant validity. Therefore, the variables proposed by the authors are retained for the next steps.

Table 5: Heterotrait-Monotrait Ratio (HTMT)

	CM	CS	DA	DN	DS	HI	MT	TD	YD
CM									
CS	0.444								
DA	0.612	0.301							
DN	0.423	0.328	0.516						
DS	0.666	0.387	0.533	0.564					
HI	0.421	0.126	0.849	0.369	0.372				
MT	0.356	0.323	0.355	0.181	0.334	0.289			
TD	0.579	0.291	0.772	0.510	0.603	0.709	0.335		
YD	0.714	0.501	0.566	0.438	0.843	0.405	0.435	0.650	

(Source: Results of research data analysis by the author, 2022)

The results of Table 6 show that the variance inflation factor (VIF) of all exogenous variables is less than 5, so the research model's multicollinearity phenomenon is still at an acceptable level.

Table 6: Results of evaluating the VIF coefficient

	VIF		VIF		VIF
CM1	2,371	DN2	3,097	MT3	4,482
CM2	3,175	DN3	3,297	MT4	4,324
CM3	4,982	DN4	2,507	MT5	3,612
CM4	4,245	DN5	2,551	MT6	3,969
CM5	3,329	DS1	2,738	TD1	3,833
CS1	1,759	DS2	3,085	TD2	2,579
CS2	2,795	DS3	2,740	TD3	2,753
CS3	2,361	HI1	2,236	TD4	2,857
DA1	1,375	HI2	4,970	TD5	3,213
DA2	2,344	HI3	4,373	YD1	3,779

DA3	2,047	HI4	4,085	YD2	4,070
DA4	3,094	HI5	3,410	YD3	2,574
DA5	2,856	MT1	4,054	YD4	4,523
DN1	3,057	MT2	4,622	YD5	3,013

(Source: Results of research data analysis by the author, 2022)

R^2 in Table 7 shows that the model has good quality. The analysis results show that the variable "Perceived ease of application" explains 64.0% of the variation "Perceived usefulness"; the variable "Perceived ease of application" and the variable "Perceived usefulness" explained 51.2% of the variation "Manager's attitude"; the variable "Factors belonging to the business", the variable "Low-cost strategy", the variable "Differentiation strategy", the variable "Manager's attitude", the variable "Subjective Norms" and the variable "Business environment" explains 75.6% of the variable "Intention to apply MMA". Thereby, the R^2 value shows moderate and strong predictive ability.

Table 7: Testing using R^2 and adjusted R^2

	R^2-value	Corrected R^2 value
HI	0.643	0.640
TD	0.519	0.512
YD	0.766	0.756

(Source: Results of research data analysis by the author, 2022)

The data in Table 8 summarizes the results of the impact of f^2 when the authors split the structural model into small models with one dependent variable (HI, TD, YD) and several independent variables. Specifically, DA has a large impact on HI, DA has a large impact on TD, and DS has a large impact on YD; The remaining relationships have a small impact.

Table 8: Results of impact scale coefficient f^2

Relationship between variables	f^2	Influence level
CM->YD	0.059	Small impact
CS->YD	0.067	Small impact
DA->HI	1.800	Big impact
DA->TD	1.162	Big impact
DN->YD	0.027	Small impact
DS->YD	0.783	Big impact
HI->TD	0.062	Small impact
MT->YD	0.031	Small impact
TD->YD	0.063	Small impact

(Source: Results of research data analysis by the author, 2022)

The results summarized in Table 9 show that with the assumption of a 5% significance level, the relationships in the model are all statistically significant ($p < 0.05$) and have a positive relationship.

Table 9: Results of direct impact relationship

	Impact coefficient	t-Statistics	p-value
CM -> YD	0.061	1.602	0.010
CS -> YD	0.142	3.064	0.002
DA -> HI	0.802	13.373	0.000
DA -> TD	0.467	2.038	0.042
DN -> YD	0.097	1.969	0.049
DS -> YD	0.606	5.893	0.000
HI -> TD	0.089	1.155	0.048

(Source: Results of research data analysis by the author, 2022)

In addition, the results of testing the intermediate variable using the BC-bootstraps method shown in Table 10 show that the indirect effects of the factors in the model are shown as follows: the variable "Perceived usefulness" has a full intermediary role between the variable "Perceived ease of application" and the variable "Manager's attitude". "Manager's attitude" is a partial mediating variable between "Perceived usefulness" and "Intention to apply MMA". Thus, the manager's attitude has both a direct impact on the intention to apply MMA and an indirect impact on the intention to apply MMA.

Table 10: Results of testing the mediating role

Relationship	Estimate	p-value	Conclude
DA -> HI -> TD	0.235	0.000	Full intermediary role
HI -> TD -> YD	0.024	0.002	Full intermediary role
DA -> HI -> TD -> YD	0.078	0.000	Partial intermediary role
DA -> TD -> YD	0.078	0.002	Partial intermediary role

(Source: Results of research data analysis by the author, 2022)

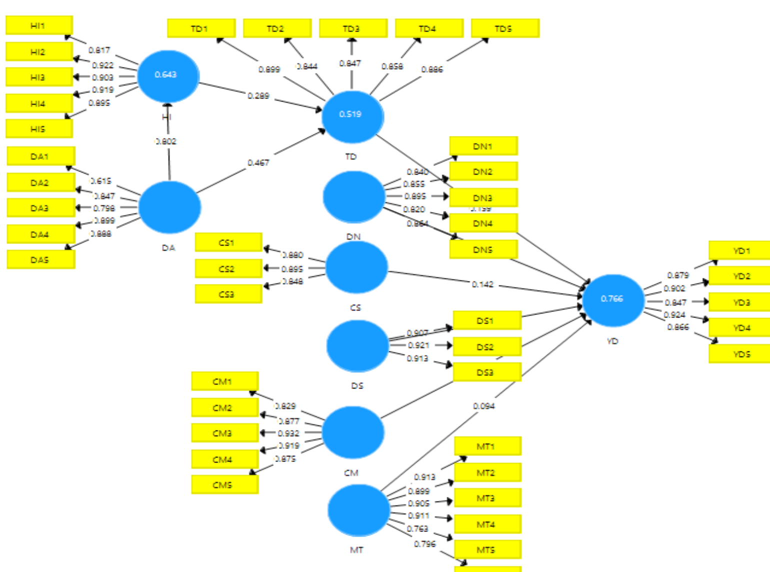


Figure 1: Model evaluation results

In this study, the authors discovered factors that influence the intentions in applying MMA to manufacturing enterprises in central provinces of Vietnam. From the research model proposed by the authors, the project tested nine hypotheses. According to the test results, nine hypotheses H1, H2, H3, H4, H5, H6, H7, H8, and H9, all have a positive impact on the intention to apply MMA.

5. CONCLUSION AND POLICY IMPLICATIONS

The study has identified factors affecting to the intentions in applying MMA of manufacturing enterprises in central provinces of Vietnam. According to quantitative analysis results, factors that positively impact the intention to apply MMA include Perceived usefulness, perceived ease of application, manager's attitude, subjective norms, factors belonging to the business, low-cost strategy, differentiation strategy, and business environment. The results of hypothesis testing accepted hypotheses H1, H2, H3, H4, H5, H6, H7, H8, H9. The research results also show that there are similarities and new findings compared to previous studies. DA has a large impact on HI, DA has a large impact on TD, and DS has a large impact on YD. This result is the basis for the authors to propose recommendations for business managers.

Research results have shown that two factors, "Perceived usefulness" and "Perceived ease of application", have a direct impact on a "Manager's attitude". Therefore, increasing managers' Perceived usefulness and perceived ease of application will make managers have a positive attitude about applying MMA. Regarding the "Perceived usefulness" factor, for managers to have a positive attitude about applying MMA, it is necessary to make them feel that applying management accounting is very useful. MMA information helps managers plan better strategies, control production costs, and operate business operations more effectively. Regarding the factor "Perceived ease of application", to move towards the intention of applying MMA, managers need to feel that these methods are easy to apply, appropriate, and applicable to their business. This requires managers to have knowledge and understanding of MMA. Managers must focus on improving management skills and knowledge of management accounting, especially MMA, through long-term or short-term training programs. The differentiation strategy factor is a strategy that focuses on providing a product or service with different attributes compared to competitors to reach a large market. Differentiation helps businesses become different and grow. Businesses must invest in market research and communication activities to find out the unique properties of their products compared to competitors. Differentiation strategy is considered the key for brands to unleash creativity and innovation and assert their position in the market. A differentiation strategy is truly an effective long-term solution for businesses in today's increasingly fierce market competition.

During the process of implementing the project, the authors could not avoid some limitations, such as research space and research subjects, so they could not accurately and fully evaluate the factors affecting and the affecting level of these factors to the intentions in applying MMA. These are also research directions that the authors can consider and will research in the future. The authors intend to expand the scale of research to neighbouring areas, especially delving into the research of new factors affecting the intentions in applying MMA in more enterprises.

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ENHANCING FINANCIAL CAPABILITY THROUGH MERGERS AND ACQUISITIONS ACTIVITIES IN ENTERPRISES

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Abstract: The research aims to propose solutions for mergers between Vietnamese securities companies to improve the financial capacity of securities companies currently operating on the Vietnam Stock Exchange - VNX (HNX, HoSE and Upcom exchanges). Through research samples collected from 27 Vietnamese securities companies in the period from 2014 to 2021, secondary data are audited financial statements and financial safety reports. By using the quantitative research method of principal component analysis PCA (Principal Component Analysis) and K-means (cluster) analysis on SPSS 20 software. As a result, the authors have classified 4 clusters of Securities companies can merge with each other according to the criteria of financial capacity and business strategy to improve financial capacity in the future. Based on the research results, the author provides some discussions and assessments on the important role of improving the financial capacity of securities companies, and recommends financial solutions for strategic development goals. long-term, based on growth and limiting risk management for companies in volatile stock market conditions.

Keywords: Securities company financial capability, Mergers and acquisitions, Securities company financial safety, Securities company risk management, Securities company financial reporting, Securities company financial safety reporting.

1. INTRODUCTION

In the modern economy, the financial market plays a crucial role as a medium for short and long-term capital flow in the economy. To ensure the efficient functioning of the financial market, the role of market intermediaries, including securities companies, cannot be ignored.

In Vietnam, the establishment and development of securities companies are closely tied to the evolution of the financial market. Since the official launch of the market in July 2000, the number of securities companies has grown from 5 to nearly 80, including 27 small-scale securities companies (capital under 1,000 billion VND). There was a time when the number of securities companies reached 105 (as of December 2009). However, under the influence of market economic laws, many securities companies operated inefficiently, leading to mergers, acquisitions, cessation of operations, and dissolution, resulting in a decrease in the number of securities companies.

Vietnam is increasingly integrating into the global economy, and its financial market is expanding. Vietnamese securities companies are facing a mix of opportunities and challenges. To survive and develop, securities companies must first enhance their financial capability. This imperative emerges from the consensus among experts and managers that the fundamental issue lies in weak financial capability.

As Vietnam integrates deeply into the global economy, and its financial market expands, Vietnamese securities companies are facing intertwined opportunities and challenges. To survive and thrive, securities companies must primarily enhance their financial capability. This necessity arises from the consensus among experts and managers that the underlying cause of the issue is weak financial capability.

Amid the changing landscape, many securities companies have made efforts to improve their financial capability to meet the demands of the competitive environment, ensuring their stability and development. However, facing new development requirements, many companies have begun to reveal weaknesses in financial capability, resulting in consecutive years of losses.

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2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

According to Tran Van Hai (2023), "Financial capability of a securities company is a term describing the financial capacity of the company. This capacity is reflected through the ability to have capital to support business activities, payment capability, and profit generation of a securities company." Financial capability not only reflects the current financial ability of the securities company but also its potential and prospects, even in the future. The financial capability of a securities company reflects its organizational ability to conduct business operations and achieve financial goals within a certain period (Tran Van Hai, 2023). To enhance the financial capability of securities companies, various studies have been conducted worldwide, including:

In the research conducted by IOSCO, the International Organization of Securities Commissions (1998), "Methodologies for Determining Minimum Capital Standards for Internationally Active Securities Firms Which Permit the Use of Models Under Prescribed Conditions" (IOSCO, 1998), methodologies were established to determine minimum capital standards for internationally active securities firms, allowing the use of models under standards 21 and 22. Additionally, IOSCO introduced objectives and principles of securities regulations in May 2003, increasing investor protection and financial system stability through thorough supervision of capital standards. Capital standards allow securities firms to withstand losses, especially in unfavorable market volatility, and achieve an environment where securities firms can cease operations for a short period without affecting customers and disrupting the orderly functioning of the financial market. According to IOSCO's perspective, securities firms with sufficient capital levels do not pose risks to customers, investors, or partners. This implies that a securities firm with adequate capital can achieve other management objectives. The principles for market intermediaries, mainly securities companies, consist of 4 principles:

Principle 21: Establish minimum input standards for market intermediaries.

Principle 22: Initial and ongoing capital requirements for market intermediaries to reflect the risks they undertake.

Principle 23: Market intermediaries must adhere to internal organization and conduct standards to protect client interests and manage risks.

Principle 24: Market intermediaries should have procedures to handle incidents to minimize damages, losses for investors, and limit systemic risks (IOSCO, 1998).

In this way, the IOSCO principles establish the first and most important standards, which are the capital adequacy standards, the sufficient capital level, and the result is ensuring the payment requirements of securities firms.

According to Healy and colleagues (1990), *Does corporate performance improve after mergers.* The study investigated the operational effectiveness of companies following mergers and acquisitions by employing a sample of 50 merger transactions among US industrial companies completed during the period from 1979 to 1983. The research results concluded that merged companies experienced significant improvements in profitability and cash flow after the mergers, leading to an increase in their assets. There exists a strong positive correlation between the post-merger increase in operational cash flow and stock profitability, with the expectation of economic enhancement serving as the basis for the reassessment of the ownership capital of companies after the mergers (Healy, 1992). Therefore, the merger and consolidation strategies among multiple companies will synergistically bolster the financial prowess of these strong companies through increased cash flow, profitability, and asset augmentation.

According to Herring and colleagues (2005), in their study "*Capital regulation for position risk in Banks, Securities firms, and Insurance companies*," the authors examined the reasons behind the differences in capital regulations, even though securities firms and insurance companies engage in similar financial business activities and share some common partners. The study also highlighted the contrasting capital regulatory approaches between US securities firms and those in Europe. European regulators often apply consolidated supervision and capital regulation to the securities activities of commercial banks within their jurisdiction, treating them similar to any other traditional banking activities (Herring, 2005). The capital adequacy regulations for securities firms in the US, differing from those in Europe, will provide certain advantages for US securities firms.

Harimaya et al. (2006), *The Changing Structure of Cost for Japanese Securities Firms*. Harimaya and their team conducted a study on Japanese securities firms from 1998 to 2002, examining the emergence of online securities firms and the differences compared to existing securities firms after the relaxation of regulations. For instance, banks participating in securities business through their subsidiaries. The research supports the existence of small online securities firms participating in a specific securities business sector (Harimaya, 2006). The study's findings suggested that the online securities firm model brings about business efficiency, as well as the issue of bank ownership yielding positive results.

Elyasiani et al. (2007). *Convergence and Risk-Return Linkages Across Financial Service Firms.* Elyasiani and colleagues (2007) conducted research on the interconnection of risk and return among commercial banks, securities firms, and life insurance companies in the United States from 1991 to 2001. The results revealed a significant and size-dependent interdependence between profitability and risk that varies with scale. Larger organizations exhibited stronger risk transmission (volatility), while smaller organizations displayed clearer profit interdependence with limited risk propagation. The differences in risk transmission models between larger and smaller organizations impact investment choices, trading, and mergers and acquisitions within the industry. In economies with developed financial sectors, there's a trend towards mergers and consolidations across sectors such as commercial banking, insurance, and securities to enhance competitiveness and efficiency. However, this is accompanied by an increase in risk with scale, underscoring the necessity for high financial capacity and securities liquidity requirements to be thoroughly considered.

Fang et al. (2009), *A Metafrontier Study of Securities Broker and Dealer Efficiency Under Zero-Sum Gains.* The study by Fang and colleagues (2009) focused on the efficiency of brokers and dealers within securities firms within a zero-sum gain framework. Current studies estimate firm-level efficiency using conventional data envelopment analysis (DEA) but neglect the constraint of 100% market share. Experimental findings demonstrated that the conventional DEA model underestimates the efficiency of less efficient securities firms in Taiwan. The technology gap ratio in the output orientation indicates that foreign ownership has a negative impact on securities firm efficiency. Specialized securities brokerage firms are significantly more efficient than integrated securities firms. Additionally, financial reforms initiated by the government cannot improve the efficiency of broker and dealer intermediaries in the securities industry.

Samuels (2018), *Early Warning System for Economic and Financial Risks in Jamaica*. Samuels (2018) presented the notion that "Indicators used to measure the stability of banks and securities dealers include: capital adequacy, asset quality, liquidity, profitability, and sensitivity to market risk." The study's shortcoming is that the author didn't consider capital capacity and the capital adequacy ratio of securities firms.

3. METHODOLOGY AND PROPOSED MODEL

The study predominantly employs a quantitative research methodology. The paper utilizes techniques such as Principal Component Analysis (PCA) and K-means clustering analysis within the SPSS 20 software.

The current market scenario reveals an excess of securities firms in comparison to the demand and market scale. Moreover, a significant proportion of securities firms face financial limitations. Consequently, the M&A strategy among securities firms emerges as a near "compulsory" option for smaller-scale securities firms aiming to augment their ownership capital.

From the perspective of securities firms, there is a need to reevaluate the objectives of establishment and operational activities in light of the firm's owners. Shareholders of securities firms, particularly those that have experienced prolonged periods of losses or inefficiencies, should actively seek partnerships for mergers or the sale of the firm. This approach aims to reduce risk and enhance financial capability.

Smaller-scale securities firms, unable to acquire additional capital from investors, encounter challenges in issuing shares to raise funds. Firms that have sustained losses for several consecutive years or exhibit modest profitability insufficient for establishing a robust market presence, or firms that possess core software technology but face high prospects of intense competition in the forthcoming years, should consider engaging in M&A. These firms must recognize that M&A represents a favorable opportunity for bolstering growth, cost savings, and achieving a critical and sustainable competitive advantage over rivals in the market. For instance, a firm with a low debt-to-equity ratio can potentially partner with a firm that employs high financial leverage. This synergistic approach aims to balance the financial structure of the company.

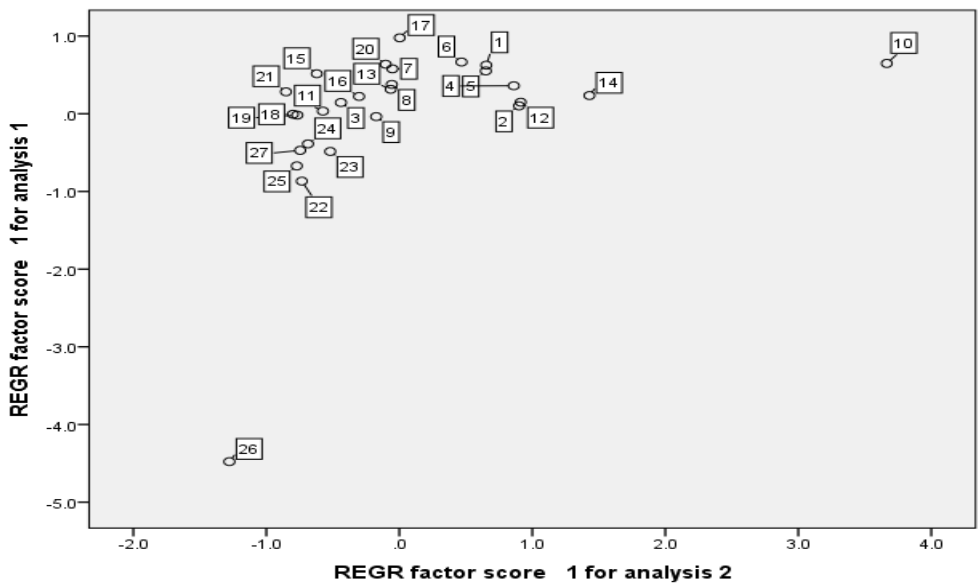
However, alongside the achieved benefits, M&A transactions entail numerous risks that can pose threats to existing shareholders. Therefore, a complete merger or consolidation is only pursued when no alternative solutions remain. Identifying potential partners assists companies in making swift decisions when opportunities arise. The aforementioned criteria can be adjusted for each M&A transaction, with fundamental criteria revolving around the financial capacity and performance of the candidate company.

Securities firms can engage in M&A through horizontal combinations between two or more securities firms. The outcomes of such combinations extend beyond increasing the scale of shareholders' equity. They offer opportunities to expand into new markets, combine brand identities, reduce fixed costs, and enhance the efficiency of service delivery systems. In this type of transaction, the management teams of both participating securities firms will possess a wealth of information regarding each other's business conditions.

The paper employs statistical techniques such as Principal Component Analysis (PCA) and K-means clustering analysis using SPSS software to examine the financial capability and business strategies of small-scale securities firms during the period from 2014 to 2021. Securities firms with similar characteristics are grouped together into clusters based on the results. Leveraging this outcome, the study proposes potential M&A opportunities among these securities firms. The following steps are undertaken:

Step 1: Conduct an analysis to generate two representative variables named FAC1_1 (REGR factor score 1 for analysis 1) and FAC1_2 (REGR factor score 1 for analysis 2), based on the financial capability and business strategy variables of the securities firms. Chart 1 illustrates the correlation between these newly established variables.

Chart 1. Characteristics of Small-scale Securities Firms in Financial Capability and Business Performance



Source: Statistical research conducted using SPSS software

Step 2: Based on the two newly created variables, the study employs the K-means clustering technique to cluster 27 securities firms (Table 1).

Table 1. History of Cluster Center Changes

Iteration History[a]									
Iteration	Change in Cluster Centers								
	1	2	3	4	5	6	7	8	9
1	.494	.000	.422	.000	.504	.260	.182	.000	.261
2	.121	.000	.000	.000	.339	.227	.546	.000	.008
3	.116	.000	.000	.000	.366	.000	.303	.000	.050
4	.040	.601	.000	.000	.374	.000	.095	.000	.026
5	.052	.000	.000	.000	.192	.000	.099	.000	.030
6	.073	.000	.000	.000	.192	.000	.016	.000	.009
7	.064	.459	.000	.000	.263	.000	.000	.000	.009
8	.076	.000	.000	.000	.103	.000	.000	.000	.020
9	.053	.000	.000	.000	.033	.000	.000	.000	.029
10	.050	.000	.000	.000	.040	.000	.016	.000	.035

a. Iterations stopped because the maximum number of iterations was performed. Iterations failed to converge. The maximum absolute coordinate change for any center is .050. The current iteration is 10. The minimum distance between initial centers is 1.948.

Source: Statistical research conducted using SPSS software

To analyze the differences among the securities firms, the author utilizes the Two-sample T-test for two populations. In cases involving more than two groups, the author employs Analysis of Variance (ANOVA). While the T-test requires pairwise comparisons, the accumulation of errors for each comparison at a 5% significance level can lead to an overall error rate different from 5%. Therefore, in this situation, ANOVA is recommended as it simultaneously tests all sample groups with an overall error rate of 5%. The results are as follows:

Table 2. ANOVA Statistical Table

ANOVA						
	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	Df		
REGR factor score 1 for analysis 1	23.220	8	.116	201	200.810	.000
REGR factor score 1 for analysis 2	24.009	8	.084	201	285.082	.000

Source: Statistical research conducted using SPSS

The sig value of the ANOVA table is 0.000 < 0.05, indicating that the clustering results align well with the collected data.

Table 3. Clustering Results of 27 Small-Scale Securities Firms

Cluster Membership					
Case Number	Cluster	Case Number	Cluster	Case Number	Cluster
APSC	7	HBS	9	SJCS	9
ASCS	9	HVS	7	VIG	9
Beta	1	IRS	1	VISE	1
CSI	9	JSI	9	VISECO	9
CVS	7	LVS	1	VNSC	7
DongA	1	NVS	1	VSEC	1
DVSC	5	ROSE	9	VTSC	9
ECC	9	SBBS	9	VTSS	9
HAC	1	SBS	5	VUA	5

Source: Statistical research conducted on SPSS

4. RESEARCH RESULTS

Through Table 3, it is evident that the securities firms are classified into 4 clusters (clusters 1, 5, 7, and 9). Based on these results, the study proposes M&A activities between securities firms belonging to these 4 clusters to increase the scale of equity capital and financial capacity. Specifically:

Cluster 1: Securities firms including Beta Securities, DongA Securities, HAC Securities, IRS Securities, LVS Securities, NVS Securities, VISE Securities, and VSEC Securities.

Cluster 2: Securities firms including DVSC Securities, SBS Securities, and VUA Securities.

Cluster 3: Securities firms including APSC Securities, CVS Securities, HVS Securities, and VNSC Securities.

Cluster 4: Securities firms including ASCS Securities, CSI Securities, ECC Securities, HBS Securities, JSI Securities, ROSE Securities, SBBS Securities, SJCS Securities, VIG Securities, VISECO Securities, VTSC Securities, and VTSS Securities.

5. DISCUSSION AND CONCLUSION

According to the researcher, newly merged securities firms resulting from M&A within the same clusters should meet a minimum equity capital requirement of over 1,000 billion VND.

From the perspective of government agencies, clear signals are necessary regarding the reduction of the number of securities firms. The policy should continue to discourage the establishment of new securities firms and instead encourage the restructuring of existing ones through mergers and consolidations.

The gradual process of merging and consolidating securities firms serves to reduce the number of such firms in the market while minimizing negative fluctuations for the securities market system. This includes addressing issues related to customer transaction account handling and related financial obligations, consulting and underwriting contracts for securities issuance, handling technical infrastructure, and the workforce of operating personnel in merged or consolidated securities firms. This process also significantly curbs the erosion of investor and customer confidence in securities firms, compared to the process of dissolution or bankruptcy. Furthermore, post-merger or consolidation, securities firms can pool resources, including both human and financial resources, to execute securities business activities.

State agencies need to establish and implement specific regulations concerning the dissolution, consolidation, and merger of securities business entities, including securities firms. The procedure for implementing dissolution, consolidation, or merger of securities firms needs to be clarified, including situations where such actions are mandatory. Encouragement mechanisms should prioritize smaller securities firms merging with larger ones (with equity capital exceeding 1,000 billion VND) in the market or consolidating with other smaller securities firms to continue providing financial market services. Incentive mechanisms may involve exemptions, reductions, or deferrals of corporate income tax for 2-3 years, reductions in securities investment tax for investors opening accounts and conducting securities transactions at the merged or newly established firms within a specified period, possibly 6-12 months...

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APPENDIX: 27 SECURITIES COMPANIES WITH SMALL CAPITAL SCALE

No.	Stock code	Company Name	Website
1	APSC	ALPHA Securities Joint Stock Company	https://apsc.vn
2	ASCS	VPB Securities Coporation	https://www.vps.com.vn
3	Beta	Beta Securities Incorporation	https://www.bsi.com.vn
4	CSI	Vietnam Construction Securities Joint Stock Company	https://vncsi.com.vn
5	CVS	CV Securities Corporation	http://cvs.vn
6	DongA	Dong A Securities Corporation	https://www.dag.vn
7	DVSC	Dai Viet Securities Corporation	https://www.dvsc.com.vn
8	ECC	Eurocapital Securities Joint Stock Company	https://www.ecsc.vn
9	HAC	Hai Phong Securities Joint Stock Company	https://haseco.vn
10	HBS	Hoa Binh Securities Joint Stock Company	https://bos.vn
11	HVS	HVS Viet Nam Securities Company	https://hvsvn.com
12	IRS	Royal International Securities Joint Stock Company	https://www.irs.com.vn
13	JSI	Japan Securities Co., Ltd.	https://www.japan-sec.vn
14	LVS	Lien Viet Security Joint Stock Company	http://www.lvs.com.vn
15	NVS	Navibank Securities Joint Stock Company	https://nvs.vn/Default.aspx
16	ROSE	Royal International Securities Joint Stock Company	https://www.irs.com.vn
17	SBBS	Saigonbank – Berjaya Securities JSC	https://sbbs.com.vn/vi/
18	SBS	SBS Securities Joint Stock Company	http://www.sbsc.com.vn
19	SJCS	ASAM Securities Corporation	https://asamvn.com.vn
20	VIG	Financial Investment Securities Corporation	https://visc.com.vn/vi
21	VISE	Vietnam International Securities Joint Stock Company	https://gtjai.com.vn
22	VISECO	Viet Securities Joint Stock Company	https://vietsc.vn/trang-chu
23	VNSC	VinaSecurities Joint Stock Company	https://www.vnsc.vn
24	VSEC	RHB Securities VietNam Company Limited	https://rhbsecurities.vn/?w=1280
25	VTSC	Viet Thanh Securities Company	https://vts.com.vn
26	VTSS	Viet Tin securities Joint Stock Company	https://viet-tin.com
27	VUA	Stanley Brothers Securities Incorporation	https://sbsi.vn/vi-vn/

(Source: Author of website Hnx.vn. and Hsx.vn)

FISCAL POLICY FOR CIRCULAR BUSINESS MODEL: INTERNATIONAL EXPERIENCE AND LESSONS FOR VIETNAM

Msc. Le Vu Thanh Tam[1], MA. Nguyen Thi Ha Linh[2]

Abstract: *Fiscal policy is considered as an effective economic instrument for guiding and encouraging businesses to implement the circular economy model by affecting the costs and benefits of production and consumption behaviors of subjects. This article gives an overview of the circular economy model, world trends, the role of fiscal policy and international experience in using tax policy tools to encourage businesses to implement the circular economy model. This article also analyzes the current situation of fiscal policy on guiding and encouraging businesses to implement the circular economy model and makes recommendations for Vietnam.*

Keywords: *Circular business, fiscal policy, green growth, sustainable development.*

1. INTRODUCTION

Vietnam is one of the world's top five most vulnerable countries to climate change, with increasingly serious pollution levels and increasingly scarce resources. Therefore, the implementation of the theoretical economy in general and the digital economy in particular is considered as one of the main solutions, which is reflected in the recent guidelines, policies and laws of the Party and State such as the Document of the Party Congress, Socio-economic development strategy, legal regulations and operating documents. In order to successfully develop a circular economy, in which business organizations play a pivotal role, policies to encourage and support businesses to convert to a digital economy model play a very important role. important, where fiscal policy is seen as central, especially in the early stages of the transition.

Although it has been mentioned since the last years of the 1960s, in the work "Economy of a spaceship named Earth" (Boulding 1966), the theoretical economy and the new economic model are only real The interest has returned from the beginning of the 21st century, in which the new mathematical model has been mentioned in both theoretical and experimental studies since the middle of the 2nd decade of this century. The reason why this model has received great attention is because the condition to meet the requirements for the development of this model has really just appeared, that is, the development of science and technology has reached the level of helping people to develop a new model. handle the problems of this model, especially the fourth industrial revolution.

Along with science and technology, fiscal policy plays a decisive role in the successful development of the knowledge economy as well as circular business model. This article will refer to the experience of developing fiscal policy for circular business model of some countries, lessons and some policy suggestions for Vietnam.

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2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

Circular Business Models (CBMs) can be considered as the interpretation of circular economy principles within the company's boundaries. Depending on the experts, CBMs can be classified under the wider umbrella of either Green Business Models (GBMs) and/or Sustainable Business Models (SBMs). About this topic, a systematic literature review has been carried out by Rosa et al. (2019). Results unveil that in terms of CBMs the most discussed research areas are (i) practical implementation of CBMs, (ii) challenges related with the adoption of CBMs and (iii) decision-support tools.

It is possible to distinguish three research streams on CBM classification: (i) papers referring to the ReSOLVE framework (The Ellen MacArthur Foundation, 2015), (ii) papers referring to the Business Model Canvas (BMC) methodology (Osterwalder, A., et.al, 2010) and (iii) papers proposing hybrid models mixing both the previous methods. The ReSOLVE framework (The Ellen MacArthur Foundation, 2015) aims at supporting companies and governments during the definition of circular economy policies. It identifies six different ways to be circular (e.g. Regenerate, Share, Optimize, Loop, Virtualize and Exchange). Each of them is subsequently detailed in specific actions. Even if the ReSOLVE framework cannot be considered a real classification method, many experts started from it to develop their own models.

Considering the BMC-based classification methods, papers pertaining to this category try to modify the original BMC in order to map circularities. Considering hybrid models, the experts try to mix the previous classification methods in order to reinforce them. Given the popularity of ReSOLVE and BMC methods, the FENIX project considered them as reference CBM classification methods. Specifically, the ReSOLVE framework has been exploited for the identification of CBM archetypes at macro level.

Subsequently, the BMC method has been considered for the detailed description of CBMs at micro level. In addition, a meso classification of CBMs archetypes was adapted from the last OECD's report on CBMs (consisting of fourteen classes considering the full amount of different business models related with circular economy existing in literature) (OECD—European cooperation and economic development organization, 2017).

Considering tables reported by Rosa et al. (Tolio, T., et.al, 2017), it is possible to see that some types of CBMs are more frequent than others. The most common CBMs described in literature are represented by recycling practices and use-oriented PSSs. They are followed by bio-based/secondary materials exploitation, reuse and refurbishing/remanufacturing practices, result-oriented and product-oriented PSSs and industrial symbiosis. Not so commonly described in literature are those CBMs related on renewable energies, co-ownership and co-access, repair practices, product dematerialization and new technologies. However, it is evident from the assessed literature the presence of a big research gap in terms of (i) how practically transform linear BMs in circular ones and (ii) how to involve common people in current industrial CBMs..

3. METHODOLOGY AND PROPOSED MODEL

Data collection method

This article collected data on the basis of studying existing documents and by manipulating logical thinking to draw necessary scientific conclusions related to the content of circular business model. By reviewing the scientific literature from various official sources around the world as well as practicing the method of systematizing theory and history, the article has reached important conclusions on the issues involved to the situation of fiscal policies for circular business model in several countries.

Data analysis method

Research conceptualize overview of circular business model; summarize the situation of circular agriculture development in the world, then discuss and draw lessons from fiscal policies for circular business model in Vietnam.

4. RESEARCH RESULTS

4.1. Overview of fiscal policy for circular business

4.1.1. Concepts of circular business

All but two[1] of the reviewed definitions focus on value creation and roughly follow either the value logic framework of Richardson (2008), which envisions the value proposition, value creation and delivery, and value capture (e.g. Linder and Williander, (2017), Nußholz, (2017), and Lahti et al., (2018)), or the business model definition of Osterwalder and Pigneur (2010), which is based on that logic: "A business model describes the rationale of how an organisation creates, delivers, and captures value" (p.14). This is then combined with circular economy principles (Manninen et al. 2018; Lüdeke-Freund et al. 2019; Zucchella and Previtali 2019) or translated into circular business model strategies by Bocken et al. (2016), Geissdoerfer et al. (2018), and Oghazi and Mostaghel (2018).

These comprise recycling measures (closing), efficiency improvements (narrowing), use phase extensions (extending), a more intense use phase (intensifying), and the substitution of product utility by service and software solutions (dematerialising) (Geissdoerfer et al., 2018). However, while all of these strategies seem compliant with the circular economy as conceptualised for example by Webster (2015), we could not find any source that would justify a business model to qualify as 'circular' (Urbinati et al. 2017) or compliant with the circular economy concept solely based on the idea of narrowing loops (i.e. efficiency gains alone). Thus, this strategy seems to constitute more of an 'add-on' than a circular business model strategy in its own right.

Some authors highlight the relationship between circular and sustainable business models. Geissdoerfer et al. (2018), Lahti et al. (2018), and Zucchella and Previtali (2019) assume sustainability aspects to be integral to the circular business model concept. This corresponds to a previous analysis carried by the authors that some but not all conceptualisations of circular business models focus on sustainability aspects (Pieroni et al. 2019).

Based on this analysis of the literature, circular business models can be defined as business models that are cycling, extending, intensifying, and/or dematerialising material and energy loops to reduce the resource inputs into and the waste and emission leakage out of an organisational system. This comprises recycling measures (cycling), use phase extensions (extending), a more intense use phase (intensifying), and the substitution of products by service and software solutions (dematerialising).

[1] Urbinati et al. (2017) refer to CE practices (e.g. recycling and reuse) and Manninen et al. (2018) refer to the related concept of Natural Capital instead

4.1.2. Fiscal policy for circular business model

According to Rizos et al. (2021), 39% of surveyed businesses (accounting for the highest percentage) believe that it is necessary to increase financial support for businesses implementing traditional business models or activities. Higher costs when implementing business according to circular principles are a barrier (26% in the electrical and electronics industry and 50% in the agricultural and food industry). Access to financial resources (23% in the electrical and electronics industry and 30% in the agricultural and food industry).

In Vietnam, according to the 2021 survey results of the Vietnam Business Council for Sustainable Development (VBCSD) and EPRO Consulting Joint Stock Company, 54% of businesses have difficulty converting their models. In a circular model, nearly 48% believe that financial difficulties are a barrier to this transformation, accounting for the highest proportion of difficulties (technology and engineering is 43% and policy is 34%).

Therefore, it is obvious that fiscal policy plays a very important role in converting the model from linear to circular economy. To implement fiscal policies for circular transition, government intervention mainly bases on the tax system and government spending along with the development of the credit system. used to support the development of this model. In addition, the public procurement process will attract a large amount of investment from businesses, thereby creating resources and a stepping stone to develop circular business model; At the same time, it helps strengthen private investors' confidence in the circular economy. The credit system plays another important role, which is to create stable loan channels for businesses to develop business models.

4.2. Experience of some countries on fiscal policies for circular business model

4.2.1. Tax policies

a. Tax policies on economic activities harm the environment

To limit plastic waste and promote the transition to circular economy for plastic, European countries have proposed different tax rates applied to plastic waste, such as 450 EUR/ton in Italy, 450 EUR/ton in the UK, and 450 EUR/ton in the UK. is 200 GBP/ton. Thanks to the application of taxes, plastic has been reused as a resource, thereby reducing the amount of plastic produced and released into the environment, as well as limiting the negative impact of plastic waste.

As for first-use royalties, European countries apply to raw materials such as sand, gravel and stone used in the construction industry. The policy of taxing first-use resources will stimulate resource use efficiency. France plans to reduce value added tax (VAT) to 5,5% instead of 20% on recycled materials, fine industries that do not comply with new standards, and continue to generate a lot of waste, damaging the environment.

Carbon tax is considered a market-based solution to reduce emissions. Adopting carbon tax will force business to analysis benefits and costs thereby adjusting excessive energy exploitation, use, and consumption. Subjects adopted to carbon tax are mainly fossil fuels such as gasoline, oil, methanol, naphtha, butane; liquefied petroleum gas; burning fuels such as peat, coal... The tax base is the amount of carbon emissions, calculated in tons of emissions. Tax rates can be tax rates based on percentage, absolute tax rate (absolute tax rate) or mixed tax rate (collected both by percentage and absolute tax rate). The carbon tax rate is about 1 - 130 USD/ton of CO2.

Finland, Sweden, Norway, Denmark were the leading countries to apply carbon taxes in the early 1990s. Currently, many countries around the world (UK, Netherlands, USA, Canada...) Apply a carbon tax to reduce emissions. According to the Organization for Economic Cooperation and Development - OECD (2015), carbon taxes have the effect of reducing greenhouse gas emissions, while also generating significant revenue for the national budget. Most East Asian countries could increase budget revenue by 0.5 - 2% of GDP in 2020 if they apply a tax of 20 USD/ton CO2. This budget revenue is especially higher in developing countries due to high emissions relative to GDP.

b. Tax incentives for environmentally friendly economic activities and products

Many countries have applied tax incentive policies to encourage and promote investment in clean technology and effective use of alternative energy sources. Policy tools to achieve diverse goals include tax holidays, tax exemptions, tax liability reduction mechanisms, and additional cost reduction mechanisms. The United States provides a tax credit for renewable electricity generation for each kWh of electricity generated by renewable energy sources, such as wind power. In 2019, the deduction rate is 2.4 cents/kWh and the deduction period lasts 10 years from the time the electricity production facility is put into use. Facilities (using wind energy) that begin construction in 2016 receive a 100% tax deduction, decreasing to 80% in 2017, 60% in 2018, 40% in 2019 and 0% thereafter. Malaysia implements an 100% deduction of the capital costs incurred for a green technology project from the year of assessment 2013 to 2020 and a 100% deduction of the costs. capital incurred for green technology assets from 2013 - 2020 (support can be offset against 70% of statutory income in the year of assessment).

The Chinese government provides tax incentives for industrial activities to promote the development of the circular economy, encouraging the import of energy-saving machinery and equipment and raw materials. Businesses that meet the conditions can be exempted or refunded input value-added tax at a certain rate. For corporate income tax, if a business purchases and uses special equipment in the prescribed list for the purpose of environmental protection, energy and water saving, and safe production, the cost of purchasing the equipment is can get a 10% income tax deduction. For businesses that use wastewater, exhaust gas and solid waste as main production materials, income tax can be reduced or exempted for a limited period, such as exemption for 3 years and 50% reduction for the next 3 years for with businesses treating wastewater and community waste, businesses innovating technology in energy conservation and emission reduction, seawater desalination and similar projects... Biodiesel production with animal waste and vegetable oil is exempted from consumption tax.

4.2.2. Green public spending policy

In Europe, in the 2020 Circular Economy action plan, green public procurement becomes a mandatory criterion for green public expenditures in European Union (EU) countries. The Chinese government implemented the project "Building an environmentally friendly society", issuing a series of policies to promote green purchasing. In 2005, the country also issued a number of instructions on "promoting the development of a reuse economy", which emphasized that China needs to increase the use of products labeled as water saving, saving and using energy effectively, environmental labels, green food labels and green organic foods, reducing the use of products that use a lot of packaging and products that are only used once. In addition, all government agencies are required to practice green procurement.

Although countries in the Association of Southeast Asian Nations (ASEAN) region have not yet issued their own laws on green procurement, many governments have policies to encourage the development of sustainable consumption. The initial step in developing green shopping is implementing 3R (reuse, reduce, recycle) and eco-labelling. Japan enacted the Green Procurement Promotion Act in 2000, which applies to the Government, agencies, local authorities, businesses and people. This law encourages a shift in demand towards environmentally friendly goods.

4.2.3. Policy for financial markets

For sustainable and efficient use of resources, Japan encourages the issuance of green bonds to promote the development of environmental projects. In 2014, the Development Bank of Japan issued green bonds for the first time, with the number issued gradually increasing over the years. In 2017, the Ministry of Environment announced green bond principles to ensure consistency with green bond principles issued by the ICMA audit organization. Green bonds are allowed to be traded on the stock exchange (Nguyen Thi Thu, 2020).

China uses the following policies: (i) support for conversion costs: Enterprises converting from the traditional economic model to the digital economy model are supported with 10% of the conversion costs; (ii) price policy: the State applies price policy to contribute to the conservation and orientation of organizations and individuals to save and use resources rationally. Accordingly, the authority applies restrictive pricing policies to restricted items in high resource consumption industries; (iii) establishment of a Science and Technology Fund, which has the task of promoting the development of the circular economy. In addition, the Green Development Investment Fund (mobilized partly from socialization and partly from the state budget) is encourage and propagate circular business.

In addition, every year, two businesses with good environmental products will won scientific and technical awards. As of 2019, there are about 109 Chinese enterprises receiving support for transformation in production model. This shows that China’s transition in policies have achieved significant success.

4.3. Lessons for Vietnam

4.3.1. Current status of fiscal policy for circular business model in Vietnam

In Vietnam, many elements of circular business model have been mentioned in the fields of clean technology with little waste, low consumption of raw materials and energy, encouragement of recycling, and use of recycled products. . However, Vietnam has very few models that carry the full connotations of digital marketing, although in terms of goals and content, there have been models or business methods that have had the manifestations of this model since early on.

Legal regulations on circular business model have just appeared, are not synchronized and mainly focus on a number of environmental and energy saving areas. Regulations related to the financial sector (taxation, public spending) specifically related to the tourism industry are almost non-existent. The Government prioritizes public procurement and spending towards activities related to environmental protection, response to climate change and green growth. However, due to the limited potential of the state fund for circular economy, the ability to support interest rates or finance programs and projects is limited and has not met realistic expectations... In addition, the regulations for receiving fund for applying circular business models are still difficult, thus limiting businesses’ access. Policies for financial market development for CBM face many barriers because this business direction is still considered a development option with many risks, making it difficult to attract investors.

The Government also issued incentives for environmental protection activities such as interest rate incentives; issue Vietnamese green bonds, government bonds, Government-guaranteed bonds and local government bonds that mobilize funds for irrigation, environmental protection, wind power, solar energy.

Although tax incentives and support policies have encouraged businesses, organizations and individuals to convert to the circular business model, in the short term, these policies are not enough to offset the costs of businesses when greening production. This is one of many difficulties for small and medium-sized enterprises that want to switch to eco-business, because green production orientation requires large investment capital. Industry needs to be optimized at the lowest level (Nguyen Hong Thang, 2021).

4.3.2. Some proposed solutions on financial and credit policies for circular business

Research on experience in some countries shows that to encourage and support the business sector to successfully transition to a circular economy model, the following contents are needed:

Firstly, supplement and complete appropriate tax policies to encourage subjects to participate and convert to operating according to the model and principles of digital marketing (technology transfer tax, import-export tax,...). Review, amend and supplement the current tax and fee policy system, determine appropriate tax rates for preferential taxable goods to ensure consistency and transparency (environmental protection tax, natural resources tax, special consumption tax, export tax, environmental protection fees...). Reduce value added tax rates for products from circular business models.

Secondly, issue specific regulations on green public procurement or public procurement of products and services produced and provided from business models according to circular principles. Implement green public procurement or green public spending and green public investment. Green public procurement, in addition to protecting the environment, also creates demand in the green procurement market and green value chain for environmentally efficient products and services.

Thirdly, develop both depth and breadth of the financial market, including encouraging and supporting the formation of financial products to serve the transition from the traditional business model to circular business model. The legal framework for the development of the financial market needs to continue to be improved in the direction of creating conditions for international investors to invest more strongly in the Vietnamese stock market.

5. DISCUSSION AND CONCLUSION

Currently, many countries such as Sweden, Finland, China, the Netherlands... have researched and developed fiscal policies for circular business model with many achievements. Recently, under pressure from corporate profits, resources have been overexploited, and environmental pollution has become increasingly serious. Therefore, the circular business model is an inevitable direction for Vietnamese businesses. In this way, production and business activities will ensure quality, efficiency, sustainability and environmental friendliness in the future.

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19.

UNIVERSITY SOCIAL RESPONSIBILITY AND STUDENT-BASED UNIVERSITY BRAND EQUITY: AN EVIDENCE FROM PRIVATE HIGHER EDUCATION INSTITUTIONS IN HO CHI MINH CITY

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Abstract: *The purpose of this study is to evaluate the effects of university social responsibility (USR) on brand equity in the context of private universities in Ho Chi Minh city, Vietnam. The quantitative data set was collected from 167 students in private higher education institutions located in Ho Chi Minh city. Partial least squares structural equation modeling (PLS-SEM) was used to analyse the measurement model and test proposed hypotheses in this study. The structural model analysis results indicated that USR has significantly positive effects on five components of university brand equity, from the highest effect to the smallest level, ranking as follows: (1) brand reputation, (2) brand trust, (3) brand loyalty, (4) perceived quality and lastly (5) brand awareness. Findings of this study suggest implications for private universities to enhance brand equity through USR pratices then increase their competitive advantages in educational market place.*

Key words: *private university, university social responsibility, university brand equity*

JEL code: L32, M14, I23

1. INTRODUCTION

Many organizations have recently acknowledged that it is important to establish a customer's brand by practicing social responsible and addressing a society's social requirements and higher education and universities are not exceptions (Mahmood and Bashir, 2020). Previous literature revealed that in the current competitive environment, CSR contributes to brand equity by filling a good image in consumers' minds (Aaker, 1991). One of the most popular definition of CSR (Carroll, 1979) claims that "The social responsibility of business encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time."(p.500). World Bank Group (2004) acknowledges that the modern corporate social responsibility (CSR) agenda is evidence that businesses are a part of society and contribute positively to societal goals and aspirations. Corporate social responsibility (CSR) must be mentioned as another concept that is influencing the development of brands nowadays, especially corporate brands as the public wants to know what, where, and how much brands are giving back to society. Both brand equity and CSR have become significantly important and the organizations have recognized how these strategies can add or detract from their value (Blumenthal and Bergstrom 2003). The CSR concept covers different plentiful fields, with interest of social responsibility in Higher Education Institutions (HEIs) increasing significantly (Carroll, 2015). Practicing social responsibility in universities is not only privileged to the obligation of education but also to satisfy the emerging needs of the society (Vázquez et al., 2014). A numberous researchs indicated that approaching CSR is critical to the survival of universities (Huempfner & Kopf, 2017).

Branding strategy in higher education instituations has increasingly become a strategic task for universities in order to develop significantly distinguished brands and communicate their strengths

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in the context of increasingly fiece competition (Jevons, 2006). Pinar et al. (2011) suggested that brands can be designed to deliver greater customer value by building a brand ecosystem that focused on students' experience. USR activities could promote the university's brand image and reputation and develop strong brands (Tan et al., 2022). However, literature revealed research on the USR and university brand equity has been conducted in the developed countries whilst there is limitation of research in emerging economies. Few studies have attempted to understand USR in developing nations (e.g. Mehta, 2011; Gomez, 2014, Plungpongpan et al., 2016; Latif, 2017; Latif et al., 2022). Despite the relatively limited number of studies in university brand equity, it is important to understand in what ways the students' perceptions enrich the brand equity of a university (Pinar et al., 2020). However, up to date, literature review shows that only a few studies have examined effects of USR on student-related outcomes, like student satisfaction and loyalty (Sánchez-Hernández & Mainardes, 2016); brand image (Plungpongpan et al., 2016). Therefore, there is a crucial need for further research that examines the relationship between university social responsibility and student related outcomes to identify the constructs that are vital to students (Elliott and Shin, 2002). Besides, previous research on USR, student loyalty and satisfaction call for from different cultural backgrounds (Vazquez et al., 2014, Sanchez-Hernandez and Mainardes, 2016). Moreover, there are not much study that look into CSR and dimesions of university brand equity (Tan et al., 2022). Thus, the importance of university brand equity dimensions and USR practices from students' perspective were investigated in this study to fill this gap. As a results, this research on USR focused on its linkage with multi-dimesions of university brand equity based on students in the context of private university sector in an Asian emerging market. The private universities is an education sector operates mainly on a profitable business model that expanding their competition and the commercialization of education in Vietnam. In Vietnam, there were 242 universities in 2020 with 176 public universities and 66 private universities. Private universities have played an important role in training high-quality human resource, make significant contributions to the development of local education and training.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. S-O-R Model

Mehrabian and Russell (1974) developed the S-O-R theory (stimulus-organism-response theory) that stated that environmental factors (stimuli) can promote an individuals' self-assessment state (organism), and then influences behaviors of an individual (response). The organism is considered to be an internal process which plays an intervening role in the relationship between the stimulus and the response emitted by an individual (Mehrabian and Russell, 1974). The S-O-R model may provides an explanatory perspective on behavioral outcomes regarded to corporate social responsibility (Wu et al., 2022). The S-O-R model is useful for supporting an integrative model in this study. As a result, this research aims to examine the relationship among stimuli (S) (university social responsibility practices) lead toward the cognitive state of organism (O) (USR perception) and response (R) (student-based university brand equity).

2.2. University social responsibility

The term University social responsibility (USR) is derived from the concept of CSR. Carroll (1979) posits that CSR has four dimensions: economic, legal, ethical, and philanthropic responsibilities. According to Vasilescu et al. (2010), the concept of USR relates to ethics and the approach the university takes in its interactions with broader society. It implies a movement of the university towards consideration of social and environmental concerns and the promotion of a general civic mindedness and concern for environmental sustainability. The USR movement has led to the creation of social responsibility offices in universities that support the development of partnerships with government, civil society and the private sector. The social responsibility literature provides an analysis of the nature of current higher education institutions partnerships, however, and the capacity for social responsibility in an socio-political context, which favours a market-based orientation to curriculum and program development.

2.3. Brand equity and university brand equity

Brand equity is the positive differential effect that knowing the brand name has on consumer responses to the product or service (Keller, 1993). Aaker (1991) defines brand equity as, "a set of assets and liabilities linked to a brand, its name, and symbol, which add or subtract from the value provided by a product or service to a firm and/or that firm's customers" (p. 15). Prior studies have operationalized brand equity dimensions using multiple constructs. While various consumer-based brand equity (CBBE) dimensions have been identified in the literature, the four dimensions of CBBE proposed by Aaker (1991) were widely accepted, they are brand associations, brand awareness, perceived quality and brand loyalty that are important from the customer perspective. Recent studies investigated various issues related to university branding that have deepened the understanding of brand in the context of higher education (Pina et al., 2020). A strong university brand equity means that students and other stakeholders have high brand awareness, a favorable brand image, perceive that the brand is of high quality, and are loyal to the brand (Heer, 2020). Tran Viet Dung (2019) also proposed Aeker's four components (1991) including brand awareness, brand associations, perceived quality and brand loyalty in order to manage brand equity for higher institutions in Vietnam. Nguyen Van Thanh Truong (2021) identifies that perceived quality and reputation effect on university brand equity. Based on different contexts and approaches, it shows that research in university brand equity still lacks the consistency of dimensions; consumer-based brand equity has been measured with multiple constructs, therefore, this study measures the concept of university brand equity described by multiple constructs some of which include brand awareness, brand trust, brand associations, brand reputation, perceived quality, and brand loyalty.

2.4. Hypotheses Development

2.4.1. University social responsibility and university brand awareness

Brand awareness is considered as an important dimension of brand equity and defined as the ability of a potential buyer to recognize or recall that a brand forms part of a certain product category under different conditions (Aaker, 1991). As a result of S-O-R model, CSR has the potential to be beneficial for developing positive brand awareness as well as building strong image among consumers. Universities create brand awareness, especially recognition by increasing the familiarity of the brand through visible promotional tools used to ensure repeat exposure to students. Thus, the more potential students see, hear it, or think about the brand, the more likely the brand will be registered in the mind. Thus the study proposed the following hypothesis:

H1: University social responsilbility positively influences students' university brand awareness.

2.4.2. University social responsibility and university brand trust

Organizations that actively engage in CSR activities can develop trust towards the organization from stakeholders (Chang, 2015). According to Rojas-Méndez et al. (2009) students' trust can be understood as students' confidence in the integrity and reliability of the university. The trust can help in building long and enduring relationships (Abdelmaaboud et al., 2021). USR can be utilized to increase community perceptions of legitimacy, value, and trust, and universities must recognize that they have a responsibility to return to society (Latif, 2017). This leads to an improved level of trust in the HEI, as students carry a perception of fairness, accountability, and responsibility. Hence, this study proposes that:

H2: University social responsibility positively influences on university brand trust.

2.4.3. University social responsibility and brand reputation

CSR should be one of a university's main duties, contributing to community sustainability while improving the organization's image (Dima et al., 2013). Parsons (2014) claimed that USR is one of the strategies approved by the management to supervise the university and to improve its reputation. The strong implementation of CSR activities could positively contributes to the university brand reputation (Plungpongpan et al., 2016; El-Kassar et al., 2019). Khoi (2021) found that universities' reputation was influenced by their social contributions. Tan et al. (2022) showed that the influence of CSR on brand reputation is positive and extremely robust for both public and private colleges in Malaysia. Hence, it is proposed that:

H3: There is a significantly positive impact of USR on the university's brand reputation.

2.4.4. Corporate social responsibility and Perceived Quality

Previous studies found that CSR activities have significant and positive influences on customer perceived value in services sector (Latif et al., 2020). Results support Vázquez et al. (2014) notion that focusing on the USR can improve service quality and student satisfaction. Santos et al. (2020) found a significant impact of USR on service quality in universities USR has been identified as the 'university's commitment to recognizing the interests of society and performing in a way that improves the well-being of its members through the provision of educational quality (Latif, 2017; Latif et al., 2022).. Hence, it is proposed that:

H4: There is a significantly positive impact of USR on perceived quality.

2.4.5. University social responsibilities and brand loyalty

Aaker (1991) defines brand loyalty as the attachment that a customer has to a brand. CSR may be used as a method to boost consumer's brand loyalty (Pirsch et al., 2007). The findings of previous studies shows that CSR was found to be strongly significant effect on customer loyalty (Mandhachitara and Poolthong, 2011; Zhao et al., 2021). El-Kassar et al., 2019) show that USR has a significant impact on student-university student loyalty. Tan et al. (2022) confirmed that CSR has a positive and strong direct effect on brand loyalty in private universities. Therefore, the following hypothesis can be proposed:

H5: There is a significantly positive impact of USR on brand loyalty

3. METHODOLOGY

The quantitative methodology is adopted in this study. The final quantitative data was collected from 167 students studying in two private universities in Ho Chi Minh city using paper-based survey questionnaires. The convenient sampling method was employed, and respondents were voluntary for their participation. The sample size (n = 167) is considered small compared to the study population, therefore we used partial least squares-structural equation modeling (PLS SEM) to analyze the measurement and structural models. A number of previous studies support that PLS-SEM has advantages at small sample sizes (Chin 1998; Hair et al., 2017). The PLS-SEM offers the significant benefit of using small data to validate models when the sample size is smaller than the indicators used in the measurement model (Jhantasana, 2023).

All constructs and items were developed based on previous studies to design questionaire. Seven items of USR scale were extracted from Latif et al. (2022) and Tan et al. (2022). Items measuring Brand awareness were generated from the study of Pinar et al. (2020). Brand reputation scale was extracted from the study of Latif et al. (2022) with 4 items. Measurements of Perceived Quality (5 items) and Brand trust (5 items) were withdrawn from Latif et al. (2022); Brand loyalty (4 items) from Tan et al. (2022).

The questionnaire was design and divided into two sections: One section measured the demographic characteristics of the participants, and section two measured the respondents' perception of the constructs in the model. Respondents were asked to rate each item according to a 5-point Likert scale, with anchors ranging from 1 (strongly disagree) to 5 (strongly agree). Out of 167 respondents, 658.7% were female, 41.3% were male; 78.4% were from economics and business management majors; 21.6% were others.

Table 1: Constructs and items

Constructs	Code	Items	Resources
University Social Responsibility	USR1	My university treats employees very well.	Latif et al. (2022); Tan et al. (2022)
	USR2	My university helps civil society organizations in the community	
	USR3	My university is committed to ecological issues.	
	USR4	My university respects the legal regulations.	
	USR5	My university behaves honestly with their students.	
	USR6	My university has many supporting policies for students if they are in difficulty	
	USR7	My university encourages students to participates in voluntary charitable activities.	
Brand Awareness	BAW1	The university is well-known	Pinar et al. (2020)
	BAW2	The university's brand name is instantly recognizable	
	BAW3	The university is among the first to come to mind when one thinks of all universities in the country	
Brand Reputation	REPU1	My university has a good image	Latif et al. (2022)
	REPU2	My university has a professional image	
	REPU3	My university 's program run by the university is reputable	
	REPU4	My university graduates are employable	
Perceived Quality	QUAL1	I am satisfied with the quality of academic staff at my university	Latif et al. (2022)
	QUAL2	I have access to latest infrastructure at my university	
	QUAL3	I am satisfied with the teaching on offer at my university	
	QUAL4	Tương xứng với chi phí bỏ ra	
	QUAL5	The quality of examinations/tests conducted at the university	

Brand Trust	TRUST1	I am sure that the university staff were always acting in my best interest	Latif et al. (2022)
	TRUST2	Integrity is a word I'd use when describing the university staff	
	TRUST3	I have great confidence in the faculty members	
	TRUST4	University staff always kept their promises to me	
	TRUST5	I can trust my university	
Brand Loyalty	LOY1	I say positive things about my university to other people.	Tan et al. (2022)
	LOY2	I recommend my university to others.	
	LOY3	I encourage friends and relatives for education in my university	
	LOY4	I consider my university as my first choice for post-education programs	

4. RESULTS AND DISCUSSIONS

4.1. Measurement Model Analysis

Composite reliability: Cronbach's alpha and composite reliability scores were used to examine the internal consistency and reliability. The construct is considered reliable when the Cronbach's alpha score and composite reliability score are above the recommended cut-off of 0.7 (Hair et al., 2017). As shown in table 2, composite reliability scores and Cronbach's alpha values of all latent constructs were found to meet the threshold criterion. Hence, the reliability of the measurement model was satisfactory.

Convergent and discriminant validity: All constructs were also tested for convergent and discriminant validity. Convergent validity is supported if average variance extracted (AVE) estimates for each underlying construct exceed 0.50 (Hair et al., 2017). While discriminant validity is established when shared variance between any two constructs is less than the square root of the AVE by the items measuring the construct (Fornell and Larcker, 1981). As displayed in table 2, convergent validity was supported by the AVE scores of all the latent constructs, which were ranging from 0.662 to 0.775 and well above the required minimum level of 0.50. The outer loadings (table 3) were examined to evaluate the correlations between the latent variables and the reflective indicators in the outer model. As shown in Table 3, all the outer loading scores were above 0.6, demonstrating convergent validity of latent constructs was confirmed (Hair et al., 2017). The results indicate that the square roots of the AVE for each construct (table 4) was higher than the corresponding inter-construct correlations, this shows that all constructs in the outer model attained discriminant validity.

Table 2: Reliability and Convergent Validity Testing

Constructs	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Brand Awareness	0.855	0.868	0.911	0.774
Brand Loyalty	0.879	0.884	0.916	0.733
Brand Reputation	0.921	0.926	0.944	0.809
Perceived Quality	0.882	0.930	0.917	0.734
Brand Trust	0.893	0.907	0.922	0.703
USR	0.927	0.928	0.941	0.696

Note: AVE: Average Variance Extracted

Table 3: Outer Loadings Scores of Items

Items	Brand Awareness	Brand Loyalty	Brand Reputation	Perceived Quality	Trust	USR
BAW1	0.859					
BAW2	0.878					
BAW3	0.901					
LOY1		0.822				
LOY2		0.853				
LOY3		0.904				
LOY4		0.843				
REPU1			0.835			
REPU2			0.930			
REPU3			0.935			
REPU4			0.895			
QUAL1				0.818		
QUAL2				0.872		
QUAL3				0.880		
QUAL4				0.856		
TRUST1					0.878	
TRUST2					0.888	
TRUST3					0.882	
TRUST4					0.753	
TRUST5					0.781	
USD6						0.845
USR1						0.783
USR2						0.815
USR3						0.887
USR4						0.783
USR5						0.849
USR7						0.872

Table 4: Fornell-Larcker Criterion

Construsts	Brand Awareness	Brand Loyalty	Brand Reputation	Perceived Quality	Brand Trust	USR
Brand Awareness	0.880					
Brand Loyalty	0.487	0.856				
Brand Reputation	0.249	0.385	0.900			
Perceived Quality	0.345	0.590	0.230	0.857		
Brand Trust	0.351	0.654	0.409	0.430	0.838	
USR	0.296	0.624	0.647	0.404	0.551	0.835

Note: Square roots of AVEs are exhibited on the diagonal (bold). Construct correlations are shown below the diagonal.

4.2. Hypotheses Testing Analysis

Results of structural model analysis (table 6) in this study supported 5 proposed hypotheses. Hypothesis 1 indicates that among the endogenous variables, USR factor has the smallest impact on brand awareness (β = 0.296, p value = 0.000). This supports the S-O-R model. This result explains that when a university practices social responsibility activities, it will increase the level of brand awareness with stakeholders. However, because the data was surveyed on students from universities therefore most students already knew clearly about their university. As a result, the impact level of USR to brand awareness is not very significant.

The results also support hypothesis 2 that confims the positive relationship between USR and brand trust (β = 0.551, p value = 0.000). Thus, the results are consistent with previous findings (e.g Latif, 2017; Chang, 2015) that considers the students as the important stakeholders in university and socially responsible engagement help organizations gain their stakeholders' trust. This research confirms the impact of students' perceptions of university social responsibility activities on their trust toward their schools.

The analysis result also demonstrates H3 is supported (β = 0.647, p value = 0.000), this confirms USR strongly and positively influences university brand reputation. This provides evidence that increasing the intensity of social responsibily may improve university brand reputation. This result also supports the findings Plungpongpan et al., 2016; El-Kassar et al., 2019; Khoi, 2021; and Tan et al. (2022). This finding indicates that practicing USR in higher education can work as a tool to strengthen the university's reputation.

H4 and H5 are also supported, this result shows there are positive affects of USR on both perceived quality (β = 0.404, p value = 0.000) and brand loyalty (β = 0.624, p value = 0.000). H4 is acceptable, this finding is consistent with the results from Vázquez et al. (2014), Su và Swanson (2017) who confirmed that focusing on the USR can improve perceived service quality from stakeholder, enrich the findings of advantages of CSR activities in customer perceived value (e.g. Arslanagic-Kalajdzic and Zabkar, 2017; Green and Peloza, 2011; Su et al., 2017; Su & Swanson, 2017; Servera-Francés and Piqueras-Tomás, 2019). The result also supports that focusing on the USR can improve students' perceived quality according to Vázquez et al. (2014); Yuen et al. (2018); and Santos et al. (2020). Additionaly, H5 is accepted in this work, the study confirms the positive relationship between university social responsibilities and brand loyalty. This result supports the findings of previous studies (e.g. Fatma et al., 2016; He and Li, 2011; Lin and Chung, 2019; Nyadzayo and Khajehzadeh, 2016; El-Kassar et al., 2019; Chen et al., 2015; Gürlek et al., 2017; Mandhachitara and Poolthong, 2011; Tan, 2022). The result illustrates USR was found to be strongly effect on university loyalty.

Table 5. Testing hypotheses Results

Paths	Original Sample (O)	Sample Mean (M)	T Statistics (|O/STDEV|)	P Values	Conclusions
USR -> Brand Awareness	0.296	0.304	3.772	0.000	Supported
USR -> Brand Trust	0.551	0.547	8.876	0.000	Supported
USR -> Brand Reputation	0.647	0.648	13.890	0.000	Supported
USR -> Perceived Quality	0.404	0.409	5.775	0.000	Supported
USR -> Brand Loyalty	0.624	0.624	11.999	0.000	Supported

Effect Size and Predictive Power Evaluation: The R^2 values for constructs as follows: Brand Awareness (0.088); Brand Loyalty (0.390); Brand Reputation (0.419); Perceived Quality (0.164) and Brand Trust (0.303). Cohen (1988) and Chin (1998) suggest that R^2 values of 0.67, 0.33, and

0.19 are substantial, moderate, and weak respectively. These values of R^2 values are considered high and acceptable (Hair et al., 2017). Besides, the effect size is calculated to examine the explained variance (R^2) of the endogenous constructs. According to Cohen (1988), f^2 value of 0.35, 0.15, and 0.02 are considered large, medium, and small respectively. As shown in Table 5, the f^2 values show that of CSR significantly effects on Brand Loyalty, Brand Reputation and Brand Trust (0.435 – 0.720) whereas the effect of USRs on Perceived Quality and Brand Awareness are considered as medium (f^2 = 0.196) and small (f^2 = 0.096).

Table 6: R^2 and f^2 coefficients

Constructs	R Square	R Square Adjusted	f^2
Brand Awareness	0.088	0.082	0.096
Brand Loyalty	0.390	0.386	0.639
Brand Reputation	0.419	0.415	0.720
Perceived Quality	0.164	0.159	0.196
Brand Trust	0.303	0.299	0.435

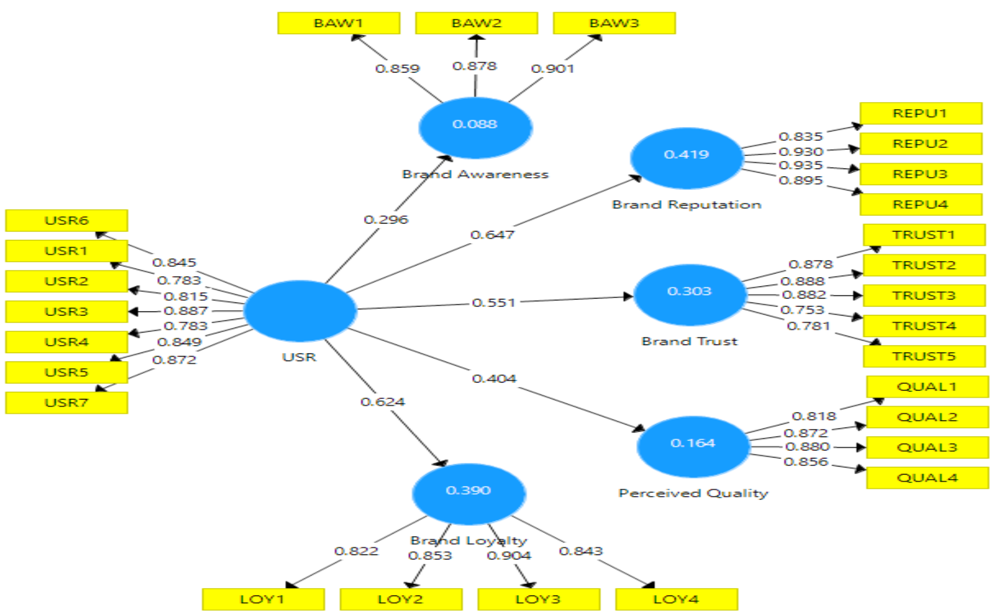

Figure 1: Path Model Result

5. CONCLUSION AND POLICY IMPLICATIONS

The purpose of this study was to investigate the impacts of USR on dimensions of brand equity includings brand awareness, brand reputation, brand trust, perceived quality, brand loyalty in the context of private higher education. The results could confirm that CSR initiatives in private universities help enhance brand equity with five components. The results highlight the importance of USR in improving brand equity private universities. This study make a contribution to the literature on effects of USR and student-based university brand equity, especially brand reputation, trust and loyalty. Therefore, for private universities, the implementation of USR is very critical, directly affecting brand loyalty that leads to an increasing number of students in the future.

The findings of this study proposed private university to develop successful branding strategies by focusing on the implemence and communication of their USR practices in brand management. Private universities should focus on the implementation of CSR as a key factor to improve university's loyalty, reputation and trust. Activities demonstrating the university's social responsibility should focus on aspects such as communication about good treatment of university staff, developing activities to support students both financial and non-financial policies. Private higher education institutions should also propagate volunteer activities for the local community and encourage students to participate in social activities. In particular, private universities also need to honestly disclose student-related issues. Moreover, private universities should consider USR as a quality standard and be presented in their mission statement and commitment.

6. LIMITATIONS AND FUTURE RESEARCH DIRECTION

This study has several limitations. First, data was only collected from student of private universities in Ho Chi Minh city. It is also proposed that more research shouls increase the sample size and the number of institutions in order to improve generalisability. Future studies may also compare the impact of USR on the brand equity between public and private universities in Vietnam. In addition, this study only considers the direct impact of university social responsibility on brand equity dimesions. Further works could examine the role of mediating variables in this relationship as well as examine the impact of social responsibility on other student-related outcome variables.

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FACTORS AFFECTING DIGITAL TRANSFORMATION IN GARMENT ENTERPRISES: AN EMPIRICAL RESEARCH IN PHU THO PROVINCE

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Abstract: *In the context of the 4.0 industrial revolution taking place globally, the digital transformation process is considered a revolution that changes operating and business models. In Vietnam, garment industry is one of the areas that needs to be prioritized in the Prime Minister's National Transformation. This study delves into the factors influencing digital transformation in garment enterprises situated in Phu Tho province. A quantitative research approach was employed, with an online survey encompassing 400 questionnaires distributed among garment businesses in the region. The study encompasses various analytical techniques, including descriptive statistics, Cronbach's Alpha, Exploratory Factor Analysis (EFA), multivariate regression models, and hypothesis testing through SPSS software. The findings reveal that six key factors, namely leadership, digital business strategy, employee capabilities, technology infrastructure, organizational culture, and external market pressures, exert significant influence on digital transformation in these enterprises. Consequently, the research offers pragmatic solutions aimed at catalyzing digital transformation endeavors within the garment sector of Phu Tho province, thereby aligning with the government's overarching digital transformation objectives.*

Keywords: *Digital transformation, garment enterprises, digital transformation service.*

1. INTRODUCTION

In the digital age, digital transformation is an imperative because it bestows a multitude of benefits upon individuals and has a profound impact on various facets of society, particularly in the realm of business development. As posited by Berman (2012), digital transformation paves the way for the emergence of innovative business models. Broadly defined, digital transformation, as articulated by Baker (2014), encompasses a sweeping spectrum of changes that revolve around the widespread adoption of digital technology across all aspects of human society. It represents a comprehensive process that transcends mere digitalization, operating at a higher echelon. Digital transformation describes enormous transformations at the scale of businesses or even markets and societies (Khan, 2017). According to Matzler et al (2016), digital transformation is the combined use of technologies such as cloud technology, sensors, big data, etc. to create new products, services and business models. (Matzler, 2016). According to Brennen and Kreiss (2016), digital transformation is the process of using digital technology to restructure the economy, institutions and society. The foundation of digital transformation is information technology, data digitization and digital transformation. Information technology constitutes the primary means, primarily involving computers, through which data is digitized and manipulated. Data digitization is the process of converting information from physical or analog forms into digital formats and serves as a stepping stone towards the digitization of processes. Process digitization involves utilizing data that has been converted into digital formats to enhance operational procedures. The data or information that undergoes digitization serves as the raw material for process digitization. For digital transformation to occur, process digitization is a prerequisite. From data digitization to process

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digitization, and from process digitization to digital transformation, these are considered as the successive stages in the completion of a comprehensive digital journey. Without data digitization, there can be no process digitization, and without process digitization, digital transformation cannot take place. Process digitization is an essential constituent of the digital transformation process (Bremen, 2016). According to Matzler and colleagues (2016), organizations may need to undergo significant data and process digitization to achieve successful digital transformation (Matzler, 2016). Digital transformation occurs at both micro and macro levels. At the micro-level, it unfolds within each organization, even within its various departments. Digital transformation allows businesses to gain customers, employees, and investors. It also generates new opportunities and value for enterprises. At the macro level, digital transformation takes place across industries, multiple sectors, and even entire nations. Macro-level digital transformation involves the creation of smart cities and digital governments. Vietnam is embarking on the Industry 4.0 revolution with rapid developments in e-commerce and digital governance, etc. Over the past two decades, information technology and communication infrastructure have experienced rapid growth. The Vietnamese government has recognized the importance of establishing a digital government and digital businesses. Consequently, the government has implemented a digital transformation program until 2020, with a vision extending to 2030.

Phu Tho, a province situated in the Northern Midlands and Mountainous region of North Vietnam, is now considered a strategically significant area, particularly in terms of its economic and socio-cultural contributions, national defense, security, and foreign relations. Throughout this development journey, businesses in general, and the textile and garment industry in particular, have played a vital role, serving as the core driving force of the local economy.

In reality, many garment enterprises in Vietnam, both in general and in Phu Tho province in particular, have not fully grasped the concept of digital transformation. As a result, they tend to be relatively passive and carry out digital transformation reluctantly. Many enterprises, including garment businesses, even exhibit a tendency to avoid undergoing digital transformation altogether. The consequence of this is that numerous enterprises have experienced declining sales and are falling behind global trends.

2. LITERATURE REVIEW

Digital Transformation

Stolterman and Fors (2004) suggest that digital transformation revolves around leveraging technology to fundamentally enhance the efficiency and scope of operations within an enterprise (Stolterman, 2004). According to McDonald and Rowsell (2012), digital transformation goes beyond the mere digitization of resources; it also involves generating business value through digital assets (McDonald, 2012). In alignment with this viewpoint, Fitzgerald and his associates (2013) define digital transformation within businesses as the application of novel technological means, such as social media platforms, advanced analytics, or automated connectivity systems, to bring about significant changes in business operations. These changes encompass enhancing customer experiences, streamlining operations, and establishing new business models (Fitzgerald, 2013). Hess and colleagues (2016) propose that digital transformation pertains to the modifications that digital technology can introduce to a business model, leading to alterations in products, organizational structures, or the automation of business processes (Hess, 2016).

Swen & Reinhard (2020) contend that digital transformation entails the integration of digital technology into business operations to fundamentally alter how business models function and provide new value to customers. It encompasses changes in processes, procedures, digital-based management culture, and efficient business objectives. Digital transformation serves as a foundational solution that helps businesses enhance their competitive capabilities, increase labor productivity, foster sustainable growth, and integrate into the global economy. This can be understood as the utilization of digital technology to create or modify existing business processes, cultures, and customer experiences to meet the evolving demands of the market and the enterprise.

Factors Affecting Digital Transformation

Leadership: Leadership is a crucial factor in shaping the digital transformation process. The initial phase's outcome is whether the business is committed to a digital transformation plan or not. Swen and Reinhard acknowledge that leadership capabilities and organizational culture are essential in executing digital transformation. Managerial factors, such as age, management experience, and a realistic understanding of digital transformation, influence the increased adoption of digital transformation services. Bader and colleagues have demonstrated that a business's capabilities are most evaluated through the manager's strategy in controlling inventory, transporting raw materials and goods, managing the order placement process, and digital transformation. This transformation is considered a revolution that enables businesses to carry out these activities based on new technology platforms (Sia, 2016).

Digital Business Strategy: Bharadwaj (2000) posits that information technology plays a vital role in business operations. It not only supports management activities but also evolves into a crucial element in crafting an enterprise's strategy. The development and implementation of a business strategy aimed at achieving long-term objectives on a digital technology foundation are referred to as a digital business strategy (Bharadwaj, 2000).

Employee Capabilities: Digital transformation involves a shift in human perception within a digital environment. Reis et al have pointed out that factors such as organizational aspects, technology, IT skills, and gender significantly influence the digitization of backend operations and, consequently, have a substantial impact on digital transformation (Reis, J., 2018). Kane et al have demonstrated that when employees are confident and proactive, capable of making decisions and completing tasks independently, they tend to be more innovative in achieving service efficiency. The value of trust positively influences employee technology adoption behaviors. The appropriate skills and capabilities of employees are paramount in the transformation process. With the right expertise, employees can plan and execute processes smoothly and efficiently, leading to a readiness to change operational methods and adopt new technologies (Kane, G.C., 2018).

Corporate Culture: Digital transformation requires a corporate culture that values verification and data sharing (Dremel, 2017). This demands a high level of transparency in work and business processes, as well as a mindset of data sharing among employees. Additionally, digital transformation may create a clash of cultures between younger, tech-savvy employees and older, experienced employees in traditional business who may lag behind in technology (Kohli, 2011).

Technology Infrastructure: Osmundsen et al argue that information technology and communication infrastructure are crucial for backend operations in efficiently supporting information access and services. Logistics infrastructure includes physical infrastructure like transportation systems and organizational infrastructure such as human resources, policy frameworks, rules, and procedures. To achieve development, effective management, and efficient operation of infrastructure systems, businesses must implement software solutions on their information technology infrastructure. This enables them to streamline operations and optimize performance while ensuring effective management of their infrastructure (Osmundsen, K., 2019). Information technology infrastructure serves as the prerequisite and foundation for driving digital transformation and economic development. Additionally, compared to traditional transportation forms, digital transformation requires the application of multiple technologies, data storage, and analysis, leading to the need for ensuring security and data safety for the system. Currently, digital technology has become the foundation for recent innovations worldwide, with emerging technologies such as AI, cloud computing, IoT, big data, and robotics rapidly breaking down digital barriers, serving as pillars for driving digital transformation (AlNuaimi, B.K., 2022).

Business Pressure: Faced with the competitive pressures of better meeting customer demands, prolonged pandemic situations, new government regulations, businesses are increasingly recognizing the full spectrum of challenges they are confronting. This compels businesses to improve and optimize their management, implementation processes, and resource utilization (Putthiwat, S., 2021).

3. METHODOLOGY

This study was designed using quantitative analysis methods while also considering qualitative information as supportive and deemed appropriate for the research objectives. Firstly, data collection was conducted through questionnaires, and then the data were tabulated using descriptive and inferential statistical analysis techniques. The target population of this study comprises all textile and garment enterprises in Phu Tho province. The sampling method employed convenience sampling. The total sample size consisted of 400 employees from 15 textile and garment enterprises in Phu Tho province.

Data were collected through direct interviews with employees from 15 textile and garment enterprises in Phu Tho province, based on pre-prepared questionnaires. Responses to the questionnaires were prepared in the form of Likert scale ranging from 1 to 5. To analyze the data, achieve the research objectives, and test the proposed hypotheses, the collected data will be processed as required for the analysis.

The results of this study will discuss each latent variable before they are combined into a regression model among variables. The discussion begins with the conduct of a measurement model through the Exploratory Factor Analysis (EFA) of independent variables and continues with dependent variables. After analyzing that each index can be used to determine the appropriateness of the regression model, the regression model evaluation stage is carried out to determine the accuracy of the research model through R-Square (R2).

4. RESEARH RESULTS

A total of 400 questionnaires were distributed, and 389 questionnaires were returned (97.25%). Among the returned questionnaires, 356 were deemed eligible for analysis. The demographic profiles of the respondents are summarized in Table 1. The majority of the respondents were under the age of 35 (over 63%). Respondents had low educational qualifications, with nearly 2/3 having completed high school. More than three-quarters of those surveyed had at least 4 years of work experience.

Table 1. Research sample statistics

Demographic variable	Categorize	Quantitative	Percentage (%)
Sex	Male	103	28,93
	Female	253	71,07
Age	Under 25	33	9,27
	25 - 30	88	24,72
	30 - 35	105	29,49
	35 - 40	43	12,08
	Upper 40	87	24,44
Job Position	Managers	40	11,24
	Office staff	65	18,26
	Production staff	251	70,51
Education level	High school	230	64,61
	Intermediate level	30	8,43
	College, University	85	23,88
	Master	11	3,09
Experience	1 - 4 years	32	8,99
	4 - 10 years	137	38,48
	Above 10 years	187	52,53

Source: Summary of the author's survey results

Since the research used the Likert scale to assess employees' opinions on factors influencing digital transformation capability in garment enterprises in Phu Tho province, it is essential to test the reliability of the scale.

Table 2 demonstrates the reliability test of the variables using Cronbach's α coefficient, and it is observed that the values for all variables are higher than 0.7. Therefore, the responses from the participants are considered reliable. Due to the high reliability obtained, seven variables can be used for further statistical tests.

Table 2. Cronabch' Alpha

Biến	Cronbach's Alpha
Leadership	0.838
Digital Business Strategy	0.867
Employee Capabilities	0.856
Corporate Culture	0.873
Technology Infrastructure	0.850
Business Pressure	0.809
Digiatal transformation	0.805

Source: Analysis results from SPSS

Using Cronbach's α coefficient to test the reliability of the digital transformation variable in the research reveals that the value of this variable is also higher than 0.7. Therefore, respondents' answers are considered reliable. Hence, all variables were analyzed (Table 2).

Furthermore, Table 3 presented the results of the suitability test using the KMO and Bartlett's test. With a KMO coefficient of 0.836, which satisfies the condition of 0.5 < KMO < 1, factor analysis is appropriate for the actual survey data of the study. The significance value of Bartlett's test = 0.000 < 0.05 indicates that the observed variables have a linear correlation with the latent factors.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.836
Bartlett's Test of Sphericity	Approx. Chi-Square	6043.822
	Df	465
	Sig.	.000

Source: Analysis results from SPSS

The results from the Rotated Component Matrix reveal that there are 6 factors extracted from the model, and the variable NL2 has the lowest factor loading of 0.237 (Factor 2) < 0.5. However, this variable has a factor loading of 0.691 on Factor 3, which is greater than 0.5, so variable NL2 is not excluded from the model. Variable VH4 has the second lowest factor loading of 0.391 < 0.5, and therefore, this variable is removed from the model. Thus, through the Cronbach's Alpha test and EFA, 6 factors are extracted with 29 observed variables having factor loadings above 0.5, and the scale has discriminant validity. Additionally, there is no cross-loading between factors, meaning that questions related to one factor do not overlap with questions related to another factor. Therefore, after factor analysis, these independent factors are retained, unaffected by any other factors. Specifically, the factors are as follows:

- The "Leadership" factor (LD) consists of 5 items including LD1, LD2, LD4, LD5, and LD6.
- The "Digital Business Strategy" factor (CL) comprises 5 items ranging from CL1 to CL5.
- The "Corporate Culture" factor (VH) consists of 4 items: VH1, VH2, VH3, and VH5.
- The "Technology Infrastructure" factor (NT) includes 5 items from NT1 to NT5.
- The "Business Pressure" factor (AL) consists of 5 items from AL1 to AL5.
- The "Employee Capabilities" factor (NL) comprises 5 items, namely NL1, NL2, NL3, NL4, and NL5.

Before estimating the impact of the factors on the digital transformation of the garment enterprises in Phu Tho province, Vietnam, the study conducted multicollinearity tests among the independent variables through the Pearson correlation coefficient matrix. The results showed that all correlation coefficients were less than 0.7, indicating no evidence of strong correlations among the independent variables. These independent variables are exogenous and suitable for use in the subsequent regression analysis.

The model was then deployed to assess the effects of the factors on the digital transformation capability of the textile enterprises in Phu Tho province, Vietnam. The results revealed that the adjusted R-squared was 0.827, indicating that the independent variables explained 82.7% of the variation in digital transformation within these garment enterprises.

Table 4. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71,899	7	10,556	201,676	0,000[b]
	Residual	16,001	290	0,051		
	Total	87,930	298			
a. Dependent Variable: CD						
b. Predictors: (Constant), LD,CL,NL,VH,NT,AL						

The results in Table 4 showed that Sig.= 0.000 < 0.05, so using the regression function for analysis is appropriate.

The results of assessing the impact of factors on the digital transformation ability of garment enterprises in Phu Tho province are presented in Table 5.

Table 5. Regression Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.298	.127		.552	.581		
	LD	.177	.032	.230	5.533	.000	.766	1.306
	CL	.286	.043	.273	6.674	.000	.789	1.267
	NL	.272	.026	.253	6.548	.000	.883	1.133
	VH	.160	.039	.165	4.119	.001	.820	1.220
	NT	.225	.035	.247	6.429	.003	.897	1.115
	AL	.117	0,027	0,019	0,636	.002	.621	1.611

Source: Analysis results from SPSS

The aim of this article is to exam the level of influence of the factors on the digital transformation of garment enterprises in Phu Tho province. The sample used in this study was drawn from 356 employees across 15 garment enterprises in Phu Tho province. Based on the research findings, the article offers some observations on the impacts of the factors as follows:

The factor that has the strongest impact on digital transformation in textile enterprises in Phu Tho province is "Digital Business Strategy (CL)", with an estimated coefficient of 0.286, sig < 0.05. The estimated coefficient for this factor is positive, indicating a positive relationship between these two variables, which is consistent with previous research. Therefore, the estimation results imply that if textile enterprises in Phu Tho province pay more attention to their digital business strategy, their chances of successful digital transformation increase. The second most influential factor is "Employee Capability (NL)", with an estimated coefficient of 0.272, sig < 0.05. The third is the impact of "Technology Infrastructure (NT)", with an estimated coefficient of 0.225, p < 0.05. The fourth factor is "Leadership (LD)", with an estimated coefficient of 0.177, sig < 0.05. Leadership is an important factor shaping the digital transformation process. A positive coefficient for this factor indicates that businesses with a higher level of digital transformation awareness among their leadership tend to accelerate their digital transformation. Ranked fifth is the "Corporate Culture (VH)" factor, with an estimated coefficient of [insert value], sig < 0.05. The positive coefficient for this factor shows a positive relationship between these two variables, supporting the perspective of previous studies. Therefore, the positive correlation implies that companies with a modern corporate culture tend to undergo digital transformation more rapidly. Finally, the factor with the least impact, with an estimated coefficient of 0.117, sig < 0.05, is "Business Pressure (AL)". This factor has a positive relationship with digital transformation at garment enterprises in Phu Tho province. It shows that the greater the pressure for digital transformation, the more it motivates garment enterprises in Phu Tho province to quickly and successfully implement digital transformation.

5. CONCLUSION

Digital transformation is essential and a mandatory requirement for businesses in any sector to survive and thrive in today's context. For garment enterprises in Phu Tho province, there is no significant difference in their digital transformation capabilities regardless of their scale, business field, and ownership type. The experimental research results indicate that the factors influencing digital transformation in garment enterprises in Phu Tho province, in order of importance, are as follows:

Leadership: The findings emphasize the significance of an initial commitment from a business to establish a digital transformation plan. According to Swen and Reinhard (2020), effective leadership and a supportive organizational culture play a pivotal role in the successful implementation of digital transformation initiatives. The management factor, which encompasses elements such as age, managerial experience, and practical knowledge of digital transformation, has a direct influence on the increased utilization of digital transformation services, as noted by Swen (2020). Furthermore, Bader and their colleagues (2022) demonstrated that a business's capability can be primarily gauged by the strategies employed by its managers in the management of raw materials, production processes, and digital transformation. This revolution allows businesses to conduct their operations on novel technology platforms, as discussed by AlNuaimi (2022).

Digital Business Strategy significantly influences a company's digital transformation capability. This suggests that business leaders need to study and proactively learn to develop an appropriate digital transformation strategy for their businesses.

Employee capabilities also play a crucial role in successful digital transformation. Labor quality in textile enterprises in Phu Tho, both specifically and provincially, remains relatively low. The labor force has not undergone training, and more than 70% lack technical expertise. This is a significant obstacle to the digital transformation process for businesses in Phu Tho. During the digital transformation process, automation systems will gradually replace manual processes. Consequently, some labor will be reduced immediately, but at the same time, labor quality must be improved to meet the demands of more complex tasks. Workers need technical skills as well as a combination of digital literacy, social communication, and soft skills to enhance their adaptability and flexibility between jobs and tasks. Meanwhile, labor in Phu Tho's garment enterprises is undergoing significant changes and lacks cohesion, making training and developing the workforce to meet the demands of digital transformation challenging.

Corporate culture: The digital transformation capacity of textile enterprises in Phu Tho province is markedly influenced by their corporate culture. Culture encompasses a collection of values, beliefs, attitudes, and behaviors embraced and followed by the members of an organization. An accommodating and adaptable culture, one that welcomes change, plays a pivotal role in facilitating the effective digital transformation of a company. Consequently, it is imperative for textile businesses in Phu Tho province to foster a pliable culture that encourages seamless adaptation to emerging technologies and the capacity to swiftly pivot when the need arises.

Technological infrastructure: Technological infrastructure is one of the key drivers of digital transformation for textile businesses in Phu Tho. The process of transforming the technological infrastructure will not be successful without choosing the right technology. However, even with the right technology, the transformation cannot succeed if businesses do not embrace change. Therefore, selecting appropriate technology is crucial for the success of digital transformation, and businesses must be willing to adapt and change to stay competitive in the market.

Business Pressure: The prolonged impact of the pandemic has brought about significant changes in the operational landscape of businesses, including those in the textile industry in Phu Tho. The imperative of adhering to social distancing, enabling remote work, and implementing medical isolation protocols has compelled companies to intensify their integration of technology, digitalize their data, and enhance the digital competencies of their workforce. Consequently, businesses have made strides in narrowing the gap in their digital transformation capabilities. Hence, the pressure faced by businesses is identified as a key factor influencing the digital transformation capacity of textile enterprises in Phu Tho province. These findings are consistent with research conducted both domestically and internationally, exemplified by studies like Anh et al. (2022) and Ha (2023), etc.

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GLOBALIZATION'S IMPACT ON BUSINESS, ENERGY, AND ECONOMY: A SUSTAINABILITY PERSPECTIVE

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Abstract: Globalization has played a significant role in shaping the world's economic landscape, driving waves of industrialization and transforming energy resources from traditional coal and wood to fossil fuels and eventually to sustainable energy sources. The integration of global markets has led to increased energy consumption, making energy-intensive practices fundamental in the global economy. This research aims to explore how Globalization has influenced business, energy, and economy and to examine its implications for sustainability and the economy of the future. Employing a methodology based on literature review, descriptive qualitative analysis, and data examination, this study applies Hart and Milstein's sustainable value framework to assess potential advancements in the field. The results indicate the urgency to reduce carbon footprint, especially in light of recent circumstances, and emphasize the critical need for more ambitious visions in sustainability. The advent of artificial intelligence has opened up new business opportunities, aligning with the fifth industrial revolution, which holds promising prospects for the economy of the future. In conclusion, Globalization has been a catalyst for innovation and transformative perspectives in business, energy, and economy. However, achieving sustainability on an international scale requires further efforts, particularly in emerging markets, developing countries, and low-income nations, which face challenges in balancing their economies amidst the ongoing impact of Globalization. Emphasizing sustainable strategies in businesses will contribute to the cultivation of enduring business values. Despite advancements in renewable energy, the transition from traditional oil and natural gas remains slow and necessitates continued efforts towards sustainable energy sources.

Keywords: Globalization, energy, economy, business, sustainability.

1. INTRODUCTION

Globalization, a gradual and enduring process, has been intricately intertwined with successive waves of industrialization, shaping the world's societal and economic fabric. This phenomenon has facilitated the transition of human civilization from basic energy resources, such as coal and wood, to fossil fuels, subsequently evolving towards sustainable energy alternatives and eco-conscious business practices. The global energy market's integration, driven by Globalization, has necessitated escalated energy consumption, leading to energy-intensive practices becoming integral to the economy. However, this interplay between Globalization and industrialization has introduced numerous challenges to the global economy, with supply and demand dynamics pivotal to business profitability. In response to mounting environmental concerns, many large corporations have initiated efforts to safeguard the global environment and their own sustainability. Despite such advances, the adverse impacts of industrial activities persist and, paradoxically, products with severe environmental consequences can prove economically more attractive than their greener counterparts. This underscores the urgent need for businesses to adopt sustainable

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strategies to protect both their profits and the environment. Rising costs and prices, in addition to impacting customer purchasing power, bear environmental ramifications, yet companies may not always be compelled to address environmental waste or compensate for their environmental footprint. The complexities of quantifying such impacts have resulted in unaccounted costs and unmeasured environmental consequences. Consumer preferences for affordable products, coupled with businesses' pursuit of cost-efficient commodities, challenge the protection of profits and the corporate foundation. In light of these intricacies, business sustainability emerges as a compelling solution, addressing the economic, social, and cultural dimensions that Globalization has complicated. Saving money and safeguarding profits become crucial imperatives for clients and businesses to maintain the foundation of the economy. Notably, market forces and companies seeking enduring success, resources, and customer loyalty have shifted their focus towards business sustainability amid Globalization's ever-evolving landscape and challenges, aligning with sustainable objectives and developmental goals. As Globalization continues to exert its influence across social, economic, cultural, and virtual domains, the advent of artificial intelligence (AI) has ushered in both opportunities for enhanced efficiency and apprehensions regarding its impact on the labor market and workforce. The burgeoning AI revolution has demonstrated its capacity to revolutionize various sectors, introducing novel insights and possibilities on the international innovation stage.

In commencing this empirical investigation, we formulated the following research inquiries: "In what ways has Globalization influenced business, energy, and the economy?" and "How has Globalization impacted the world with regards to business sustainability and prospects for the future economy?" The research approach adopted for this study encompasses an extensive literature review, complemented by descriptive qualitative analysis and data examination.

The structure of the study is designed as follows. Section 2 is for the Literature Review. Sections 3 covers Analysis and results. Finally, Section 4 is devoted to the Conclusion.

2. LITERATURE REVIEW

2.1. Business sustainability plays a crucial role for companies and enterprises

The concept of 'business sustainability' has emerged from deliberations on effectively incorporating sustainability principles into enterprises. According to some scholars, business sustainability refers to an organization's approach to attain competitiveness in the market while employing sustainable strategies (Bari et al., 2022).

Business sustainability can be defined as the capacity of an organization to effectively oversee and harmonize economic, social, and environmental aspects, ensuring long-term growth and viability (Sivarajah et al., 2020). The pursuit of sustainability objectives entails aligning business goals with the ever-changing internal and external dynamics, seeking equilibrium through adaptation. Scholars have highlighted that corporate sustainability is intrinsically linked to value creation, prioritizing the exploration of promising opportunities while mitigating corporate risks. To attain corporate sustainability, business practitioners must prioritize accepted practices that are socially and environmentally responsible and acceptable (Vu et al., 2017).

In recent times, an increasing number of businesses have come to recognize the critical importance of achieving long-term business sustainability. This imperative extends not only to their internal operations but also throughout the entirety of their market and supply chain network.

Sustainable business practices, once perceived as expensive inconveniences, are now indispensable for maintaining competitiveness in the market. As the prevalence of businesses claiming to operate sustainably rises, the need arises to discern between those genuinely contributing to sustainable development and those merely making unsubstantiated claims.

The Erb Institute at the University of Michigan delves into two aspects of business sustainability for consideration. The first aspect, Enterprise Integration, centers on businesses responding to market shifts by incorporating sustainability into their existing business considerations, aiming to enhance their competitive positioning. Conversely, the second aspect, Market Transformation, involves businesses actively leading the change within their markets, proactively promoting sustainable practices rather than merely reacting to market incentives.

In conclusion, this paper underscores the significance of sustainability description, theoretical frameworks, and practical sustainability standards, performance, and reporting. It emphasizes the imperative for global companies and their management, policymakers, regulators, investors, educators, and research scholars to adopt sustainability principles as integral aspects of their day-to-day operations and to invest more in research and development to advance sustainable practices(Hoffman,2018).

2.2. Sustainable value framework helps organizations create value

Stuart et al. (2003) contend that sustainability can serve as a catalyst for organizations to drive value creation while simultaneously addressing critical challenges. By examining their concept of sustainable value and applying the sustainable value framework in a business context, we aim to foster sustainable business practices.

The graphical representation utilizes a matrix format, with the vertical axis depicting time, where the present is at the bottom and the future at the top. On the horizontal axis, internal perspectives of organizations are situated on the left, while external perspectives are located on the right.

Hart and Milstein posit that businesses generate and capture value in the four quadrants delineated in Figure 1. From a purely business standpoint, the lower left quadrant emphasizes internal and near-term objectives, such as cost management and risk reduction, leading to value creation. Simultaneously, in the lower right quadrant, external factors are considered, and the focus is on maintaining legitimacy and enhancing reputation with external stakeholders, contributing to value generation. Credibility with stakeholders allows a business to distinguish itself effectively.

	Future		
	Innovation and repositioning	Growth path and Trajectory	
Internal	Share holder Value		External
	Cost and Risk Reduction	Reputation and Legitimacy	
	Present		

Figure 1. Key Dimensions of Shareholder Value

Source: Stuart et al. (2003)

Transitioning to the upper left quadrant, value is created by embracing innovation and repositioning strategies to adapt to changing conditions, ensuring the development of future-oriented products and services. Lastly, the upper right quadrant addresses external dimensions and future performance, where the pursuit of a clear trajectory for growth generates value by introducing new services or tapping into untapped markets.

In essence, these four quadrants represent a comprehensive framework for understanding how a business generates value for its stakeholders.

2.3. From industry 4.0 towards the economy of the future and industry 5.0

Forbes attributes digitalization as the primary catalyst for Industry 4.0, which is marked by various trends such as interconnected customers, empowered employees, streamlined production, and transformed products. Additionally, the article highlights the contrast between digitalization and digitization. It suggests that to become customer-centric throughout the enterprise, digital transformation requires enhancing the organization's capacity to handle change comprehensively, making change a core competency while engaging in the process of digital transformation (Kraaijenbrink, 2022).

In September 2021, Industry 4.0 was a term used to describe the fourth industrial revolution, characterized by the integration of digital technologies, automation, data exchange, and smart manufacturing processes. It brought about significant advancements in various industries through the use of technologies like the Internet of Things (IoT), artificial intelligence (AI), big data, cloud computing, and more. The focus was on optimizing production processes, enhancing efficiency, and enabling a more connected and intelligent ecosystem.

Industry 4.0 was expected to drive economic growth and change the way businesses operate. It aimed to improve productivity, reduce operational costs, create new business models, and revolutionize the global economy. Some of the key features of Industry 4.0 included:

- Smart Factories: Manufacturing facilities equipped with interconnected machines and systems that can autonomously exchange information and make decisions to optimize production.
- IoT and Sensor Integration: The use of sensors and connected devices to gather real-time data from various processes and products, enabling better monitoring and decision-making.
- Big Data and Analytics: Utilizing large datasets to gain insights, predict outcomes, and optimize operations.
- Cyber-Physical Systems: The integration of physical machinery and digital technologies, allowing for real-time interaction and collaboration between the physical and virtual worlds.
- Additive Manufacturing (3D Printing): A technology that allows for the creation of complex objects through layer-by-layer printing, revolutionizing prototyping and manufacturing.
- Artificial Intelligence and Machine Learning: Implementing AI algorithms to enhance decision-making processes and enable autonomous systems.
- Cloud Computing: Providing access to computing resources and data storage over the internet, facilitating scalability and data accessibility.

Now, as for Industry 5.0, it is more of a speculative concept and not yet a widely adopted term. Some experts and futurists suggest that Industry 5.0 would be the next stage of industrial development after Industry 4.0, with a stronger focus on human-centered manufacturing. While Industry 4.0 emphasized automation and the integration of digital technologies, Industry 5.0 would seek to combine the advantages of technology with human creativity, emotional intelligence, and problem-solving capabilities.

In an Industry 5.0 scenario, the vision is to find a balance between automation and human labor, where humans and machines work collaboratively to achieve a sustainable and inclusive economy. The idea is to leverage technology to enhance human capabilities and well-being rather than replacing human workers with machines.

The transition from Industry 4.0 to Industry 5.0 is expected to bring about new challenges and opportunities. As automation and AI continue to advance, there are concerns about job displacement and the need for upskilling and reskilling the workforce to adapt to new roles. Additionally, ethical considerations and questions about the role of humans in an increasingly automated world are likely to arise.

2.4. Artificial Intelligence's incorporation in business and it road to industry 5.0

While the majority of businesses are currently in the process of digitalizing their operations by incorporating artificial intelligence (AI), the internet of things (IoT), cloud computing technology, and other cutting-edge technologies represent the next stage of the Industrial Revolution, already present and emerging. The rapid development of new technologies and their integration into human processes has effectively ingrained Industry 5.0 into everyday business practices. Industry 5.0 goes beyond merely digitalizing manufacturing processes; it also addresses challenges such as the demand for a larger workforce and the aging workforce issue (et al., 2019).

Artificial Intelligence (AI) has made significant strides in the business world, transforming various industries and enabling new possibilities. Its incorporation in business has brought about several benefits, including improved decision-making, enhanced customer experiences, increased operational efficiency, and the ability to process and analyze vast amounts of data. Here are some key aspects of AI's incorporation in business:

- Data Analytics and Insights: AI enables businesses to extract valuable insights from the massive amount of data they generate. By using advanced analytics and machine learning algorithms, companies can identify patterns, trends, and correlations in the data, leading to better-informed decisions and more targeted strategies.
- Personalization and Customer Experience: AI-powered recommendation systems and chatbots have revolutionized customer interactions. These technologies can personalize product recommendations, provide real-time customer support, and enhance overall user experiences, leading to increased customer satisfaction and loyalty.
- Automation and Efficiency: AI-driven automation streamlines repetitive and time-consuming tasks, freeing up human resources to focus on more complex and creative aspects of their work. Robotic Process Automation (RPA) and AI-powered systems help businesses optimize workflows and improve efficiency across various departments.
- Predictive Maintenance: In industries like manufacturing and logistics, AI can predict equipment failures and maintenance needs, minimizing downtime and reducing operational costs.
- Fraud Detection and Security: AI algorithms can detect unusual patterns in financial transactions, helping businesses prevent fraud and enhance security measures.
- Natural Language Processing (NLP): AI-powered NLP allows machines to understand and process human language, facilitating applications like sentiment analysis, language translation, and voice assistants.
- Supply Chain Optimization: AI can optimize supply chain operations by predicting demand, improving inventory management, and enhancing logistics and delivery processes.

As for the road to Industry 5.0, as mentioned earlier, Industry 5.0 is a speculative concept that is envisioned as a more human-centric approach to industrial development. The incorporation of

AI in Industry 5.0 would likely focus on finding ways to combine AI's capabilities with human ingenuity and creativity.

While Industry 4.0 emphasized automation and machine-to-machine communication, Industry 5.0 may aim to create a collaborative environment where humans and AI systems work together harmoniously. For example:

- Cognitive Assistance: AI systems could assist workers by providing real-time information, insights, and recommendations, allowing humans to make better decisions and solve complex problems.
- Human-AI Collaboration: Industry 5.0 might encourage the development of AI systems that are more intuitive and capable of understanding human context and emotions, fostering better collaboration between humans and machines.
- Ethical and Responsible AI: As AI becomes more integrated into the workplace, ensuring ethical and responsible AI practices will be crucial to address potential biases and avoid negative consequences.
- Upskilling and Reskilling: The transition to Industry 5.0 would require a focus on upskilling and reskilling the workforce to adapt to new roles that leverage AI's potential and complement human skills.

It's important to remember that the concept of Industry 5.0 is still evolving, and the path towards its realization may differ from these speculative ideas. As AI and technology continue to advance, businesses and industries will need to adapt to new paradigms to embrace the potential benefits of Industry 5.0 while addressing itschallengesresponsibly.

3. ANALYSIS AND RESULTS

Globalization encompasses a broad range of factors that extend beyond business sustainability, energy, and the economy of the future, even though these areas are crucial elements of globalization. It involves the integration of global economies, cultures, and societies, with implications for various aspects such as politics, human rights, the environment, and technology. One of its effects has been the widespread dissemination of technology and information, creating new opportunities for innovation and development, as evidenced by the 4th and 5th industrial revolutions. However, it has also raised concerns about privacy, security, job displacement, and inequality. While business sustainability, energy, and the economy play significant roles in globalization, a comprehensive understanding of this phenomenon requires considering a wide array of issues and factors.

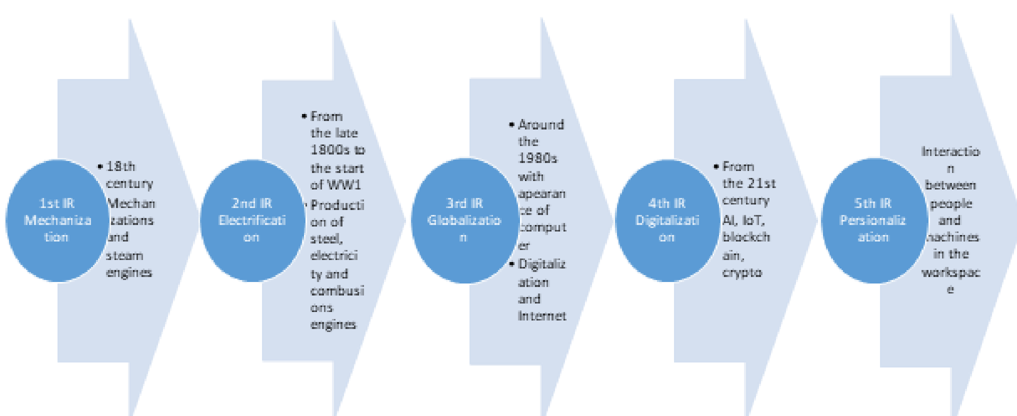

Figure 2. The evolution of industrial revolution (IR) before and after Globalization

Source: Summary of the author

3.1. Globalization and Energy

Energy plays a crucial role in economic stability and growth, and the relationship between the two is reciprocal. Energy serves as one of the fundamental pillars of the economy, and as globalization has progressed, the world's energy consumption and production have increased significantly to meet the demands of industries and populations. Throughout history, energy has been at the center of various industrial revolutions, starting from the mechanization and steam engine-driven first industrial revolution, continuing through the subsequent industrial revolutions and into the ongoing fourth and fifth industrial revolutions. The fifth industrial revolution emphasizes human-machine interaction, demanding substantial energy resources for the production of goods and services.

As globalization has intensified, the need for more energy to fuel increased production has become evident. However, the excessive consumption of energy has negatively impacted many economies, leading to the emergence of energy transition and sustainability initiatives aimed at efficiently using and storing energy for long-term benefit. The shift towards renewable energies has gained attention, despite their initial costliness and setup expenses.

Globalization has fostered a global economy heavily reliant on energy markets, commodity markets, innovations, international trade, and competitiveness, as illustrated in Figure 3.

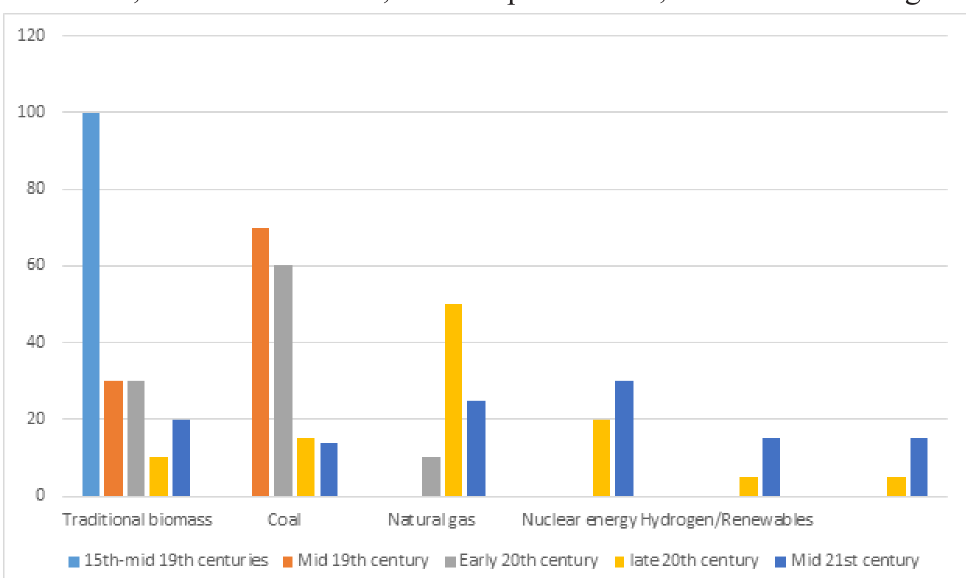

Figure 3. Energy sources' appearance and progress (%) before and after Globalization

Source: Summary of the author

3.2. Capturing sustainable business value by applying the sustainable value framework in business

To assist businesses in harnessing the benefits of sustainability, a comprehensive strategy can be applied. In the lower left quadrant, businesses can involve employees in finding ways to reduce waste and improve resource efficiency, leading to significant cost reductions, risk mitigation, and a more engaged workforce. In the lower right quadrant, engaging with the immediate and extended value chain can focus on developing product stewardship and extending the value of products and services, enhancing the business's reputation and legitimacy, thus creating more value for the company. In the upper left quadrant, adopting a sustainability approach can drive innovation and reshape the business by developing sustainable competencies and identifying the skills, products, and services required in a resource-constrained society.

Finally, in the upper right quadrant, businesses can chart a future trajectory and communicate a clear sustainability vision, stimulating competitive imagination and guiding organizational priorities. This can help identify unmet needs and new markets, including underserved or unserved sectors. To evaluate their sustainability efforts, businesses can use this framework to assess their activities in each quadrant and identify any imbalances in their portfolio of activities. By pinpointing the most opportune areas for action, they can develop initiatives to rebalance the portfolio and create new value while addressing sustainability challenges. (Refer to Figure 1 for illustration).

3.3. Energy sources before and after globalization

When considering the shift from traditional energy sources, it becomes evident how essential they have been. Historically, main energy sources included coal, oil, natural gas, nuclear, hydropower, biofuels, wind, and solar. In the early 1800s, traditional biomass, primarily wood, was the dominant energy source. With the industrial revolution, coal gained importance, and around half of the world's energy came from biomass. In the 1900s, the world adopted new energy sources like oil, natural gas, hydropower, and later nuclear energy in the 1960s. However, the transition to renewable energy, particularly solar and wind energies, has been slow, taking around 200 years to emerge in the 1980s. The cost and complexity of installations remain challenges in the shift towards renewable energy. Additionally, it is difficult for the world to entirely abandon the main energy sources like oil and natural gas, which are crucial commodities driving various industries and productions.

Artificial intelligence has played a significant role in the process of globalization and the global economy. The world now heavily relies on the energy of artificial intelligence for production, analysis, and security purposes. (Refer to Figures 3 and 4 for visuals).

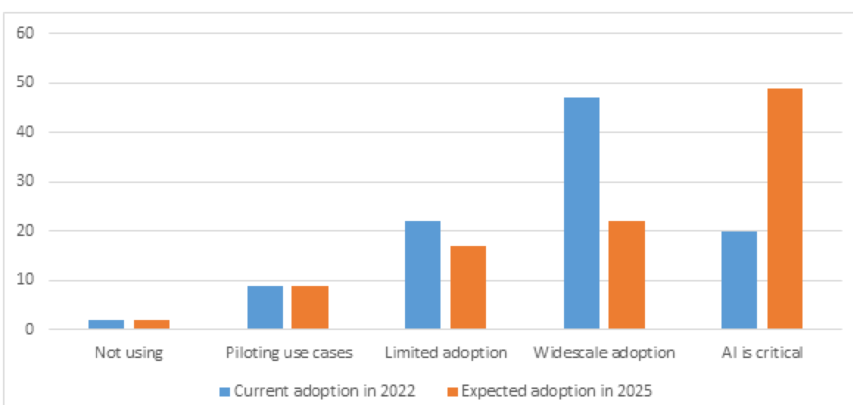

Figure 4. Current and expected adoption rate of artificial intelligence (%) in global IT business during 2022-2025

Source: Statista data, 2023

Incorporating sustainability into businesses and companies plays a vital role in safeguarding the planet by reducing and eventually eliminating carbon emissions in the production process. This significant step is both a challenge and an opportunity for companies as it leads them towards sustainable practices while retaining clients and customers. Initiatives such as regenerating energy resources, recycling energy and waste, and adopting new approaches in business awareness, marketing, and strategy contribute to advancing the global society's move towards sustainable globalization. Since sustainable business is a fundamental aspect of the economic sector, and the economy serves as a main pillar in both sustainability and globalization, the integration of sustainability practices contributes to the overall well-being of the planet and global society. (Refer to Figure 5 for visual representation).

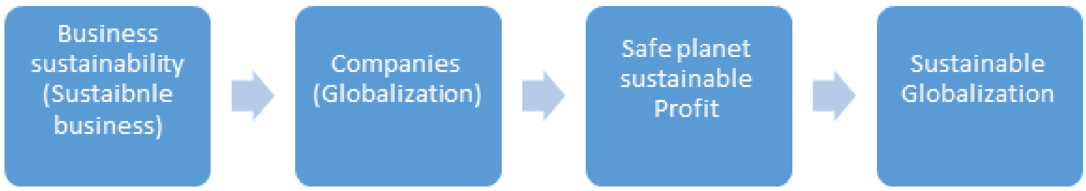

Figure 5. Incorporating sustainability in business for a sustainable profit and safe planet

Source: The author

4. CONCLUSIONS

Globalization has significantly shaped the world and global society, creating a global economy and a virtual world. It has played a pivotal role in driving industries 4.0 and 5.0, focusing on the potential of artificial intelligence to surpass human abilities. The future economy will rely on the synergy between machines and humans, necessitating sustainable practices for businesses and companies. However, the transition to renewable energy has been sluggish due to high costs and installation challenges. The world continues to heavily rely on main energy sources like oil and natural gas, which are essential commodities for industries and various productions. Despite globalization fostering innovation and new perspectives in business, energy, and the economy, the implementation of sustainability requires more efforts at the international level, especially for emerging markets, developing countries, and low-income nations, facing difficulties in balancing their economies amid the impact of globalization. Adopting sustainable strategies in businesses can lead to enduring business values, but it's evident that the shift towards renewables is still progressing at a slow pace.

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COMPLETING THE LEGAL ACCOUNTING PROVISIONS FOR LIABILITIES IN VIETNAM

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Abstract: Provisioning is one of the very important accounting operations, affecting business results and the nature of continuous operation of a business in the accounting period. In Vietnam, the issue of contingency is referred to in Accounting Standard No. 18 " Provisions, Contingent Liabilities and Contingent Assets", the standard prescribes and guides the principles and methods of accounting for reserves; These regulations also gradually move towards general international regulations. However, this issue still has shortcomings and limitations as a legal basis for preparing and presenting on financial statements of Vietnamese enterprises. Therefore, it is necessary to clarify some basic contents related to the presentation of provision information, as well as to propose some specific solutions, which will be meaningful for the improvement of the current accounting legal framework system in Vietnam.

Keywords: accounting, provisions, liabilities, Vietnam

1. INTRODUCTION

Currently, the system of legal documents related to backup accounting in Vietnam, especially the Guiding Circulars is quite complete and detailed. However, the system of these documents has been issued sporadically, in the period from 2005 until now, there exist a number of inadequacies, limitations, need to overcome and improve.

Provision appropriations are essentially built on the basis of estimates, which is an important basis, but it does not lose the reliability of the data on financial statements if enterprises provide reliable bases for the work of estimating appropriations (debts). This is also a mandatory requirement for enterprises when presenting provisions on financial statements.

With the trend of international economic integration, the requirements of globalization and the information needs of accounting information users have set requirements for harmonization of accounting regulations and principles among countries around the world. International accounting standards (IAS/IFRS) are issued by IASC (International Accounting Standards Board) and IASB (International Accounting Standards Board). In the period from 1993 to 2001, the IASC restructured to form the IASB. The purpose of IASB is to develop the International Standards System of Financial Statements (IFRSs), forming a new era towards global accounting harmonization. Since then, the process of harmonizing international accounting has been increasingly interested by international accounting organizations as well as countries around the world.

Vietnam is a developing country the fledgling market economy cannot stand outside the flow of integration. In fact, the Department of Accounting and Auditing Regulations and agencies of the Ministry of Finance together with experts and scientists are implementing the roadmap to update and promulgate a new system of accounting standards in Vietnam in the direction of harmonization with IASs/IFRSs, including IAS Standard 37 - Provisions, Contingent Liabilities and Contigent Assets corresponding to Vietnam Accounting Standard VAS 18 - Provisions, Assets and Potential

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Liabilities (Issued and announced under Decision No. 100/QD-BTC dated 28/12/2005 of the Minister of Finance).

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

2.1. Situation of study abroad:

IAS 37 defines and defines the method of accounting and explains the provisions payable (liabilities that are uncertain in terms of time or value), along with contingent liabilities (which may be current obligations and obligations that cannot be determined or cannot be measured) and contingent assets (which may be assets).

IAS 37 - Contingent Provisions, Assets and Liabilities, issued in 1998, significantly improved the financial statements at that time. Before it was enacted, there was considerable scope for profit manipulation, for example, units can make provisions for future expenses without current obligations. IAS 37 only allows contingencies that meet the definition of liability.

On 14 May 2020, IAS 37 was revised with guidance on Contracts with Great Risk – Cost of Contract Completion (IAS 37 Amendments) stipulates the costs that the company is taken into account when assessing whether the contract will suffer losses and is effective for the reporting year period commencing on or after January 1, 2022. In the amendment, the "cost of completion" of a contract includes "costs directly related to the contract." Costs directly related to a contract may be increased costs in the performance of that contract (e.g. materials, direct labor) or the allocation of other costs directly related to the performance of the contract (An example is the allocation of depreciation expense to an item of property, plant and equipment used to perform the contract).

IAS 37 - Contingent provisions, assets and liabilities issued by the IASB in September 1998 and effective for accounting periods beginning on or after July 1, 1999. - IFRS.VN.

2.2. Research situation in the country

In recent times, accounting for provisions has been hotly discussed by many interested researchers on forums about various aspects because accounting information about reserves is always considered important information in the management process of each enterprise and fully and honestly reflecting reserves is quite complicated.

Accounting for provisions in Vietnam has attracted the attention of researchers, however, the number of publications is limited and only focuses research on certain aspects of accounting for provisions. Some main contents of research on accounting for provisions in Vietnam can be listed as: *The first, Method of setting aside and handling provisions at enterprises* with research by Mr. Duong Thi Thanh Hien - Duy Tan University (2018) (http://tapchitaichinh.vn/). *The second, The need for provisions in enterprises* with the research of MSc Tran Thi Thanh Thuy (Faculty of Accounting – University of Economics and Technology) (2017) (http://tapchicongthuong.vn/). *The third, Legal basis related to provisions in enterprises today: Current situation and recommendations* with research by Phan Thanh Hai - Duy Tan University (2020) (https://hoiketoanhcm.org.vn/). *The fourth,* Pham Hoai Huong (2007) in his research clarified *the nature of the content reflected in reserve accounts according to the legal regulations of Vietnamese accountants; The fifth,* Mai Ngoc Anh (2012) provides general *research results on accounting estimates and methods for determining each estimate specified in International Auditing Standards (ISA), International*

Financial Statements Standards (IFRS) and US accounting principles (US GAAPs) thereby providing experiences suitable to the Vietnamese context. The topic also researches accounting standards and regimes on accounting estimates and methods of determining accounting estimates, assesses advantages and disadvantages from which to offer complete solutions;

The above studies have covered each content in the accounting of provisions, however, none of them have a comprehensive approach to the entire legal system of accounting for reserves in Vietnam today as well as complete solutions according to international practices.

3. METHODOLOGY AND PROPOSED MODEL

Research Methods: From the collected material, the author conducts qualitative research, through such methods: analyzing and synthesizing theory, experts, analyzing and summarizing experience, studying history … On dialectical materialistic perspective: use translation to speculate the corollary, use comparisons to make intermediate judgments, thereby using induction to make conclusions, summarize to propose recommendations and solutions.

Secondary data collection

Summary reports of the Ministry of Finance, Annual Report of the State Bank of Vietnam and Social Affairs, books and magazines such as: Financial and Accounting Research Journal, Accounting Journal, Accounting - Auditing Journal, scientific research journal of auditing, domestic and foreign studies related to the topic. Websites such as the website of the Ministry of Finance (www.mof.gov.vn), the International Accounting Standards Drafting Committee (www.iasplus.com) and some other websites.... Legal documents related to accounting provisions such as Enterprise Law, Accounting Law, International Accounting Standards, Vietnam Auditing Standards, Decrees, Decisions, Circulars... of the Government and agencies relevant function.

4. RESEARCH RESULTS

4.1. Assessing the limitations and contents of regulations on accounting for provisions for liabilities in Vietnam at present

4.1.1. Assessing the limitations of backup accounting for product issuance in Vietnam

In fact, when making provisions for warranty of products and goods, pursuant to Circular No. 48/2019/TT-BTC issued on August 8, 2019 on provisioning, there are specific provisions as follows:

“Article 7. Warranty provision for products, goods, services, construction works

1. Objects and conditions for making provisions: are products, goods, services and construction works performed by the enterprise that have been sold, supplied or handed over to the buyer still within the warranty period and the enterprise is still obliged to continue repairing and perfecting, contractual warranty or customer commitment.”

In fact, when applying enterprises, there are 2 interpretations as follows:

- *How to understand 1:* Appropriation of warranty at the end of the annual accounting period, based on the products and goods sold in the period and committed to warranty with customers by warranty cards, warranty stamps, sales contracts, quotations. According to accounting principles, this risk “provision” does not depend on whether the appropriated goods are still under warranty by the supplier. Because the time of appropriation is the end of the year, the warranty goods are based on the time when the customer brings the warranty for repair, therefore, it is impossible to determine whether the warranty liability belongs to the company or to the supplier at the end of the fiscal year.

- *How to understand 2:* Set up warranty at the end of the year based on the goods for which the supplier has exhausted its warranty liability.

Conditions for provisioning are specified in Article 7 of Circular No. 48/2019/TT-BTC Guide the establishment and handling of provisions for inventory discounts, losses of investments, bad receivables and warranty of products, goods, services and construction works at enterprises as " .... *still within the warranty period and the enterprise is still obliged to continue repairing, perfecting, warranty according to the contract or commitment to the customer"* is unreasonable, leading to the above interpretation of the enterprise. For example, the company sold the phone on 01/03/2021 with a warranty period of 2 years, So on December 31, 2022, the accountant of the enterprise has made a product warranty provision for the 2022 financial statements for the phone?. With current provisions in Circular No.48/2019/TT-BTC, enterprise will understand: "If the product is still within the warranty period, it will be made a backup", that would not be true of the nature of the provision for liabilities in terms of product issuance costs as stipulated by International Accounting Standard IAS 37 - Provisions, Contingent Liabilities and Contingent Assets.

The essence of the provision condition given in Circular No.48/2019/TT-BTC is the determination of "When to make provision for product issuance", here emphasis is placed on when contingency should be made. With regulations such as the current Circular No.48/2019/TT-BTC, it will be difficult to determine when enterprises should set up provisions: when exporting and selling products, or at the end of each fiscal year, as required by Circular No.48/2019/TT-BTC " .... *still within the warranty period and the enterprise is still obliged to continue repairing, perfecting, warranty according to the contract or commitment to the customer"*

4.1.2. Assessing legal content limitations on environmental restoration cost provision accounting in Vietnam

Environmental restoration costs can be understood as expenses to return to the current state of the environment before renovation activities for production and business purposes. In particular, typical of this cost is the cost of returning the premises to the initial state of the enterprise.

Accounting: The accounting of environmental restoration costs also has differences between Vietnamese accounting regimes and specific international accounting standards:

Content	Vietnam Accounting Regime	International Accounting Standards
Recognition methods	* In all cases, these expenses are provisioned to be recognized as expenses for the period a) Record the entire reserve value in expenses in the period, corresponding to the estimated value to be paid in the future b) Provisions are set aside periodically throughout the useful life of the asset: Accounting: Dr. Acc 627, 641, 642 Cr. Acc 352 - Provisions (According to Circular 200/2014/TT-BTC)	* The cost of site refund will be recognized in the cost of the asset when meeting the conditions for the time of recognition stipulated on time and reserve appropriation value. This value will then be gradually allocated to periodic expenses based on the depreciation method and useful life of the asset (Pursuant to IAS 16 - Property, Plant and Equipment)

Guidance on when to make provisions	* There are no specific provisions "5. About accounting for environmental restoration costs Circular 200 only provides for the advance deduction of environmental restoration costs and the use of Acc 3524 for accounting. The level of extraction, the beginning and end of the excerpt... must comply with mechanisms and policies applicable to each industry and each unit. For example, the advance deduction of mine cleanup costs of Vietnam National Oil and Gas Group or advance deduction of environmental restoration costs of Coal and Mineral Group must comply with specific provisions of law according to regulations of each industry" (quoting Official Dispatch No. 12568/BTC-CĐKT dated September 09, 2015; V/v: Explanation of contents of Circular No. 200/2014/TT-BTC)	* Provisions in IAS 37 - Provisions on the value of provisions Accordingly, the written value of the historical increase in the cost of the prescribed asset is the most reliable estimate of the cost value that the enterprise will have to spend to fulfill its obligations at the time of reporting. And this estimated value needs to show the time value of the money as well as the risks of that reserve
Change the appropriation value	Recognition in expenses for the period	Record changes in the cost of assets

From a corporate income tax perspective: There are no specific provisions for the declaration of advance deductions related to these environmental restoration costs, However, according to the general provisions on the determination of expenses deducted from previous deductions, the pre-deducted reconstituted expenses in the period shall be included in the deductible expenses when determining income subject to corporate income tax. And at the end of the contract, the unit must redetermine the exact amount of actual costs based on the actual invoices and legal documents incurred to adjust the declared costs. However, it is also possible to recognize the risks in ensuring regulatory requirements such as: the basis of prepayment cost deduction in the period because there is no guidance on provision for environmental restoration costs and determine the contract termination period to redetermine the actual costs incurred. Some tax authority guidelines do not accept deductible costs from this cost. Therefore, companies need to be careful in declaring deductions for this part of the cost.

Legal basis: Pursuant to Point 2.20, Clause 2, Article 4 of Circular 96/2015/TT-BTC,

"2. Expenses that are not deductible when determining taxable income include:

…

2.20. Pre-deducted expenses according to the term, according to the cycle that until the end of the term, the end of the cycle has not been spent or the expenditure is not exhausted.

Advance deductions include: advance deductions for major repairs of cyclical fixed assets, advance deductions for activities that have calculated revenue but continue to have to fulfill contractual obligations (Even in case the enterprise has asset leasing activities, service business activities for many years but collects money in advance from customers and has fully included in the revenue of the year of collection) and other prior deductions.

In case an enterprise has production and business activities that have recognized enterprise income tax calculation revenue but have not yet fully incurred expenses, the prescribed expenses shall be deducted in advance from the deductible expenses corresponding to the recognized revenue when determining income subject to enterprise income tax. At the end of the contract, the *enterprise must calculate and determine the exact amount of actual costs based on the actual legal invoices and documents incurred to adjust the increase in costs (in case the actual costs incurred are greater than the pre-deducted amount) or reduce costs (in case the actual costs incurred are less than the pre-deducted amount) in the tax period end of contract."*

In addition, these guidelines are providing guidance for pre-deducting periodic environmental restoration costs. In case an enterprise does not make an advance deduction but recognizes once in the last period, there is a risk of determining undeductible costs corresponding to past periods where this part of expenses has not been pre-deducted.

4.1.3. Assessment of legal content limitations on provision accounting for fixed asset repair costs in Vietnam

Fixed assets are used for a long time and are constituted by many different parts and details. When participating in the production and business process, the parts constituting fixed assets are worn out and damaged unevenly. Therefore, in order to restore the normal operation capacity of fixed assets and ensure safety in production and business labor, it is necessary to repair and replace worn and damaged parts and details of fixed assets. Depending on the form of repair, the impact of repair costs on production and business costs between periods, the method of accounting for repair costs is different. In principle, for periodic repair work, large repair costs, enterprises must plan in advance, from this plan, the accountant makes an estimate of repair costs and proceeds to deduct in advance to production costs regularly every month.

Specifically, according to Point c, Section 3, Article 62, Circular 200/2014/TT-BTC guiding the recognition of advance deductions for fixed asset repair costs according to technical requirements that must be periodically repaired (aircraft, ships...) as follows:

Every period, the accountant deducts in advance the cost of major repairs of fixed assets as planned, recording:

Dr. Acc 627/641/642

Cr. Acc 352 – Provisions

Actual major repair costs incurred, record:

Dr. Acc 2413 – Major repairs of fixed assets

Cr. Acc 111/152/153/214/334/338…

When major repairs to fixed assets are completed, the actual cost of major repairs incurred, record:

Dr. Acc 352 (3524) – Provisions

Cr. Acc 2413 – Major repairs of fixed assets

The accountant shall handle the difference in the actual amount of major repair costs incurred compared to the amount deducted in advance according to the plan (if any), recording:

+ If the actual arising number is greater than the previous extract, it will be supplemented and recorded:

Dr. Acc 627/641/642…

Cr. Acc 352 (3524) – Provisions

+ If the actual amount incurred is less than the previous deduction, write down expenses (According to the CIT Law) or write off other income increases (Based on VAS 15), record:

Dr. Acc 352 (3524) – Provisions

Cr. Acc 627/641… or Acc 711 – Other income

For example: On January 1, Pacific Airlines put into operation 1 Boeing 737-400 aircraft for international passenger transportation. According to technical requirements and based on the airline's operation plan, after 5 years Pacific Airlines needs to overhaul Boeing 737-400 aircraft on.

When starting operation, Boeing 737-400 has estimated the cost of overhauling the aircraft after 5 years, including: 1. Cost of buying new replacement equipment: VND 1,700 million. 2. Cost of reinstalling machinery: VND 600 million. 3. Cost of machinery repair staff: 700 million VND.

According to Circular 200/2014/TT-BTC, accountants will pre-deduct aircraft overhaul costs on year N financial statements as follows: (Each year provision for overhaul costs is 600 million)

Dr. Acc 627: VND 600 million

Cr. Acc 352: VND 600 million

Financial statements for the year N+1, N+2, N+3, N+4 will be made provision for overhaul costs according to the above entries

In December N+4, Pacific Airlines overhauled the Boeing 737-400 with a total actual cost of VND 3,200 million, the accountant recorded:

Dr. Acc 2413: VND 3,200 million

Cr. Acc 331, 112….: VND 3,200 million

On 31/12/N+4, the accountant transferred the actual overhaul costs incurred:

Dr. Acc 352: VND 3,200 million

Cr. Acc 2413: VND 3,200 million

The amount of overhaul costs deducted in advance from year N to the end of N+1 is: 600 million x 5 = 3,000 million

The actual overhaul cost incurred is: 3,200 million, so the accountant will make additional appropriations on 31/12/N+4:

Dr. Acc 627: VND 200 million

Cr. Acc 352: VND 200 million

Thus, Circular 200/2014/TT-BTC has acknowledged that the pre-deduction of periodic fixed asset repair costs is always a mandatory event for provisioning.

IAS 37 - Provisions, contingent liabilities and contingent assets do not allow Pacific Airlines to make provisions for the cost of overhauling Boeing 737- 400 aircraft, because at the end of the first year:

a. There is no obligation to spend VND 600 million at the end of the first year.

b. Just an intention of repair, not a current obligation (non-binding event)

c. Overhaul costs can be avoided by future airline action. (For example, sell the aircraft at any time)

However, according to experts, in practice, there are still many interpretations and improper implementation, because the event is mandatory:

i) A past event giving rise to a present obligation is called an event of a compulsory nature.

ii) A compulsory event is an event in which the entity has no choice but to perform obligations arising from this event.

This only happens when the payment of this obligation is mandatory by law or when there is a joint obligation of the event, resulting in a reliable estimate so that the 3rd party is sure that the business will pay the debt.

However, according to the principle of recognition of provisions of International Accounting Standard No. 37 (IAS 37), a reserve is recognized only when the following conditions are satisfied:

+ The entity has current obligations (legal or joint obligations) resulting from an event that has occurred. Legal obligation is an obligation arising from a contract, an existing legal document …. Solidarity obligation is an obligation arising from the activities of an enterprise when adopting issued policies or relevant current documents and documents to prove to other partners that the enterprise will accept and fulfill specific obligations.

+ The entity can be sure that resources associated with economic interests must be used to pay obligations. Thus, a debt that must be accompanied by a decrease in economic benefits is more likely than not to occur.

+ The value of the obligation can be reliably estimated.

The use of estimates is an important part of preparing financial statements and does not detract from the reliability of financial statements.

The provision for repairing fixed assets only represents the entity's intention to carry out repairs to this asset, not that the entity is obliged to do so because the entity may choose to sell such assets at any time. Thus, the above provision is not in accordance with the principle of provision recognition according to international accounting standards IAS 37 - Contingent provisions, assets and liabilities

4.2. Solutions to complete the legal system of accounting for provisions for liabilities in Vietnam according to international practices

4.2.1. Solutions to complete legal contents on provision accounting for product warranty in Vietnam according to international practices

Products with a long service life such as cars, motorcycles, computers, phones,... are usually sold with warranty conditions. During the warranty period of the product, if damage occurs, the seller will repair or renew the product for the buyer. Product warranty debts are not only a tool to insure and hedge risks, but they also convey signals about the future results of the company, and it is also a tool for managers to implement profitable management behaviors.

The determination of product warranty provision costs is based on the judgments and estimates of the business, combined with historical statistical data;

The value of warranty provision is based on the value of warranty costs that the enterprise expects to spend in reality, regardless of the value of revenue arising from the sale of products; The method of setting up warranty provisions based on revenue value is a commonly applied method in practice, but this is not the only method in determining the reserve value of product warranty.

The determination of product warranty contingency costs is based on the judgments and estimates of the business. Judgments and estimates of product warranty contingency costs are governed by the following factors:

(1) For new business products

Past statistical forecasts are a basis for businesses to determine the warranty reserve value for products.

However, for new business products, businesses do not have historical data related to this product. At this point, businesses need to estimate the warranty reserve value for the product based on the information that the business currently has. Some of the information that can be mentioned includes:

- Determine whether the manufacturing process is simple or complex: Products that require complex manufacturing processes are more likely to make mistakes than products with simple manufacturing processes;

- Product quality control process: Products with strict quality control procedures will have less defect and failure rates than products with less strict control processes;

- Do you have experience with products with similar technical standards?

In this case, enterprises still have to estimate with all their ability, based on existing information to determine the warranty reserve value to be set aside. Enterprises are not allowed to neglect the provision for product warranty (if these costs are material) on the basis that you cannot reliably estimate these costs

When manufacturing products, there will be a percentage of defective products and therefore, businesses will have to spend a lot of money to fix these defective products. Therefore, the provision for warranty should be made to reflect the above obligation.

(2) Quality of raw materials

The quality of raw materials used in the manufacture of products is also a factor affecting product warranty costs. In case the enterprise changes the supplier of raw materials, uses new materials to replace the materials in use, ... then the costs incurred for the product warranty will also be likely to change.

(3) Labor quality

The cost of product warranty also depends on the quality of labor. When enterprises replace skilled workers with new ones, it is likely to affect the quality of manufactured products and therefore, the rate of defective products increases, leading to an increase in product warranty costs.

(4) Warranty period

The warranty period is also a factor affecting the warranty reserve value of the business. The same product A, but if the warranty period is 24 months, the expected warranty cost will be less than when the warranty period is 36 months.

When the warranty period is longer, the percentage of defective products during the warranty period is also greater and therefore, the estimated cost value of the product warranty will be more.

Therefore, when setting up a product warranty provision, the reserve value will be different with the same product with a different warranty period.

For new business products, enterprises only have complete data on product warranty costs after the product warranty period expires. For example, product A has a warranty period of 36 months, only after 36 months from the time of putting the product on the market, the enterprise has in hand enough statistical data related to the warranty cost of product A

Example:

Product A has a defect rate for the first year of warranty service of 5%. However, by the second year, the defect rate is up to 7.5% of the products sold and the warranty defect rate in the third year is 10%.

Thus, if only the data obtained in the first year, the determination of the warranty cost of product A will not be accurate, when the actual cost that businesses have to spend on product warranty in the second and third years is much greater than the first year

(5) Variation in estimates in warranty costs

Estimates of warranty cost provisions need to be updated regularly to adjust the estimated value to be close to the actual cost value incurred.

For new business products, when there is actual data showing that the percentage of defective products is greater or smaller than the original estimated value, the product warranty reserve value needs to be adjusted to match the reality.

Similarly, the data on past warranty costs also needs to be adjusted to fit the current situation. For example, enterprises improve production processes, improve labor quality, apply stricter product quality control processes, ... are cases that show that the value of product warranty costs is expected to decrease compared to past statistical data.

Product warranty cost estimation process

The estimation of product warranty contingency costs can be done according to the steps below:

- Estimate the rate of product failure and the degree of failure of each product for each warranty year;

- Estimate the necessary costs spent on repairing the product;

- Calculate the reserve value of product warranty to be set aside based on the above information. This value is discounted to present value to reflect the time value of money if its effect on the financial statements is material.

From the above analysis, the author offers a solution to complete the legal content of provision accounting for product warranty costs in Vietnam according to current international practices as follows:

As analyzed in Chapter 2, Circular No. 48/2019/TT-BTC did not specify the time to make a product warranty provision

Answering the question "When to make a product warranty provision?", the answer here is "The sales performance period will be the period when product warranty provision should be made", the appropriate principle will govern the recognition of product warranty costs. At the time of determination of sales, i.e. the time of recognition in revenue, the accountant will estimate the cost of product warranty in the same period in which the accounting recognizes revenue. In essence, the warranty policy is for the purpose of promoting sales, warranty costs need to be recognized in accordance with the revenue recognition in the period, here it is necessary to comply with the appropriate principle of accounting

There are three methods for accounting for warranty costs of products and goods:

+ Accrual warranty cost method;

+ Method of selling separately warranty and:

+ Adjusted cash method;

(1) Accrual warranty cost method

According to the accrual method, the company recognizes warranty costs and estimated liabilities for future warranty performance in the sales period. This method is based on the assumption that the company offers a warranty policy to drive sales, and therefore estimated warranty costs need to be recognized to match these revenues.

Scenario 1: Mclaren started producing and bringing to market a new line of cars from January 2020 with a warranty policy that it will be repaired free of charge (both spare parts and advanced, except for parts that need to be replaced due to natural wear and tear) within 3 years or 100,000 km, whichever comes first. In 2020, the company has sold 1,000 vehicles with a selling price of 1,200,000,000 VND/vehicle, excise tax of 50%, VAT of 10%, cost price of 600,000,000 VND/vehicle. From its experience the company estimates that 2% of vehicles will be severely damaged with an estimated repair cost of VND 50,000,000 per vehicle, and 5% of vehicles will be slightly damaged with an estimated repair cost of VND 10,000,000 per vehicle. In 2020, the company incurred warranty costs of VND 400,000,000;

The estimated warranty costs for vehicles sold in 2020 are:

1.000 x 2% x 50.000.000 + 1.000 x 5% x 20.000.000 = 2.000.000.000 VND.

The entries that the company reflects on the sale of vehicles from 4/2020 to 12/2020 are as follows:

Reflecting car sales:

Dr. Acc 111, 112, 131	1.320.000.000.000	
Cr. Acc 5112		800.000.000.000
Cr. Acc 3332		400.000.000.000
Cr. Acc 33311		120.000.000.000

Reflect the cost of sale of the car:

Dr. Acc 632	600.000.000.000	
Cr. Acc 155		600.000.000.000

Pre-deduction of warranty costs:

Dr. Acc 641	2.000.000.000	
Cr. Acc 3521		2.000.000.000

Warranty costs incurred:

Dr. Acc 3521	400.000.000	
Cr. Acc 154, 152, 334, 331, 336		400.000.000

On the 2020 Business Results Report, the company reported the warranty cost for products sold in 2020 as 2,000,000,000.

On the 2020 Balance Sheet, the balance of credit 3521 for this model of VND 1,600,000,000 will be presented in the section Short-term or long-term liabilities? Suppose the company estimates that the warranty cost for the vehicles sold in 2020 will be incurred in 2021 is 500,000,000 VND, in 2022 it is 600,000,000 VND, in 2023 it is 500,000,000 VND. In this case, the company will present in the Short-term debt section as VND 500,000,000 corresponding to the security debt to be realized in 2021, VND 1,100,000,000 in the Long-term debt corresponding to the warranty debt to be realized in 2022 and 2023.

In 2021, when warranty costs related to 1,000 cars sold in 2020 were incurred, the Mclaren company noted:

Dr. Acc 3521	500.000.000	

Cr. Acc 154, 152, 334, 331, 336 500.000.000

Scenario 2:

Company A sells X phones. In June of year N, Company A sells 1,000 X phones to the market with the following information:

- Price: 25 million VND/phone
- Warranty period: 3 years

The determination of the warranty backup cost of phone X is carried out as follows:

- *Estimate product failure rate and degree of failure*

	Year 1	**Year 2**	**Year 3**
Minor damage	20%	15%	15%
Medium failure	15%	15%	10%
Severe damage	10%	10%	15%

- *Estimate the cost required for product repairs*

	Component replacement	**Repair workers**	**Total**
Minor damage	500.000	500.000	1.000.000
Medium failure	2.000.000	1.000.000	3.000.000
Severe damage	5.000.000	2.000.000	7.000.000

- *Calculation of warranty reserve value to be set aside*

	Year 1	**Year 2**	**Year 3**
Minor damage	= 1.000.000 * 20% = 200.000	= 1.000.000 * 15% = 150.000	= 1.000.000 * 15% = 150.000
Medium failure	= 3.000.000 * 15% = 450.000	= 3.000.000 * 15% = 450.000	= 3.000.000 * 10% = 300.000
Severe damage	= 7.000.000 * 10% = 700.000	= 7.000.000 * 10% = 700.000	= 7.000.000 * 15% = 1.050.000
Total (undiscounted value)	1.350.000	1.300.000	1.500.000
Discount value (*)	1.285.714	1.179.138	1.295.756

(*): assume warranty costs are paid at the end of each year and a cash flow discount rate of 5% per annum.

Thus, for each phone sold, Company A needs to set aside a warranty reserve in the amount of VND 3,760,608 (= 1.285.714 + 1.179.138 + 1.295.756).

The value of warranty provision in June of year N from the sale of phone X is VND 3,760,608,000, the revenue value recorded from the sale of the product is VND 25,000,000,000.

Scenario 3:

Company A is a telephone manufacturing company. In 20X8, Company A sold 100,000 X products with a selling unit price of 20 million VND/product, production cost of 15 million VND/product.

Based on historical data, Company A estimates that out of 100,000 X products sold, about 5,000 products are slightly damaged with repair costs of about 2 million VND/product and about 10,000 products are severely defective with repair costs of about 5 million VND/product. Thus, the estimated total warranty cost arising from the above number of products is:

5.000 * 2 million VND + 10.000 * 5 million VND = VND 60 billion.

Company A recorded revenue and cost of sales in 20X8:

+ Recognition of sales revenue:

Dr. Acc Cash: VND 2,000 billion

Cr. Acc Sales revenue: VND 2,000 billion

+ Record cost of goods sold:

Dr. Acc Cost of goods sold: VND 1,500 billion

Cr. Acc Inventory: VND 1,500 billion

At the same time, Company A recorded the provision payable for warranty costs at 31/12/20X8 as follows:

Dr. Acc Warranty cost: VND 60 billion

Cr. Acc Provision payable on goods warranty: VND 60 billion

An important issue in standard warranty cost accounting is the determination of whether the enterprise incurs obligations for warranty costs or not. In some cases, enterprises are only intermediaries working with customers instead of suppliers to facilitate the goods warranty process. The goods are then sent directly to the supplier for warranty, and if the supplier refuses the warranty, the business does not have any other obligations to the customer. In this case, the enterprise acts only as an intermediary, while the main warranty obligation belongs to the manufacturer, and therefore, the enterprise does not recognize the warranty obligation of the goods in this case.

In another case, the enterprise is obliged to warranty the goods to the customer, in which, part or all of the warranty cost will be refunded by the supplier. At this time, the enterprise recognizes all obligations related to the provision to pay warranty costs, and at the same time recognizes an asset related to the right to recover warranty costs from the supplier (reimbursement right).

(2) How to sell the warranty

Many companies sell warranty extensions outside the basic warranty period. For example, car companies or computer manufacturers may sell 1-year or 2-year warranty extensions for a certain amount, and usually, this warranty extension if the customer buys it immediately when buying the product, the price will be lower when buying the warranty extension later. In the case when selling products or goods that are accompanied by the sale of warranty extensions, the company applies the method of selling the warranty and separately recognizes the revenue of the products, goods and warranty extensions.

For example: Suppose the above Mclaren company has a warranty extension package of 2 years or 50,000 km whichever comes first for its new car when customers buy a car for VND 12,000,000 (excluding 10% VAT). If the customer purchases this extension, then after the expiration of the standard warranty period, the customer will be continued by the company free warranty for a period of 2 years (or 50,000 km whichever comes first).

Assuming that in January 2020, a customer buys a car and buys a warranty extension package, the accounting entries on revenue and cost price are as follows:

Reflecting car sales:

Dr. Acc 111, 112, 131 1.333.200.000

Cr. Acc 5112 800.000.000

Cr. Acc 3332 400.000.000

Cr. Acc 3387 12.000.000

Cr. Acc 33311 121.200.000

Reflection of cost prices:

Dr. Acc 632 600.000.000

Cr. Acc 155 600.000.000

The accounting entries for standard warranty costs remain the same as above.

At the end of 2020 when preparing the financial statements, the unrealized revenue on the extended warranty is presented in the Long-term debt section because the term of performance of this obligation is more than 12 months.

Since the extended warranty service is only available in 2023 and 2024, when preparing the 2022 Financial Statements, the accountant presents the unrealized revenue of the warranty extension in the section Short-term debt of VND 6,000,000 and Long-term debt of VND 6,000,000.

The unrealized revenue of this warranty extension will be allocated in a straight-line method unless another method is more reasonable. At the end of 2023, the company accounts for revenue:

Dr. Acc 3387 6.000.000

Cr. Acc 5113 6.000.000

The costs incurred for this customer's extended warranty package in 2023 are VND 4,000,000 accounted for in the cost price:

Dr. Acc 632 4.000.000

Cr. Acc 154, 331,.. 4.000.000

When preparing the 2023 Financial Statements, the unrealized revenue of this customer's remaining warranty period of VND 6,000,000 is presented in the section Short-term liabilities.

(3) Adjusted cash method

According to the adjusted cash method, the company recognizes warranty costs as costs in the period in which the warranty product repairs are incurred. In this way, the warranty cost is recognized in the cost of the repair period, not the sales period. Therefore, this method does not comply with the principle of appropriateness in accounting. If according to accounting principles, this method is not reasonable. In accounting practice, this method can be applied in the following cases:

From a benefit/cost point of view, when the warranty period is relatively short, it is not necessary to deduct the estimated warranty cost in advance. For example, store A that sells used smartphones applies a warranty period of 1 month for all products sold. Because the warranty period is relatively short, the warranty debt obligation at the time of making the report is not large, the company does not need to deduct warranty costs in advance when selling, but accounts for costs when incurred.

When warranty costs are incurred, the accountant writes: Dr. Acc 641/Cr. Acc 152, 334, 111

The Company cannot reliably estimate the value of warranty obligations at the time of sale. Assuming that company B has been in operation since January 1, 2015, the company produces a new type of product and sells them with a warranty period of 1 year. However, the company does not have reliable information to estimate the value of the warranty obligation incurred. In this case, the company does not deduct warranty costs in advance when selling, but accounts for costs when actually incurring warranty costs.

Accounting standards divide the warranty costs of products and goods into two categories: assurance-type warranties; and service-type warranties.

+ Assurance-type warranties can be understood as standard warranty method or statutory warranty (hereinafter referred to as standard warranty method). This warranty method ensures that products and goods sold to customers operate in accordance with the technical standards specified in the sales contract. For example, during the warranty period, if the customer discovers that the product has a defect from the manufacturer, the business will be obliged to repair or renew the product for the customer.

+ Service-type warranties can be understood as a service warranty method, ie customers pay a fee to the business in exchange for warranty services in addition to the standard warranty method (hereinafter referred to as the service warranty method). At this time, the enterprise will have additional obligations to customers in accordance with the contract, in addition to the obligation to ensure that the business does not sell customers defective products. Some examples of service warranty methods include: extended warranty period compared to the standard warranty method, product warranty even if the fault arises from the user, …

Accounting for service warranty method

The service warranty method is accounted for as a separate contractual obligation, regardless of whether the business sells these service orders independently or whether this service package is in a separate agreement with the customer

Example 1: Company A is a company specializing in the manufacture of suitcases. Products manufactured by Company A are warranted for 10 years, including defects arising from the user, and customers do not have to pay extra when purchasing Company A products to enjoy this warranty.

Although the warranty package is not sold separately by Company A to customers, the nature of the warranty package includes:

– The duration of the warranty package is extended; and

– Warranty for errors arising from the user

Company A is providing customers with services, in addition to ensuring that the goods produced by Company A are in accordance with technical standards and are not damaged when sold to customers. So, this is the service warranty method. Company A’s accountant needs to determine the independent selling price of this service and account for warranty obligations as a separate contractual performance obligation.

Example 2: Enterprises may incur simultaneous standard warranty and service costs

Company A is a Mobile Phone Manufacturing Company. Products sold by Company A are warranted for 12 months, excluding user defects. Customers can also choose to purchase an additional service warranty package that brings the total warranty period to 24 months or 36 months.

In 20X8, Company A received 100 machines sent by customers for warranty, of which:

– 25 machines break down within 12 months from the time of purchase and are eligible for warranty. The company determines these are standard warranty costs;

– 60 machines broke down after 12 months. These customers have purchased an extended warranty and are eligible for the warranty. Therefore, Company A determines that these are the service warranty costs;

– 15 machines broke down after 12 months, however these customers did not purchase an extended warranty and therefore, the Company charged for repair services for these customers.

Situations on service warranty accounting

Company A is a company specializing in distributing mobile phones, including product X. Know some information related to product X as follows:

– Customers who purchase product X are warranted for 12 months against manufacturer defects;

– Within 30 days from the date on the purchase invoice, customers can choose to buy a gold warranty package in the amount of VND 2 million. Customers who purchase a gold warranty package will be warranted for additional errors in power, screen, errors arising from breakage, water drop and other errors arising from the user; and

– At the time of purchase, if the customer buys both the machine and the gold warranty package at the same time, the amount to pay for the gold warranty package is 1 million VND.

On 08/08/20X9, customers simultaneously purchased product X and gold warranty package with an amount of VND 21 million, of which: the selling price of machine X is VND 20 million and the selling price of the warranty package is VND 1 million. The accounting is carried out as follows:

– Determination of contract performance obligations:

Company A has two contractual performance obligations:

+ Product X; and

+ Gold warranty package

– Determine the transaction price:

The total transaction price in this case is VND 21 million

– Allocate transaction prices for contract performance obligations:

+ Obligations related to product X:

Allocation price = 20/22 * 21 = 19.1 (VND million)

+ Obligations related to the warranty package:

Allocated price = 2/22 * 21 = 1.9 (million VND)

– Recognition of revenue from sales of goods and provision of services:

+ On 08/08/20X9, the Company transfers products to customers and at the same time recognizes sales revenue:

Dr. Acc Cash: 21 VND million

Có Sales revenue: 19,1 VND million

Có Liabilities arising from contracts: 1,9 VND million

+ Every month, the Company recognizes revenue from straight-line warranty services (distributed over 12 months), recording:

Nợ Liabilities arising from contracts: 158.000 VND

Có Warranty service revenue: 158.000 VND

Thus, according to the author's opinion, Article 7 of Circular No. 48/2019/TT-BTC issued on August 8, 2019 on provisioning provisions on subjects and conditions for provisioning should be amended as follows:

"Article 7. Warranty provision for products, goods, services, construction works

1. Objects and conditions for making provisions: are products, goods, services and construction works performed by enterprises that have been sold, supplied or handed over to buyers who have committed warranty to customers."

With such adjustments in the content specified in Circular No. 48/2019/TT-BTC, enterprises determine the time to make product warranty provisions depending on the accounting method of product warranty costs selected by the enterprise, specifically summarized as follows:

With three different methods to account for warranty costs of products and goods: (1) Accrual warranty cost method; (2) Adjusted cash method; and (3) Warranty Private Sale Method. The choice of which method is suitable depends on the nature of the warranty (standard warranty – original warranty or extended warranty) and the fact arising at the business.

+ The adjusted cash method is simple but is only suitable for products with a short warranty period or when it is not possible to reliably estimate the magnitude of the warranty obligation.

+ The accrual warranty cost method ensures the principle of conformity in accounting and, accordingly, warranty costs are recognized in the cost of the sales period through pre-deductions.

+ The method of selling a warranty is applied when the warranty is sold in addition to the standard warranty, and then the company will defer the revenue from the upsell warranty service to recognize the period in which this warranty service is performed.

4.2.2. Solutions to complete legal contents on provision accounting for refund costs in Vietnam according to international practices

Currently, according to the requirements of Vietnamese law, investors when implementing the project must have a Decommissioning Cost to return the site to the State or the land and water surface lessor after the expiry of the project term without continuing the project implementation. For example, mineral companies, after exploitation is completed, according to regulations, must complete the earth, restore the environment such as leveling to restore the current state of the terrain, planting trees to restore the environment. This cost is usually incurred at the time of mine closure and is of great value.

As required by regulations on Vietnamese accounting standards as well as World Financial Reporting Standards (IFRS), the determination of project reversal costs is one of the mandatory requirements in terms of data. So what is the purpose of determining the project revert cost, why is it necessary for the valuation company in determining this project revert cost (Decommissioning cost)?

Basically, determine the project revert cost (Decommissioning cost) to make provisions and allocate costs in the accounting period. Specifically, for the Vietnamese accounting regime, it will be specified in Circular 200/2014/TT-BTC guiding the corporate accounting regime. For International Financial Reporting Standards, clauses IAS16, IAS37, IFRIC1 and IAS02 are specified.

As prescribed in the current Vietnamese accounting regime - Circular No. 200/2014/TT - BTC - Guiding the corporate accounting regime, issued on December 22, 2014, stipulates:

"– When making provisions for environmental restoration expenses, expenses for site cleaning, restoration and return, provision for severance allowance in accordance with the Labor Law, etc., record:

Dr. Acc 627, 641, 642

Cr. Acc 352 – Provisions

Thus, according to the provisions of the current Vietnamese accounting regime, the cost of site return is set aside by writing an increase in costs, and at the same time writing an increase in a corresponding reserve. The circular contains no further guidance on determining the value of this reserve.

Theoretically, enterprises when setting up provisions for site return costs as prescribed in Circular No. 200/2014/TT - BTC - Guidance on the enterprise accounting regime issued on December 22, 2014 can approach in the following two ways:

a) Record the entire reserve value in expenses in the period, corresponding to the estimated value to be paid in the future.

b) Provisions are set aside periodically throughout the useful life of the asset.

Both of the above approaches, in the author's view, have specific inconsistencies:

– For option a, the value of liabilities is measured and presented appropriately, but the value of costs recognized in the period does not ensure the appropriate principle.

– For option b, although expenses are recognized appropriately between periods, the value of the reserve presented on the annual financial statements does not reflect the actual obligations of the enterprise.

From the above analysis, the author offers a solution to complete the legal content of provision accounting for refund costs in Vietnam according to current international practices as follows:

- For reconstitution costs, Circular No. 200/2014/TT - BTC - Guiding the corporate accounting regime, issued on December 22, 2014 stipulates that an increase in a reserve but according to international practices will not be recorded an increase in costs:

As Specified in International Accounting Standards

Accounting for decommissioning costs is specified in the Standards as follows:

- IAS 16: prescribing the method of initial recognition

– IAS 37: stipulating the timing and value of provisioning

– IFRIC 1: guide accounting methods in case of changes in the appropriation reserve value *(The International Financial Reporting Standards Interpretation Committee (IFRIC) is the guiding body of the International Financial Reporting Standards Board (IASB))*

– In addition, environmental restoration costs are accounted for in accordance with IAS 02 – Inventories

(a) IAS 16 prescribes the method of initial recognition

IAS 16 p16 regulations:

"The cost of an item of property, plant and equipment comprises:

(c) the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period."

Thus, according to the provisions of IAS 16, the cost of site return will be recognized in the cost of the asset when meeting the conditions for the time of recognition specified in IAS 37. This value will then be gradually allocated to periodic expenses based on the depreciation method and useful life of the asset.

Thus, according to IAS16 - PPE, at the time of initial recognition, the accountant recorded an estimate and recorded the cost of reversal for the asset put into use as follows:

Dr. Acc 211 (Cost of Property, Plant and Equipment)

Cr. Acc 352 (Provision for liabilities under IAS 37)

(b) IAS 37 stipulates the value of provisioning

IAS 37 p36 regulations *"The amount recognised as a provision shall be the best estimate of the expenditure required to settle the present obligation at the end of the reporting period"*.

Thus, the written value of the full price increase of assets as prescribed by IAS 16 is the most reliable estimate of the cost value that the enterprise will have to spend to fulfill its obligations at the time of reporting. IAS 37 also requires that this estimate should reflect the time value of the money as well as the risks associated with the provision, as set forth in p45-47:

"45 Where the effect of the time value of money is material, the amount of a provision shall be the present value of the expenditures expected to be required to settle the obligation.

46 Because of the time value of money, provisions relating to cash outflows that arise soon after the reporting period are more onerous than those where cash outflows of the same amount arise later. Provisions are therefore discounted, where the effect is material.

47 The discount rate (or rates) shall be a pre-tax rate (or rates) that reflect(s) current market assessments of the time value of money and the risks specific to the liability. The discount rate(s) shall not reflect risks for which future cash flow estimates have been adjusted."

Thus, when determining the value of provision for site return, enterprises need to pay attention to two factors:

– Time value of money; and

– Risks associated with the reserve.

(b1) Time value of money

IAS 37 states that, when the effect of the time value of money is material, the provision value is the present value of the estimates to be paid in the future to pay for the obligation to return the premises. As for the cost of returning the premises, usually the enterprise will be obliged to perform for about 5-10 years, even 30-50 years, so it is appropriate to discount future cash flows to the present value as stipulated in IAS 37. According to PwC, the interest rate representing the time value of money under normal conditions is the interest rate on government bonds in the same currency and the maturity period is similar to the expected time of repayment. The implementation of discounting future value to present value to represent the time value of money can be done in two ways:

– Discounting future prices (including the effects of inflation) using nominal interest rates; or

– Current price discounts (excluding the effects of inflation) using real interest rates.

There is the following illustrative scenario:

- At Emperor Company, on January 1, 2018, built a hotel on leased land in Tuan Chau Island. The lease period is 50 years and Emperor Company is obliged to demolish and return the land to its original state at the end of the lease term.

- The demolition cost at this time in the market is estimated at about 300 million VND. Assuming that the interest rate on government bonds denominated in VND with a term of 50 years is 5%, the expected inflation rate is 1.5% / year. Discounting future cash flows to present value to represent the time value of money can be done in one of two ways:

– Adjust the current price (VND 300 million) for the inflation rate (1.5%) to determine the future price in 50 years with a value of VND 631,572,726. Then the future price discount uses the nominal interest rate (5%) to discount to the present value, with a value of VND 55,075,496.

– The current price discount (VND 300 million) uses the real interest rate, where:

(1 + Real interest rate) = (1 + Nominal interest rate)/(1 + inflation rate)

From this we calculate the real interest rate of 3.45%

Discounting VND 300 million for an interest rate of 3.45%, we get a current value of VND 55,075,496.

Thus, the present value of cash flows in both cases is the same.

(b2) Risks associated with the reserve

IAS 37 does not contain specific guidelines for adjusting the risks associated with the provision. The standard only notes that accountants need to pay attention to ensure that risk adjustments are not duplicated, for example, if cash flows have already been adjusted for risk, the discount rate will no longer be adjusted:

"The discount rate(s) shall not reflect risks for which future cash flow estimates have been adjusted".

To adjust the present value of the reserve to reflect the risks attached to the reserve, can be done through two ways:

– Discounting adjusted cash flows for risk using an unadjusted interest rate for risk; or

– Discounting unadjusted cash flows for risk using the adjusted interest rate for risk.

In practice, determining the rate of interest adjusted for risk is not easy. Therefore, accountants often adjust cash flows for associated risks, then use the unadjusted interest rate for risk to discount to present value.

To better understand these two methods, consider the following example:

Based on the above example, the estimated value that Emperor Company must pay after 50 years to fulfill the obligation to return the premises is VND 631,572,726. However, the actual costs that may be incurred range from VND 600 million and VND 750 million. Emperor Company is risk-averse, and is willing to accept payment of costs with the value of VND 675 million, instead of taking the risk that the actual costs incurred may be up to VND 750 million.

Thus, to determine the present value of the reserve, the accountant will discount the adjusted cash flow value for risk (VND 675 million) to the unadjusted discount rate for risk (5%). Thus, the reserve value is VND 58,862,516.

To determine the adjusted discount rate for risk, the accountant may discount the value of unadjusted cash flows for risk (VND 631,572,726) to the appropriate interest rate to achieve the current value of VND 58,862,516, in this case 4.86% (lower than the discount rate not adjusted for risk).

Accounting:

Dr. Acc Asset Cost: 58.862.516 VND

Cr. Acc Provisions: 58.862.516 VND

Every period, the enterprise writes an increase in the reserve value payable, and at the same time writes an increase in financial costs in the period.

(c) IFRIC 1 guiding accounting methods in the event of a change in the reserve value of appropriations

According to IFRIC 1 guidelines, in case the reserve value changes due to a change in the timing or value of the estimated cash flow to fulfill the obligation, or a change in the interest rate:

– The changing value of the reserve will be added to or subtracted from the cost of the relevant asset; and

– The value minus from the historical cost of the asset does not exceed the carrying value of the asset. If the decrease in the payable value of the provision is greater than the remaining value of the asset, the excess value will be immediately recognized in the business results for the period.

– If the increase in the value of the provision leads to an increase in the cost of the asset, the enterprise may consider the loss of asset value as stipulated in IAS 36.

– When the asset has reached the end of its useful life, all changes related to the provision payable are immediately recognized in the business results for the period. The above rules are based on the assumption that the business uses the original pricing model.

4.2.3. Solutions to complete legal contents on provision accounting for fixed asset repair costs in Vietnam according to international practices

In terms of general accounting principles, both VAS and IFRS divide subsequent expenditures into 2 types:

+ *Costs for repair/maintenance of fixed assets and*

+ Cost of upgrading / renovating fixed assets: For the cost of upgrading and renovating fixed assets, the recognition between VAS and IFRS is the same: capitalized in the value of fixed assets.

The author discusses the basic differences in the cost accounting for repair/maintenance of fixed assets. Repair and maintenance of fixed assets are divided into 3 groups:

+ Regular maintenance of fixed assets

+ Major unusual repairs

+ Periodic maintenance of fixed assets according to technical requirements

The following will analyze and compare between VAS and IFRS on how the accountant records the cost of repair/maintenance of fixed assets in each case as follows:

(a) For regular maintenance costs of fixed assets

For this expense, VAS and IFRS both require recognition in expenses in the period. For example: If a motorcycle has to perform an oil change every month (or every 1,500 km), the cost of the periodic oil change is accounted for in the periodic cost.

(b) For abnormal repair costs/Major repair costs

When incurring costs other than periodic maintenance/maintenance costs, VAS requires to separate repair costs to maintain the operating condition of fixed assets and costs that help extend the life or increase the usability of assets. However, in practice it is difficult to distinguish whether an expenditure is to maintain operational status or to increase functionality or both, so international standards offer an open approach and are easier to apply in practice.

For example: A car in use is damaged, possibly due to a collision in traffic or other technical errors, the repair cost is 500 million VND.

– For VAS: Fully recognized in the cost in the period (if the value is small) or recorded in the prepaid cost and allocated for a period of up to 36 months if the repair value is large.

– For IFRS: It will be determined whether this repair will include the replacement of critical parts of the asset.

+ Repair costs mainly include the replacement of important parts of the asset: in this case, international standards require capitalization of the value of replacement parts to the value of fixed assets, while writing down the residual value of the replaced parts (including cases where previously replaced parts are not recognized, and depreciation separately). IAS 16 on PPE outlines several methods for determining the value of parts to be written down in this case, of which the replacement cost method is commonly used.

+ Repair costs if mainly include labor costs, replacement costs of non-essential parts, other costs will be fully recognized in expenses in the period.

In both cases, a large expense value will be recognized as an expense in the period to reflect the fact that the loss has taken place instead of deferring it as an asset item (upfront cost) as stipulated by Vietnamese accounting standards.

(c) For periodic fixed asset maintenance costs according to technical requirements (Overhaul)

(1) According to VAS: For fixed asset costs according to technical requirements that require periodic maintenance (for example every 5 years), VAS allows two directions of handling:

– Case 1: Deduct the cost of major repairs of fixed assets annually in advance, and at the same time record a reserve payable (previously according to QĐ15/2006/QD-BTC as payable expenses – 335)

According to Circular 200/2014/TT-BTC, for fixed assets where the repair is cyclical, enterprises are entitled to deduct the estimated repair costs in advance into annual costs. For this case, when property repairs arise, accounting is as follows:

If the enterprise has a repair plan at the beginning of the year, has made an estimate into the annual cost: When the enterprise has planned a major repair of fixed assets from the beginning of the year, the enterprise can deduct in advance the cost of major repairs of fixed assets according to a specific plan:

Every period, the accountant deducts in advance the cost of major repairs of fixed assets as planned, recording:

Dr. Acc 627/641/642

Cr. Acc 352 (3524) – Provisions

Actual major repair costs incurred, record:

Dr. Acc 2413 – Major repairs of fixed assets

Cr. Acc 111/152/153/214/334/338…

When major repairs to fixed assets are completed, the actual cost of major repairs incurred, record:

Dr. Acc 352 (3524) – Provisions

Cr. Acc 2413 – Major repairs of fixed assets

The accountant shall handle the difference in the actual amount of major repair costs incurred compared to the amount deducted in advance according to the plan (if any), recording:

+ If the actual arising number is greater than the previous extract, it will be supplemented and recorded:

Dr. Acc 627/641/642…

Cr. Acc 352 (3524) – Provisions

+ If the actual amount incurred is less than the previous deduction, write down expenses (According to the CIT Law) or write off other income increases (Based on VAS 15 – Accounting Standard No. 15), record:

Dr. Acc 352(3524) – Provisions

Cr. Acc 627/641… or Acc 711 – Other income

– Case 2: In case of failure to deduct the cost of major repairs of fixed assets, VAS requests to re-suspend the cost of major repairs of fixed assets on the prepaid cost account (if the value is large), then make allocation to expenses in the period for a period not exceeding 36 months.

Observe

+ In case No. 1, the recognition of a reserve payable is inconsistent with the definition of recognition of liabilities (according to which the enterprise must have current obligations - legal or constructive obligation).

+ In case No. 2, the provision on the allocation of repair costs for a period of 3 years is also not really appropriate because it violates the principle of suitability.

b) According to IFRS: IFRS guidance on cases when Major inspections/Overhauls

– For major inspections, international standards require that costs not be deducted in advance, because at the time of deduction there are no “current obligations arising from past transactions” and therefore not yet eligible to recognize a reserve in particular and a liabilities in general. For example, the business can stop using the asset and then will not have to pay any costs related to repairing/maintaining the asset. Note that the advance deduction of periodic asset maintenance costs according to this technical requirement is different from the case of recognizing the provision for decommissioning costs because in the case of Decommissioning costs, the enterprise already has a legal obligation.

– The treatment for major inspections is the same as for replacement parts, The enterprise writes down the entire replacement part (carrying amount) of the previous cost if it has not been fully allocated (regardless of whether the previous major inspection overhaul cost is recognized and depreciated separately), at the same time capitalize the cost this time into the asset value (recognition separately from other tangible parts and depreciation during periodic maintenance according to specifications, for example in this case 5 years).

In fact, the FASB Financial Accounting Standards Board (which sets accounting rules for public and private companies as well as non-profit organizations in the United States) has not accepted advance deductions for major repairs after 2005:

> An interesting question is whether a company can accrue planned maintenance overhaul costs *before* the actual costs are incurred. For example, assume that Southwest Airlines schedules major overhauls of its planes every three years. Should Southwest be permitted to accrue these costs and related liability over the three-year period? Some argue that this accrue-in-advance approach better matches expenses to revenues and reports Southwest's obligation for these costs. However, reporting a liability is inappropriate. To whom does Southwest owe? In other words, Southwest has no obligation to an outside party until it has to pay for the overhaul costs, and therefore it has no liability. As a result, companies are not permitted to accrue in advance for planned major overhaul costs either for interim or annual periods. [10]

From the above analysis, the author offers a solution to complete the legal content of preventive accounting for fixed asset repair costs in Vietnam according to current international practices as follows:

- For the cost of periodic maintenance of fixed assets according to technical requirements (Overhaul) for fixed assets where the repair is cyclical, Circular No. 200/2014/TT - BTC - Guiding the enterprise accounting regime, issued on December 22, 2014 is not stipulated to allow enterprises to deduct the estimated repair costs in advance into annual costs. As analyzed above, the provision of pre-deduction for the cost of repairing cyclical fixed assets as stipulated in the current Circular 200/2014/TT-BTC is wrong with the nature of a reserve under the provisions of IAS 37 - Provisions, Contingent Liabilities and Contingent Assets. Thus, Circular 200/2014/TT-BTC in stipulating the contents of Acc 3524 - Other payable provisions should be ignored *"... periodic repair and maintenance costs, fixed assets ...)*

The reflection of Acc 3524 in Circular 200/2014/TT-BTC should be amended to: "Account 3524 - Other payable provisions": This account reflects other provisions payable by law in addition to the provisions already reflected above, such as costs for environmental restoration, costs for cleaning, restoring and returning premises, provision for severance pay in accordance with the Labor Law…"

The instructions on accounting for pre-deduction of fixed asset repair costs according to technical requirements that must be periodically repaired (aircraft, ships...) in Point c, Section 3, Article 62 of Circular 200/2014/TT-BTC should also be eliminated

- Accounting for periodic fixed asset maintenance costs according to technical requirements (Overhaul) for fixed assets whose repairs are cyclical will apply the provisions of International Accounting Standard IAS 16 - Property, Plant and Equipment issued by the International Accounting Standards Board

Excerpts 43 and 44 are specified in IAS 16 - Property, Plant and Equipment as follows: (According to https://ifrs.vn/)

"43. Each part of a property, plant and equipment whose full cost accounts for a significant proportion of the total cost of that asset must be depreciated separately.

44. The unit allocates the amount in the initial recognition of a property, plant, and equipment to critical parts of that asset and depreciates each of these parts separately. For example, it is possible to depreciate the airframe and engine of the aircraft separately. Similarly, if the entity acquires real estate, plant and equipment under an operating lease agreement of which the unit is the lessor, the entity may separately depreciate the amounts reflected in the cost of the asset arising from favorable or adverse lease terms relative to market conditions. - IFRS.VN"

For factories, machinery and equipment that require cyclical major repairs, when put into use, the enterprise will “allocate the amount in the initial record of a property, workshop and equipment to important parts of that asset and depreciate each of these parts separately”. This means that, for each asset’s own depreciation department, the accountant determines the unique useful life of each part of that asset when the asset starts to be put into use.

5. DISCUSSION AND CONCLUSION

On May 23, 2022, Deputy Prime Minister Le Minh Concept signed Decision No. 633/QD-TTg on approving the Accounting and Auditing Strategy to 2030. Thereby improving the quality of the economic-financial-budget information system increasingly openly and transparently, honestly reflecting economic-financial information and data in the national economy, meet the requirements of management, administration and decision-making of State management agencies as well as other enterprises, units and organizations; strengthen international integration, cooperate with international organizations in accounting and auditing, create close links and mutual recognition between Vietnam and other countries in the region and the world.

For that reason, the author is aware that the improvement of the system of legal documents in general and documents related to accounting for provisions for liabilities is very important in Vietnam today. The study presented legal regulations on accounting for provisions according to current legal documents of Vietnam as well as principles according to international practices. On that basis, the author has proposed solutions to complete the legal content of accounting for provisions for liabilities in Vietnam.

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SITUATION OF THE LEGAL FRAMEWORK ON GREEN BOND IN VIETNAM

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Abstract: Climate change and pollution are big problems all over the world, not just in one country. Because of this, countries are starting to focus more on protecting the environment and finding ways to grow their economies in a "green" and sustainable way. As one of these countries, Vietnam is using special bonds called green bonds to help fund projects that protect the environment. This is a critical effective tool for mobilizing capital to attract investment capital from domestic and foreign investors for sustainable environmental protection projects in Vietnam. However, there are still some things that need to be done to make sure the rules for issuing these bonds are clear and complete. This paper examines the present regulations for green bonds in Vietnam and suggests ways to improve them using qualitative approaches.

Keywords: green bonds, sustainable development, green finance, green financial tools

I. INTRODUCTION

The serious socio-economic effects of climate change have led countries to prioritize the environment and green growth for the economy. To implement green growth, countries need an enormous source of capital to implement green projects for the environment. According to the International Energy Organization (IEA), to halve global emissions by 2050, the world will need 46 trillion USD, equivalent to 1 trillion USD/year. Countries are beginning to employ specialized financial instruments called green bonds to raise this money. These bonds are a way for nations to get money for projects that help the environment and make sure that growth is sustainable. Green bonds have been around since 2008 and are becoming more and more crucial for countries to get the money they need for environmental projects.

Vietnam is one country that has already suffered and is expected to continue to suffer severe losses because of climate change. In response to these problems and to keep its commitments made at the COP-21 United Nations Climate Change Summit, the Vietnamese government has put in place a variety of forceful reactionary measures, such as issuing green bonds. It urged the economic sector to move toward turning green and towards sustainable economic growth through green bonds, which raised money for green investment firms. Despite tremendous development potential, Vietnam's issuance of green bonds has underperformed.

It is implementing green growth policies connected with creating green capital markets to finance environmental improvement projects that the Government has endorsed and given priority in the face of substantial environmental repercussions on socio-economic development. The development of a legal framework for green bonds is a crucial building block for encouraging the expansion of the market for these securities. This is a vital and effective tactic for attracting capital from both domestic and foreign investors to finance sustainable environmental preservation activities in Vietnam. In the current circumstance, it is vitally required to look for solutions to this issue based on the experiences of other countries.

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II. LITERATURE REVIEW

Green bonds provide fixed income to holders and are defined as standard debt instruments. The intention behind selling these debt instruments is to generate revenue, which can be clearly stated as funding for "green" projects or projects related to environmental protection.

The Climate Bonds Initiative (CBI) defines "green bonds" as "bonds issued by governments, banks, localities or businesses that issue and label green bonds as debt securities including securitization, private placement, and guaranteed bonds aimed to mobilize capital for climate change solutions."

The group of organizations including 4 global banks (Bank of America Merrill Lynch, Citi Group, Crédit Agricole, and JPMorgan Chase Bank) worked together to draft a Code of Principles for the issuance and use of revenue from green bonds (Green Bond Principles - GBP). According to the GBP 2015 Code of Conduct, "green bonds" are any sort of bonds that use the revenues from the issuing of bonds for partial financing or refinancing, or for a completely new green project or green project that is running eligible for funding and abides by the GBP principle established.

The term "green bonds" is only used in a few legal papers in Vietnam now, and it is defined as follows:

+ Article 4 of Decree No. 163/2018/ND-CP, which regulates the issuance of corporate bonds, states that "Green enterprise bonds" are those that are issued for investing in environmental protection projects as per the Environmental Protection Law.

+ Decree No. 95/2018/ND-CP issued on June 30, 2018, providing for the issuance, registration, depository, List, and trade of government debt instruments on the stock market as stated in Article 21 as follows: "Green bonds are a type of Government bond issued to invest in projects related to environmental protection activities by the Bao Law environmental protection (green project) and is on the list of projects allocated public investment under the provisions of the Public Investment Law, the State Budget Law".

+ The Environmental Protection Law 2020, in Article 150, defines: "Green bonds are bonds issued by the Government, local governments, enterprises... The investment project benefits the environment and raises funds for protection".

By the aforementioned concepts, it is clear that green bonds are first and foremost a type of bond issued by the subject (Government, local government, business), where the proceeds from the issuance of green bonds are used in part or in full (typically as a whole) for green projects (projects towards environmental protection goals).

Sustainable development, with green growth as the cornerstone, has become an essential demand driven by the Party and the State to promote successful economic development, a fair society, and environmental protection. The objective of green growth, which takes the work of establishing green financial markets (including green bonds) as a cross-cutting vision, has been institutionalized through law texts from 2015 to the present. Green bonds have arisen as a financial tool in recent years, allowing issuers (governments, local governments, and enterprises) to raise funds to fund green initiatives and environmental friendliness. However, green bonds are still a new capital mobilization channel in Vietnam today, in the pilot phase of application in some localities, and lack specific regulations on issuance and selection standards to choose green projects and evaluate the environmental efficiency... that green projects bring.

III. METHODOLOGY

The author uses historical materialism and dialectical materialism as a framework for writing the paper. According to which the author employs particular social science research techniques, such as:

- Analytical techniques: The author uses this technique to evaluate the current state of the green bond legal framework as a foundation for concluding science. Throughout the whole writing process, this technique is utilized.

- General method: The author uses the general technique while reviewing to get to broad findings, viewpoints, ideas, and specific recommendations connected to the study topic of the paper.

- Statistical method: The statistics in the article were compiled using data from a variety of primary sources, including the General Statistics Office, the World Bank, the International Monetary Fund, UNCTAD… and the findings of earlier research.

In addition to the aforementioned conventional research techniques, the article also employs survey techniques, expert interviews, statistics based on data, annual summary reports of the Government, Ministry of Planning and Investment, Ministry of Finance, State Securities Commission, and localities to address the content required by the article.

IV. STATUS OF THE LEGAL FRAMEWORK FOR GREEN BONDS IN VIETNAM

Vietnam has viewed green growth as a key component of sustainable development in the face of climatic change and severe environmental degradation. In recent years, Vietnam has produced and published a significant number of normative legislative documents with the express purpose of establishing the legal foundation for implementing and expanding green development.

The Central Executive Committee of Course XI enacted Resolution No. 24-NQ/TW on June 3, 2013, during the Seventh Conference, on taking aggressive measures to combat climate change, enhancing resource management, and promoting environmental protection through green financing. The resolution identifies "promote the transformation of the growth model associated with restructuring the economy towards green growth and sustainable development" as its primary objective. It was releasing a set of metrics to measure the effects of sustainable development, including green growth into the national criteria, and launching a pilot project to build a green economy model, an industry, an urban green space, and a rural green space.

The national action plan for green growth for the years 2014 to 2020 was then authorized by the Prime Minister on March 20, 2014, under Decision No. 403/QD-TTg. The resolution listed 66 specific action tasks, including activity 2: "Complete the institutional framework to promote economic restructuring in line with the Green Growth Strategy," as well as 4 primary issues, 12 operational groups, and 12 operational groups.

Even though the government has policies and action plans for promoting green growth, developing a green financial system generally, and growing the green bond market specifically, there are still many issues and a lack of a legal framework for these operations.

On August 14, 2017, the government released Decision No. 1191/QD-TTG to approve the Bond Market Development Roadmap for 2017-2020, Vision to 2030, in which Section 3, Article 1 offers a remedy to complete the market policy framework with green bonds. It is specifically necessary to have issuance methods and market development policies for green bonds so that issuers may generate money by selling bonds to fund projects. According to Decision 1191/QD-

TTG, the Ministry of Finance is the primary organization responsible for setting policy processes for the green bond market border, together with the State Bank and the Ministry of Planning and Investment.

On June 30, 2018, the government released Decree 95/2018/ND-CP on the issuance, registration, depository, list, and trading of government debt instruments on the stock market, including green bonds. This kind of government bond was subsequently issued to finance projects related to environmental protection activities by the Environmental Protection Law (green projects) and leniency in the list of projects allocated for public investment by the Public Investment Law and State Budget Law. The decree promoted the issue, listing, and trading of this type of bond. The decree also requires the Ministry of Finance to collaborate with the Ministries of Planning and Investment, Natural Resources, and Environment to develop a green government bond issuance plan that considers the following aspects: the purpose of the issuance, the volume issued, the conditions and terms of the bonds, the recipients of the bonds, the process of registration, depository, listing, and trading, as well as a list of projects that will use the bonds.

Then, on December 4, 2018, Decree No. 163/2018/The ND-CP, which takes the place of Decree No. 90/2011/ND-CP (effective October 14, 2011), further completes the legislative framework for green bonds by regulating the issuing of corporate bonds issued by the government. Decree 163/2018/ND-CP regulates the issuance of individual bonds (including convertible bonds) of domestic enterprises, inside and outside the territory of Vietnam, but does not regulate the issuance of corporate bonds to the public. The phrase "green enterprise bonds" and several specific green bond regulations were first used by the government in Decree 163. Such as:

- For the principle of issuing and using green enterprise bond capital: The competent authority has authorized the disbursement for environmental protection projects by the given option, separate monitoring management, compliance with general requirements, as well as the accounting of capital from bond issuance.

- For revealing information before the enterprise's issuance of green bonds: In addition to the content of disclosure required under general rules, issuers must publish information regarding the regulatory procedure and capital disbursement from the issuing of green bonds as specified.

- As part of the content of periodic disclosure of green bonds, the issuer must prepare a capital usage report, payment schedule, project implementation status, and environmental effect assessment report; the capital use report must include the audit organization's opinion.

- For the corporate bond information page on the Stock Exchange: businesses that issue green bonds must provide information about the issuing enterprise's financial position, principal payment situation, bond interest; capital use situation, disbursement schedule, project implementation progress, and environmental impact assessment report, in addition to basic information and content about bonds.

The government is working hard to complete the legal framework for green bond development, developing corridors that attract investors, particularly groups of investors interested in green finance, environmental protection, and greening the economy as quickly as possible. Encourage businesses to issue green bonds to attract resources into green, clean sectors and ensure long-term growth. However, at this period, the creation of a legal framework was insufficient to remove the barriers to the issue of green bonds. For example, ICMA's green bond ideas such as monitoring the purpose of utilizing funds from issue, separate account accounting, and post-issuance reporting lack clear and meaningful law, requiring regulators to spend additional time drafting and providing guidance materials.

The Environmental Protection Law No. 72/2020/QH14 was adopted on November 17, 2020, and it went into force on January 1, 2022. This is Vietnam's highest legal document on green bonds. The Environmental Protection Law 2020 specifies several green bond issues in Article 150, including: (i) green bond definition; (ii) green bond issuers (governments, local governments, and businesses); (iii) how the proceeds from the issuance of green bonds are used; (iv) green bond issuers; and (v) incentives for green bonds.

On January 10, 2022, the Government issued Decree No. 08/2022/The ND-CP, which guides the Environmental Protection Law defining green bonds, for more specific advice on various problems relating to green bonds. Article 154, for example, describes a green-funded project as issuing green bonds as an investment project in environmental protection, investment projects that provide prescribed environmental benefits; or in Article 157, the proceeds from the issuance of green bonds must be used to carry out projects on the green classification list by the provisions of Clause 2, Article 150 of the Law on Environmental Protection (for example, renovating and upgrading environmental protection works; technological changes in the direction of applying the best existing techniques; ap using circulating economy, green economy, low carbon emissions; re-education, environmental restoration after environmental incidents...). Furthermore, the Decree specifies how to apply the Information Disclosure Mode, report the management position, distribute money collected through green bond issuance, preferential policies for green bond issuers and green bond investors, and so on.

The legislative framework for green bonds in Vietnam has been designed fully and exhaustively, providing a legal foundation for the growth of the Vietnamese green bond market. However, there is still some content to continue to be finalized, such as:

- Raising investor knowledge of green bonds: Investors should be given sufficient information on green bonds, such as green investment project assessment criteria, green investment project classification portfolio, and green bond incentives.

- Encourage green bond issuers: Companies should be encouraged to issue green bonds to raise funds for green investment initiatives.

- Completing the infrastructure system for the green bond market: A comprehensive and efficient green bond market infrastructure system, comprising a trading system, depository system, and credit rating system, is required.

Some suggestions for promoting green finance in Vietnam

Although the Vietnamese government has established and approved the legislative framework for green bonds, there are still certain limitations. This calls for a higher quality than the legal text system. Green bond principles must also be explicit and thorough for the green bond issuer to comply. Furthermore, transparency information on the issue and use of funds from green bonds should be tightly regulated as a basis for inspection and oversight of interested parties. Competent authorities should also conduct research and development of an indicator set to assess sustainable development enterprises to pique the attention of investors in green bonds.

First and foremost, the government must complete the policy framework for developing the green bond market. The growth and completeness of the legal system, the creation of a legal framework for socioeconomic interactions, and the ability of governments, corporate entities, associations, and training organizations under their authority to create an incentive environment or supply products and financial services need to improve liquidity for green bonds and support the shift from the "deep into the traditional" sector to the "green" economy. Furthermore, a policy system that promotes corporations and organizations to invest in green initiatives is required.

Second, there is a policy to encourage the issuing of international green bonds to attract substantial investment. Currently, Vietnam is collaborating with overseas organizations to provide advice, assistance, and assessment in the market for the issue and development of green bonds. The bank's strong credit rating and expert management make it a good choice for the government to increase its role in issuing and managing green bonds.

Third, design particular green project selection criteria. Green bonds are a relatively new stock on the Vietnamese market. This expansion and market development promise to be a significant step forward for the Vietnamese economy and aid in the resolution of the country's present critical environmental pollution crisis. To accomplish so, agencies, ministries, and companies must quickly create documentation to guide the execution of the evaluation process, as well as appraise the degree of "green" projects in the "Green project portfolio." Creating intermediate entities, such as credit rating agencies and independent review groups, to check the quality of green bond issuing projects.

Fourth, the support policy mechanism should be reviewed and supplemented, and enterprises and organizations should be encouraged to invest in green initiatives - reform legal processes in the posting of green bonds. Preferential tax and fee regulations should be examined and updated to encourage and assist issuers and investors to actively engage in the green bond market.

V. DISCUSSION AND CONCLUSION

Although the issuing of green bonds has been addressed in several legislative documents, decrees, and guiding circulars, there has yet to be a formal legal framework that offers explicit instructions and guidelines for the issuance and usage of green bonds. In particular, the Government of Vietnam must issue specific documents related to green bonds, which must stipulate Vietnam's standards in determining green bonds, green projects, and principles in issuing and managing capital formed from green bonds. These criteria must be designed in line with the GBP Green Bond Principle, but they must also reflect Vietnam's unique peculiarities in terms of economic development, politics, the environment, and society.

As a result, the Vietnamese government must study, investigate, and complete the overall bond market management mechanism, as well as green bonds. Based on the existing legal framework, specific papers should be published that establish the requirements for assessing green bonds, and green projects, as well as the rules of issuance and management, with capital formed from green bonds serving as a foundation for inspection and oversight by authorities.

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THE RISE OF VIETNAM'S PRIVATE ECONOMY: A CATALYST FOR ECONOMIC ADVANCEMENT

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Abstract: Throughout Vietnam's history, its economic system has undergone significant transformations. The initial economic system established in the 1946 Constitution lacked specific provisions dedicated to the economy. It neither introduced the concept of economy nor implemented a centrally planned approach. Instead, the 1946 Constitution aimed to safeguard private ownership and introduced the notion of a mixed economy, replacing the exploitative colonial system. The Vietnamese Constitution promoted the presence of both domestic and foreign private enterprises, along with an agricultural society primarily led by private farmers. Over the course of 37 years of implementing reforms, the role of the private sector in Vietnam's economy has experienced fundamental changes. The Party's perspective is to foster a diverse economy where the private sector plays a significant role in driving the nation's prosperity and holds a distinctive position compared to the public sector and sectors involving foreign investment. This article underscores the genuine value placed by the state on the private economy. In practice, the government has adapted to and capitalized on the advantages offered by its development.

Keywords: State economy, private economy, foreign-invested economy, Vietnam.

1. INTRODUCTION

Following the collapse of the centrally planned economic model in the late 1980s, Vietnam embarked on a reform process that began with granting land to individual farmers and recognizing private enterprises. In 1986, the Vietnamese Communist Party introduced the "Doi Moi" policy, which initiated economic renovation. Since then, Vietnam has embraced and encouraged a market economy, resulting in a shift from a rigid, agriculture-dominated planned economy to a more industrialized economy with a focus on market-oriented principles.

In 2001, Vietnam amended its constitution and introduced the concept of a "socialist-oriented market economy" for the first time. The subsequent decade of reforms primarily focused on the relationship between the state and the market, as well as the process of liberalization in the state's relationship with democracy. This article aims to reflect the perspective of the Vietnamese Communist Party and the government regarding the private sector, its contribution to the economy, and their encouragement of its role in driving the country's prosperity.

The private economy is defined as a component of the national economy that develops based on private ownership of the means of production. It has evolved through the opening of the market economy and successive party documents that permitted, supervised, and ultimately encouraged its growth.

The Doi Moi policy, initiated in 1986, aimed to develop a multi-component market economy with state management guided by socialist-oriented principles. The goal was to "create a strong force to unleash the productive forces and develop the market economy towards socialism" (Central Committee Meeting, 4th Congress). Subsequently, the 6th Central Committee Meeting,

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6th Congress (3 - 1989), affirmed that "developing a multi-component market economy is a long-term strategic path towards advancing socialism."

At present (13th Congress - 2021), Vietnam maintains four economic components: the state economy, collective economy, private economy, and foreign-invested economy. These components consist of enterprises with varying legal forms and ownership rights. The establishment of the Private Economic Development Research Board aims to outline a development path for the private sector, which currently finds itself caught between a strong yet declining state economy and a gradually growing foreign-invested economy in Vietnam.

2. ACHIEVEMENTS AND THE CURRENT ROLE OF THE PRIVATE ECONOMY AFTER THE REFORMS

2.1. Achievements

The emergence of new private enterprises has witnessed remarkable growth, particularly in recent years. From 2011 to 2020, the number of newly registered businesses exceeded 1.035 million, almost double the figure recorded in the previous two decades (1991-2010). Despite the adverse effects of the Covid-19 pandemic, more than 400,000 new businesses were registered during the period of 2020-2021, with an average of over 133,000 new businesses per year. Furthermore, the average registered capital of these newly established enterprises experienced a significant increase, surging from 6.63 billion VND in 2011 to 16.57 billion VND in 2020.

Alongside the surge in new registrations, the number of active private enterprises has also witnessed robust growth, soaring from over 312,000 businesses in 2011 to surpass 660,000 businesses in 2020. Likewise, the count of non-agricultural business households has experienced a substantial rise, escalating from over 4.2 million households in 2011 to exceed 5.2 million households in 2020.

According to the 2022 Enterprise White Paper, published by the Ministry of Planning and Investment, the period from 2016 to 2020 demonstrated significant advancements in various indicators reflecting the scale of private enterprises when compared to the period from 2011 to 2015. Notably, the number of active businesses exhibited an impressive growth rate of 160.7%, accompanied by a 125.2% increase in the number of employees. Moreover, there was a substantial surge in capital by 235.5%, and fixed assets and long-term investments experienced remarkable growth of 254.0%, among other positive trends.

As of 2022, the private economy has established itself as a robust foundation within Vietnam's economic landscape, contributing approximately 42-43% to the country's GDP, accounting for 30% of state budget revenue, and employing approximately 85% of the workforce. Its significance lies in its ability to mobilize social resources for investment, drive business development, foster economic growth, facilitate economic restructuring, enhance budget revenue, improve living standards, and ensure social welfare.

After 36 years of implementing economic reforms, the private economy in Vietnam, according to 2022 statistics, constitutes approximately 75% of the country's GDP. However, this contribution primarily stems from the unofficial private sector, encompassing approximately 5.2 million production and business households, individual enterprises, economic entities, and nearly 30,000 cooperatives. In contrast, the official private sector, which comprises nearly 900,000 enterprises, contributes only around 25% to the GDP. Experts highlight the importance of shifting the focus from the unofficial sector to the official sector in terms of domestic product generation and employment in order to foster the private sector's competitiveness and its substantial contribution to sustainable economic development.

Vietnam's private enterprises have garnered international recognition, with notable companies such as Vingroup, T&T Group, Thaco, Vietjet, Sun Group, and Vinamilk exerting influence on the global supply chain. The country boasts approximately 29 private companies with a market capitalization exceeding $1 billion, and in 2021, six billionaires from Vietnam were members of the World Billionaires Club. Additionally, the number of enterprises employing over 1,000 individuals has consistently risen, increasing from 3.2 in 2010 to 8.7 in 2021, indicating an annual growth rate of 12.5% during this period.

Despite Vietnam witnessing around 120,000 - 130,000 new business registrations annually, the closure and dissolution rate remains high, reaching approximately 60% in comparison to the number of newly established enterprises. Consequently, to attain the target of 1.5 million businesses by 2025, an additional 400,000 newly registered businesses are required each year, nearly tripling the current business growth rate.

Regarding contributions to the state budget, the private economy's share has risen from 28.3% in 2010 to 30% in 2022, while the contributions from foreign-invested companies have experienced a substantial increase, surging from 26.3% to 42%. Conversely, the contribution from the state sector has declined from 45.4% to 28%.

However, the private economic sector, particularly individual businesses, faces challenges related to low labor productivity. Notably, the average income of workers in the individual business sector is comparatively lower than that of their counterparts in the state and foreign-invested sectors.

While the private economy in Vietnam has exhibited remarkable growth and made significant contributions to the country's economic development, there remain areas for improvement. Enhancing labor productivity, addressing the challenges faced by individual businesses in accessing resources, and promoting a more balanced contribution from the official private sector are key factors for ensuring the continued success and sustainability of Vietnam's private economy.

2.2. Roles of the private economy

The private economy has played a crucial role in driving economic growth, maintaining a substantial and stable share (around 38-40%) during the period from 2011 to the present. Moreover, it has significantly contributed to the overall social investment landscape. Between 2011 and 2020, private sector investments increased from over 545 trillion VND (accounting for 47.0%) to over 1,605 trillion VND (representing 57.3% of total investments). Prominent private enterprises have directly undertaken large-scale and complex infrastructure projects, including construction, real estate, bridges, ports, and airports. These endeavors have made remarkable contributions to the nation's development, transforming the social fabric and greatly enhancing infrastructure quality. Notable examples of such projects include Van Don Airport, Hai Van Tunnel, Deo Ca Tunnel, Hanoi - Hai Phong Expressway, Bach Dang Bridge, and more.

The private economy has also played a significant role in generating employment opportunities and improving livelihoods for workers. Approximately 60% of the workforce is employed in private enterprises across various sectors, with an average annual growth rate of nearly 4%. If we consider labor across all business households, private enterprises and business households together account for almost 74% of the workforce in various sectors.

Furthermore, the private economy has contributed significantly to promoting gender equality and empowering women through increased employment opportunities and income sources. Female workers constitute nearly 50% of the total female workforce across different types of enterprises. Additionally, women-owned businesses have not only created jobs and income but have also expanded their influence regionally and internationally. Many Vietnamese women entrepreneurs have been recognized and honored in prestigious rankings such as "TOP 50 Powerful Asian Businesswomen," "Outstanding ASEAN Businesswomen," "Powerful Women Entrepreneur Award," "50 Outstanding Business Leaders Changing Industries and Regions," and more.

The private economy also plays a crucial role in social welfare activities, particularly in expanding the coverage of social security and facilitating greater participation in social insurance programs. Private enterprises actively engage in social, community, and environmental initiatives, reflecting their social responsibility and commitment to societal well-being.

2.3. Issues

Despite achieving significant results, the development of the private economy still faces several persistent issues, particularly regarding its quality. These challenges can be observed as follows:

Firstly, the recent growth of the private economy has been characterized by a substantial increase in the number of small and micro-scale enterprises. According to the 2021 Statistical Yearbook, nearly 73% of private enterprises have a scale of less than 10 billion VND, and approximately 81% of private enterprises employ fewer than 10 individuals. The private sector lacks significant and robust enterprises. Its technological proficiency and capacity to participate in value chains, both domestically and globally, remain limited, particularly in low-value-added stages. As a result, the majority of export value is concentrated in foreign-invested enterprises, accounting for over 72% of the total export turnover.

Secondly, the contribution of the private economy does not proportionately reflect its quantity, scale, and potential. Its contribution to economic growth has remained relatively stagnant over an extended period, primarily driven by the informal sector (individual business households contributing up to 30% of GDP, while formal private enterprises contribute less than 10% of GDP). In contrast, during the same period from 2011 to 2020, the share of the FDI sector in GDP increased by nearly 5%, rising from 15.39% to 20% of GDP.

Despite private enterprises accounting for nearly 97% of the total number of businesses in the country, they contribute only 31.2% of pre-tax profits of all enterprises and less than 10% of GDP. The share of domestic revenue generated by private enterprises is relatively low, accounting for less than 20%. Conversely, the contribution of business households to state budgets is insignificant, amounting to less than 2%.

Thirdly, the operational efficiency of the private economy remains low, and its social labor productivity is relatively modest. On average, during the period from 2016 to 2020, active private enterprises accounted for 96.7% of the total number of enterprises, yet their labor productivity, measured at constant prices, was the lowest among economic sectors. It reached only 29.1% compared to the FDI sector and 24.6% compared to the state-owned economic sector.

Moreover, private enterprises exhibit lower profitability compared to the overall business sector, state-owned enterprises, and FDI enterprises. In the 2016-2020 period, the pre-tax profit-to-asset ratio for private enterprises averaged 1.4%, lower than the overall business sector's average of 2.4%. Similar trends can be observed in terms of the pre-tax profit-to-net revenue ratio (2.1% compared to 3.8%) and the pre-tax profit-to-owner's equity ratio (4.1% compared to 7.6%). The low profitability adversely affects the private sector's ability to accumulate capital and expand its scale.

Lastly, private economic entities face limitations in terms of resilience. A considerable number of businesses cease operations or dissolve each year. From 2011 to 2020, the average annual rate of business closures or dissolutions was approximately 73.5% of the number of newly registered businesses. The vulnerability of private enterprises has become more evident, particularly during the 2020-2022 period due to the adverse impacts of the Covid-19 pandemic.

3. SOLUTION TO PROMOTE THE DEVELOPMENT OF THE PRIVATE ECONOMY

3.1. Solutions from the State's perspective

To fulfill the Party's objectives of surpassing the middle-income trap, reducing reliance on foreign direct investment (FDI), and advancing the country's development, the State must augment institutional reforms, enhance the business environment, foster innovation, and elevate the level of national governance. The following key solutions should be prioritized:

First and foremost, it is crucial to consistently acknowledge the significant role of the private economy in our market-oriented socialist-oriented system. Private enterprises should be recognized as drivers of development and key contributors to bolstering the autonomy and self-reliance of the entire economy. This perspective should be evident in the construction, issuance, and implementation of mechanisms and policies pertaining to the private economy, as well as in the conduct of state management activities by officials and civil servants at all levels.

Secondly, effective implementation of the tasks and solutions outlined in Resolution No. 10-NQ/TW of the 5th Central Committee of the 12th Party Congress, which aims to develop the private economy into a vital driving force for the market-oriented socialist-oriented economy, should be continued. Regular inspections, monitoring, and evaluations of the implementation should be undertaken.

Thirdly, efforts should be focused on improving the transparency and stability of the legal system to foster confidence among private economic entities and promote their adherence to regulations. It is crucial to comprehensively address limitations, inconsistencies, and overlaps among legal documents, advance administrative reforms, reduce and transparently disclose administrative procedures, and eliminate unofficial costs imposed on businesses in their production and business activities. Mechanisms, policies, and laws that encourage the development of business households should be refined, actively promoting their formal registration and eliminating discrimination among different types of businesses.

Fourthly, it is necessary to create a favorable environment for private enterprises to exploit and utilize national resources by promoting equitization and divestment of state capital in enterprises where the State does not need to retain shares, and by minimizing the state's shareholding in businesses. The healthy development of factor markets should also be pursued.

Fifthly, enhancing the effectiveness and efficiency of state management, improving the quality of laws, and their enforcement is paramount. Constructing a responsive, efficient, and accountable government system, enhancing transparency, ensuring equal access for private economic entities to business opportunities, information, and resources, particularly financial resources and land, are important objectives. Priority should be given to removing barriers, direct administrative interventions, and addressing inequalities in accessing development resources. Transparency and public disclosure of land-use planning, land-use plans, and unused land resources are also essential.

Sixthly, the capacity of support institutions and organizations for enterprises, such as business development service providers, startup support centers, and legal consulting and support services for enterprises, should be strengthened.

Seventhly, supporting enterprises in enhancing labor productivity and focusing on the development and supply of high-quality human resources to the market are crucial. Issuing and implementing mechanisms and policies to encourage private investment in science and technology applications, research and development activities, and innovation are vital components of this endeavor.

3.2. Solutions from the perspective of the private economic sector

In order to foster development and success, the private economic sector must actively adapt to new trends and contexts, notably the Fourth Industrial Revolution, global uncertainties stemming from the Covid-19 pandemic, trade and military conflicts, and climate change, as well as deep international integration through new-generation free trade agreements. Private enterprises, in particular, should prioritize investment in innovation, bolstering technological capabilities, improving management proficiency, enhancing leadership capacity, and upgrading the quality of their human resources. These efforts will contribute to increased productivity, business efficiency, competitiveness, and successful integration into the production and value chains of larger corporations. Each individual enterprise should formulate clear plans and strategies to navigate both the short-term and long-term challenges. It is essential for enterprises to abide by laws and regulations, while placing significant emphasis on upholding the company's reputation and credibility with regards to the State, the community, customers, shareholders, and employees.

4. CONCLUSION

The development of Vietnam's private sector holds significant advantages in fostering an independent and self-reliant economy alongside the state-owned and collective sectors. The private economy has the capacity to attract a substantial portion of the population to participate in "ordinary" economic activities, contingent upon the government establishing genuine equality between foreign and state-owned enterprises, as well as between small and large businesses. Moreover, the implementation of supportive policies for small and medium-sized enterprises and the cultivation of a favorable business environment and startup ecosystem are vital. Nevertheless, obstacles persist in accessing land and bank loans for unrelated entities, hindering the realization of these advantages. Therefore, it is imperative to establish an effective system for safeguarding intellectual property rights to ensure the sustainable development of the private sector.

Vietnam must shift its focus towards the growth of existing businesses rather than solely pursuing an increase in the number of newly registered enterprises. Reforms in the Company Law, tax management regulations, taxation, and other relevant laws are necessary to establish an appropriate legal framework that facilitates the operation of sole proprietorships and individual businesses. This comprehensive approach serves as a fundamental strategy to encourage self-employed individuals and business owners to transition into formal enterprises, ultimately striving towards the target of 1.5 million efficiently operating businesses, and eventually reaching 2 million.

In the metaphorical context of Vietnam's economy as a ship, the private economy assumes the role of the driving force that determines the pace of its journey. However, it is important to note that the direction and destination of the ship entail separate considerations that extend beyond the influence of the private sector.

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DIVIDEND POLICY OF STEEL JOINT STOCK COMPANIES LISTED ON VIETNAM STOCK MARKET

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Abstract: Dividends are a part of a company's after-tax profits paid to shareholders. Dividends are considered a tool that provides information to investors about the financial health status of a joint stock company. Dividend policy represents the decision between paying profits to shareholders versus retaining profits for reinvestment. The implementation of dividend policies of joint stock companies is not the same but depends on many factors such as the results of production and business activities, the company's cash flow situation, financial strategy, and development strategy of the company, legal regulations, personal income tax, investor psychology, transaction costs and costs of issuing new shares, investment opportunities and investment capital needs, need to repay loan repayment, life cycle of the company, control of the company, ability to penetrate the capital market,... Based on statistics of 23 steel joint stock companies listed on the Vietnam stock market during the period 2016 - 2022, the article will focus on analyzing the current situation of dividend policies of steel joint stock companies listed on the Vietnamese stock market, thereby providing assessments and proposing solutions to improve dividend policy of listed steel joint stock companies in the coming time.

Keywords: Dividend policy, steel company, listed

1. INTRODUCTION

Although dividend policy is now quite familiar to many people. However, it is not common to understand it thoroughly. The company's dividend policy is still considered an issue that needs to be summarized in the most general and complete way. Dividends depend on the company's operating results and how dividends are paid depends largely on specific conditions as well as the company's strategies.

Dividend policy is one of the three most important policies that impact the interests of shareholders in the company. A company's dividend policy represents the decision to distribute profits into two parts: consumption (paying dividends to shareholders) and accumulation (reserving for reinvestment). Dividend policy determines how the company's after-tax profits will be distributed, how much will be retained for reinvestment and how much will be paid to shareholders. Therefore, dividend policy will affect the amount of equity in the company's capital structure and the company's cost of capital. The main content of dividend policy is expressed through the legal bases for implementing dividend payment decisions, dividend payment ratio, and dividend payment process and form.

In Vietnam today, dividend payments are still spontaneous and not highly strategic. Steel joint stock companies are no exception to this practice. Many companies' business is still unstable, which has significantly affected the company's dividend payments. There are companies that are doing quite well but do not have a strong enough strategy to build a strategic dividend payment policy. comb. Companies also pursue satisfying the needs of short-term investors rather than the long-term development orientation of the company; Many companies also use dividend policy as a tool to polish their company image; Although some large companies have initially established

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strategic policies according to a certain trend, the majority of remaining steel companies do not have a stable, long-term strategy and still depend heavily on environmental factors. and business results; There are also some companies whose dividend payout ratio is on the rise, affecting the process of accumulation and future development... All of these things greatly affect the company's stock price. company in the market. Faced with that situation, it is necessary to have complete research on dividend policies in joint stock companies in general and in individuals.

2. CURRENT STATUS OF DIVIDEND PAYMENTS OF LISTED STEEL JOINT STOCK COMPANIES IN THE PERIOD 2016 - 2022

2.1. Dividend payment situation of listed steel joint stock companies

Table 1: Statistics of listed steel joint stock companies paying dividends in the period 2016-2022

Unit: Company

Content	2016	2017	2018	2019	2020	2021	2022
Number of companies paying dividends	16	14	12	15	15	12	5
Number of companies not paying dividends	7	9	11	8	8	11	18
Total number of companies	23	23	23	23	23	23	23

Source: Compiled from annual reports of listed steel companies

Looking at table 1 shows that the number of listed steel companies paying dividends is decreasing while the number of companies not paying dividends is increasing. The dividend payment situation of listed steel companies can be divided into stages:

- Period 2016-2018: 2016 marked the return to growth of the steel industry after a slowdown in 2015 due to competition with cheap steel from China. Steel exports in 2016 reached 3.48 million tons, up 36% over the same period last year. In 2017, growth was stable and reached 3.75 million tons of steel exports. In 2018, this industry's profits dropped sharply. This decline comes from a number of reasons such as: (1) Excess capacity in segments such as galvanized steel, leading to fierce competition for businesses through price reductions; (2) Due to the US-China trade war, with the conclusion that there is tax evasion for some steel products from China through Vietnam for export to the US, the US Department of Commerce in May 2018 decided to decided to impose anti-dumping tax of 199.76% and anti-subsidy tax of 256.44% on cold rolled steel produced in Vietnam using substrate steel originating from China. In 2018, Vietnamese steel was involved in 16 trade defense cases. This has affected steel exports to markets such as the EU, US, and Malaysia - Vietnam's major steel export markets.

- Period 2019-2022: During this period, the profits of listed steel companies continuously decreased. In 2019, the steel industry faced many difficulties due to the spread of protectionist trends among countries to impose import restrictions, falling steel prices due to demand and globalization trends, making profits worse. The after-tax profit of the steel business group decreased by 23% compared to 2018 due to increased competition, fluctuations in global raw material prices, domestic electricity prices increased by 8.36% in March 2019 and trade protection. Trade in many countries, industry-wide consumption demand has also stagnated since mid-2019, causing some businesses to suffer losses such as Pomima Steel Joint Stock Company (POM), Hoa Phat Group Joint Stock Company (HPG), Hoa Phat Group Joint Stock Company Sen (HSG) accepts low consumption to keep other product prices stable.

In 2020, in the context of the Covid - 19 epidemic still affecting many areas of the world economy in general and Vietnam's economy in particular, Vietnam's steel industry still recorded positive numbers such as producing 17,219 million tons of crude steel, an increase of 14% over the same period in 2019, sales reached 16.98 million tons, an increase of 3.55 times over the same period in 2019. Although both steel output and steel sales increased, due to the cost of raw materials for steel production increased unusually in December 2020, affecting the profits of steel production companies. In addition, in 2020, the steel industry's exports will face more difficulties than in 2019 when five more countries are conducting anti-dumping investigations on Vietnamese galvanized steel and steel pipe products, including two countries in the main Southeast Asian market area are Malaysia and the Philippines. However, in 2020, there were still 15/23 companies paying dividends to shareholders. Among the 8 companies that do not pay dividends, there are 6 companies with low profits that do not pay shareholders and 1 company that achieves high profits, Vietnam Steel Corporation (TVN), has a profit after tax of 545,5 billion but spent all the remaining after-tax profits for reinvestment. A company suffered huge losses so it did not pay dividends to shareholders.

Although 2021 is considered a brilliant year for the construction steel industry, prices continuously set records, leading to the business results of many large companies breaking old records. However, due to the galloping increase in steel prices due to the sharp increase in input raw material costs, it is still affected by the Covid - 19 epidemic, leading to a sharp decrease in steel consumption demand in the last months of the year due to many provinces and cities. Prolonged social distancing has led to a decrease in domestic sales, which in turn has also affected the business results of many steel companies. Therefore, in 2021 there are only 12 companies paying dividends and 11 companies not paying dividends. And among the 11 companies that do not pay dividends, 2 companies have losses so they do not pay dividends, 5 companies have low profits so they do not pay dividends but keep them for reinvestment, and 4 companies have high profits. Tien Len Steel Group Joint Stock Company (TLH), Vietnam Steel Corporation (TVN), Thai Nguyen Iron and Steel Joint Stock Company (TIS) and Pomina Steel Corporation (POM) do not pay dividends but use them for reinvestment. .

In 2022, the global economy will continue to face difficulties as inflation increases and steel-using industries record slow growth. Meanwhile, the price of raw materials for steel production has increased, leading to increased production costs along with a decline in steel demand, causing the amount of raw steel production as well as the amount of finished steel products of all types to continuously decrease compared to the same period last year. Period of 2021, in addition, difficulties in the real estate market greatly affect the cash flow of steel enterprises. Accordingly, with record losses in 2022, many large steel industry enterprises such as Nam Kim Steel, SMC Trade Investment, Vietnam Steel Corporation... proposed not to pay dividends this year. As for Hoa Phat Group (HPG), even though its profit is up to 8,444 billion VND, it does not pay dividends because it wants to put all of it into business activities in 2023. In 2022, only 5/23 companies will pay dividends. In general, during this period, many companies suffered losses and profits were not high, which affected dividend payments to shareholders.

2.2. Dividend payment form of listed steel joint stock companies

The form of dividend payment represents part of the dividend policy of a joint stock company. According to statistics, 12/23 companies (accounting for 52.17%) apply cash dividends. This is considered an easy form to implement and is loved by most shareholders because shareholders want to ensure their income. There are 10/23 companies (accounting for 43.47%) applying the form of paying dividends in cash and in shares because this form ensures flexibility between shareholders who want to receive dividends in cash to ensure income. Just want to reinvest to increase profits. There are 1/23 companies (accounting for 4.35%) that apply stock dividends because the company's accumulated cash resources are not abundant and the company wants to use profits to reinvest to increase profits. more profits in the future.

In the period 2016 - 2022, the forms of dividend payment used by steel joint stock companies listed on the Vietnam stock market are shown specifically in table 2.

Table 2: Dividend payment methods of steel joint stock companies listed on the Vietnam stock market in the period 2016 - 2022

Unit: Company

Forms of dividend payment	2016	2017	2018	2019	2020	2021	2022
Pay dividends in cash	10	7	6	10	10	4	3
Pay dividends in shares	2	3	3	2	4	3	1
Pay dividends in cash and stocks	4	4	3	3	1	5	1
Total number of companies paying dividends	16	14	12	15	15	12	5

Source: Compiled from annual reports of listed steel companies

Table 2 shows that in the period 2016-2022, steel companies listed on the Vietnamese stock market mainly pay dividends in cash. Some companies that have always maintained the form of paying cash dividends regularly for many years can be listed as: Ho Chi Minh City Metal Joint Stock Company; Thanh Thai Group Joint Stock Company; Central Metal Joint Stock Company; Thu Duc-Vnsteel Steel Joint Stock Company; Nha Be Steel Joint Stock Company... The favorite form of dividend payment is Vingal-Vnsteel Industrial Galvanizing Joint Stock Company, which throughout the period 2016-2022 always paid cash dividends with rates ranging from 13% - 20%. Paying cash dividends is also a way for investors to see the company's strong financial situation. This is also one of the points to evaluate the attractiveness of these companies' stocks when investors make their investment decisions because many investors are often interested in cash and dividend payment policies, growth of companies over time. However, paying dividends in cash will cause companies to reduce a large amount of capital, which may partly affect the financial capacity of some companies.

Also during this period, there were listed steel companies that paid dividends entirely in shares such as: Pomina Steel Joint Stock Company paid dividends in shares in 2017 at the ratio of 100:30 and in 2019 at the ratio of 100: 15.

Some companies use a form of dividend payment that combines cash dividends with specific stock dividends such as: Hoa Phat Group Joint Stock Company in 2019 paid cash dividends at a rate of 5% and paid in shares. with a ratio of 100:20; In 2020, dividends will be paid in cash at a rate of 5% and paid in shares at a rate of 100:35; In 2021, dividends will be paid in cash at a rate of 5% and paid in shares at a ratio of 10:3. SMC Commercial Investment Joint Stock Company in 2017 will pay dividends in cash at a rate of 10% and paid in shares at a rate of 10:3, rule 100:30; In 2018, it paid dividends in cash at a rate of 10% and paid in shares at a ratio of 10:1. Son Ha Saigon Joint Stock Company in 2016 paid dividends in cash at a rate of 3% and paid in shares at a rate of 10:1. 100:12; In 2018, dividends were paid in cash at a rate of 5% and paid in shares at a rate of 100:10; In 2019, dividends will be paid in cash at a rate of 3% and in shares at a rate of 100:5.

Compared to paying cash dividends, paying dividends entirely in stocks or combining cash dividends and stock payments can help companies increase their financial resources for reinvestment. However, whether receiving stock dividends for shareholders is beneficial or not depends on the success of the company's new investment in the future.

In general, it can be seen that in the period 2016-2022, the main form of dividend payment used by listed steel joint stock companies is paying dividends in cash, followed by a combination of paying dividends in cash and paying in cash, stocks, a few companies choose to pay dividends in stocks.

2.3. Number of dividend payments

During the period 2016-2022, listed steel joint stock companies make dividend payments ranging from 1 to 3 times. Hoa Sen Group Joint Stock Company in the two years 2016-2017, each year the company paid dividends 3 times; From 2018-2022, dividends will be paid once a year. SMC Commercial Investment Joint Stock Company during the period 2016-2022, the company pays dividends twice a year. Ho Chi Minh City Metal Joint Stock Company in 2018 paid dividends twice, in the remaining years it paid dividends once, the remaining companies were mostly Hoa Phat Group Joint Stock Company, Central Metal Joint Stock Company, Thu Duc Steel Joint Stock Company – Vnsteel, Vingal Industrial Galvanizing Joint Stock Company – Vnsteel pays dividends one time. Some other companies, for certain objective and subjective reasons, do not pay dividends in the period 2016-2022.

It can be seen that the number of dividend payments or the frequency of dividend payments of listed steel joint stock companies depends greatly on the results of production and business activities in that year to decide, this shows that the companies does not have a clearly oriented dividend policy strategy.

2.4. Dividend payment rate

Table 3: Dividend payments of listed steel joint stock companies in the period 2016 - 2022

Unit: %

Dividend payment level (VND/share)	Proportion of listed steel joint stock companies (%) by dividend payment level						
	2016	2017	2018	2019	2020	2021	2022
0	39,1	52,2	60,7	43,5	52,2	56,3	82,6
300-900	13	8,7	8,7	30,4	8,7	17,5	13
1000-1500	43,5	21,7	13	21,7	26,1	8,7	0
1600-2000	0	8,7	4,4	4,4	13	8,7	4,4
2100-2500	0	0	4,4	0	0	0	0
2600-3000	0	8,7	4,4	0	0	4,4	0
Trên 3000	4,4	0	4,4	0	0	4,4	0
Tổng	100	100	100	100	100	100	100

Source: Compiled from annual reports of listed steel companies

Looking at table 3, it shows that the dividend payments of listed steel joint stock companies in the period 2016-2022 commonly range from 300 VND to 1,500 VND, specifically in 2016, up to 56.5% of companies paid. At this level, in 2019 it was 52.1%, in 2020 it was 34.8%.

2016 was the year when the proportion of companies paying dividends at 1,000 VND to 1,500 VND was quite high at 43.5%, while in other years this dividend payment level only ranged from 13% - 26.1%. Although exported steel products faced a lot of pressure in 2016 due to trade defense cases from other countries, Vietnam's steel industry has made many efforts in expanding the market to promote exports of all kinds of products, steel products. Accordingly, the export output of the steel industry in 2016 still increased by 18.1% compared to 2015, thanks to which the business activities of listed steel joint stock companies during this period were also better, earning more profits and therefore higher dividend payments.

Overall, in the period 2016-2022, the proportion of companies paying dividends above 2,100 VND is very low, ranging from 4.4% to 13.2%. The number of companies paying the highest dividend of over 3,000 VND includes Thanh Thai Group Joint Stock Company paying 5,000 VND/share in 2016, Ho Chi Minh City Metal Joint Stock Company paying 3,500 VND/share in 2018 and 4,500 VND/share in 2021.

Objectively, during this period, the majority of listed steel joint stock companies had to face many difficulties such as: facing protectionist trends between countries, cases related to anti-dumping policy; the US-China trade war and the Covid - 19 pandemic. In addition, domestic economic difficulties have affected the production and business of steel companies, such as the price of raw materials for steel production. Continuously increasing prices of electricity, gasoline, and bank interest rates remaining at high levels for a long time have significantly affected the efficiency of production and business activities of steel enterprises. In addition, due to competition with cheap Chinese steel, Vietnam's steel export turnover also faces many difficulties. Thus, the decline in production and business efficiency is the main cause leading to reduced dividend payments at listed steel joint stock companies.

Subjectively, during this period, listed steel companies have given more priority to the company's long-term growth through using retained profits to reinvest, thereby also making the trend of dividend payments is decreased.

2.5. Dividend payout ratio

Dividend payout ratio is an indicator that reflects the relationship between the dividend payment that common shareholders receive and the income of a common share. This indicator shows how much of each share income the company spends to pay dividends to shareholders. Through the dividend payout ratio, it is possible to evaluate and estimate the profit reinvestment rate, thereby estimating the future income growth rate.

Table 4: Dividend payout ratio of companies of listed steel companies in the period 2016-2022

Unit: Company

Dividend payout ratio	Number of companies							Average dividend payout ratio
	2016	2017	2018	2019	2020	2021	2022	
Hệ số 0	9	12	14	11	12	14	19	
Từ 0,1 – 0,3	6	6	0	3	3	4	1	
Từ 0,31 - 0,5	1	0	3	2	1	0	0	
Từ 0,51 – 0,7	3	2	1	2	5	1	0	
Trên 0,7	4	3	5	5	2	4	3	
Tổng số	23	23	23	23	23	23	23	0,292

Source: Compiled from annual reports of listed steel companies

Table 4 shows that the average dividend payout ratio for the entire period 2016-2022 of listed steel companies is 0.292. This is a fairly low dividend payout ratio. Thus, the majority of after-tax profits of listed steel companies are retained, with only a small portion of after-tax profits distributed to shareholders. The reason why the dividend payout ratio of these companies is low stems from the characteristics of the steel industry, which is the huge need for capital, so companies often retain most of their after-tax profits to increase their financial capacity for Business.

To see more clearly the dividend payout ratio of listed steel companies in the period 2016-2022, we can consider the dividend payout ratio according to the company's capital scale.

Table 5: Dividend payment coefficient of listed steel companies classified by capital size in the period 2016-2022

Group	2016	2017	2018	2019	2020	2021	2022
Capital size under 1000 billion	0,46	0,27	0,38	0,35	0,71	0,32	0,28
Capital size from 1000-5000 billion	0,18	0,24	0,21	0,18	0,23	0,24	0,85
Capital size over 5000 billion	0,11	0,12	0,12	0,39	0,05	0,03	-
Average dividend payout ratio	0,27	0,22	0,25	0,3	0,37	0,22	0,41

Source: Compiled from annual reports of listed steel companies

The table above shows that companies with a capital scale of less than 1,000 billion have the largest average dividend payout coefficient, followed by companies with a capital scale of 1,000 billion to 5,000 billion, and companies with a capital scale of 1,000 billion to 5,000 billion. Capital over 5,000 billion has the lowest dividend payout ratio, and in 2022, the group of companies with capital over 5,000 billion will not pay cash dividends, so the dividend payout ratio is 0. It can be seen Capital scale is one of the factors affecting the dividend payout ratio of listed steel companies.

2.6. Dividend policy model

Through reviewing the actual production and business activities of listed steel companies, it shows that most companies have paid more attention to building and implementing a certain dividend policy model. Each company is different in scale, development strategy and efficiency in production and business activities, so it has to choose and pursue different dividend policy models. Besides, even though the same model is chosen, the level of implementation of that model in each company is different depending on the qualifications, capacity of the leadership team and corporate governance and a number of customer reasons, other officials.

Some companies that choose a stable dividend policy model include: Central Metal Joint Stock Company (KMT) with a payout rate of 700 VND/share for many consecutive years with a dividend payout coefficient that fluctuates around the clock, around 0.7; Nha Be Steel Joint Stock Company (TNB) with a payout rate of 1,000 VND/share for many consecutive years with a dividend payout coefficient fluctuating around 0.7; Vingal – Vnsteel Industrial Galvanizing Joint Stock Company (VGL) with a payout rate ranging from 1300-2000 VND/share with an average dividend payout ratio of 0.9 during the whole period; SMC Commercial Investment Joint Stock Company (SMC) pays regular annual dividends at 1,000 VND/share, especially in 2022 at 500 VND/share.

Besides, some companies tend to pursue a residual dividend policy model. These companies do not strictly implement a surplus policy in the true sense, but here we want to emphasize the aspect that companies pay more attention to retaining profits to reinvest in their income distribution. Typical companies such as Hoa Phat Steel Group Joint Stock Company (HPG) in 2022 profited more than 8,000 billion but did not pay dividends but used it for reinvestment; Hoa Sen Group Corporation in 2021 profited more than 4,000 billion but did not pay dividends; Dai Thien Loc Joint Stock Company (DTL); Pomina Steel Joint Stock Company (POM); Vietnam Steel Corporation (TVN).

In addition, there are still some companies that have not yet shaped a clear dividend policy model such as Son Ha International Joint Stock Company (SHI), which in the entire period 2016-2019 paid dividends at 500 VND/share in There were 2 years of 2016-2017 paying two dividends with the first payment of 300 VND/share, the second additional payment of 200 VND/share, however in the period 2020-2022 even though the company had business activities good but does not pay cash dividends like the previous period or Tien Len Steel Joint Stock Company (TLH) does not pay dividends according to a certain model.

3. ASSESS THE CURRENT STATUS OF DIVIDEND POLICIES AT LISTED STEEL JOINT STOCK COMPANIES IN THE PERIOD 2016 - 2022

3.1. These achievements

Through analyzing the current status of dividend policies at listed steel joint stock companies in the period 2016-2022, it can be seen that these companies have achieved the following main results:

Firstly, the majority of listed steel joint stock companies have chosen and pursued a certain dividend policy model, this shows initial success and marks a mature step in management of listed steel companies.

Second, many listed steel joint stock companies have maintained annual dividend payments to create confidence for shareholders. Although in the period 2016-2022, the steel industry faces many difficulties such as the impact of trade protection measures, cases related to anti-dumping, and the impact of the US-trade war. China, the Covid -19 pandemic, raw material prices continuously increasing, difficulties in export markets.... These difficulties greatly affect the business results of steel companies, however many companies still persistently pursues its chosen dividend policy, maintaining continuous annual dividend payments.

Third, some joint stock companies have combined payment of cash dividends and stock dividends. This combination not only helps create trust with shareholders but also helps the company have more capital to invest compared to paying dividends in cash.

Fourth, some listed steel joint stock companies have initially resolved relatively harmoniously between the decision to pay dividends to shareholders and retain profits to reinvest to help the company grow in the future. Typically Tien Len Steel Joint Stock Company (TLH) and Central Metallurgy Joint Stock Company, although achieving high business efficiency, the dividend payment per share is only moderate and the company has spent most of its after-tax profit to invest for growth and reality shows that the company's investment is quite effective.

3.2. Limitations exist

Firstly, the majority of listed steel joint stock companies have not diversified their forms of dividend payment. In general, in the period 2016-2022, listed steel companies often choose to pay dividends in cash, however this method will reduce a large amount of the company's capital, thereby affecting its financial capacity. This is not really reasonable, especially in the context of many companies being in the growth phase.

Second, some companies have high dividend payout ratios, not balancing the retained profits for reinvestment. If the company has a good investment opportunity, because the remaining profit for reinvestment is low, the company will have to choose other sources of funding such as issuing more shares, borrowing capital from credit institutions, or other sources of funding. This has higher mobilization costs than retained profits, leading to increased financial risks, imbalance in funding sources, and reduced financial capacity of the company.

Third, some listed steel companies have not clearly shaped the dividend policy model that the company pursues. These companies do not have a long-term strategy for dividend payments and most dividend payments depend on the results of production and business activities each year, so dividend payments are erratic.

4. SOME DIRECTIONS TO IMPROVE DIVIDEND POLICIES AT LISTED STEEL JOINT STOCK COMPANIES

Firstly, it is necessary to complete the selection of an appropriate dividend policy model. Each dividend policy model has certain advantages and limitations, so choosing the appropriate model should be based on the advantages, limitations and specific characteristics of each company. The dividend stability policy model is more suitable for companies with relatively stable annual after-tax profits, abundant cash flow, and enough ability to pay dividends and pay off due debts. Before and after paying dividends to shareholders, companies that choose this model also need to keep a certain amount of accumulated undistributed after-tax profits to maintain continuous dividend payments to shareholders, winter in the following years. On the contrary, the dividend surplus policy model is more suitable for companies in the growth stage, with many investment opportunities that promise to bring high rates of return, meeting shareholders' expectations. With a low fixed dividend policy model and additional dividends at the end of the year, suitable for companies with good growth prospects, the company must regularly maintain dividend payments to shareholders at a minimum level, certain minimum.

Second, it is necessary to diversify forms of dividend payment to ensure that it is suitable for the characteristics and specific situation of the company in each certain period. The company can pay dividends in cash, in shares, or in combination with both cash and shares. Each form has different advantages and limitations, so companies need to choose the appropriate dividend payment form.

Third, it is necessary to determine the appropriate number of dividend payments per year. Deciding on the number of dividend payments per year should be based on the company's business characteristics and the wishes and psychology of shareholders.

Fourth, it is necessary to consider whether to use share repurchases instead of paying dividends because this is considered a way to pay indirect cash dividends to shareholders. Buying back shares has positive effects on the company such as reducing the number of outstanding shares and thereby increasing earnings per share (EPS). That could be attractive to investors and could therefore increase the company's stock price in the future.

5. CONCLUSION:

Research on dividend policy in joint stock companies is always a topical issue. The authors have applied the method of synthesizing theoretical and practical issues to provide specific directions and solutions to achieve the research objectives. The proposals of the project will contribute somewhat to the sustainable development of listed steel joint stock companies, especially in the socio-economic context that poses many opportunities as well as great challenges.

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APPLICATION OF INFORMATION TECHNOLOGY FOR EFFICIENT DIGITAL TRANSFORMATION IN TAX MANAGEMENT IN VIETNAM

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Abstract: Nowsaday, Digital Transformation in tax management is an urgent issue, contributing to modernizing tax management and reforming tax administrative procedures. The application of information technology win tax administrative reform has saved compliance costs for taxpayers and administrative costs for tax authorities, thereby minimizing interactions between tax authorities and taxpayers, contributing to reducing harassment and inconvenience to taxpayers. In recent years, Digital Transformation in tax management has always received investment attention in all aspects. However, certain limitations still exist in the implementation process. Therefore, a thorough analysis of the theoretical and practical underpinnings of this problem is required, and on the basis of that analysis, some fundamental remedies should be suggested to encourage the current digital transformation of tax administration in our nation. The article uses the method of collecting secondary documents combined with the use of synthesis, system, and analysis methods to clarify the theoretical basis of digital transformation in tax management. On that basis, evaluate the current situation of digital transformation, the situation of digital transformation in general in Vietnam and digital transformation in tax administration in our country today. In light of this, we offer a few proposals for advancing the current digital transformation of tax administration in Vietnam today.

Keyword: digital transformation, digital economy, IT in tax management

1. URGENCY OF THE RESEARCH PROBLEM

Information technology (IT) has been and will always be an effective and indispensable support tool for the tax sector to perform its functions: Organizing and managing the collection of taxes and fees into the state budget, implementing an important link of e-Government. Along with the reform and modernization of tax administration, the application of IT in tax administration must pay special attention to reforming tax administration procedures and processes in the direction of unity, transparency, simplicity, and science. study, in accordance with international practices; building a modern, effective and efficient tax industry. In the past time, the tax sector has increased the application of IT to support tax management (centralized tax management system TMS), electronic tax declaration, and electronic tax payment. However, the application of IT in tax administration has not really brought into full play the role of IT to improve tax administration efficiency, meeting the goals of the Government's resolutions assigned to the Ministry of Finance and the General Department of Taxation (reducing administrative procedures, contributing to improving the competitiveness of Vietnamese enterprises).

In the next stages, with the rapid development of science and technology, the strengthening and expansion of IT application in tax management to all organizations and individuals incurring tax obligations is increasing. becomes urgent when taxpayers change technology and management method on the basis of application of modern technology. The more the economy develops, the deeper and deeper international integration in the region and the world is. Commercial and service business activities are becoming increasingly diverse and complex: cross-border business, digital

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economy... requires IT application to be based on modern and effective solutions and technologies. linkage, integration, high automation; easy to expand and develop; inheriting the results of IT application from previous periods; overcome existing shortcomings and weaknesses.

Therefore, the organization of research and application of information technology in tax administration has scientific and practical significance, in order to build an information technology strategy of the tax sector in the future, which is the basis for tax administration. implementing IT application tasks in tax administration. The article clarifies the theoretical basis of digital transformation in tax management, evaluates the current situation of digital transformation, the situation of digital transformation in general in Vietnam and digital transformation in tax administration today. In light of this, we offer a few proposals for advancing the current digital transformation of tax administration in Vietnam today.

2. OBJECTIVES OF THE STUDY

The study aims to clarify theoretical and practical issues of IT application in tax administration, thereby drawing lessons from experience, and proposing solutions to apply IT in tax management in the next stage.

3. RESEARCH METHODS

The article collects secondary documents combined with the use of synthesis, system, and analysis methods to clarify the theoretical basis of digital transformation in tax management, especially the concept of digital transformation and tax administration, the organization and implementation of policies on digital transformation in tax management. On that basis, evaluate the current situation of digital transformation, the situation of digital transformation in general in Vietnam and digital transformation in tax administration in our country today. Thereby, we propose some solutions to promote the digital transformation process in tax administration in our country today. The data used in the discussion is collected from journals, topics, theses, presentations, reports, and statistical data published domestically and internationally.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Concept of digital transformation and tax management

The idea of "digital transformation" emerged in association with the current scientific and technological revolution. Despite just recently emerging, it has already cemented its place among the most popular trends globally. There are many different approaches to digital transformation, but basically it can be understood that digital transformation is a process of comprehensive change for individuals and organizations in the way they live, work, and produce and operate, based on the foundation of the digital environment and digital technologies. Digital transformation is both a process of transformation at the system level to change behavior on a large scale, and the integration of digital solutions into all areas of the organization and unit, through developing new operational procedures, consumer experiences, and organizational cultures, aspires to fundamentally alter the way we conduct business. It not only reinvents traditional methods but also innovates new methods to meet changing market expectations. In other words, digital transformation is not only a change in technological solutions or operating processes of an organization, production and service unit, or a subject in the market, but also a change cultural change, requiring market actors to recreate business organization models. Simply expressed, this is a method for applying digital technology rationally and successfully to all facets of people and subjects, shifting human activities from the physical world to the virtual world in a network context.

Tax management is the State's establishment of mechanisms and measures to ensure the rights and obligations of tax payers, tax collection agencies and relevant organizations and individuals in the process of tax collection and payment.

4.2. Organization and implementation of digital transformation policies in tax administration.

*** Guidelines and policies on digital transformation in Vietnam.**

The Central Executive Committee issued Resolution No. 52-NQ/TW dated September 27, 2019 on a number of guidelines and policies to actively participate in the fourth industrial revolution. urgent to accelerate the digital transformation process.

The Prime Minister signed and promulgated Decision No. 749/QD-TTg dated June 3, 2020 approving the national digital transformation program to 2025, with orientation to 2030.

Decision 1911/QD-TTg dated November 15, 2021 of the Prime Minister on the connection and sharing between the National Database on Population and other national databases and specialized databases.

Notice 331/TB-VPCP of Prime Minister Pham Minh Chinh's conclusion at the first meeting of the National Committee on Digital Transformation on November 30, 2021.

According to the Ministry of Information and Communications, 2020 is determined to be the year to start the national digital transformation. The perception of the whole society about digital transformation has changed dramatically. The year 2021 and the whole period of 2021-2025 will be an acceleration period with specific implementation actions for each industry, each field, and each locality.

*** Digital transformation in tax management**

In recent years, the Ministry of Finance has proactively implemented tasks related to digital transformation in the financial sector.

- The Ministry of Finance issued Decision No. 446/QD-BTC dated March 30, 2018 of the Minister of Finance on the action plan of the Ministry of Finance to implement Resolution No. 02-NQ/BCSĐ dated March 9 /2018 on deploying technology applications of the 4.0 Industrial Revolution in the field of finance and budget.
- Decision No. 844/QD-BTC dated May 21, 2020 of the Minister of Finance on the action plan of the Ministry of Finance to implement a number of key tasks and solutions for e-Government development in the 2019 period -2020, orientation 2025 meets the specific requirements in Resolution No. 17/NQ-CP dated March 7, 2019.
- Regarding the Ministry of Finance's digital transformation roadmap, in Decision No. 2445/QD-BTC dated December 28, 2018 of the Ministry of Finance approving the e-Government architecture of the Finance sector, clearly stating the vision for the period 2021- 2025 is to continue perfecting information systems to serve the construction of paperless offices; building a digital finance platform based on data and open data; Establishing a Digital Finance industry ecosystem, in which the Government plays a role in creating and connecting with parties through open, data sharing and digital platforms to allow many parties to create services Smart finance.

Recognizing the importance and trend of developing the digital economy and the digital transformation process, the Tax industry has proactively prepared and participated in this field to ensure the effectiveness and efficiency of tax administration.

Recently, the Tax industry has accelerated the digital transformation process:

- *Implementing technical infrastructure solutions*: In recent years, tax authorities have deployed technical and technological infrastructure, gradually meeting the digital transformation requirements of the Tax industry. During the period 2016-2020, the Tax sector has upgraded the high-speed internal network system (optical cable) connecting the centers of the South and North, connecting from Tax Departments and Tax Sub-Departments to Regional and provincial centers according to the Finance sector communications infrastructure project, ensuring data transmission and reception and exchange requirements to deploy centralized processing applications at the General Department of Taxation such as: Tax management applications , email application, message exchange, online meetings throughout the Industry...

In addition, the General Department of Taxation has upgraded transmission lines connecting tax authorities with agencies and organizations outside the tax industry to support taxpayers and businesses in applying tax declaration, tax payment, and electronic tax refund...

In addition to upgrading transmission lines, the General Department of Taxation deploys decentralized systems, checks and monitors information exchanged between tax authorities and outside agencies to ensure standardization, safety and information security in data exchange.

Server infrastructure, network equipment, and security equipment of the Tax industry are continuously invested and supplemented to meet the deployment of new technologies such as cloud computing systems, virtualization of server infrastructure, and infrastructure. Big data for tax management and data warehouse (on Oracle's Datawarehouse technology platform) meets the requirements of the national tax database project of the Government and the Ministry of Finance.

Build a pilot database to store information received from third parties ((such as the General Department of Customs, Ministry of Planning and Investment, Ministry of Natural Resources and Environment, General Statistics Office, State Securities Commission, Vietnam Social Insurance...) helps manage budget revenue effectively, contributing to preventing state budget revenue loss.

- Develop applications to serve people and businesses: IT applications of the Tax industry not only provide good support for internal management, but also serve people and businesses well. In the last 5 years, the General Department of Taxation has built an electronic portal for tax declaration, tax payment, tax refund directly online, electronic invoices replacing paper invoices; publicize tax policies, regimes and administrative procedures on the website; providing free tax declaration support software for businesses and taxpayers.

The General Department of Taxation promotes the provision of online public services, creating favorable conditions and reducing costs for people and businesses to promote socio-economic development. To date, the number of administrative procedures provided online is 304, of which 182/304 administrative procedures have been upgraded to online public services levels 3 and 4.

The number of administrative procedures to meet level 3 online public services is 32 procedures, level 4 is 150 procedures. The Tax Department has integrated 150 online public services into the National Public Service Portal. Online public services of tax authorities are always highly appreciated by organizations and individuals when participating in transactions with tax authorities.

4.4. The current situation of digital transformation in Vietnam

4.4.2 The current situation of digital transformation in Vietnam

Through the study of the development of the digital economy in Vietnam in the 2016 - 2020 period, it can be seen that the digital economy in Vietnam is developing strongly and achieving certain achievements. Vietnam has been having guidelines, policies and passed legal documents to develop the digital economy in accordance with the general conditions of the country as well as international integration. The number of businesses operating in the IT field from 2016 to 2020 increased sharply due to effective policies and action programs from the State, making digital economy activities more vibrant, creating a potential market for growing businesses.

Source: Information and Communication Technology White Paper 2021

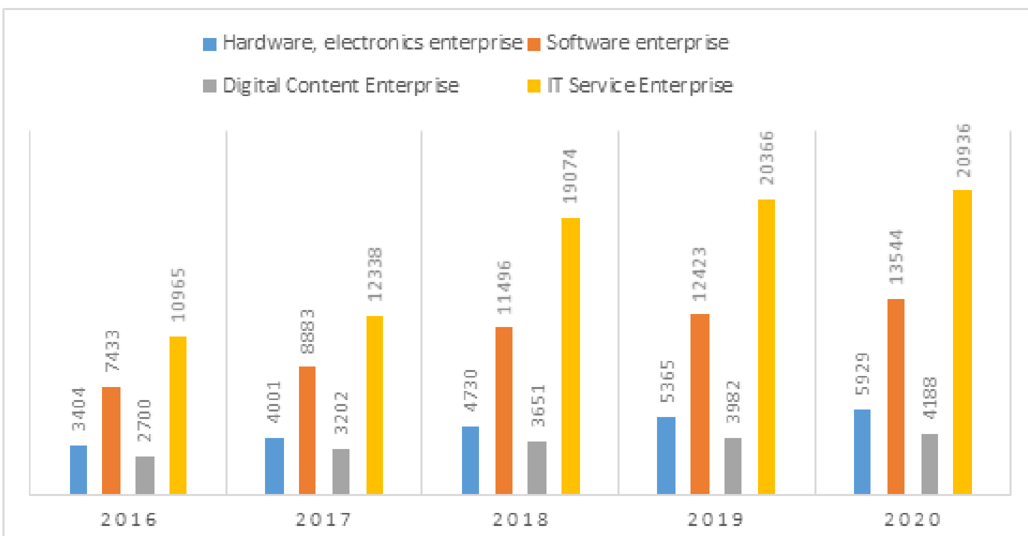


Figure 1. Number of enterprises operating in the IT field from 2016 - 2020

Appropriate policies have been creating confidence from foreign investors. Table 3 shows an increase in foreign investment in the IT industry.

Table 1. Foreign investment in IT industry

Targets	Unit	2018	2019	2020
Total foreign investment in IT industry	Million USD	591.77	3,566.25	1,498.3
Total number of foreign investment projects in the IT industry	Project	248	568	243
Total number of countries investing in the IT industry	Country	42	42	41

Source: Ministry of Planning and Investment.

Infrastructure, services, ecosystems and digital resources are gradually being upgraded and improved to meet the needs of society. Faster, more stable internet speed. Science and technology are gradually rising to the forefront and international comparison, especially 5G technology. The increasing number of information sites, electronic devices and social networks makes the digital ecosystem more and more diverse. The level of participation in digital transformation of Vietnam ranks 70th, at a high level with 70.93% in 3 periods, respectively, 77.78%; 57.14%; 63.64%.

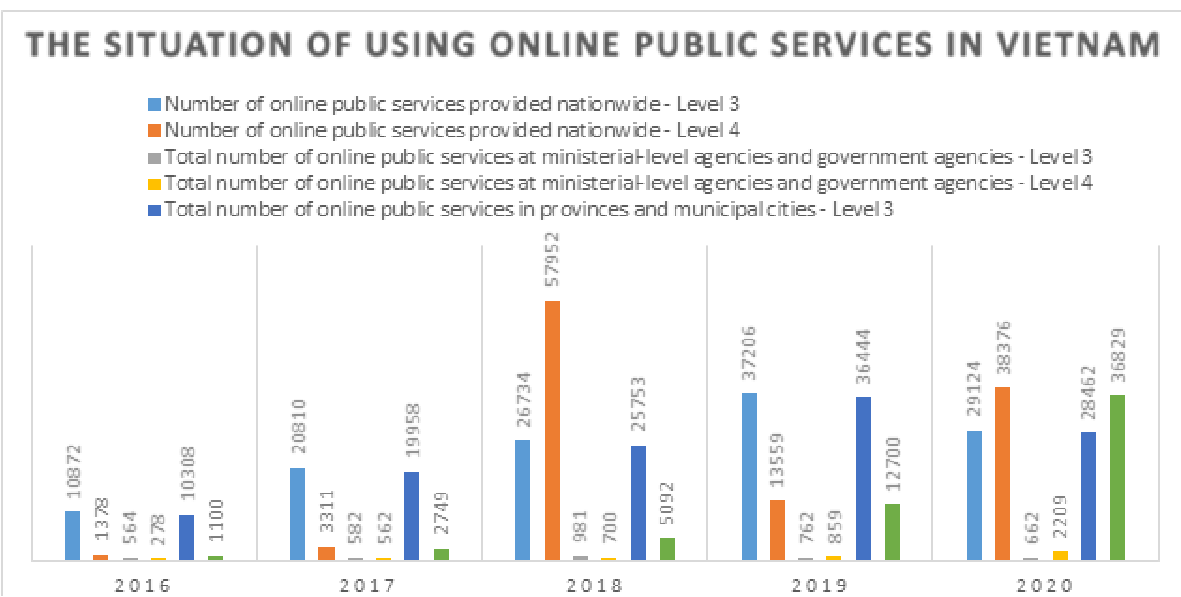
Vietnam has 68.72 million Internet users (November 2021), accounting for 70.3% of the population (according to data from the Vietnam Internet Center), especially in fixed broadband - mostly fiber optic. Internet speed in Vietnam is considered to be at a good level compared to the world, when the average download speed of fixed and mobile Internet in the world in November 2021 was 58 Mbps and 29.06 respectively. Mb/s. In these two types of connections, Vietnam is ranked 42nd and 48th respectively in the world, up from 50th and 53rd in January. In Southeast Asia alone, Vietnam's Internet is behind Singapore, Thailand, Malaysia and higher than the rest of the countries[1].

Businesses have been paying more attention to promoting their images on websites as well as forums and social networks. The percentage of businesses with a website in Vietnam as of 2018 was 44%. Along with that, businesses all use electronic tax declaration or do electronic customs procedures with a rate of over 90%, which will save a lot of time, effort and costs for businesses.

Table 2. Enterprises using online public services

Targets	2016	2017	2018	2019	2020
Percentage of businesses with a website	45	43	44	42	42
Percentage of businesses declaring tax electronically	99.64	99.94	99.83	99.90	99.8
Percentage of enterprises doing electronic customs procedures	95.31	99.96	99.96	99.54	99.7

Source: Information and Communication Technology White Paper 2021.



Source: Compiled from Vietnam E-commerce White Paper 2021.

Figure 2. Use of online public services in Vietnam

The use of online public services in Vietnam has increased significantly in recent years. In recent years, the government has been trying to develop and create a digital government, in order to reduce troublesome administrative procedures and save time for businesses. In 2020, some online public services that have a high number of uses in society are:

According to a UN report, Vietnam in 2020 has a high e-government development index (EGDI), belonging to group H3, ranking 86 out of 193 UN member states, up two places compared to 2018, with

[1] https://vnexpress.net/internet-viet-nam-dang-o-dau-so-voi-the-gioi-4405005.html

0.6667 points, online services index is 0.6529, telecommunications and infrastructure is 0.6694. Along with that, Ho Chi Minh City's local online services index ranks 42nd out of 100 cities[1].

Table 2. E-Government Development Index (EGDI) of Vietnam

Year	Vietnam's position in the EGDI ranking
2020	86
2018	88
2016	89
2014	99

Source: Compiled by the author.

The human resource index and information technology infrastructure of the provinces are quite high. Vietnam has improved the qualifications of the labor force in the IT industry to develop the digital economy; the workforce is qualified and ready to meet the domestic and foreign markets. The ability of students to self-study (the adjacent workforce) is also increasing due to the development from the platform of online learning services. As of 2020, the number of employees in the IT industry in Vietnam is 1,081268 people.

Table 3. Number of employees in the IT industry in Vietnam

Unit: People

Targets	2016	2017	2018	2019	2020
Number of employees in hardware and electronics industry	568,288	678,917	717,955	760,097	842,458
Number of employees in software industry	97,387	112,004	127,366	143,149	149,072
Number of employees in the digital content industry	46,647	55,908	51,952	42,479	34,377
Number of IT service employees (except for trading and distribution)	68.605	75,692	76,419	59,481	55,361
Total number of employees	780,926	922,521	973,692	1,005,206	1,081,268

Source: Information and Communication Technology White Paper 2021

Vietnam currently has more than 250 training institutions in information technology - communication at university and college level with 158 universities, 442 vocational colleges and vocational secondary schools. Some training institutions provide a large source of high-quality IT human resources such as Hanoi University of Science and Technology, Ho Chi Minh City University of Technology, University of Technology - VNU, University of Natural Sciences. of course – Vietnam National University Ho Chi Minh City, FPT University, Institute of Posts and Telecommunications Technology, etc., along with a series of academies and training centers in all provinces.

Table 4. Training of IT - Information Technology Human Resources

Targets	2018	2019	2020
Total number of universities offering IT, electronics, telecommunications, and cyberinformation security training	149	158	158
Total number of vocational colleges and vocational secondary schools offering training in IT, electronics, telecommunications, and cyberinformation security	412	442	442

[1] https://smedx.vn/tin-tuc/quoc-gia-so/chinh-phu-so-tai-viet-nam-va-kinh-nghiem-quoc-te-ve-xay-dung-chinh-phu-so-quoc-gia-thong-minh

Total number of university enrollment targets in IT, electronics, telecommunications, and network information security (Unit: People)	51,114	68,435	82,085
Actual rate of college enrollment in IT, electronics, telecommunications, and cyberinformation security	82%	82%	84%
Percentage of enrollment targets for vocational colleges and intermediate vocational schools in IT, electronics, telecommunications and network information security / Total enrollment targets	12.53%	9.54%	7.7%

Source: Information and Communication Technology White Paper 2021.

Vietnam has a full range of information technology education, training and research institutions that can meet the requirements of the market as well as develop the digital economy.

Regarding information technology infrastructure, in comparison with other countries in the world, the average download speed of Vietnam is 6.7Mbps, ranking 75 out of 200 countries.

4.5. The situation of information technology application in the tax industry.

Aware of the important role of information technology (IT) in the management and long-term development orientation of the tax industry, over the past time, the General Department of Taxation has promoted the application of IT in the management and support businesses (enterprises), people. According to the Information Technology Department, in 2022, the General Department of Taxation has built and upgraded 376 application versions to meet newly issued, supplemented and revised tax policies and operations. Including 95 upgraded versions of centralized tax management application, 158 upgraded versions of application to support taxpayers and 123 versions of application to support tax management and internal management.

Currently, the General Department of Taxation is deploying 20 services of providing and sharing data to serve the coordination of budget collection, of which 4 services of providing information on tax registration and tax obligations have been provided to the Department C06 - Ministry of Public Security: Service of looking up tax registration information according to people's identity cards; Service of looking up tax registration information by tax code; Service of looking up information on collection and payment by tax code; Registration fee tax number lookup service.

In tax management, the tax industry has deployed Edoc application nationwide with 2.6 million documents processed, upgraded tax management applications to meet Tax Administration Law No. 38, Decree 126. The tax authority has upgraded its website to expand the function of providing information for taxpayers, supporting information, and looking up electronic invoices.

Regarding technical infrastructure, the General Department of Taxation has increased bandwidth capacity, implemented a network monitoring management system; deploying and expanding the server system to ensure stable and smooth operation of the system.

For the database implementation, the tax IT system has monitored the operation and good management of the database system; receive and support 1,277 requests for data synchronization and reconciliation; 3,612 requests for administrative support related to system evaluation and tuning; convert and upgrade Etax system to Exadata x8m-2 and upgrade TMS database system to Exadata to improve system performance, meet data processing and reporting requirements.

In the implementation of information safety and security, the tax IT system has maintained 24/7 information security monitoring and supervision to promptly detect and handle risks; maintaining the administration and operation of the storage and backup system to ensure stable operation of the system; All computers are fully installed anti-malware software.

The strong and clear change in IT application of the whole tax industry can be seen through some outstanding results as follows:

Centralized Tax Management System (TMS)

Promoting the results achieved in the implementation of personal income tax (PIT) management applications and actively supporting the implementation of the Law on Personal Income Tax, the General Department of Taxation has decided to upgrade the application system architecture. current tax management to a centralized processing model at the General Department by upgrading and expanding the PIT management application system to manage other taxes. In 2015, the General Department of Taxation completed the implementation of the Centralized Tax Administration System (TMS) nationwide to support 63 tax departments and nearly 700 tax branches in tax administration.

This system has supported tax authorities at all levels to process data of the professional stages of tax registration, tax records management, declaration obligation management; Processing periodical declarations/tax finalization declarations; Processing tax receipts; Handling tax administrative decisions (tax refund, exemption, reduction, imposition...); Accounting and tracking of taxpayers' obligations (NNT); Synthesize reports according to the regime (accounting/statistics), evaluation reports, analysis to support tax management.

**** Electronic tax declaration, tax payment and refund application***

In the past time, the General Department of Taxation has actively implemented an electronic tax declaration system to support taxpayers to declare most tax declaration documents, including the first/additional declarations, and declarations for each time they arise, tax finalization declarations, financial statements, invoice reports, receipts for collection of fees and charges payable according to regulations. In addition, the General Department of Taxation has also implemented an information exchange system between tax authorities and land registration agencies - the Ministry of Natural Resources and Environment to support many tax departments in deploying and using the exchange system. communication between tax authorities and land registries.

According to information from the General Department of Taxation, the tax sector has actively implemented solutions to achieve the goals set out by the Government in Resolutions No. 19/NQ-CP (2017-2018), Resolution 02/ND -CP (year 2019-2021) and Resolution No. 36a/NQ-CP dated October 14, 2015 of the Government on e-Government.

Firstly, the electronic tax declaration system has been implemented in 63/63 provinces and cities and 100% of the Tax Departments are attached. Up to now, there have been 838,787 enterprises (enterprises) participating in using the electronic tax declaration service out of a total of 841,018 operating enterprises (reaching the rate of 99.7%). The number of electronic tax declaration dossiers received was 12,925,589 records.

Secondly, on electronic tax payment, the General Department of Taxation has coordinated with 55 commercial banks (completed the connection of electronic tax payment with the General Department of Taxation) and 63 Departments of Taxation to deploy the electronic tax payment service and declare tax declaration. communication and mobilizing enterprises to use the service. As of August 19, 2021, the number of businesses that have registered to use the service with the tax agency is 832,802 out of a total of 841,018 operating enterprises, reaching 99%.

The number of businesses that have completed service registration with the banking system is 831,154 out of a total of 841,018 operating enterprises (reaching 98.8%). From January 1, 2021 up to now, businesses have carried out 2,425,472 electronic tax payment transactions with the amount of over 486,844 billion VND and 29,350,060 USD.

Third, the tax sector has implemented electronic tax refund in 63 provinces and cities. From January 1, 2021 up to now, the total number of enterprises participating in electronic tax refund is 7,654 out of a total of 7,855 tax refund enterprises, reaching the rate of 97.44%.

The number of applications received was 17,177 out of a total of 17,440 applications, reaching a rate of 98.49%. The total number of system files has been resolved and refunded is 12,428 with the total amount of refund settlement is more than 79,772 billion VND.

Fourth, the General Department of Taxation continues to implement the electronic invoice pilot project. From January 1, 2021 to July 19, 2021, 172,800 invoices have been issued codes with a total revenue of more than 17,708 billion VND, the tax amount on the issued invoices is more than 1,552 billion VND. Following the success of implementing the first phase of electronic invoices in 6 provinces and cities in 2021, on April 21, 2022 the General Department of Taxation will implement phase 2 in the remaining 57 provinces and cities. With a spirit of high determination and with many synchronous and unified measures and solutions, the tax sector has successfully completed the task of implementing e-invoices more than 2 months ahead of schedule as prescribed in Decree No. 123/2020/ND - CP, contributing to accelerating the process of digital transformation and modernization of the tax industry in particular and the financial industry in general.

Up to now, nationwide, 100% of businesses operating and using invoices have switched to using e-invoices and 100% of business households and individuals doing business according to the registered declaration method have switched to using e-invoices. , with a total of over 2.1 billion e-invoices issued.

After more than 8 months of implementation (from March 21, 2022 to December 31, 2022), there were 42 public servants registering, declaring and paying taxes through the Portal, with a total tax paid of more than VND 3,444 billion. Of which, nearly 1,900 billion VND have been declared and paid directly by the public officials; the rest is deducted and paid by Vietnamese parties (Facebook is 1,748 billion VND; Google is 979 billion VND). Notably, there are 6 large foreign investors, Meta (Facebook), Google, Microsoft, TikTok, Netflix, Apple accounting for 90% of the market share in revenue of e-commerce business services on cross-border digital platforms in Vietnam that have registered for tax. , tax declaration and tax payment in Vietnam.

Also in 2022, the tax sector officially operates the e-commerce portal to receive general information of organizations and individuals doing business through the e-commerce floor in case the e-commerce floor has not yet made tax declaration on behalf of the company. individual. With outstanding features of data aggregation according to information of e-commerce floors and information of suppliers (organizations and individuals doing business on e-commerce floors) as well as functions of administration, decentralization, communication Receiving data to ensure information safety and security, E-commerce portal is a new beginning in e-commerce tax management, towards preventing revenue loss in this field.

According to statistics, from the end of 2021 until now, the number of administrative procedures has decreased from 304 to 234 procedures, of which 103/234 procedures reach the level of 3-4 and 97/103 procedures are integrated into the Public Service Portal. country, respectively, saving over 524 billion VND in compliance costs for people and businesses. This result exceeded the target set by the Government's Resolution 68/NQ-CP.

Fifth, the General Department of Taxation also expanded the service of electronic tax declaration and payment for individuals.

The General Department of Taxation has connected with 7 commercial banks to provide electronic tax payment services for individuals and electronic registration fees for cars and motorbikes on the National Public Service Portal or through other channels. payment Internet banking, Mobile banking. From January 1, 2021 up to now, there have been 125,981 car and motorbike registration fee payment transactions across the country in the form of Internet banking and Mobile banking, accounting for 5.42% of the total 2,324,067 fee transactions. registration fee for cars and motorbikes nationwide.

Following the direction of the Government, the General Department of Taxation has also completed the integration of information on financial obligations on land of households and individuals in 63 provinces and cities with the National Public Service Portal.

However, in order to deploy the service, there needs to be a connection and integration between the Public Service Portal of the provinces and cities with the National Public Service Portal so that the local land registration agency can receive information. tax notices as well as tax payment documents. Up to the time of the report, 50 provinces and cities have completed the technical connection to deploy the service. There have been nearly 38,000 successful payment transactions with the payment amount reaching nearly 180 billion dong.

Sixth, the tax sector also actively deploys the provision of online public services (DVCTT). The total number of administrative procedures in the tax field is 304 administrative procedures, of which 122 procedures are provided, level 2 is 32 procedures, level 3 is 32 procedures, and level 4 is 150 procedures. The total number of public services at levels 3 and 4 of the tax sector is 182 public services (reaching the rate of 59.9%).

Up to now, the General Department of Taxation has integrated 150 public services at levels 3 and 4 into the National Public Service Portal. It is expected that in 2021, the General Department of Taxation will complete the integration of 100% of level 3 and 4 public services into the National Public Service Portal…

In 2022, the whole industry has completed upgrading taxpayer support applications (NNTs) such as: HTKK, eTax, iCanhan. Specifically, by the end of 2022, there were 886,901 enterprises participating in using the electronic tax declaration service out of a total of 887,475 operating enterprises, reaching the rate of 99.94%. The number of electronic tax returns received in 2022 was 17,337,891 records.

To implement the requirements on e-government, the General Department of Taxation has built and officially deployed the eTax Mobile application from March 21, 2022. This application has contributed to building a more transparent, convenient digital society and reducing time, costs and risks for people and businesses. At the same time, the General Department of Taxation has also officially announced the application of the Portal for Foreign Suppliers (NCCNN). Accordingly, up to now, 42 foreign suppliers have successfully registered and declared tax.

Implement Decision No. 06/QD-TTg dated January 6, 2022 of the Prime Minister on the Project on developing the application of population data, identification and electronic authentication for national digital transformation in the period 2022 - 2025, with a vision to 2030, the Information Technology Department has reported to the General Department of Taxation and coordinated with the Ministry of Public Security and the Government Office to unify information exchange services; develop technical requirements to connect and share database data (database) about population with tax database; develop the service of tax registration for the first time, registration for changes in tax registration information for taxpayers who are households and individuals.

Especially, from July 1, 2022, the tax sector has "covered" electronic invoices (e-invoices) to 100% of businesses and business households to calculate tax according to the declaration method. Most recently, the General Department of Taxation has officially launched the e-commerce portal and the e-invoice program is created from the cash register. These are important applications that contribute to reducing the time and cost of implementing administrative procedures and promoting digital transformation at enterprises. Along with deploying applications to support businesses, the Information Technology Department has concentrated human resources, invested in equipment, and managed operations to ensure that the system of applications operates smoothly 24/7 to serve businesses and people.

For individuals and business households, the General Department of Taxation has upgraded the functions of supporting the establishment of a set of contracts (for nearly 1.8 million households) and supporting the establishment of a set of non-agricultural land for about 20 million taxpayers who use land. nonagricultural. Completing electronic tax declaration for property leasing activities (including house rental activities) at 63 tax departments and affiliated tax branches.

Application of IT in the work of inspection, examination and internal inspection.

To meet the requirements of management, synthesis, and executive direction in the inspection and examination of tax authorities at all levels, from the beginning of 2016, the General Department of Taxation has upgraded and supplemented quick report forms, in order to support tax authorities in making and synthesizing reports on the application, and at the same time issuing documents directing and guiding tax authorities at all levels to review and update data into the tracking application. inspection and test results.

The General Department of Taxation has upgraded the application of risk analysis (TPR) to modify the way to obtain data on the criteria specified in Decision No. 2176/QD-TCT dated November 10, 2015 of the General Department of Taxation on the application of risk management by tax authorities in the planning of tax inspection and examination at taxpayers' offices to meet the criteria of the set of financial statements as prescribed in Circular No. 200/TT- The BTC replaces the set of financial statements issued under Decision No. 15/QD-BTC on the corporate accounting regime effective from 2015.

In 2016, the General Department of Taxation completed the pilot implementation of the risk analysis application for VAT declarations at the Tax Department of Ho Chi Minh City. Hanoi and Quang Ninh Tax Department meet the professional inspection of tax records. In the internal inspection work, up to now, the General Department of Taxation has been and continues to upgrade the internal inspection application, meeting the professional contents specified in the process of receiving citizens, the process of complaints and denunciations, internal inspection process and user requirements after applying risk analysis according to sets of criteria on tax inspection, tax inspection, tax refund, tax debt management, planning audit annual internal audit of the tax sector.

Upgrade technical infrastructure.

After 2 years of researching a virtual computer platform solution (VDI) for users, in March 2016, the General Department of Taxation implemented phase 1 of a virtual computer system for users at the General Department of Taxation. City Tax Department. Hanoi, Tax Department of Bac Ninh province. In addition, upgrading the technical infrastructure of the systems in 2016 at the Tax Data Center, specifically:

- Implement upgrading virtualization system technical infrastructure to meet the requirements of electronic tax declaration, electronic tax payment and electronic tax refund applications.

- Deploying to upgrade the integrated axis system to improve the capacity of information exchange, integration and communication between applications inside and outside the tax industry, ensuring information security.

- Deploying a backup system for electronic transaction processing systems with high availability requirements such as electronic tax declaration and electronic tax payment systems, ensuring that the system is always stable, ready, and upgraded. high processing capacity, especially in the peak periods of tax finalization.

- Continue to deploy and upgrade the local equipment system for the whole industry to meet the requirements of modernizing the working environment, improving the capacity and working efficiency of tax officials.

4.6. Solutions to promote the application of information technology in the tax industry.

To overcome the above limitations and implement the national program on IT application in the activities of State agencies in the period of 2021-2030, the General Department of Taxation continues to promote IT application in the following directions:

- Building a national tax database to meet the requirements of e-Government implementation.

- Promote activities to support taxpayers through the extensive provision of tax electronic services; Encourage and support intermediary organizations to develop tax services to meet the requirements of socialization of some services.

- Modernize the industry's internal management to improve quality and operational efficiency, and create a professional and effective working environment.

- Develop IT technical infrastructure, advanced, modern and synchronous equipment.

- Ensure the IT system operates continuously, effectively, information safety and data security.

- Training and developing IT human resources in the tax sector in line with the orientation and development plan of the tax sector in the period of 2021-2030.

5. CONCLUSION

Deployment of tax IT technical infrastructure operating on cloud computing in the direction of providing platform-level services. Developing internet of things (IoT) infrastructure and new digital technologies in building applications and services for tax administration.

The Tax Department invests in equipment for tax officials to meet the requirements of modernizing the working environment; development of remote systems for working from home; equipped with systems to enhance the collaborative working environment for tax officials such as online conference system, data sharing system, email system, online training system, digital phone... With the motto of putting people and businesses as the center, the successful implementation of the above-oriented IT tasks is an important foundation for promoting tax administrative reform, has helped tax authorities, businesses and banks reduce the time to carry out procedures; reducing costs for businesses and society, especially, has contributed to publicity and transparency of information for taxpayers…, contributing to accelerating the digital transformation of the tax sector in the new period.

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CARBON MARKET IN VIET NAM

Dr. Vu Ngoc Anh[1]

Abstract: Along with the continuous development of economics, society, science and technology, people are facing environmental problems such as climate change, greenhouse effect, global warming, and the rise of sea levels... Governments and countries are making efforts to overcome the consequences of climate change, especially reducing greenhouse emissions. The concept of "carbon market" was also born from there as one of the economic solutions to solve environmental problems. By studying the experiences of some countries in the Emissions Trading Mechanism, this article offers some suggestions for Vietnam to improve the legal framework as well as organize and operate the carbon market effectively.

Keywords: Carbon market, greenhouse emissions, carbon credits.

1. INTRODUCTION

The carbon market, also known as the market for exchanging credits for reducing greenhouse emissions (or carbon credits), is a type of market where the goods bought and sold in the market are the amount of greenhouse gases reduced by an emission/removal unit when operating between the Buyer and the Seller. This is a politically created market that places value on removing or avoiding carbon emissions and facilitating the trading of carbon (in tonnes of CO2 equivalent) in a market context. The carbon market has the effect of increasing the demand for emission reductions and climate action by businesses, encouraging private sector investment in large-scale emission reductions; At the same time, carbon markets can leverage the policy framework to accelerate low-cost decarbonization.

Depending on the nature of market activity, carbon markets can be classified into: compulsory markets and voluntary markets.

- For compulsory markets: emitters in this market are governed by emission compliance policies and must decarbonize or purchase credits in accordance with the law. Specifically, in Australia, there is a safeguard mechanism for high-emitting industries; in other regions of the world also formed compliance markets such as the European emission trading market (EU ETS), the Chinese emissions trading market, etc.

- For the voluntary market: market participants voluntarily buy and sell carbon credits to serve the common emission reduction goals or ensure the needs of enterprises on carbon credit exchange and greenhouse gas emission reduction. A number of frameworks and standards (sustainability, transparency ...) for the voluntary market have been established in the world, such as ClimateActive, VCMI, and IC-VCM…

There are many types of emission reduction projects that can generate carbon credits. These projects may include:

- Emission reduction activities that can generate carbon credits;

- The projects and carbon credits generated by this project are appraised according to various international standards.

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- Projects can also deliver co-benefits on social, cultural, economic, and other environmental outcomes.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

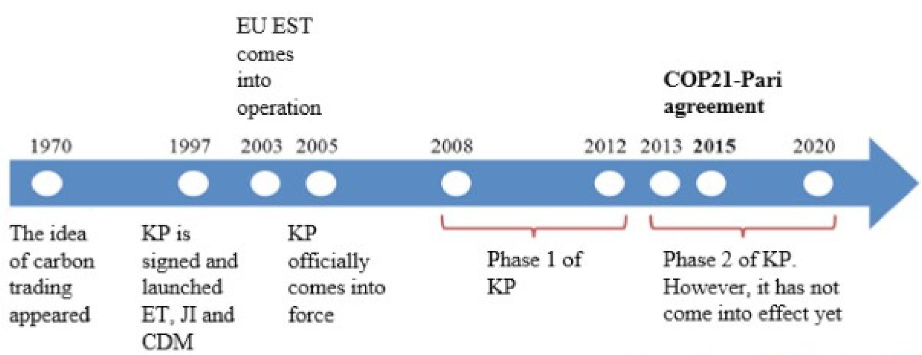
The concept of a carbon market is not a new concept, but it has only been emphasized in recent years. With the small number of studies on this issue, domestic and foreign legal documents and articles mainly provide general concepts and understandings as well as suggestions on how to build carbon markets in developed countries.

First of all, the 1997 Kyoto Protocol on climate change specifically stipulates types of greenhouse gases and classifies greenhouse gases by sectors/sources; At the same time, generalize the content of commitments to limit and reduce greenhouse emissions. According to Article 17 of the Kyoto Protocol, a carbon market allows countries with the right to excess emissions to sell or buy from countries that emit more or less than the committed target. As a result, a new commodity appeared globally, as a certificate to reduce/absorb two greenhouse gas emissions. Because Carbon Dioxide (CO_2) is a greenhouse gas equivalent to all greenhouse

gases, it is often referred to simply as carbon trading. Trading in carbon credits forms carbon markets.

Immediately after the Kyoto protocol came into effect in 2005, the trade in carbon credits developed quite strongly. Kyoto protocol has proposed three flexible mechanisms, including 1) Emissions Trading (ETS), 2) JI, and 3) Clean Development Mechanism (CDM). The carbon trading market development process, within the framework of Kyoto protocol, is presented in Figure 1.

Figure 1: The formation and development of the carbon trading mechanism process.



Source: Nguyen Thi Lieu et al. (2021)

The Kyoto protocol Phase I has set the stage for developing the international carbon market. However, while carbon markets continue to function, the future of the Kyoto protocol as a framework for GHG emission reductions is uncertain. At the 18th Conference of the Parties to the UNFCC (COP18), the Parties agreed that the second Kyoto commitment period would start from January 1, 2013, and end December 31, 2020. The goal for this period is to cut total GHG emissions below 1990 levels by at least 18 percent between 2013 and 2020. Nitrogen trifluoride (NF_3) is a controlled GHG starting from the Kyoto investor's second commitment period.

Secondly, The Paris Agreement on climate was adopted at COP21 in Paris, France, and came into force on November 4, 2016. This agreement developed a completely different framework from Kyoto protocol. Instead of setting emission limits, the Paris Agreement required the Parties to submit a Nationally Determined Contribution (NDC). The agreement has been signed by 193 countries and ratified by 189 Parties. About 100 countries that account for 58 percent of GHG emissions are considering or planning to use a carbon pricing instrument to achieve GHG emission reduction targets.

The Paris Agreement has fundamentally resolved the difference in levels of responsibility between developed and developing countries. It is built on a foundation of countries' shared commitment to best and continuous reinforcement in the coming years. The agreement reaffirms the goal to control the increase in average global temperature below 2°C and calls for the national effort to limit the increase of global average temperature to 1.5°C.

In their research, domestic authors also rely on the experiences of countries around the world and the characteristics of Vietnam to make recommendations to build an effective carbon market in Vietnam. Accordingly, there are 3 levels of carbon market development in Vietnam: (1) Government level: The State management structure for the construction and operation of the carbon market impacts the whole system to bring greenhouse gas emissions to a certain limit; (2) Ministries and sectoral level: An agency with a specialized function in carbon market management needs to be established to deploy, manage, and operate a carbon market. This agency has the role of managing, regulating, and supervising the credit granting, buying, and selling activities of market participants. It is also the agency that manages the credit registration and appraisal system and the market participation status of organizations and individuals; (3) Grassroots level: direct participation in the carbon market is the business establishments, individuals directly participating in the exchange of buying and selling credits. The participation of businesses and individuals in the carbon market must satisfy the criteria of the carbon market participants. *(9).*

3. INTERNATIONAL EXPERIENCE, CHALLENGES AND PROSPECTS FOR CAP-AND-TRADE SYSTEMS

a) General experience on quota systems and emission trading, challenges and prospects

Currently, there are 02 approaches to overcoming global warming and climate change: (i) Command and Control (i.e. applying fiscal and monetary policies); (ii) Market-based approach (i.e. application of offsetting mechanisms, setting of emission quotas and emission trading systems; and cap and trade systems). For a market-based approach to reducing greenhouse gas emissions, the government will set a cap/cap on total emissions, after which the emission quota is allocated free of charge or through auction to businesses.

In the above approaches, the cap-and-trade system is applied by many countries and brings certain successes. When this mechanism is applied, it will create an economically efficient way to reduce emissions; At the same time, it encourages technological innovation, mobilizes the participation and cooperation of the industry and is successfully implemented in many different regions.

Depending on the socio-economic, political and emission situation in each country, the implementation of cap-and-trade systems will vary, such as:

The European Union's emissions trading market (EU-ETS): is the largest multinational cap and trade system in the world, covering nearly half of the EU's CO2 emissions in 31 countries. The EU-ETS market came into operation in 2003, applying to more than 11,000 facilities, including power generation plants and large industrial facilities; implemented in phases: phase I (2005 – 2007), phase II (2008-2012), phase III (2013 – 2020) and subsequent phases until 2030.

In the early stages, the EU ETS allocates excessive emissions quotas resulting in low and unstable quota prices. This demonstrates that input "data" plays a very important role in calculations to make decisions about proper quota allocation and setting total quotas. Through each stage of development, the EU-ETS has so far transitioned from free quota allocation to auctions to solve distribution and competitiveness issues.

Allowing quota borrowing (banking) between compliance periods helps stabilize quota prices, avoiding devaluation. As can be seen, policies in the market can impact the price of quotas and affect the costs associated with reducing emissions.

- Along with the analysis of experiences on the EU ETS system, a number of other greenhouse gas programs and initiatives have also been developed such as:

(i) The Sulfur Dioxide (SO2) Emission Quota Trading Program aims to address concerns about acid rain by setting SO2 emission targets of coal power plants and consists of 02 phases: phase 1 (1995 – 1999) applied to 263 most polluting coal power plants; Phase 2 (2000 onwards) applies to 3200 power plants with a target reduction of 50% compared to 1980 levels. The program also enables quota trading and banking, along with ongoing emissions monitoring and penalties for non-compliance.

(ii) California Regional Clean Air Concessional Market (RECLAIM): implemented in 1993 to reduce NOx emissions and in 1994 to reduce SO2 emissions in Southern California. RECLAIM targets 350 sources of influence, including: power plants and industrial-related sources in the Los Angeles area. Implement a free allocation of RECLAIM (RTC) trading credits with an annual reduction ceiling of 8.3% for NOx and 6.9% for SO2. The program also includes a regional design that restricts transactions from downstream to upstream sources.

(iii) Regional Greenhouse Gas Initiative (RGGI): This is a US cap-and-trade system on CO2 emissions with the participation of 9 Northeastern states of the United States, which is a downstream program, focused on the power sector. The emissions limit decreased by 2.5% annually from 2015 to 2019 and there is a combination of price cap and price collar.

- On the basis of the cap-and-trade system, many new innovations and technologies such as: (1) carbon capture and storage (CCS) technologies by capturing CO2 emissions from large sources and storing them in deep geological formations or using them in other applications, allows for carbon removal and negative emissions. (2) Advanced pollution control technology for SO2 removal. Use SO2 reduction systems in furnace smoke (FGD), wet treatment technology (WFGD) to remove up to 95% of SO2, improve efficiency and cost-effectiveness in the gas reduce mercury emissions; (3) Renewable energy solutions. Sustainable technologies such as solar, wind, hydropower, bioenergy, geothermal, and marine energy; (4) Energy saving technology. Reduce energy waste and reduce emissions through solutions such as energy-efficient lighting, smart thermostats and advanced building insulation; (5) Improve emission monitoring by improving the accuracy and efficiency of measuring pollutants, using advanced sensors, real-time data analysis and remote monitoring systems.

Accordingly, the lessons learned from international experience from building a cap and trade system are:

- Consideration should be given to economic development trends and emissions, environmental targets; the granting and adjustment of quota allocations should be calculated based on performance and accurate data;

- Gradually reduce the limit/ceiling to avoid economic shocks; need to flexibly handle unforeseen events;

- It is necessary to balance between economic efficiency and competitiveness of the industry;

- It is necessary to gradually convert the free allocation of quotas to auctions;

- Avoid making unexpected profits or taking chances in the market.

b) Specific experience of some Emissions Trading Mechanisms (ETS) in the world

**** China ETS***

China's national emissions trading system is the world's largest in terms of the emissions it covers, estimated to exceed 4 billion tonnes of C02 and account for more than 40% of the country's carbon emissions. ETS China aims for fixed emissions by 2030 and neutrality by 2060. Since 2013, China has piloted ETS in Beijing, Shanghai, Tianjin, Chongqing and Shenzhen, and the provinces of Guangdong, Hubei and Fujian. The pilot systems are implemented in the following sectors: electricity, industry, buildings, transport and domestic aviation. The official national ETS system was launched on July 14, 2021 based on these pilot programs. The national carbon market includes more than 2,225 companies operating coal and gas plants designed to produce electricity and heat, most of which are state-owned enterprises. *(10)*

China's national carbon trading market is under the supervision and management of the Ministry of Ecology and Environment (MEE) while trading operations are run by the Shanghai Energy and Environment Exchange (SEEE) – which acts as a trading platform for the national ETS system. China Carbon Emission Registration and Offsetting Co., Ltd. is responsible for operating the registration and offsetting platform.

China's ETS system currently does not set a fixed emission cap/ceiling nor does it have a limit that decreases over time. Limits are flexible and based on the sum of "verified quotas". This is the limit based on intensity, which varies with the actual level of production. Therefore, the success of ETS depends on the effectiveness of emission reduction plans and technologies at regulated sites/facilities. China's carbon trading market provides financial incentives to companies and businesses to reduce emissions by allocating credits to emitters below the available quota, while requiring facilities that fall under emissions regulations greater than the allowed limit to purchase additional credits.

The allocation of carbon emission quotas is mainly free allocation and paid allocation (auction) will be launched at the appropriate time in the future. To date, the auction of quotas is conducted annually, whereby a fraction of the annual cap/ceiling can be put up for auction in order to provide facilities with additional resources to meet their compliance needs. The revenue from the auction is proposed to establish a national ETS fund and use this revenue to support the development of national carbon markets and key projects on reducing greenhouse gas emissions.

Emitting facilities can buy and sell licenses (quotas) in ETS as well as purchase China Emission Reduction Certificate (CCER) on the voluntary market to offset their emissions, the offset rate must not exceed 5% of the allocated emission quota. In the 2021-2022 allocation plan that allows borrowing, companies whose emissions exceed the allocation threshold by 10% or more can apply for loans from the pre-approved portion of the quota for 2023 with a maximum limit of 50% of the excess emissions. Penalties for failing to submit an emissions report or appraisal/verification report on time or providing fraudulent information range from 10,000 yuan ($1,483) to 50,000 yuan ($7,418). *(10)*

The market structure includes the primary and secondary markets, specifically:

+ Primary market: Greenhouse gas emission quotas are allocated to enterprises; Currently, there is only a free allocation form, no auction form.

+ Secondary market: Emission quotas can be traded back and forth by companies on a dedicated trading platform managed by the Shanghai Energy and Environment Exchange.

It should be further noted that, in China, emissions quotas are not currently considered financial instruments. Particularly for corporate accounting, China's Ministry of Finance has issued a temporary policy; Accordingly, the quotas acquired by the enterprise (excluding the amount of quota allocated for free) will be counted as assets in the financial statements of the enterprise.

As of July 16, 2022, the market value of China's national ETS has reached 8.5 billion yuan (~€1.2 billion), with nearly 194 million tonnes of CEA (China's emission quota) traded. The price of the national carbon emission quota (CEA) has increased from 48 yuan/mt (~€6) to a maximum of 61 yuan/mt (~€9), and prices have ranged from 58-60 yuan/mt (~€8-9), up 20% since trading began. A total of 179 million tonnes of China's emissions quota (CEA) was transferred in 114 trading days in 2021, with a high compliance rate of 99.5%. (compared to the EU ETS's compliance rate of less than 80% in 2005, the first year of trading). . *(10)*

**** Korea Emissions Trading Mechanism (K-ETS)***

Before being officially put into operation, the carbon market in Korea received mixed opinions from businesses. The K-ETS has been implemented since 2015, covering 684 large emitting facilities, accounting for 73.5% of national greenhouse gas emissions, including large emitting sectors such as power generation, energy, steel, chemicals. The K-ETS includes criteria for companies with average annual emissions above 125,000 tCO2e or average annual emissions of a site operating above 25,000 tCO2e. *(7)*

K-ETS is divided into 3 stages:

+ Phase 1 (2015-2017):: This is the period of accumulating experience and stabilizing the market and preparing the infrastructure for MRV deployment. Applies to 592 companies and makes free allocation of 100% of the total quota.

+ Phase 2 (2018-2020):: expand coverage and set stricter emission limits/ceilings. Raise MRV criteria. Make 97% of the total quota allocated free of charge and 3% allocated through auctions. The number of participating companies is 642.

+ Phase 3 (2021-2025): The number of participating companies is 684 companies. Freeallowance not exceeding 90% of the total quota, the remaining quota (minimum 10%) will be allocated through auction.

A special feature that can be learned from Korea's experience is the participation of 3rd parties, financial institutions, in the emissions trading market.

Financial institutions are allowed to participate in Korea's emissions trading system (K-ETS) as traders; Some banks and securities companies have become active participants in the market. The South Korean government actively encourages financial institutions to participate in ETS as a way to increase market liquidity and improve market efficiency. Financial institutions can participate in ETS as traders on behalf of clients and offer financial products (derivatives) that are related to ETS. Financial institutions must follow the same rules and regulations as other market participants and must comply with laws and regulations related to emissions trading and financial markets. The participation in the market by financial institutions will increase liquidity for the market thanks to the availability of buyers and sellers (through intermediaries who are financial institutions); The execution of trades will also be easier, making the overall trading operations and efficiency of the market.

However, the participation of financial institutions in the market brings certain concerns. Financial institutions may have competing interests as they act as both trading parties in the market and advisors to market participants. This can lead to a situation where financial institutions prioritize their profits over the interests of customers or the entire market, potentially leading to market manipulation or other forms of abuse. In addition, financial institutions may have access to sensitive information about market trends and other market participants; They may use the information to gain an unfair advantage. This can lead to a situation where some market participants may profit at the expense of others, leading to a decline in credibility, confidence and market stability.

Regulators in South Korea have taken various measures to ensure that financial institutions comply with the law and do not engage in market manipulation. For example, financial institutions must comply with strict disclosure and reporting requirements, and are subject to regular inspections and inspections by regulatory authorities. Overall, despite some challenges associated with financial institutions' participation in South Korea's emissions trading market, regulators are actively working to mitigate these risks and ensure market integrity and stability.

Thus, according to Korean experience, the participation of financial institutions in the market helps increase liquidity. However, it is necessary to have a strict management mechanism and regular inspection and inspection of state management agencies to avoid the situation of financial institutions manipulating prices and conducting illicit transactions to bring illegal benefits.

***Thailand's Voluntary Emission Trading System (Thai V-ETS)**

The Thailand Voluntary Emission Reduction Program was developed by the Public Organization for Greenhouse Gas Management of Thailand (TGO) to promote and support all sectors to voluntarily participate in reducing greenhouse gas emissions. Participating projects can be awarded "TVER" emission reduction credits (carbon credits) and can be sold on the Thai Voluntary Emission Trading System (Thai V-ETS) – also established by the NGO. The program currently covers areas such as: energy efficiency, renewable energy, waste management, transportation, tree planting/afforestation, forest restoration and conservation, agriculture.

TVER is appraised by an accredited third party and can be sold to an interested buyer. To be eligible for the Program and be granted TVER, projects must meet specific criteria and comply with internationally recognized standards such as the Validated Carbon Standard (VCS) or the Gold Standard (GS). TVERS can be used by companies and organizations to offset emissions voluntarily or to meet their sustainability goals.

In V-ETS, sellers set their own prices for TVER based on the cost of their emission reduction projects, as well as market demand for TVER; the buyer then negotiates with the seller to agree on a price for TVER. The TGO organization (which is the watchdog of the V-ETS) does not set a fixed price for TVER. In general, the carbon price in the V-ETS is determined through negotiation between buyers and sellers, whereas the TGO Foundation only provides guidance on prices and platforms for project registration, TVER issuance and management of the registration system.

Previously, T-VER project certification could be used to offset greenhouse gas emissions only in Thailand's jurisdiction. However, TGO has now linked the TVER Carbon Credit Standard to the Verra Foundation's Validated Carbon Standard (VCS). Therefore, the price of carbon credits received from T-VER projects tends to increase with global demand. Thus, it can be seen that the standardization and application of internationally recognized standards in the evaluation of carbon credits is very important; it helps projects approach international standards on emission reduction and also increases the value of carbon credits issued. *(11)*

c. Summary of some takeaways from practical experiences of other countries

By research on carbon markets in some regions and countries around the world, a number of lessons can be drawn for Vietnam about four main aspects of the carbon market as follows: (i) policy; (ii) scope and scale; (iii) market organization and operation; and (iv) measurement, reporting, verification (MRV) system.

(i) Policy

Vietnam has developed and completed many legal documents to implement policies on environmental protection, including climate change mitigation and adaptation activities. Regarding the construction and development of the domestic carbon market, Vietnam also has documents which stipulate the initial steps as a foundation for building the market such as: Vietnam Law on Environmental Protection 2020; Decree 06/2022/ND-CP on reducing greenhouse gas emissions and protecting the ozone layer; Decision 01/2022/QD-TTg... However, Vietnam is still in the stage of building and completing the legal framework to form and develop the domestic carbon market.

Based on the experience of other countries, in order to build and operate domestic carbon markets, these countries have issued adequate legal and regulatory documents and guidelines for market development. Thus, in order to establish and operate the domestic carbon market, Vietnam needs to review, at the Carbon Market Development Project, it is also necessary to provide a roadmap and orientation to complete the system of legal documents and responsibilities of agencies and ministries in building and operating the domestic carbon market.

In addition to perfecting the legal system, the policies set out must ensure the feasibility and liquidity of the market as well as ensure the participation of market participants. According to the experience of countries, besides policies that directly affect the market such as credit prices, market stabilization mechanisms, regulations on compliance and sanctions, regulations on total emission quotas, allocation and auction, there are other regulations on supporting emission reduction facilities or stipulating other mechanisms to increase calculation liquidity for national carbon credits.

(ii) Scope and scale

Carbon markets of large scale and scope and complexity will often bring more efficiencies but at the same time require more complex legal and technical preparation and basis. Vietnam needs to consider the level of scale at the initial stage when establishing the market, which can be piloted at the industry scale. The extent and scale of the market depends on the current status of policies, experiences and existing systems of greenhouse gas emission measurement, reporting and appraisal of Vietnam. With these factors at an early stage, Vietnam needs to have initial stages of understanding market needs. Accordingly, the market structure can go from a simple level to plans with a more complex structure as the parties' willingness to participate in the market increases.

Developing countries, including Vietnam, can implement simplified policies when the willingness to participate in transactions is low and gradually increase to more complex systems over time.

(iii) Market organization and operation

There are many lessons on state management to create a basis for readiness to trade in the carbon market, which can be learned from international experience when building a carbon market for Vietnam, such as the experience of South Korea, which has many similarities with Vietnam in the process of developing carbon markets. Currently, Korea is integrating the carbon market into the stock market and operating quite smoothly; Vietnam can refer to this Korean operating method.

Another advantage of Vietnam is that it has many years of experience and active activities in bilateral and multilateral credit creation mechanisms such as JCM and CDM. However, the state management of carbon credit trading activities as a special commodity product is quite new, with a wide scope, multi-sectors, many fields, carbon market management needs the participation from the central level to the ministerial level, branches, etc local. Therefore, it is necessary to unify the focal point management agency at the national level on carbon markets and carbon credit exchanges.

(iv) System for measuring, reporting and appraising greenhouse gas emission mitigation

Systems for measuring, reporting, and appraising greenhouse gas emission mitigation (MRV) should be developed and implemented in any carbon market. MRV systems are also widely used in mechanisms and schemes to reduce greenhouse gas emissions worldwide. To establish and operate the MRV system, it is necessary to develop specific, clear and appropriate regulations, measurement, reporting and appraisal procedures suitable to Vietnamese conditions for the national level and the following fields: energy, industrial processes, agriculture, forestry, land use and waste.

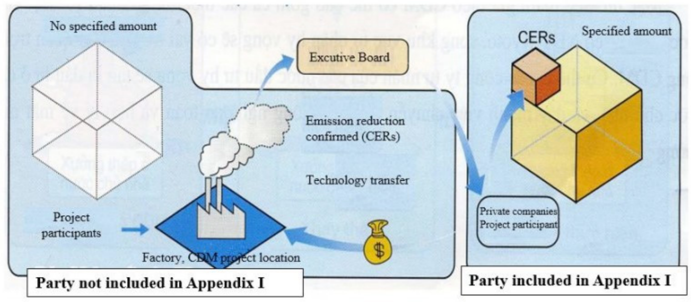
In summary, based on the experience of some countries in the world in organizing and developing carbon markets, Vietnam needs to research, develop and implement the following main contents:

- Clearly define the scope of the domestic carbon market.
- Clearly define the domestic carbon market management agency and the coordination responsibilities of relevant agencies
- Develop a system of legal documents to organize and operate the market.
- Building infrastructure for carbon market operation.
- Develop regulations on the implementation of domestic and international carbon credit exchange and offsetting mechanisms.
- Strengthening the capacity of carbon market participants

4. CURRENT STATUS OF CARBON TRADING IN VIETNAM

Under the KP, Clean Development Mechanism (CDM) projects aimed to help Non-Annex I Parties achieve sustainable development, contribute to the goal of the Convention, and help Annex I Parties achieve compliance with their country's GHG emission reduction targets. The CDM project implementation mechanism and CDM project operation are illustrated in Figure 2 below. Vietnam is one of the countries actively participating in the CDM Mechanism. To date, Vietnam has 254 CDM projects and is ranked fourth in the world for the number of registered CDM projects. The total amount of GHG reduction from the 254 CDM projects is about 140 million tons of CO2 equivalent. The percentage of projects that received CERs by type is shown in Figure 3.

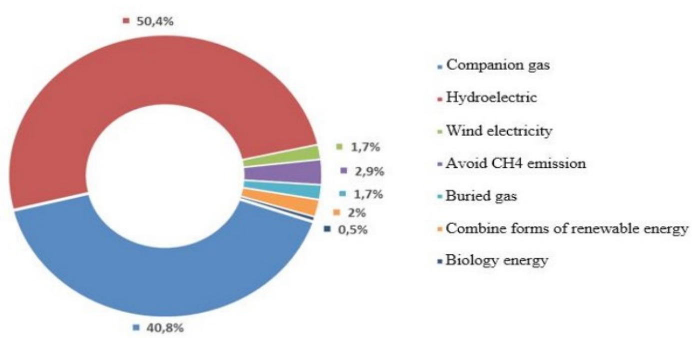
Figure 2: Mechanism for CDM adoption



Source: Mai Kim Lien et al. (2020)

Vietnam was one of the first countries to sign up for the Joint Credit Mechanism (JCM) with Japan, represented by the Memorandum of Understanding on Cooperation on Low Carbon Growth between Vietnam and Japan (signed first on July 2, 2013, and signed second on July 1, 2017). On April 6, 2015, the Minister of Natural Resources and Environment issued Circular No. 17/2015/TT–BTNMT stipulating the construction and implementation of the project under the Common Credit Mechanism within the framework of cooperation in the field of environmental protection—Low-carbon growth between Vietnam and Japan.

Figure 3: Percentage of cdm projects that have received cers by sector.



Source: Mai Kim Lien et al. (2020)

To direct, coordinate and manage activities to implement the JCM Mechanism, a Joint Committee with members from relevant ministries and sectors of the Vietnamese and Japanese governments participated, including 18 members, six from Japan and 12 from Vietnam from 2013 to now, the Joint Committees of the two countries Vietnam and Japan have held eight meetings (in 2015 there were two meetings in January and February). August). The relevant forms were first approved at the second meeting in 2014 in Tokyo and revised at the fifth meeting in 2016 in Hanoi.

Currently, seven entities are accredited and operate as Third-Party appraisals for projects under the JCM Mechanism in Vietnam. To become a Third Party in the JCM Mechanism, an organization or agency needs to meet the following conditions, including 1) Accredited according to ISO 14065 by an accreditation body that is a member of the International Accreditation Forum based on the international standard according to ISO 14.064–2 standard, or 2) is a Specialized Professional Body (DOE) or a professional body certified by the Clean Development Mechanism's Executive Board. Registrants becoming Third Parties are responsible for submitting their documents for review and recognition by the Joint Committee.

As of 2020, there have been 14 projects registered with the potential to reduce greenhouse gas emissions, reaching 15,996 tCO_2 equivalent/year. Vietnam has the second most registered projects after Indonesia, with 19 projects. Of the 14 registered projects, 11 projects received funding from the Japanese Ministry of Environment, and three projects received funding from the Ministry of Economy and Trade and Japanese Industry. The total funding received was nearly US$35 million, accounting for 38 percent of the total project implementation budget.

So far, six projects have been put into operation and have been monitored, verified, and issued carbon credits. The joint committee of the two countries granted 4,415 credits made of carbon, equivalent to 4,415 tons of carbon equivalent CO_2. The amount of carbon credits is allocated to the Government of Japan, the Government of Vietnam, and project participants.

In addition, the Ministry of Natural Resources and Environment developed a draft project "Developing the carbon market in Vietnam". Accordingly, by 2025, Vietnam will begin piloting and by 2028 will officially operate the carbon credit exchange.

According to the draft Project, by the end of 2027, our country will focus on developing regulations on carbon credit management, activities of exchanging greenhouse gas emission quotas and carbon credits; develop regulations for operating the carbon credit exchange; Pilot implementation of the carbon credit exchange and offset mechanism in potential areas and guide the implementation of the domestic and international carbon credit exchange and offset mechanism in accordance with the provisions of law and international regulations to which Vietnam is a member; Establish and organize pilot operation of a carbon credit exchange from 2025; Implement capacity building activities and raise awareness about carbon market development.

The project also sets the goal that by 2028, our country will operate an official carbon credit exchange; regulate activities connecting and exchanging domestic carbon credits with regional and world markets.

5. RECOMMENDATIONS

In order to develop a carbon market according to the contents of the author mentioned above, it is essential to learn from the experiences of countries to improve the knowledge and awareness of implementation officials. This is also an opportunity to exchange detailed information on research and organization building of the carbon market; regulations and methods for determining and allocating greenhouse gas emission quotas; the mechanism of operation of the carbon market; financial mechanisms and policies for market development ..., especially for countries with experience in building and operating carbon markets such as China, South Korea... These are the experiences that Vietnam wishes to learn to establish and operate the carbon market in accordance with the law in the coming time.

On that basis, the article proposed to continue strengthening coordination with ministries, agencies (embassies, bilateral and multilateral organizations), international cooperation between countries on carbon market development in particular as well as climate finance in general, as follows:

- Promote the strengthening of financial cooperation between the Ministry of Finance and the Government of Australia on climate finance through technical cooperation frameworks, policy consultations as well as training and capacity building.

- Strengthen training, especially intensive training for officials of the Department of Legal Affairs in particular and officials of the Ministry of Finance in accessing and learning about carbon markets and climate finance;

- Strengthen communication and dissemination to businesses and stakeholders about the carbon market and implementation of greenhouse gas emission reduction projects in Vietnam towards the goal of net-zero emissions by 2050 as well as targets under the Nationally Determined Contribution.

CONCLUSION

The formation of a domestic carbon market helps Vietnam seize opportunities in effectively reducing carbon emissions, as well as increase the competitiveness of Vietnamese products in the international market. Vietnam has a lot of potential because 3/4 of it is forest land, but in the past, there has been deforestation to grow industrial crops, so the proportion of primary forests is still small, only planted forests remain.

To be able to successfully build a carbon market, from the lessons learned from previous countries, Vietnam can apply it to its own practice to take the right steps. From establishing and perfecting the legal basis, to organizing, operating and improving the capacity to monitor, measure, report as well as improve IT application and common awareness of all industries and fields. and people in reducing greenhouse emissions... are all considered practical and necessary solutions to soon put the carbon market into operation in Vietnam.

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DIGITAL TRANSFORMATION: OPPORTUNITIES AND CHALLENGES FOR ACCOUNTING AT SMALL AND MEDIUM ENTERPRISES IN VIETNAM

Master. Vu Thi Minh[1]

Abstract: Vietnam is in a period of drastic action to implement the goals set out in Decision No. 749/QD-TTg on the National Digital Transformation Program to 2025, oriented to 2030. With the goal set by 2025, Vietnam strives to develop the digital government, digital economy and digital society, contributing to the fundamental and comprehensive reform of management and administration activities of state management agencies, production and business activities of enterprises. In the field of accounting, digital transformation is one of the important goals set in the Accounting and Auditing Strategy to 2030 issued together with Decision No. 633/QD-TTg dated 23/5/2022 of the Prime Minister. In this article, the author will analyze the opportunities and challenges brought by digital transformation to management agencies, businesses and workers in the field of accounting in small and medium enterprises in Vietnam. At the same time, the author proposes some solutions to solve difficulties in the process of implementing digital transformation that stakeholders face in the coming time.

Keywords: Digital transformation, small and medium enterprises, accounting

1. INTRODUCTION

In Vietnam, the concept of "Digital transformation" is often understood in the sense of the process of changing from traditional business models to digital enterprises by applying new technologies such as Big Data, Internet of Things (IoT), cloud computing (Cloud) ... to change operating methods, leadership, working processes, company culture [4]. The purpose of digital transformation in businesses is to increase the efficiency of production and business activities, increase close relationships with customers, and improve the capacity of businesses in the market. This issue has also been emphasized and paid special attention by the Government of Vietnam recently through the national digital transformation under Decision No. 749/QD-TTg [6]. Digital transformation is the integration of digital technologies into all areas of a business, leveraging technologies to fundamentally change the way it operates, business models and provide new values to its customers as well as accelerate business operations [10].

In the field of accounting, digital transformation is one of the important goals set in the accounting and auditing Strategy to 2030 issued together with Decision No. 633/QD-TTg dated 23/5/2022 of the Prime Minister [7]. The development of digital technology makes simplify the process of collecting, processing and analyzing financial information for reporting in the enterprise [3]. Reports in enterprises can be known as: financial and accounting reports, management reports, published reports, internal circulation reports ... They are set up to serve stakeholders inside and outside the business. Due to the impact of the 4.0 technology revolution, there are five main trends pointed out in accounting activities in Vietnam in the coming time [1]. In particular, digital transformation in general and digital transformation in businesses in particular are forecasted to bring significant changes in the field of Accounting. Digital transformation in the field of Accounting is understood as the application of technology - digital technology to accounting

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operations, helping accounting operations to be deployed synchronously, quickly and effectively, while saving manpower, time and costs for corporate accountants and state management agencies in accounting. Troshani (2018) demonstrate that established digital reporting to replace traditional reporting will minimize unnecessary administrative burdens but do not affect the effectiveness of accounting regulations [9]. Digital technology currently in Vietnam is being used in the field of accounting, such as: Electronic invoice software, electronic accounting software, electronic sales software, electronic office software, electronic tax declaration software...

Digital transformation in the field of accounting is considered an inevitable need of businesses and society in the current context. Obviously, the early implementation of digital transformation will bring more benefits to corporate accountants and management agencies such as tax authorities and statistics agencies. However, Digital transformation taking place in a developing market like Vietnam also poses many difficulties and challenges for parties involved in accounting activities, especially in small and medium enterprises which are weaker in terms of financial potential and personnel, technology than large enterprises. Therefore, in this article, the author analyzes the benefits and inadequacies brought by digital transformation to propose some solutions to overcome difficulties in the process of implementing digital transformation in the field of accounting for small and medium enterprises in Vietnam.

2. OPPORTUNITIES AND CHALLENGES FOR THE FIELD OF ACCOUNTING FOR SMALL AND MEDIUM ENTERPRISES IN THE PROCESS OF IMPLEMENTING DIGITAL TRANSFORMATION

2.1. Opportunities for accounting in small and medium enterprises

2.1.1. For small and sedium business accounting

When the accounting system is digitally transformed, accountants will have a modern digital working environment. Digital transformation helps improve the labor productivity of accountants. Thanks to digital technology products, accountants can work more independently, proactively solve work quickly and effectively, through application software, thereby creating higher value for businesses and accountants themselves.

(1) Use electronic office software for accounting department

Accountants in the enterprise can easily connect, shorten the distance with other parts of the business, easily exchange and handle work conveniently and efficiently between accounting departments when using electronic office software. All jobs arising in the enterprise can therefore be solved remotely via cloud computing technology. Especially through working time in the period of fighting the Covid-19 epidemic, the use of online office software has become more important and useful than ever.

(2) Use e-invoice software

E-invoices have many advantages over using traditional paper invoices such as: Save costs for printing, preserving, backing up, collecting information compared to paper invoices; Shorten the process of making and issuing invoices; Minimize risks occurring when using paper invoices (loss, tearing, loss); Easily store, check, manage invoices anytime, anywhere; Automatically email e-invoices to customers; Support payment reminder feature via E-banking, promoting the debt recovery process for businesses; Increase the convenience for accountants in accounting and reconciling accounting documents.

(3) Use accounting solution software

In Vietnam, there are many different accounting software used (MISA, Bravo, Fast, Weekend...) to support the entry of data from documents to produce financial statements quickly, accurately and efficiently based on pre-programmed procedures. Using Accounting software minimizes errors when doing manual accounting and produces financial statements quickly. Moreover, today's accounting software is specially designed for each separate accounting section, convenient for making department reports and reconciling accounting data in the company.

Applying digital transformation in enterprises will minimize work for the internal control department in small and medium enterprises for the following reasons: Information for control activities is always available and more transparent; The checking and reconciliation of accounting data with related parties is also conducted more conveniently, accurately and quickly on the digital platform; Business information is provided synchronously and transparently.

(4) Apply electronic payment

Enterprises use electronic payment methods such as e-wallets, credit cards, online transfers for customer convenience and to enhance transaction processes and accounting processes. Electronic payment is a convenient and fast financial solution for business activities and commercial transactions. With its speed and convenience, electronic payment helps transactions be carried out conveniently and meets customers' needs in the shortest time. For example, when purchasing online, customers can pay immediately through electronic payment methods such as credit cards, e-wallets or bank transfers. With modern technologies, accountants can easily track business transactions on electronic payment platforms such as e-wallets or online payment gateways. Payment invoices, detailed transaction information, and payment amounts will be provided in detail and transparently.

2.1.2. For small and medium enterprises

Digital transformation in the field of accounting also brings ultimate benefits to businesses themselves and business managers from two angles.

Firstly, digital transformation contributes to reducing operating costs for businesses. As analyzed, digital transformation greatly supports the work of accountants and operational accounting systems in enterprises. Through that, accounting activities under the digital technology platform help save operating costs more than traditional accounting work used to do before. Therefore, the labor efficiency of accounting personnel and the operational efficiency of enterprises are significantly improved.

Second, digital transformation contributes to increasing the ability to capture information and make decisions for business managers. With a digital-based accounting information system, the provision of information to decision-making managers is carried out quickly and accurately in all aspects: content, form, time, objects to be provided and information used. The information provided includes both financial information (assets, sources of capital, receivables – payable, inventory, revenue and expenses) and non-financial information (list of customers, suppliers, banks). Information is provided in a consistent, complete and continuous manner at the request of managers. Centralized data organization allows the provision of information at many different levels and levels. Accounting information systems are flexible and diverse in forms and subjects, and business managers can access them from many different places because of cloud computing technology.

2.1.3. For state management agencies in the field of accounting

For state management agencies in the field of accounting, digital transformation in Vietnam is carried out synchronously on both the business side and the State management agencies. Digital software has also been put into use at management agencies in the field of accounting to support activities between businesses and agencies management such as: software to support online tax declaration, electronic invoice management, State budget revenue and expenditure management, electronic customs management ... Using technology systems in State management agencies in the field of accounting also changes the profession, model and mode of operation of them. On the other hand, this change helps improve the efficiency of interaction between enterprises and State agencies by minimizing cumbersome, complicated and manual administrative procedures.

2.2. Challenges for the Accounting sector in the digital transformation process

First, the rapid development of digital technology is expected to quickly wipe out some of the traditional positions of accountants in the past. Applying digital technology to business accounting systems and the work of accountants requires accounting staff to reach a certain level of technology to access new technology, master technology, turn technology into an effective tool for accounting activities in particular and business accounting systems in general. On the other hand, accountants themselves need to understand the process of accounting operation procedures at their units to promptly detect which technology application processes are not suitable for elimination if that process is not really necessary.

Second, the investment cost for technical infrastructure systems for digital transformation is an issue that businesses also need to pay attention to. Digital transformation also means that businesses must actively invest in technology in their operations. In the Vietnamese market, small and medium enterprises account for more than 90% of the total number of enterprises. Most of these enterprises if forced to choose to spend some capital to invest in technology and train accounting teams compared to the capital spent to invest in technology with benefits are still quite lame. Because small and medium enterprises have not been able to fully exploit technology investment capacity. In addition, the confidentiality and safety of information is an important issue. While Vietnam's digital infrastructure is weak, regulations and measures to protect the software, hardware, and data of both businesses and partner customers are essential for businesses to avoid information theft. This is a major risk that accountants and businesses need to be aware of and prepare for possible problems when applying new technologies.

Third, digital transformation creates a fiercely competitive market for businesses specializing in providing accounting services. Large-scale accounting service providers have the advantage of applying digital technology and providing high-quality services to customers. As a result, these businesses are often able to acquire a large number of customers, increasing their market dominance and ability to connect with international customers. However, this ability is limited for small and medium accounting service providers.

Fourth, digital transformation also poses many difficulties and challenges to State management agencies in the field of accounting and Auditing (tax authorities, customs authorities, budget revenue and expenditure management agencies, ...). The shortage of skilled staff to use information technology to implement the digital transformation process. Meanwhile, building a workforce with professional expertise and understanding of technology is essential for any digital transformation strategy of any organization or agency. The investment process and deployment of digital infrastructure of the management agency is not suitable for the digital transformation process taking place rapidly in Vietnam today. The rules and regulations related to the state administrative management of Accounting are still quite rigid, inflexible, not really relevant. These problems have limited individuals and businesses from quickly accessing, deploying and timely applying new technology products to activities associated with the State management agency in Accounting and Auditing.

Fifth, there are obstacles in the application of international accounting and auditing standards in Vietnam. In the context of globalization and economic integration, financial information requires transparency, reliability and presentation in accordance with common international standards. Artificial intelligence (AI), intelligent robotics, blockchain technology, cloud computing, digital have had a certain impact on accounting and auditing cycles and methods, but it is necessary to direct them towards a common standard for output reports. Vietnamese accounting uses 26 standards (VAS), although they have been developed according to international accounting standards (IAS). They are suitable for the characteristics of the economy as well as the situation of businesses in Vietnam, but there are still some differences between VAS and IAS, significantly affecting the integration process of Vietnamese and international accounting and auditing The biggest difference between these 2 systems is manifested in many items on the financial statements prepared under IFRS and VAS. Financial statements prepared under IFRS are assessed at fair value or receivable value, but prepared according to VAS are recorded at historycal cost. This makes the value of assets, liabilities and capital sources of enterprises not reflect the actual market developments. The second issue, some International Accounting Standards (IAS) and International Financial Statement Presentation Standards (IFRS) have been introduced but nevertheless Vietnamese Accounting Standards have not been mentioned (IAS 19, IAS 20, IFRS 01,...) [2], [5]..

3. SOME SOLUTIONS FOR STAKEHOLDERS IN THE FIELD OF ACCOUNTING IN THE CONTEXT OF NATIONAL DIGITAL TRANSFORMATION

According to the national digital transformation strategy to 2020 and vision to 2030, the goal of developing the field of Accounting and Auditing in Vietnam will be oriented to: Continue to improve the corridor and legal framework on accounting - auditing on the basis of international practices in accordance with practical conditions in Vietnam; Human resource development in the field of accounting and auditing ensures both quantity and quality and is internationally recognized; Strengthen the capacity of state management agencies in accounting and auditing, develop human resources who have both professional management expertise and proficiency in using technology at work; Support businesses in the process of digital transformation in using accounting software; Invest in synchronous infrastructure development; Focus on high-quality accounting training according to international accounting standards at training institutions. In order to be able to effectively implement the above strategy in the coming time, it is necessary to pay attention to solving the following issues:

First, continue to improve the legal framework on accounting and auditing with innovative contents on principles and processes in accordance with digital technology application and international practices. Most importantly, the financial statements and the presentation of the financial statements must ensure standard, understandable information whether the report is published at home or abroad. The requirement is that financial statements need to be presented in accordance with principles and standards, ensuring general consistency, close to standards and rules for presenting international financial statements.

Second, improve the qualifications of the team of accountants, business managers, accounting and auditing experts in management agencies. The goal lies not only in improving the qualifications and skills of accounting and auditing, but also ensuring the capacity of information technology application. Obviously, businesses cannot easily change a new accounting team with technology knowledge instead of the existing one through a completely new recruitment process, so businesses need to improve their understanding of operating technology systems. In order to implement digital management issues between State agencies in the field of accounting and auditing, enterprises and individuals using services, management agencies need to organize training sessions to popularize issues related to the use of digital technology in their management activities, At the same time, there must be a team of highly qualified consultants to advise and solve difficulties encountered in the process of using public management services of agencies in the field of accounting – auditing.

Third, there are policies to support businesses in the process of digital transformation, especially small and medium enterprises. Specifically, the government should encourage and support enterprises in the use of technology software in accounting work, training and training accountants, qualified experts and skills in using information technology.

Fourth, Invest in the development of preliminary infrastructure and information technology in a synchronous and timely manner to enhance the development of technology applications to serve accounting and auditing activities; serving the inspection and supervision of legal compliance and accounting and auditing service activities. At the same time, focusing on the network security system, ensuring a high level of security of accounting data.

Fifth, accounting and auditing training institutions should focus on innovating training programs in the direction of approaching IAS and IFRS. Develop foreign language curriculum so that students can have international qualifications more easily, closer access to the orientation of the international accounting environment. At the same time, accounting training institutions also need to develop training content associated with digital transformation to help students after graduation adapt promptly to the digital age. .

4. CONCLUSIONS

Digital transformation is gradually deepening into all economic and social aspects in Vietnam. This rapid change is taking place in the field of accounting. Accordingly, the work of accountants as well as the way business accounting systems operate is also gradually transforming. Automating the process of data entry, data connection, processing, reporting, and analysis has changed the work of manual accountants as before and contributed to improving the efficiency of accounting activities in enterprises.

On the side of small and medium enterprises, digital transformation helps save operating costs for businesses, the digital accounting system ensures to provide faster and timely information to business administrators in the decision-making process. Digital transformation in State management agencies in the field of accounting helps reduce the burden and overload in handling administrative procedures between the State, enterprises and people in accordance with the roadmap for building an E-government in the construction roadmap.

Digital transformation poses difficulties for accountants, businesses and state management agencies in the field of accounting. It also creates fierce competition but also an opportunity for financial and accounting institutions to constantly develop financial services and accounting more professionally. Contributing to the transparency of information, improving service quality, meeting the increasing requirements of the people. Digital transformation is an inevitable process of society in general and the field of accounting in particular. It requires a radical and comprehensive change of stakeholders from accountants, enterprises, State management agencies in the field of accounting and the whole political system.

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ASSESSING CAPITAL ADEQUACY RATIOS: A STUDY OF COMMERCIAL BANKS IN VIETNAM

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Abstract: This research delves into the assessment of Capital Adequacy Ratio (CAR) among Joint-Stock Commercial Banks (JSCBs) in Vietnam from 2015 to 2022. It investigates the variations in CAR over this period and explores its association with key financial metrics, including Return on Assets (ROA), Deposit Ratio (DEP), Liquidity (LIQ), Loan-to-Asset Ratio (LOA), Loan Loss Reserve (LLR), Non-Performing Loan Ratio (NPL), Leverage (LEV), bank size (SIZE), and the scale of board governance (BoardS). Moreover, the study examines the relationships between these financial metrics and CAR, shedding light on their impact on the capital safety of banks. This understanding can contribute to risk prediction and management within the banking system. As future research directions, further investigation into these relationships and exploration of additional influencing factors on CAR are recommended.

Keywords: Capital Adequacy Ratios, Car, Commercial Banks, Vietnam

1. INTRODUCTION

The Capital Adequacy Ratio (CAR) stands as a pivotal metric in the global banking sector, reflecting the financial robustness and ability of banks to cushion potential losses. For Commercial Banks in Vietnam, comprehending the determinants that shape CAR is of utmost significance. This study is dedicated to assessing these influential factors and elucidating the dynamics of CAR among Commercial Banks in Vietnam, spanning the years from 2015 to 2022.

To ensure the integrity and comprehensiveness of our dataset, rigorous data collection efforts were channeled towards securing secondary data from the independently audited financial reports of 26 Commercial Banks operating in Vietnam over the research period. The methodology adopted for this study primarily revolves around descriptive statistics, establishing a solid foundation for analysis and insights.

Furthermore, this study acknowledges that shifts in CAR can serve as reliable indicators of risk profiles and the resilience of these banks within a dynamically changing economic landscape. Beyond CAR, the research encompasses an extensive array of variables, including Return on Assets (ROA), Deposit Ratio (DEP), Liquidity (LIQ), Loan-to-Asset Ratio (LOA), Loan Loss Reserve (LLR), Non-Performing Loan Ratio (NPL), Leverage Ratio (LEV), Bank Size (SIZE), and Board Size (BoardS). These multifarious variables offer nuanced insights into the variation and resilience of Vietnamese Commercial Joint Stock Banks.

Significant findings indicate that variables like ROA, DEP, LIQ, LOA, LLR, NPL, LEV, SIZE, and BoardS exhibited stable trends across the study period, with minimal variations. Some variables, such as SIZE and BoardS, displayed an increasing average value over time, indicative of the expansion and growth of these banks. This stability across diverse facets of banking operations cultivates a predictable and secure environment for investors and regulatory authorities.

Furthermore, this study embarks on dissecting the interplay between these variables and CAR to fathom their impact on capital safety within the banking sector. The insights gleaned from

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this analysis can prove instrumental in the realm of risk prediction and management within the Vietnamese banking system.

As this study progresses, it is pertinent to acknowledge that future research avenues may delve even deeper into these relationships and explore additional factors that could exert influence on CAR. This research seeks to augment the understanding of the Vietnamese banking landscape and fortify the capacity to anticipate and adeptly manage risks.

2. LITERATURE REVIEW

Rubi Ahmad et al (2008) conducted a study with 42 financial institutions in Malaysia from 1995 to 2002. They used multivariate regression analysis for panel data. The study found that non-performing loans, equity-to-total-debt ratio, and liquid asset-to-total-deposits ratio had a positive relationship with capital adequacy ratios, while the individual bank risk index, net interest margin, and bank size had a negative relationship. These findings did not align with research in developed countries.

Ahmet and Hasan (2011) studied factors influencing the capital adequacy ratio of the Turkish banking sector from 2006 to 2010. They used data from financial reports of 24 sample banks. The study found that the loan-to-deposit ratio, return on equity, and leverage ratio had an inverse correlation with capital adequacy ratios, whereas the loan loss reserves ratio and return on assets moved in the same direction. Bank size, customer deposit ratio, liquidity ratio, and net interest margin did not significantly impact capital adequacy.

Ijaz Hussain Bokhari et al (2012) used Miller and Modigliani's capital structure theory (1958), along with asymmetric information theory and banking cost theory, to model factors influencing the CAR. They categorized CAR-influencing factors into three groups: internal bank policies, market dynamics, and banking operations regulations. Data from 12 Pakistani banks during 2005 - 2009 were utilized. Results showed that the deposit-to-assets ratio and risk asset portfolio had a negative impact on CAR, while other variables were not statistically significant. The study focused on bank-specific factors, without considering management or macroeconomic factors.

Mohammed T. Abusharba et al (2013) studied CAR determinants in 11 Islamic banks in Indonesia from 2009 to 2011. They employed multivariate regression and correlation matrix methods to model CAR influences. Independent variables included profitability measured by return on assets, credit quality reflected in the non-performing loan ratio, deposit-driven funding through the deposit-to-assets ratio, and liquidity represented by the loan-to-deposit ratio. Results showed that profitability and liquidity positively affected CAR, while non-performing loans had a negative impact. Other factors were not statistically significant. The study primarily assessed bank-specific factors influencing CAR, without considering macroeconomic factors.

Nadja Dreca (2013) investigated factors affecting the capital adequacy ratio of banks in Bosnia and Herzegovina using data from 10 banks over six years from 2005 to 2010. Explanatory variables represented capital structure, size, profitability indicators, deposit and loan components of total assets, and financial leverage. The study performed regressions with Ordinary Least Squares (OLS), Random Effect Model (REM), and Fixed Effect Model (FEM). Sustainability checks and model selection criteria favored OLS results. Specifically, bank size, deposit ratio, loan-to-asset ratio, return on assets (ROA), return on equity (ROE), and financial leverage had significant impacts on CAR. Non-performing loan reserves and net interest income-to-total assets did not influence CAR. These findings only considered bank-specific characteristics and did not delve into bank management or macroeconomic variables.

Leila Bateni et al (2014) conducted a study on CAR determinants using data from six Iranian banks between 2006 and 2012. They employed panel data regression with both FEM and REM. After testing, FEM results were deemed more appropriate. The study found that equity-to-assets ratio (EQR), ROA, ROE, and loan-to-asset ratio (LAR) positively influenced CAR, while bank size had a negative impact. Thus, larger banks in Iran had lower CAR due to riskier business activities. Adjusted asset risk ratio and deposit-to-assets ratio did not have statistical significance with CAR. This research examined bank-specific factors affecting CAR but did not consider management factors or macroeconomic variables.

Nuviyanti and Achmad Herlanto Anggono (2014) studied CAR determinants using data from 19 banks in Indonesia from 2008 to 2013. They considered factors reflecting bank operations such as operating expense-to-income ratio, net profit margin, non-performing loan ratio, loan-to-deposit ratio, and ROA and ROE as independent variables in the model. Results showed that operating expense-to-income ratio negatively influenced CAR. Quality-of-operation indicators, namely non-performing loans and loan-to-deposit ratio, impacted CAR, with non-performing loans having a positive correlation and loan-to-deposit ratio having a negative correlation. Bank profitability, represented by ROA and ROE, significantly influenced CAR. While ROA had a positive relationship with CAR, ROE had a negative correlation with capital adequacy. Other variables such as bank size, deposit-to-asset ratio, and net interest income-to-total assets did not significantly affect CAR. This research highlighted the importance of bank operations in maintaining a reasonable CAR by balancing income and expenses

Pham (2013) conducted a study on the factors influencing the CAR (Capital Adequacy Ratio) using data from 17 Vietnamese joint-stock commercial banks during 2006 - 2010. Based on the research model by Ahmad and Skully (2009), the author built a model with CAR as the dependent variable and eight independent variables, including bank size, deposit-to-assets ratio, loan-to-assets ratio, credit risk provisioning ratio, liquid asset ratio, net profit margin, net interest income ratio, and debt-to-equity ratio. Through regression analysis and p-value tests, all factors were found to have an impact on CAR. Specifically, bank size, loan-to-assets ratio, net profit margin, and net interest income ratio had a negative influence on CAR. The study focused on analyzing financial indicators related to banks' impact on CAR and did not consider management-related factors or macroeconomic variables.

Vo et al (2014) conducted research titled "Determinants of Capital Adequacy Ratio: Empirical Evidence from Vietnam's Commercial Banking System." The authors analyzed the factors affecting the capital adequacy ratio of 26 banks during the period 2007 - 2012 to quantify the influence of bank-specific factors on the minimum capital adequacy ratio in Vietnam. The results showed that an increase in the liquidity ratio (LIQ) and the credit risk provisioning ratio (LLR) had a positive impact on the capital adequacy ratio. On the other hand, bank size (SIZE), deposit ratio (DEP), return on equity (ROE), and return on assets (ROA) had negative effects on the capital adequacy ratio. The study did not find evidence of a relationship between leverage and lending activities' impact on the capital adequacy ratio. Additionally, the study did not address the potential influence of macroeconomic factors on the capital adequacy ratio.

Current research primarily focuses on factors that reflect a bank's operations when evaluating CAR, but the role of corporate management has not been thoroughly studied. Furthermore, macroeconomic factors such as economic growth, inflation, and legal changes impact banking *activities, but previous CAR studies in Vietnam have not examined these variables in conjunction with corporate management*

3. METHODOLOGY

The author analyzed and synthesized relevant documents regarding capital and capital adequacy, as well as the factors affecting capital adequacy. Based on each research issue, trends, and research perspectives of different authors on the topic were identified, forming the theoretical foundation for the paper's research topic. Additionally, the comparative method was used. The paper utilized secondary data to create tables and graphs for comparing, analyzing, and evaluating micro and macroeconomic factors influencing the capital adequacy ratio (CAR) of commercial banks. Drawing from both domestic and international theories and research, the author made adjustments and additions to establish 'variables influencing the minimum capital adequacy ratio (CAR).

Through the process of synthesizing reference materials and desk research, the study aimed to identify concepts related to the minimum capital adequacy ratio (CAR). It included variables measuring the minimum capital adequacy ratio (CAR) and factors influencing the minimum capital adequacy ratio (CAR) of commercial banks. The author examined and screened variables in the evaluation model for the minimum capital adequacy ratio (CAR). Qualitative research was conducted to assess the suitability of the theoretical model, as well as to explore, adjust, and supplement the factors used to measure research concepts, ensuring that the constructed model aligns with research theory.

This method was used for the purpose of adjusting factors. Qualitative research was employed during the data collection phase in a qualitative form through discussion and interpretation techniques

In this research study, the author employs both qualitative and quantitative research methods to establish criteria for evaluating factors influencing the CAR of commercial banks. The research results reveal that there are 9 factors affecting the CAR of commercial banks. The study collects, synthesizes, analyzes data, and evaluates the capital adequacy ratio (CAR) at Vietnamese joint-stock commercial banks using Excel software. The paper conducts descriptive statistical analysis through absolute comparison and relative comparison of variables within the research model to observe the changes in variables during the study period and to some extent, to identify the relationships between these factors and the CAR

4. RESULTS

4.1. Descriptive Statistics Results on Capital Adequacy Ratio (CAR)

Table 1: Descriptive Statistics Results on CAR

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.137	0.139	0.014	0.115	0.164
2016	0.141	0.141	0.014	0.118	0.172
2017	0.148	0.147	0.015	0.118	0.177
2018	0.141	0.139	0.016	0.113	0.171
2019	0.140	0.136	0.016	0.110	0.167

2020	0.141	0.139	0.015	0.108	0.178
2021	0.137	0.138	0.013	0.104	0.165
2022	0.134	0.133	0.013	0.102	0.163

(Source: Surveyed and processed by the author)

Table 1 presents the descriptive statistics results on CAR from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average capital adequacy ratio (CAR) was in 2017 at 14.8%, while the lowest was in 2022 at 12.5%. Furthermore, the standard deviation values of CAR show relatively little variation.

4.2. Descriptive Statistics Results on Return on Assets (ROA)

Table 2: Descriptive Statistics Results on ROA

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.009	0.006	0.012	0.002	0.065
2016	0.009	0.006	0.009	0.001	0.037
2017	0.007	0.006	0.007	0.001	0.032
2018	0.013	0.006	0.020	0.001	0.083
2019	0.012	0.007	0.016	0.001	0.084
2020	0.010	0.006	0.008	0.001	0.035
2021	0.012	0.008	0.009	0.001	0.030
2022	0.009	0.005	0.008	0.001	0.024

(Source: Surveyed and processed by the author)

Table 2 presents the descriptive statistics results on ROA from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Return on Assets (ROA) was in 2018 at 1.3%, while the lowest was in 2017 at 0.7%. Furthermore, the standard deviation values of ROA show relatively little variation.

4.3. Descriptive Statistics Results on Deposit Ratio (DEP)

Table 3: Descriptive Statistics Results on DEP

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.644	0.632	0.117	0.447	0.843
2016	0.676	0.667	0.110	0.420	0.861
2017	0.704	0.703	0.099	0.493	0.894
2018	0.706	0.717	0.097	0.521	0.886
2019	0.674	0.687	0.102	0.481	0.868
2020	0.674	0.695	0.099	0.461	0.860
2021	0.678	0.679	0.097	0.489	0.884
2022	0.674	0.674	0.097	0.484	0.881

(Source: Surveyed and processed by the author from Excel)

Table 3 presents the descriptive statistics results on DEP from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Deposit Ratio (DEP) was in 2018 at 70.6%, *while the lowest was in 2015 at 64.40%. Furthermore, the standard deviation values of DEP show relatively little variation.*

4.3. Descriptive Statistics Results on Liquidity (LIQ)

Table 4: Descriptive Statistics Results on LIQ

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.193	0.182	0.098	0.052	0.415
2016	0.184	0.161	0.103	0.048	0.415
2017	0.144	0.138	0.061	0.046	0.290
2018	0.134	0.127	0.059	0.052	0.325
2019	0.146	0.144	0.046	0.045	0.255
2020	0.143	0.153	0.048	0.051	0.244
2021	0.164	0.157	0.058	0.069	0.269
2022	0.158	0.139	0.057	0.062	0.265

(Source: Surveyed and processed by the author)

Table 4 presents the descriptive statistics results on LIQ from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Liquidity (LIQ) was in 2015 at 19,3%, while the lowest was in 2018 at 13,4%. Furthermore, the standard deviation values of LIQ show relatively significant variation.

4.4. Descriptive Statistics Results on Loan-to-Asset Ratio (LOA)

Table 5: Descriptive Statistics Results on LOA

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.498	0.488	0.120	0.249	0.720
2016	0.506	0.494	0.114	0.220	0.704
2017	0.556	0.560	0.102	0.264	0.695
2018	0.580	0.595	0.095	0.363	0.709
2019	0.596	0.598	0.092	0.319	0.723
2020	0.611	0.627	0.092	0.347	0.744
2021	0.623	0.639	0.091	0.399	0.743
2022	0.618	0.631	0.090	0.394	0.741

(Source: Surveyed and processed by the author)

Table 5 presents the descriptive statistics results on LOA from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Loan-to-Asset Ratio (LOA) was in 2021 at 62,3%, while the lowest was in 2015 at 49,8%. Furthermore, the standard deviation values of LOA show relatively significant variation.

4.5. Descriptive Statistics Results on Loan Loss Reserve Ratio (LLR)

Table 6: Descriptive Statistics Results on LLR

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.011	0.011	0.006	0.002	0.025

2016	0.012	0.009	0.009	0.001	0.032
2017	0.013	0.012	0.008	0.002	0.033
2018	0.013	0.011	0.010	0.001	0.050
2019	0.012	0.010	0.009	0.003	0.045
2020	0.011	0.007	0.010	0.001	0.052
2021	0.012	0.009	0.010	0.001	0.054
2022	0.010	0.008	0.010	0.001	0.053

(Source: Surveyed and processed by the author)

Table 6 presents the descriptive statistics results on LLR from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Loan Loss Reserve Ratio (LLR) was in 2017 and 2018 at 1.3%, while the lowest was in 2022 at 1%. Furthermore, the standard deviation values of LLR show relatively little variation.

4.6. Descriptive Statistics Results on Non-Performing Loan Ratio (NPL)

Table 7: Descriptive Statistics Results on NPL

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	0.023	0.019	0.022	0.005	0.126
2016	0.026	0.024	0.020	0.004	0.093
2017	0.030	0.025	0.020	0.007	0.090
2018	0.021	0.020	0.011	0.002	0.057
2019	0.025	0.022	0.017	0.005	0.093
2020	0.023	0.019	0.022	0.003	0.126
2021	0.024	0.019	0.019	0.007	0.090
2022	0.022	0.017	0.017	0.005	0.080

(Source: Surveyed and processed by the author)

Table 7 presents the descriptive statistics results on NPL from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Non-Performing Loan Ratio (NPL) was in 2017 at 3,0%, while the lowest was in 2018 at 2,1%. Furthermore, the standard deviation values of NPL show relatively little variation.

4.7. Descriptive Statistics Results on Leverage (LEV)

Table 8: Descriptive Statistics Results on LEV

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	9.475	9.325	3.140	3.195	15.982
2016	10.800	10.581	3.498	3.539	18.352
2017	11.263	10.685	3.789	4.234	19.160
2018	13.029	12.426	4.726	4.419	22.393
2019	13.932	13.207	5.167	5.239	27.591
2020	13.582	12.620	5.390	4.931	29.701
2021	13.304	12.809	5.385	5.181	33.113
2022	13.302	12.808	5.385	5.180	33.112

(Source: Surveyed and processed by the author)

Table 8 presents the descriptive statistics results on LEV from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Leverage (LEV) was in 2019 at 13.932, while the lowest was in 2015 at 9.475. Furthermore, the standard deviation values of LEV show relatively significant variation.

4.7. Descriptive Statistics Results on Bank Size (SIZE)

Table 9: Descriptive Statistics Results on SIZE

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	7.885	7.902	0.457	7.167	8.761
2016	7.953	7.953	0.451	7.199	8.827
2017	8.007	7.973	0.462	7.249	8.933
2018	8.088	8.022	0.472	7.264	9.015
2019	8.162	8.096	0.466	7.329	9.085
2020	8.218	8.166	0.469	7.309	9.118
2021	8.255	8.220	0.453	7.358	9.173
2022	8.251	8.217	0.453	7.351	9.171

(Source: Surveyed and processed by the author)

Table 9 presents the descriptive statistics results on SIZE from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Bank Size (SIZE) was in 2021 at 8.255, while the lowest was in 2015 at 7.885. Furthermore, the standard deviation values of SIZE show relatively significant variation.

4.8. Descriptive Statistics Results on Board Size (BoardS)

Table 10: Descriptive Statistics Results on BoardS

Year	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
2015	8.071	7.000	2.478	5.000	14.000
2016	8.000	7.500	2.277	5.000	14.000
2017	8.393	8.000	2.986	5.000	17.000
2018	8.143	8.000	1.860	5.000	12.000
2019	8.107	8.000	1.771	5.000	12.000
2020	8.500	8.000	1.836	5.000	13.000
2021	10.357	10.000	1.747	8.000	14.000
2022	10.357	10.000	1.747	8.000	14.000

(Source: Surveyed and processed by the author)

Table 10 presents the descriptive statistics results on BoardS from 2015 to 2022 for 26 joint-stock commercial banks in Vietnam. The highest average Board Size (BoardS) was in 2020 and 2021 at 10.357, while the lowest was in 2016 at 8.0. Furthermore, the standard deviation values of BoardS show relatively significant variation.

5. DISCUSSION

The article is conducted with the purpose of evaluating the factors influencing the CAR (Capital Adequacy Ratio) of Commercial Banks in Vietnam *during the period from 2015 to 2022. To ensure a comprehensive dataset, the research collected secondary data from independently au-*

dited financial reports of 26 Commercial Banks *during the research period. The research method employed in the article is descriptive statistics. The research results reveal the following:*

- CAR (Capital Adequacy Ratio): The average CAR of banks during the research period fluctuates between 0.134 and 0.148, with no significant variation over the years. The highest CAR was recorded in 2017 (14.8%), while the lowest CAR was in 2022 (13.4%). The relatively low standard deviation of CAR indicates stability in its fluctuations over time. This stability in CAR over the years can instill confidence in the banking market. Changes in CAR can reflect the risk and resilience of banks in an evolving economic environment.

- Various Variables Studied: The research considered variables such as ROA (Return on Assets), DEP (Deposit Ratio), LIQ (Liquidity), LOA (Loan-to-Asset Ratio), LLR (Loan Loss Reserve), NPL (Non-Performing Loan Ratio), LEV (Leverage Ratio), SIZE (Bank Size), and BoardS (Board Size). These diverse variables provide crucial information about the variation and resilience of Vietnamese Commercial Joint Stock Banks from multiple perspectives.

- Key Findings on Specific Variables: ROA fluctuated between 0.007 and 0.013, indicating minimal variation over time. DEP, LIQ, LOA, LLR, NPL, LEV, SIZE, and BoardS also demonstrated similar stability with negligible variations. Some variables, such as SIZE and BoardS, showed an increasing average value over time, possibly representing the development and expansion of banks. The stability of these variables can create a predictable and stable environment for investors and regulatory authorities.

- Analyzing the Relationship Between Variables and CAR: The research also analyzed the relationship between the studied variables and CAR to understand their impact on the capital safety of banks. Understanding this relationship can assist in predicting and managing risks within the banking system.

- In the future, further research can expand to explore deeper into this relationship and investigate other factors that may influence CAR.

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GREEN FINANCE: LEVERAGING PRIVATE INVESTMENT FOR SUSTAINABLE DEVELOPMENT

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Abstract: Green finance has gained significant momentum in the world. It is a worldwide trend that affects national governments, international financial institutions, and the financial systems of every nation and area. Innovative financial tools and private sector money may and should play a larger role in climate finance. Scaling up private climate finance in developing and emerging market countries necessitates a multifaceted strategy with advancements in a number of areas, support from multilateral development levels between public and private partnerships. This paper focuses on the private sector's role in fostering private climate finance, demonstrates how it mobilizes green investment, identifies challenges and opportunities, and then proposes some solutions for financial institutions aiming to strengthen their resilience and the resilience of the financial system as a whole, aligned with the Vietnamese government's goal of turning Vietnam into one of developed countries with high income by 2045.

Keywords: green finance, private sector, financial tools, sustainable development, green investment

1. INTRODUCTION

According to the Sustainable Development Goals and Paris Agreement, it was reproclaimed growth and development goals are inherently unlikely to persist without all nations addressing climate change and minimizing environmental impacts (Prasad et al., 2022). Since the global community is paying more attention to dealing with climate issues on a global scale, it is strongly highlighted that economy must create the groundwork for the creation and implementation of a funding strategy for global sustainability. However, driving the transformation towards to a low carbon economy will require substantial investments and innovation, thereby calling upon the terminology and engagement approaches of a variety of stakeholders including both government and private sectors. With limited government funding available, private sector plays a critical role in promoting green growth globally, as businesses and investors can advance green supply chains, give priority to green investments, and encourage the development of green technology. Therefore, in light of the world's environmental issues, green finance is key to managing business risks while guaranteeing long-term investment returns.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

In the wake of ratification of the Paris Agreement, green finance started to spark an explosion. Green finance is a notion that is quickly changing and whose idea has not yet been given a formal, universal definition. Green finance seeks to balance SDG achievement, environmental stability, economic growth, and ecological protection. It is the method of financing that calls upon the participation of a large number of financial organizations, both public and private, as well as a variety of asset classes, such as green bonds, green loans, green funds, and so forth, all of which are in charge of financing investments that are environmentally friendly. Recent studies show that until 2050, the supply-side of the global energy system will require financing ranging from USD 1.6

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to 3.8 trillion annually, and the financing gap for achieving the SDGs alone in developing countries is estimated to be USD 2.5 trillion annually. According to Taghizadeh-Hesary and Yoshino (2019), the amount of green finance demand and development is occasionally rising, and it is also thought that domestic bank credit is insufficient to close this funding gap.

Financing environmentally beneficial projects has become possible due to the introduction of new financial instruments like green bonds and climate bonds. However, as numerous academic writers have shown (Akomea-Frimpong et al., 2022), there is still a sizable financial gap when it comes to green investment. Climate change is one of the greatest challenges in the world. The issues posed by climate change may represent potential threats to the stability of the financial markets, the price system, and macroeconomics, all of which fall under the primary purview of central banks and financial regulators. Furthermore, as we move toward a low-carbon economy, changes in energy prices can have a direct impact on price stability, inflation, and economic growth across all sectors, including the banking sector.

According to financial experts, central banks and other financial authorities need to actively participate in the creation of a legal framework for green finance. To achieve this, progressive measures are required against financial and monetary regimes that support environmental solutions based on global solidarity and democratic economic governance for green funding. In order to raise money for long-term growth and incorporate green financing into their financial systems, emerging markets and developing nations in particular must put in place a plethora of regulations (Barbier, 2020). As a result, the financial sector has also contributed significantly to the growth of green financing. To bolster this, Mumtaz and Smith (2019) proposed that poor nations could imitate affluent nations in an effort to close the gap in green financing. The report goes on to say that green financing might forge connections between innovation, technical advancement, and economic greening to uncover untapped potential for economic growth. However, regulatory bodies like central banks must be used to address the financial system's operations.

According to the most recent IPCC special report, central banks or financial regulators may act as a last-resort facilitator for climate financing instruments that can assist reduce the systemic risk of stranded assets. The duty of central banks and financial regulators for broader societal objectives including the prevention of market failure and their part in formulating long-term national strategy are additional justifications for their increased roles. Additionally, in order to prevent a collapse of the credit market, central banks and regulators should restrict financial flows and bank lending to borrowers with high carbon footprints and damaging environmental practices. This is because it is one of their obligations to set specific restrictions on certain types of lending. Because monetary policies typically affect the economy with a lag, central banks and regulators must create and implement a forward-looking monetary policy approach.

According to the majority of empirical studies, regulatory and central bank actions significantly influence investment and financing decisions for green projects. More particular, Monnin and Barkawi (2015) suggested that central banks' role in supporting society in achieving its environmental goals has received less attention than monetary policy in worldwide discussions. On the other hand, according to Liu (2018), private investors play the biggest role in advancing green finance.

In contrast to other investment options, the private investment contribution is less than anticipated. Several studies explain why private investment is less significant than other types of investment, and one of the explanations given is the nature of green investments in terms of the trade-off between risk and return (Ruiz et al., 2016). Coordination between financial and environmental rules is advised, in accordance with (Akomea-Frimpong et al., 2022), in order to boost the amount of private green investment. This is the reason why the role of governmental authorities and monetary policies is remarkably significant to a country's economic development. Similarly, based on the available research articles on green finance, Rawat claimed that the reach of green finance in India has been constrained by stakeholders' lack of interest and ineffective government initiatives (International journal of recent technology and engineering, 2020). Despite many advantages of green finance and its significance to environmental challenges, some of its drawbacks include low yields, challenging methods, and a lack of expertise (International journal of recent technology and engineering, 2020). Hence, creative skills in finance and environmental economics are needed to build green finance. Therefore, the main obstacles to the growth of green finance in both developed and developing nations can be attributed to insufficient funding for small-scale investment needs, the short-term focus of investment products, a lack of knowledge of green financing and technical proficiency within businesses.

3. METHODOLOGY

The primary method adopted for this research is a qualitative approach, involving expansive literature reviews and collecting and analyzing non-numerical data to understand concepts, opinions or experiences. According to Tranfield, Denyer, and Smart (2003), a literature review is a more or less methodical method of compiling and summarizing prior research. A strong basis for knowledge expansion and the facilitation of theory formation is established by a successful and well-executed review as a research approach. A literature review has the ability to address research problems more effectively than any single study by incorporating the conclusions and points of view from numerous empirical findings.

The literature review draws on a variety of sources, encompassing books, research papers, academic and professional journal articles, and research publications, as well as adding instances or illustrations to the information. Boell and Cecez-Kecmanovic (2015) highlighted that the literature review is an important factor in all studies and assessments, typically including an outline, an explanation, and a critical evaluation of previous research as well as a recognition of current research challenges, new research issues, and questions for future research that are motivated by the data currently available. It is a collection of easily accessible (both published and unpublished) theme documents that include facts, concepts, data, and evidence published from a specific viewpoint to obtain or express those viewpoints on the nature of the subject and how it should be examined, and an effective review of the research papers involved.

This study's compilation, discussion, and analysis of the qualitative data help to answer the research question. This method is used throughout the research to achieve this goal. In addition, it broadens the scope of the research by utilizing multiple data sources and data collection techniques to confirm the validity of the research data (Saunders, Lewis and Thornhill, 2019).

4. DISCUSSION

The Role of Private Sector Investment in Sustainable Development

Private sector actors have yearned their desire for sustainable development to flourish in recent years. Krushelnytska (2019) stated that private investment money may be the primary source of the additional billions of dollars needed to bridge this gap and fund the preservation of the world's priceless ecosystems. Globalization and interdependence have prompted businesses and investors to acknowledge the overlap between public and private interests. They realize that the presence of a wealthy and sustainable society will contribute considerably to their success and well-being. In fact, private sector dominates the markets for food, energy and water. A government framework could foster public participation, but since this is a commercial initiative, it would be beneficial to collaborate more closely with the private sector.

A large number of businesses and other private sector players increasingly view themselves as contributors to promoting sustainable development efforts. They pursue towards this goal in a variety of ways including providing goods and services, generating tax revenues for funding essential social and economic infrastructure, as well as creating novel and creative solutions to help address development challenges. It is also strikingly becoming clear to companies and investors the importance of fighting against climate change. The private sector's contribution to development goes beyond the conventional strategy of fostering economic growth to the creation of deeper and more intricate public-private partnerships. As a result, the private sector is seeking out new opportunities to invest capital in ways that will both yield market-rate returns and minimize their negative environmental impacts, thus helping policymakers and the donor community in reshaping the business environment to facilitate green growth more effectively.

Green Finance: Mobilising green investment

Known as the new paradigm in the world of finance and business, green finance refers to the integration of business, finance and environmentally friendly behavior. According to Höhne et al. (2012), green finance is a broad term that covers investments in projects and initiatives aimed at sustainable development, environmental products, and policies aimed at promoting sustainable economic growth. It serves as a platform for a wide range of players, such as private individuals and companies, producers, investors, and financial lenders. Depending on the participant, green finance may be driven by monetary incentives, a desire to protect the environment, or a combination of both. In contrast to traditional financial activities, green finance places a greater emphasis on ecological benefits and gives the environmental protection sector more attention.

According to Maurice Strong, secretary-general of both the 1972 Stockholm Conference and the 1992 UN Conference on Environment and Development (Earth Summit), the corporate community was viewed as a growingly significant political force for sustainable development. To attract private capital and lessen the risk of private financing for renewable energy technology, they use loans and blended finance where political and commercial uncertainties diminish returns on investment. Zhang et al (2022) argued that green finance development will be more successful if all industries simultaneously embrace the same national policy. The same national policy should be followed by all economic sectors, including agriculture, industry, and services. Green financing must be added to ecological and environmentally sound initiatives as part of the development of rural regeneration. Furthermore, to promote other industries and support high environmental quality, governments should use a variety of financial instruments. Determining the characteristics of green finance development is therefore thought to be extremely important.

In the green finance market, there are mechanisms and financial products designed to reduce pollution emissions, preserve ecosystems, and protect businesses from unexpected changes in the environment. The former is exemplified by emissions trading, while the latter includes a variety of products such as environmental funds, weather derivatives, nature-linked securities, and ecological options, among others. For instance, the UK government has launched Green Finance Strategy entitled Mobilising Green

Investment with the aim of mobilising private finance for clean and resilient growth. The government has shown their commitment to pursuing its ambition to become the world's first Net Zero-aligned Financial Centre. It is estimated to cost 1% to 2% of GDP to achieve the UK's net zero goal (The UK Government, 2023). It is private investment that will be essential for delivering net zero, building climate resilience and supporting nature's recovery. Attracting private funding for decarbonization has been identified as the key challenge by the Environmental Audit Committee since businesses are regarded to be the primary source of the majority of the necessary investment. Hence, this investment presents a tremendous chance to level up the UK, particularly those regions with an industrial legacy, and will assist the sectors and technologies of the future while allowing traditional industries to adapt and thrive during the transition.

Another famous cases that environmental regulators use financial market mechanism to solve the problem of air pollution, water pollution and the problem of biodiversity is that the Swedish carbon tax is hailed as a success for being effective in reducing carbon emissions while decoupling continued economic growth from national emissions despite it levying the highest carbon tax rate in the world. In terms of definition, a carbon tax is a form of a government intervention used to address market failures. A carbon tax imposes a cost on polluters (emitters) for each ton of greenhouse gas emissions they release into the atmosphere (Meyer, Hvelplund and Nørgård, 2011).

The role of green finance in promoting significant sustainable development in Vietnam

The demand for Vietnam's investment in projects that minimize environmental consequences will increase with the commitment to attain net zero emissions by 2050 and reduce methane emissions by 2030. As a result, green finance is absolutely essential to Vietnam's aspirations for sustainable development. Climate change and environmental challenges are currently raising an alarming concern in Vietnam. The State has determined that developing green finance in Vietnam is the best course of action for raising capital for the green economy, with a strong commitment to the international community on the "zero" economy of greenhouse gas emissions by COP26.

In terms of regulating sustainable finance, the Vietnamese government has made some headway. The regulator established two goals for 2025 in 2018: establishing an environmental and social (E&S) management system in all financial institutions, as well as implementing banking procedures to incorporate environmental and social risk assessment into credit risk assessment. To raise private sector funding for projects with environmental and social benefits, the State Securities Commission and the International Finance Corporation published a handbook on "How to Issue Guide for Green Bonds, Social Bonds, and Sustainability Bonds" in April 2021. Furthermore, general action plans for expanding green credit and creating green banks in the nation have been laid out by the State Bank of Vietnam (SBV). By the end of 2022, credit balances for green projects would have reached around 500,000 billion VND, or about 4.2% of the total existing loans to the economy, according to the SB of Vietnam research. Credit institutions have provided financing for eco-friendly initiatives like sustainable agriculture, clean energy, and environmental sanitation. Therefore, Vietnam's finance sector will undoubtedly play a big role in delivering climate finance, and institutions must also embark on their own carbon transition journeys if the country is to achieve its ambitious decarbonization agenda.

Green Finance in Vietnam: Opportunities and barriers

After China and Mongolia, Vietnam is one of the most carbon-intensive economies in Asia, and to help combat climate change, it needs to make a swift shift away from high carbon activity.

The nation's finance sector will have to play a vital role as it follows this ambitious course, offering a wide spectrum of cutting-edge financial solutions. According to the research, five loans for sustainability and the environment were issued in Vietnam in 2022 by different issuers (Vietnam Investment Review, 2021). The greatest of these was a green loan of $500 million that VinFast, a Vingroup affiliate, granted. By the end of 2022, green loans were expected to equal roughly VND 500 trillion, or 4.2% of all outstanding loans, according to a report by the Training and Research Institute of the Bank for Investment and Development of Vietnam (BIDV). Green loans increased at a rate of about 22% each year from 2017 to 2022. Vinpearl, a fully-owned subsidiary Vingroup, recently issued an Exchangeable Sustainable Bond (ESB) worth $425 million with the assistance of HSBC, which is convertible into additional Vingroup shares. The first exchangeable sustainable bond ever issued is this one. HSBC assisted Vingroup in creating its initial Sustainable Finance Framework, which covers six green and two social project categories throughout Vingroup's business areas. Vingroup is the exclusive sustainability structuring bank. Clean transportation, eco-friendly structures, environmentally sound water and wastewater management, pollution prevention and abatement, energy efficiency, renewable energy, access to basic services like healthcare, and affordable housing are a few possible project areas. According to Sustainalytics, a top independent organization that rates the sustainability of publicly traded companies, the framework has a favorable effect on the environment and society.

Looking ahead in the bright future, Vietnam has an estimated $753 billion in climate-smart corporate investment opportunities between 2016 and 2030, with the majority ($571 billion) going toward the nation's transportation infrastructure requirements by that year. The total amount of potential investments in renewable energy is $59 billion, of which over half ($31 billion) will go toward solar photovoltaic projects and the remaining $19 billion will go toward small hydropower ones. Investment opportunities in new green buildings are roughly $80 billion (Vietnamnet Global, 2023). Due to the ongoing epidemic and increased focus on sustainable economic recovery, these figures demonstrate how Vietnam's sustainable finance sector will significantly change over the coming years. In the coming years, it is anticipated that new strategies, funds, and financing instruments that address environmental and social challenges will develop at an accelerated rate due to the Vietnamese government's commitment to expanding the sustainable financial sector.

However, Vietnam still lacks a legal framework, a thorough, consistent policy, environmental standards, and tools for commercial banks to use in risk management and promotion. The paper emphasizes that the lack of a legal framework for social, environmental, and green credit management makes it difficult for credit institutions to implement processes, norms, mechanisms, preferential policies, and products for firms in this field. In an August 2017 session on drawing resources for green and sustainable development co-hosted by the SBV, the CEO of HSBC Vietnam emphasized how difficult it is for many companies to establish the circular economy, a key component of sustainable development. He underlined that there are no specific rules or standards for limiting emissions or defining what "green" means in particular contexts.

Proposing financial strategies to stimulate green growth

Given the dynamic aspects of these challenges, there is no unified approach to address this issue. In fact, it is evident that each national setting can use a combination of tools that are suitable for their unique circumstances. Indeed, a significant lesson from some literature reviews clarifies that there is no silver bullet (Gramkow, 2020). In other words, no single policy tool (such as a carbon tax, an emissions trading system, etc.) will have the requisite traction to set in motion the uptake of investments that would both enhance economic recovery and move us all to a growth path that produces fewer GHG emissions. Instead, there exist a number of interventions and measures that may be appropriate to leverage green finance in private sector for promoting sustainable development as well as adaptation to climate change.

Firstly, establishing a legal framework to develop diversified and synchronous green finance solutions listed as regulations on the disclosure of information related to the environment of listed companies, especially in developing nations in general and Vietnam in particular, is a crucial first step towards facilitating green financing. By supporting the development of green technologies, the growth of related enterprises, etc., green finance can aid in the expansion of specific businesses or the economy. Therefore, a legal emission trading system and associated system with green funding need developing should be needed so as to serve a legislative purpose.

The second way for most cities addressing these issues is to create a pipeline of projects that can be financed via green instruments. Not every city has climate action plans, resilient strategies, or assessments of climate and vulnerability. Such strategies should be connected to specific investment plans when they are created or changed. In the real world, this might result in adopting city laws for green building and land use planning or looking into new models for operations and maintenance.

Thirdly, establishing a framework for carbon pricing is one of the most effective ways to ensure that the costs of mitigation and adaptation measures for climate change are taken into account when making major investments. The establishment of green infrastructure investment trusts (InvITs), which include bonds and other instruments, will then encourage the use of national investments. Lastly, the ultimate goal is to lower legislative hurdles, provide guidance for external borrowing, and minimize prevarication costs in order to lower barriers to green financing when interacting with global markets.

5. CONCLUSION

Green finance is a cutting-edge financial strategy with the goal of achieving resource sustainability and environmental preservation. Green finance can direct the flow of capital, achieve efficient risk management of the environment, and produce optimal distribution of social and environmental resources if its market mechanism is rational. The phenomena of knowledge asymmetry will be avoided and the moral hazard problem will be resolved with proper policy control as well.

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THE IMPLEMENTATION OF GREEN ACCOUNTING: SUSTAINABLE DEVELOPMENT IN VIETNAMESE SMALL AND MEDIUM ENTERPRISES

PhD. Nguyen Thi Thuan[1], MA. Dang Thu Lan[2]

Abstract: *The study conducted an investigation and outlined several factors that impact the implementation of green accounting for small and medium-size enterprises in Vietnam. Subsequently, through a combined qualitative and quantitative research method, the paper introduces a model of variables influencing green accounting in Vietnam within the framework of globalization. Data used in the study were collected from the results of 207 survey questionnaires. Research results show that Professional associations and State management agencies affect the implementation of green accounting. However, two factors Manager's awareness and Economic characteristics have a negative with the implementation of green accounting in Vietnamese small and medium enterprises.*

Keywords: *Implementation, green accounting, small and medium, Vietnam.*

1. INTRODUCTION

Vietnam has experienced significant economic development over the past few decades with impressive economic growth rates. This growth has been driven by factors such as market-oriented reforms, foreign direct investment, and a young, dynamic workforce. However, the rapid pace of economic development has been accompanied by environmental challenges such as pollution, deforestation, and depletion of natural resources. Like many other countries, Vietnam has been influenced by the global discourse on sustainable development and environmental protection. These challenges demand a more systematic and comprehensive approach to accounting for the environment. The concept of green accounting emerged in Vietnam as a response to the complex interplay between economic development, environmental challenges and global sustainability trends. One of the earliest prominent mentions of green accounting can be traced back to the 1970s. In 1973, economist William Nordhaus introduced the concept of "adjusted net savings" as a way to account for the depletion of natural resources in his paper titled "The Allocation of Energy Resources." However, it was in the 1980s and 1990s that the term "green accounting" gained more widespread recognition. Various international organizations began advocating for the development and implementation of accounting systems that incorporate environmental factors. The United Nations first mentioned the definition of green accounting in the "System of Integrated Environmental and Economic Accounting" (SEEA). Green accounting, also referred to as environmental accounting, is defined as the "identification, measurement, and allocation of the economic benefits and costs of environmental resources." (UN, 1993).

In an era defined by increasing environmental awareness and growing concerns about the sustainability of the planet, traditional accounting practices have shown their limited scope in capturing the true costs and benefits of economic activities. Green accounting is a pioneering approach that seeks to bridge the gap between economic progress and environmental preservation.

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Unlike conventional accounting which predominantly focuses on monetary transactions, green accounting incorporates ecological and social dimensions to provide a more complete picture of an entity's performance. This innovative framework revolutionizes the way we measure, report, and manage economic activities, placing emphasis on identifying and quantifying material environmental impacts. By prioritizing materiality, green accounting enables businesses to target their sustainability efforts where they can have the greatest effect (Moorthy and Yacob, 2013). A critical tool within green accounting is the Life Cycle Assessment that evaluates the environmental impacts of a product or process throughout its entire lifecycle, from resource extraction to production, distribution, use, and disposal. By considering the full spectrum of impacts, businesses can make informed decisions to minimize their environmental footprint. (De Beer and Friend, 2006).

In both developed and developing countries, the adoption of green accounting can have significant benefits. However, the specific challenges and opportunities will vary based on the level of economic development. Developing countries are heavily dependent on natural resources for their economic activities, which makes green accounting crucial for understanding the true economic value of these resources and for sustainable management. On the other hand, developing countries often face challenges in terms of data availability and quality, which requires a great deal of effort to implement comprehensive green accounting practices. In many developing countries, there may be a need to integrate green accounting principles into broader policy frameworks related to sustainable development and poverty reduction (Farouk et al., 2012).

Green accounting fosters transparency, enhancing stakeholder trust and credibility. Additionally, it can drive innovation by encouraging the development of sustainable technologies and practices. This can lead to cost savings in long-term through reduced energy consumption, waste reduction, and optimized resource utilization. Green accounting allows investors to evaluate a company's potential for cost savings through sustainability initiatives. Both globally and in Vietnam, there have been numerous studies and reports addressing green accounting and its effect in various business sectors, such as Rounaghi (2019), Huy (2014), Huong and Hang (2020). Nevertheless, there is remains a limited understanding of the factors influencing green accounting and how to effectively measure them. This study builds upon prior research findings and proposes a model that delineates the factors affecting the application of green accounting for small and medium enterprises in Vietnam.

2. LITERATURE REVIEW

With the trend of green growth, green economy globally, green accounting is more and more popular in many countries. Green accounting has also become the research topic of scholars around the world. The requirement of sustainable development, limitation and minimization of impacts on the environment makes green accounting a concern of policy makers, business administrators as well as researchers. According to Agarwal and Kalpaja (2018), standards and quantification are needed to control business activities that pollute the environment before allowing an organization to operate production or business activities or to force the organization to handle the pollution problems it has caused. When businesses take into account environmental aspects of economic activities such as service and product costs, businesses can consider reducing the amount of natural resources used in production and business activities to save money, thereby maximizing cost savings and ensuring compliance with environmental requirements. Research by Lako

(2018) confirms that the first way to strengthen Green Accounting practice is through employees' understanding and awareness of environmental and social issues. Van (2018) believes that green accounting is an important tool related to aspects of the influence of the natural environment on the economy. On the other hand, green accounting is the direction of transformation towards sustainable development that Vietnam is aiming for.

Hang (2019) believes that the application of green accounting contributes to providing accurate, transparent, complete and accountable information. This helps improve the image of the business to regulators, shareholders, investors and business partners. The author opines that businesses' awareness of social responsibility affects the application of green accounting. In addition, professional associations also need to participate in promoting the application of green accounting through proposing recommendations to the Ministry of Finance and related agencies based on experiences from other countries.

Research by Hung an Trung (2020) aims to analyze factors affecting the level of environmental accounting application at companies listed on the Vietnamese stock exchange. Data used in the study were collected from the results of 280 survey questionnaires and annual reports. Research results show that there are 5 factors affecting the level of environmental accounting application including: (1) Legal system; (2) Economy; (3) Competitiveness; (4) Accounting training system; (5) Manager. By inheriting relevant previous research and using a combination of qualitative and quantitative research methods, this study has built a model of factors affecting the level of environmental accounting adoption in market of listed enterprises. With a survey sample of 280 listed enterprises, the model testing results show that there are 5 factors affecting the level of environmental accounting application of listed enterprises in order of importance: System law; Manager; Economy; Accounting training system and competitiveness.

Khiem and Cong (2021) used quantitative research methods, using multivariable linear regression models to analyze data at manufacturing enterprises in Thai Nguyen province to indicate factors affecting the level of green accounting application. The results show that the factors: Potential for business expansion, People perception in the business and Incentives from stakeholders affect the level of green accounting adoption. However, the author's research is limited in terms of research scope and influencing factors, the level of data processing is quite simple.

Dinh et al. (2022) used qualitative research methods combined with quantitative methods to propose 6 factors affecting environmental accounting including: Firm size, The pressure of stakeholders, Perception of the benefits of implementation, Legal regulations , Financial resources, Staff qualifications, Applying environmental accounting in manufacturing enterprises. The results of multivariate regression analysis show that all 6 factors included in the study have a positive impact on the application of environmental accounting in manufacturing enterprises in Vietnam. However, the study still has limitations that future studies need to pay attention to. First, the data used in the study was collected through surveys in many types of enterprises (different sizes, industries, etc.), so it is not representative of each type of business. Secondly, many other factors can affect the application of EA, such as environmental strategy, business lines, audit, etc. but have not been considered in this study. Finally, the study used analytical and synthesis methods from published studies for a long time, and the sample size was small, so the generalizability was not high, affecting the quality of the study. Using qualitative research methods in Bali province by research of Adyatma et al. (2022) pointed out that small and medium enterprises in Bali have not yet understood and applied green accounting in their business activities. In general, small and medium-sized enterprises still manage and treat waste according to the traditional model, not as professionally managed as large enterprises. Awareness of the importance of protecting the environment can be started by implementing green accounting in the small and medium enterprises. With the application of green accounting in small and medium enterprises it is hoped that they will be able to create a positive impact on society, not only from an economic perspective, but also from a natural, social and cultural perspectives.

To evaluate the impact of factors on the application of green accounting in construction enterprises in Vietnam, Nguyen et al. (2023) collected 243 questionnaires from managers and accountants. Then, the authors used Cronbach's alpha test, exploratory factor analysis and multiple regression analysis to identify 5 factors affecting the application of green accounting in Vietnamese construction enterprises. These factors encompass: staff levels and resources, legal and regulatory systems, customer demands, legal and educational systems, stakeholders, managers' perceptions, internal resources. However, the study has certain limitations such as the modest sample size, restrited scope (stopping at the construction industry), and measurement questions posed that may affect respondents' answers.

From theoretical and practical research, the author proposes the following hypotheses for small and medium enterprise in Vietnam:

H1: Manager's awareness has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises.

H2: State management agency has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises.

H3: Professional associations has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises.

H4: Economic characteristics has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises.

3. RESEARCH METHODS

The authors used qualitative research methods combined with quantitative research methods. Research conducted interviews with experts in the field of financial and management accounting, experts in the field of accounting and auditing practice, managers of small and medium-sized enterprises, and university lecturers. From there, the authors calibrated the scales of the factors and set up a survey table for use in official research. The authors collected data, conducted preliminary analysis, and calibrated the scale and research model before official research. The author evaluated the reliability of Cronbach's alpha and analyzed the EFA exploratory factor. And then built a multivariate regression model to evaluate the impact, as well as the influence of factors on the implementation of green accounting of small and medium-sized companies in Vietnam.

3.1. Research data

According to the results of the survey on May 22, 2023 conducted by the General Statistics Office recently, it can be seen that Vietnamese enterprises are mainly small and medium-sized enterprises, accounting for over 97% of enterprises nationwide. (https://www.gso.gov.vn/tin-tuc-other/2023/05/doanh-nghiep-nho-va-vua-co-the-dong-gop-nhieu-cho-cong-nghiep-ho -ash/).

However, the author could not survey all Vietnamese small and medium enterprises due to limited resources and high costs. Therefore, the study used a non-probability convenience sampling method (Tho, 2013).

In the study, there are a total of 23 observed variables (including 7 dependent variable scales, 18 independent variable scales). The minimum sample size for this study is: 23 x 5 = 115 samples (Bollen, 1989). However, to ensure that the number of observations collected is sufficient for analysis and representative of the entire population, the authors sent 350 questionnaires to small and medium enterprises.

Research survey subjects: Business managers and chief accountants. Each business represents one survey respondent. The author sent questionnaires via email and Google Docs during the period from June 2023 to August 2023. To conduct the survey, all items in this study were designed on a 5-point Likert scale (1 = completely disagree and 5 = completely agree). After sending the letter, the author received a total of 225 responses, accounting for 64.29%. However, out of 225 responses, 18 responses were incomplete, leaving 207 responses worth analyzing.

3.2. Research model

The research model proposed by the authors is as follows (Fig. 1)

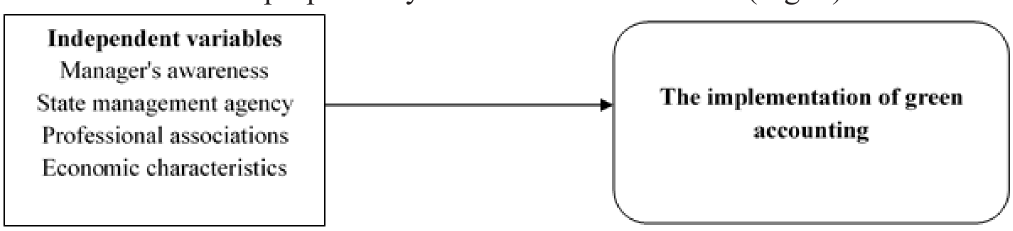

Fig. 1. Research model

4. RESEARCH RESULTS

According to Nguyen (2013), observed variables with item-total correlation less than 0.3 will be eliminated and the scale is selected when Cronbach's Alpha coefficient is 0.6 or higher. The results of Cronbach's Alpha analysis are presented in Table 1.

Table 1: Cronbach's Alpha coefficient of the factors

Factor	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Measure The implementation of green accounting: Cronbach's Alpha = 0.887				
GA1	11.11	9.697	.627	.884
GA2	10.97	8.926	.737	.860
GA3	11.05	8.969	.686	.873
GA4	11.05	8.648	.795	.847
GA5	11.04	8.591	.792	.847
Measure Manager's awareness: Cronbach's Alpha = 0.78				
MA1	5.77	2.798	.668	.645
MA2	5.19	3.040	.614	.707
MA5	5.86	3.027	.572	.752
Measure State management agency: Cronbach's Alpha = 0.897				
SM1	6.75	5.847	.734	.884

SM2	6.89	6.173	.823	.851
SM3	6.85	5.966	.768	.869
SM4	6.88	6.152	.774	.867
Measure Professional associations: Cronbach's Alpha = 0.893				
PA1	14.24	9.893	.683	.883
PA2	14.18	9.384	.795	.857
PA3	14.09	9.763	.752	.867
PA4	13.98	9.985	.792	.860
PA5	14.35	9.723	.685	.883
Measure Economic characteristics: Cronbach's Alpha = 0.922				
EC1	5.83	2.766	.769	.916
EC2	5.79	2.728	.827	.897
EC3	5.79	2.593	.804	.905
EC4	5.79	2.495	.885	.876

Source: Authors' analysis

The results of Cronbach's Alpha analysis are presented in Table 1 showing that all scales have Cronbach's Alpha coefficients greater than 0.6 and the total variable correlation coefficients of the scales are greater than 0.3. Except for the case of variable MA3, variable MA4 of the scale was eliminated because it did not meet the requirements. Therefore, the scales meet the requirements and the observed variables continue to be used to EFA exploratory factor analysis.

Talbe 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.838
Bartlett's Test of Sphericity	Approx. Chi-Square	1997.045
	Df	120
	Sig.	0.000

Source: Authors' analysis

From the results of table 2, it can be seen that: The result of Bartlett's test of sphericity in the KMO and Bartlett's test table with sig = 0.000, means that the observed variables are still linearly correlated with the representative factor (specifically, the index 0.5 < KMO = 0.838 < 1 indicates that exploratory factor analysis is still appropriate for real data).

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.598	28.736	28.736	4.598	28.736	28.736	3.563	22.270	22.270
2	3.273	20.459	49.195	3.273	20.459	49.195	3.265	20.406	42.676
3	2.582	16.140	65.335	2.582	16.140	65.335	3.100	19.375	62.051
4	1.545	9.658	74.993	1.545	9.658	74.993	2.071	12.941	74.993

Source: Authors' analysis

According to table 3, there are 4 factors extracted based on the criterion of eigenvalue greater than 1, so these 4 factors best summarize the information of the 16 observed variables included in the EFA. The total variance extracted by these 4 factors is 74.99% > 50%, thus, the 4 extracted factors explain 74.99% of the data variation of the 16 observed variables participating in EFA.

Talbe 4: Rotated Component Matrix[a]

Factor	1	2	3	4
PA2	.869			
PA4	.864			
PA3	.837			
PA5	.787			
PA1	.783			
EC4		.937		
EC2		.900		
EC3		.888		
EC1		.863		
SM2			.893	
SM4			.872	
SM3			.868	
SM1			.837	
MA1				.825
MA5				.821
MA2				.775
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

Source: Authors' analysis

According to table 4: Rotated matrix results show that the 16 observed variables are classified into 4 factors, all observed variables have Factor Loading coefficients greater than 0.5 and there are no longer bad variables.

The relationship between Manager's awareness, State management agency, Professional associations, Economic characteristics with the implementation of green accounting of small and medium enterprise in Vietnam is shown in the following models:

$$\mathbf{GA = \beta0 + \beta1MA + \beta2SM + \beta3PA + \beta4EC + \varepsilon}$$

Dependent variable: Implementation of green accounting

The independent variable consists of 4 variables:

Variables (Xit): Manager's awareness (MA), State management agency (SM), Professional associations (PA), Economic characteristics (EC)

ε is the error.

Table 5: Results of multiple regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.674	.328		2.056	.041					
	MA	.121	.069	.114	1.744	.083	.244	.122	.107	.880	1.136
	SM	.217	.058	.237	3.755	.000	.326	.255	.230	.941	1.063
	PA	.319	.062	.333	5.149	.000	.413	.341	.315	.894	1.118
	EC	.055	.086	.040	.643	.521	.002	.045	.039	.970	1.031
a. Dependent Variable: GA											

Source: Authors' analysis

Table 5 results show the Sig value. of MA and EC are both greater than 0.05, so these two variables are not meaningful in the model. However, the value Sig. of SM and PA are both less than

0.05, which can confirms again that these variables are meaningful in the model. Table 5 shows that the adjusted R^2 is 0.243, meaning the model's level of explanation is 24.3%. Specifically, the four factors MA, SM, PA, EC explain 24.3% of the dependent variable. Furthermore, the results show that the VIF values of the independent variables are all less than 10, so it can be concluded that there is no multicollinearity phenomenon.

Table 6: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.493[a]	.243	.228	.6488	.243	16.189	4	202	.000	2.058
a. Predictors: (Constant), EC, SM, PA, MA										
b. Dependent Variable: GA										

Source: Authors' analysis

The results from table 6 show that the F statistic value is 16.189 with Sig value. very small (= 0.000 < 0.05). Thus, it can be concluded that the proposed model is suitable for real data, the independent variables have a linear relationship with the dependent variable. The Durbin – Watson coefficient is 2.058 (1 < 2.058 < 3), so it can be concluded that there is no first-order serial correlation in the model. Therefore, the model is not violated when using multiple linear regression method.

Table 7. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	27.255	4	6.814	16.189	.000[b]
	Residual	85.020	202	.421		
	Total	112.275	206			
a. Dependent Variable: GA						
b. Predictors: (Constant), EC, SM, PA, MA						

Source: Authors' analysis

The regression results show that the order of influence of factors on the implementation of green accounting in order of importance are: PA, SM, respectively. However, two factors have opposite effects: MA and EC. This shows that PA and SM have an important influence on the implementation of green accounting.

Thus, the regression equation is expressed as follows:

$GA = 0.674 + 0.217\ SM + 0.319\ PA + \varepsilon$

Thus, the hypothesis H1: "Manager's awareness has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises" is rejected. It can be said that managers' awareness has an insignificant impact on the implementation of green accounting in Vietnamese small and medium enterprises. Or in other words, the impact of managers' awareness on businesses the higher the number of small and medium enterprises, the lower the adoption of green accounting. Hypothesis H2: "State management agency has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises" is accepted.

Thus, the more small and medium-sized enterprises are influenced by state management agencies, the higher their adoption of green accounting. Hypothesis H3 states that: "Professional associations has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises" is accepted. It can be said that professional associations are the important factors that have the most significant influence on the application of green accounting. Thus, when small and medium enterprises have the influence of professional associations, the application of green accounting is higher. Hypothesis H4: "Economic characteristics has a positive impact on the implementation of green accounting in Vietnamese small and medium enterprises" is rejected. Thus, when small and medium enterprises are affected by economic characteristics, the application of green accounting is lower.

5. CONCLUSIONS

The results of this study indicate that the role of State management agency and Professional associations have a significant impact on the implementation of green accounting. The other factors considered, Manager's awareness and Economic characteristics do not show a relationship with the implementation of green accounting.

Although the effectiveness and importance of green accounting have been acknowledged, in practice, the implementation of green accounting in small and medium-sized enterprises in Vietnam is still very limited. Research on the factors influencing green accounting currently yields inconsistent results. It is crucial and urgent to identify and suggest these factors. The authors' proposed research model presents potential for future studies to comprehensively promote the implementation of green accounting in the Vietnamese economy.

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DEVELOPMENT OF ELECTRONIC BANKING SERVICES IN THE DIGITAL ECONOMY

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Abstract: Developing E-Banking services is an inevitable and objective trend in the current digital economy. The benefits of e-banking are huge for customers, banks and the economy, thanks to its convenience, speed, accuracy and security. Digital technology is gradually changing fundamentally the form of providing financial and banking services. The development of e-banking services on the basis of digital technology can help banks comprehensively innovate from the process of providing products and services, innovating the distribution channel system, and expanding the product portfolio, providing services to a wider range of customers at a lower cost. From this situation, it is required to have practical summaries as well as solutions to promote the development of e-banking services in the current digital economy era.

Keywords: E- banking, Digital economy, Banking services

1. PROBLEM STATEMENT

In Vietnam, e-banking began to be known and had the first foundations in the mid-2000s. However, it was not until 2010, under the development and impact of the 4.0 revolution, that the e-banking trend really exploded. The popularity of the Internet and modern technology devices such as smartphones, tablets, laptops, etc. have created favorable conditions for e-banking to develop. The fact that Vietnam's population is young, sensitive to technology, and has a high rate of mobile phone and Internet usage (over 50% of the population) contributes to the demand for convenient services such as e-banking. The appearance of technology makes customers' habits and behaviors gradually change. They want to experience safe and convenient financial services, being able to transact anytime, anywhere right on a portable electronic device instead of spending time and effort commuting but poses the problem of service innovation for banks.

E-banking services bring new values to customers: save time and costs, conveniently perform anytime, anywhere, quickly and efficiently. Developing e-banking services is one of the top development strategies of commercial banks in the world. Determining that promoting e-banking services is one of the focus of operations, commercial banks have taken many concrete steps, from implementing, building and modernizing payment systems to creating advanced payment technology infrastructure systems.

However, the implementation of e-banking services in Vietnam in the current digital economy still has many limitations. For the purpose of further research on the development of e-banking services in the digital economy, research opportunities as well as challenges to develop e-banking services, thereby contributing solutions to deploying e-banking services. , to further successfully develop e-banking services in Vietnam, the author chooses the topic "Development of electronic banking services in the digital economy" as my research content.

2. CONTENT

2.1 Research Subject

The research topic: the theoretical basis and practice of developing e-banking services at commercial banks in the digital economy in order to propose solutions to develop banking services in today's digital economy.

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2.2. Research Method

Research Objective: This article aims to clarify the current status of electronic banking service development in commercial banks, analyze the influencing factors on the development of electronic banking services, and provide solutions for the advancement of electronic banking services in the current digital economy.

Research Methods and Data: In addition to the synthesis method and statistical methods using secondary data, the authors utilize the exploratory factor analysis (EFA) method and multiple linear regression analysis method to identify the influencing factors and the extent of their impact on the development of electronic banking services in commercial banks.

The data used in the research are collected from a survey of 179 customers who are using electronic banking services in Hanoi, Ho Chi Minh City, and some other provinces and cities, from August 1 to August 10, 2023. In the survey questionnaire, the research proposes a measurement scale for six influencing factors on the decision to use Fintech services, consisting of 29 variables. These variables will be measured on a 5-point Likert scale with the following levels: (1) Strongly Disagree; (2) Disagree; (3) Neutral; (4) Agree; (5) Strongly Agree.

2.3 Electronic Banking Services

With a history spanning over 30 years, electronic banking services are understood in various ways depending on the researching entity, and to date, there has been no universally accepted definition for this type of service.

According to the FFIEC (Federal Financial Institutions Examination Council), electronic banking services are understood as a type of traditional banking service provided directly to customers automatically through interactive electronic communication channels. Thus, electronic banking encompasses the entire system that enables individuals or businesses to access their accounts, conduct transactions, or gather information about financial products and services through both public and private electronic networks, including the internet.

Electronic banking services include both traditional and modern banking services. Similar to traditional banking services, the utilities provided by electronic banking services are built on the core banking system of the bank and include information services, payment services, credit services, trade services, and finance services. Unlike traditional banking services, electronic banking services are provided through electronic channels.

* Fintech Services:

Fintech, short for Financial Technology, refers to the application of advanced technologies to enhance and improve the quality of traditional financial service methods. Based on functionality and target audience, Fintech products currently fall into two categories:

First category - Consumer-oriented: These solutions aim to enhance customer experiences in financial activities such as payment transactions, borrowing, crowdfunding, investing, etc.

Second category - Back-office: These are companies that provide technological solutions to issuing organizations or distribution agents, such as information security, user identification, risk management, etc.

To meet the convenience of the public's digital financial service usage, the Fintech ecosystem has introduced a series of specific flagship products, such as:

* E-Payment Services:

E-payment is an online payment method through electronic means. This allows users to easily and quickly conduct shopping transactions, money transfers, and bill payments. E-payment offers significant benefits, including convenience, speed, and integration. Online shopping and e-commerce payments: E-payment enables users to shop online and make payments on e-commerce websites. This saves time and enhances the user shopping experience. Bill payments and utility payments: E-payment provides a convenient payment method for monthly bills, including electricity, water, and bank loans. International money transfers and foreign currency transactions: E-payment facilitates easy international money transfers and swift foreign currency transactions, avoiding time constraints and high fees.

Payment for public services: E-payment offers a payment method for public services such as public transportation, social insurance, and taxes.

2.4.The current situation of developing e-banking services in Vietnam

Developing e-banking services is an inevitable trend in the context of international economic integration. Not only since the Covid-19 pandemic has digital payments developed, but for a long time, in many countries around the world, not using cash has become a strongly promoted payment trend.

In Vietnam, since 2006, the State Bank has submitted to the Prime Minister for approval the Scheme of non-cash payment. This scheme has been adapted to the development of the economy and the development of cashless payment technology. In the past, non-cash payment activities in our country have been expanded in both scale and quality; has made strong progress with many new, convenient and modern payment products and services based on information technology applications.

In 2015, the NAPAS card system handled more than 90% of automatic teller machine (ATM) switching transactions, the figure in 2019 was only about 40%. In the first months of 2020, when the Covid-19 epidemic occurred and especially during the period of social isolation, electronic payment activities took place smoothly and safely, payments via internet channels increased by nearly 50% in price. Transaction value while paying via mobile phone channel increased by more than 160% over the same period in 2019 (Source: State bank report 2019-2020).

In 2021, we will witness rapid progress from pre-tax revenue to Vietnam's financial-banking industry. Impressive numbers continuously appeared and crashed a series of peaks in the same period in previous years. With innovation, acceptance of application and integration of many advanced technology platforms, E-Banking Vietnam is going further and further. Typically, the outstanding growth from banks: Vietcombank, Techcombank, MB and VPBank is a clear example. One of the key deciding factors is mobile technology and quick processing of user data. According to Statista 2020, there are currently more than 120 million mobile subscribers in Vietnam, with more than 75% of them able to register to use financial-banking services and online payment transactions. This is as a springboard for the development of e-Banking technology and of course, the mobile platform is given top priority. According to statistics of the State Bank of Vietnam, non-cash payment has developed rapidly and strongly in the past, it has had great significance in terms of socio-economic development in the face of the impacts of the Industrial Revolution 4.0, helping to increase quick adaptation, quick recovery, to unpredictable social events. Especially in the context of the outbreak of the COVID-19 pandemic in the world as well as in Vietnam, non-cash payment has clearly demonstrated its advantages in safety, limiting the spread and contagion, which is also the convincing explanation for the current trend of strong shift from cash payment activities to non-cash payment activities. In fact, according to data from Vietnam National Payment Joint Stock Company (Napas), in 2021, the Napas electronic clearing and financial switching system has processed more than 800 million transactions, corresponding to more than 8 million billion dong, an increase of 113% in volume and 169% in transaction value over the same period in 2020. Total value of card payment transactions at points of sale (POS) and total value of card payments, e-wallets via Napas online payment gateway grew by 50% and 125% respectively over the same period in 2020.

COVID-19 epidemic has had major impacts in all aspects, which has promoted non-cash payments, is one of the important policies to promote the National Financial Inclusion Strategy to 2025, with orientation to 2030 by the Government. The banking industry has been offering many solutions to promote non-cash payments, especially in the context of the current complicated developments of the COVID-19 epidemic, making an important contribution to the process of realizing the goal of non-cash payments. objectives of the above Strategy and maintain smooth financial and banking activities, the lifeblood of the country's economy.

On the side of credit institutions: Up to now, most credit institutions have been actively applying the technologies of the industrial revolution 4.0 or cooperating with Fintech companies to optimize and simplify the process. business processes, improve operational efficiency and customer transaction experience. Many basic operations have been completely digitized (100%), many banks have recorded a rate of more than 90% of customer transactions done via digital channels. Banks have applied artificial intelligence (AI), machine learning (ML), big data (Big Data) technologies in customer assessment, classification and disbursement decisions, etc. to help simplify procedures and withdrawal time for disbursement and lending. In addition, credit institutions also focus on establishing partnerships, business cooperation, expanding the digital ecosystem of banking and non-banking products and services to attract and retain customers. deeply integrate banking services into the daily digital journey of customers. In addition, banks have researched and applied many new, modern, safe and convenient technologies (Tokenization application, mobile payment, QR Code use, eKYC...) in their operations. pay. By the end of June 2022, there are 5.6 million accounts and 8.9 million cards opened using this method. By July 2022, there were 82 credit institutions implementing payment via the Internet and 51 credit institutions implementing payment via Mobile, more than 100,000 points accepting QR Code payments.

The State Bank has licensed 48 payment intermediary service providers. Non-cash payment in the first 10 months of 2022 achieved a high growth compared to the same period in 2021. According to the Payment Department - State Bank, transactions through the interbank electronic payment system increased by over 4 6% in quantity and over 33.06% in value; through the financial switching and electronic clearing system, increased by 99.79% in quantity and 106.09% in value; non-cash payment transactions increased by 87% in quantity and 34% in value; via Internet channel increased 86.9% and 40.4% respectively; via mobile phone channels increased by 115.9% and 97.2% respectively; via QR Code method increased 169.4 and 204.7 % respectively *(Source: State bank report 2021-2022)*.

E-payment activities continue to grow rapidly in 2022 with the total number of transactions and transaction value increasing by 96.5% and 87.3% respectively compared to 2021. In which, the proportion of transactions Chip cards made through the NAPAS system continue to increase from 26% in 2021 to more than 60% in 2022. NAPAS 247 fast transfer service with VietQR code has also grown impressively after more than a year of launch and has become one of the fastest-growing service providers. popular form of payment. Particularly for the program of exemption and reduction of switching and clearing service fees, the total NAPAS fee has been reduced for member organizations in 2022 to reach VND 1,743 billion. *(Source: State bank report 2022).*

According to the latest statistics of the State Bank, the whole market has 120 million e-wallets. Of which 47 million wallets are active and 29 million wallets are active. Up to 3,300 billion VND is maintained by people in e-wallets for payment.

In addition, non-cash payment activities in the first 11 months of 2022 achieved high growth compared to the same period in 2021, up 85.6% in quantity and 31.39% in value. In which, transactions via Internet channel increased respectively 89.36% (in quantity) and 40.55% (in value); via mobile phone channel increased by 116.1% and 92.3% respectively. In addition, transactions via QR code increased by 182.5% and 210.6% respectively; transactions via POS increased by 53.57% and 48.78% respectively *(Source: State bank report 2022).*

2.5. Opportunities and challenges for developing e-banking services at commercial banks in present-day

2.5.1 Opportunities

Firstly, Vietnam is a country with a large population, currently ranked 15th in the world, with a young and educated population structure, and has an ability of accelerated access to technology. According to statistics, the current population of Vietnam is over 98.76 million people, the population structure is young and well-trained, so it has quick access to technology and the internet. By 2022, the number of smartphone subscribers reached 90.5 million (accounting for 73.4% of mobile phone subscribers) *(Source:Report to the Ministry of Information and Communications 2022).*

Secondly, the high determination of the Government and the State Bank of Vietnam. Seeing the importance of digital banking development, over the past time, the Government, as well as the State Bank of Vietnam, have given drastic directions and issued many legal documents to manage and promote the development of digital banking. development of cashless payment services, initially establishing a legal infrastructure for the implementation of digital banking, such as: Decree No. 101/2012/ND-CP on non-cash payments (amended and supplemented in Decree No. 80/2019/ND-CP); Decision No. 35/2007/QD-NHNN on principles of risk management in e-banking activities; Decree No. 35/2007/ND-CP on electronic transactions in banking activities; Decision No. 2545/QD-TTg approving the project of developing non-cash payment in Vietnam in the period of 2019-2020; Circular No. 16/2020/TT-NHNN allows opening personal payment accounts by electronic method (eKYC); Circular No. 09/2020/TT-NHNN stipulating information system safety in banking activities to update new regulations of the Law on Cyber Information Security...With the drastic direction and high determination of the Government, the State Bank of Vietnam, along with the issuance of legal documents that have been and are being completed, are one of the solid premise for the banks to develop digital banking more conveniently.

Thirdly, the awareness and determination of Commercial banks in Vietnam. In fact, compared to traditional banking activities, digital banks have many outstanding advantages based on the digitized operating model platform, digital banking will provide many new financial instruments such as mobile payment, trust loans on consumption based on advanced data analysis technology, digital insurance instruments, digital investments,... With outstanding advantages, digital banking helps commercial banks reduce operating expenses, increase profits, increase processing speed and ensure operational efficiency, helping customers reduce costs and be more convenient. Recently, commercial banks have been proactive and highly determined in developing digital banking to keep up with the trend of the times, as well as meet the requirements of competition and international integration.

2.5.2 Challenges

Firstly, the legal framework for digital banking has not kept pace with the speed of technology development. As we all know, the operations of banks must comply with the regulations of the law, so in order to develop digital banking, banks must be based on the regulations of the law. It can be seen that in the recent times, despite the intense and close attention and direction of the Government and the State Bank of Vietnam, with the rapid technological development, while the promulgation of regulations The law is not velocious but requires a certain period of time, so it has partly affected the development of digital banking. For example, the digital payment segment has developed for many years, but the legal writings for this activity were only issued by 2020 through Circular No. 16/2020/TT-NHNN; Circular No. 09/2020/TT-NHNN.

Secondly, the investment cost for digital technology is large with today's rapid technological development, the technology that was born in a very short time has been replaced by new and more modern technologies. Therefore, in order to adapt to the development of new technology, the banking system must regularly upgrade, improve, maintain, and innovate technology to meet competition, which puts great pressure on financial resources. For banks, especially small and medium sized banks, the financial pressure will not be small. This is also one of the challenges for commercial banks.

Thirdly, the limitation in human resources, especially human resources in the field of information technology. Digital banking operations need high-quality human resources, especially information technology staff. Meanwhile, according to the statistics of recruitment channels, the current recruitment demand of the information technology industry in Vietnam has increased 4 times, in which the software development industry has always achieved double growth, accounting for more than 50% of the recruitment demand of the entire information technology industry. This is also a group of industries with high-quality intellectual human resources, including a collection of engineers in multi-functional management software solutions, programming engineers, information security...

Fourthly, difficulties in customer information security. It can be affirmed that digital banking brings a lot of conveniences to customers and banks, but besides that, it also has to face the problem of personal information security, when customers and banks are always the target. of high-tech crime. In reality, there are many cases where customers use the service incorrectly and unmatched with the instructions, or fake information leads to being deceived and taken advantage of by crooks to appropriate money in their accounts.

Fifthly, the habit of using cash is still popular. Digital banking services are used quite a lot in urban areas. But the habit of using cash is still quite common, especially in rural areas. Therefore, changing people's consumption habits also poses many challenges to the digital transformation process of Vietnamese banks.

2.6. Factors Influencing the Development of Electronic Banking Services in Commercial Banks

2.6.1. Research Model and Hypotheses

The factors influencing the development of electronic banking services in commercial banks in this study are based on the following primary references:

Trust: Research by Nguyen Dinh Tho (2007), Nguyen Thi Hang Nga (2012), Parasuraman & colleagues (1988), Pikkarainen and colleagues (2004), Nguyen Thi Khanh (2020).

Employees: Research by Nguyen Thi Hang Nga (2012), Gronroos (1984), Ihab Ali El-Qirem (2013), Luis V. Casaló and colleagues (2008), Nguyen Thi Khanh (2020).

Information Security: Research by Sohail and Shanmugham (2003), Pikkarainen and colleagues (2004).

Service Products: Research by Nguyen Thi Hang Nga (2012), Gronroos (1984), Pikkarainen and colleagues (2004), Muhammad Rizwan and colleagues (2014), Nguyen Thi Khanh (2020).

Technology System: Research by Nguyen Thi Hang Nga (2012), Gronroos (1984), Pikkarainen and colleagues (2004), Ihab Ali El-Qirem (2013), Luis V. Casaló and colleagues (2008), Nguyen Thi Khanh (2020).

Marketing and Customer Care: Research by Nguyen Thi Hang Nga (2012), Gronroos (1984), Ihab Ali El-Qirem (2013), Muhammad Rizwan and colleagues (2014), Nguyen Thi Khanh (2020).

These six influencing factors are represented in the proposed research model as follows:

Figure 01: Proposed Research Model

Trust (TC)	H1
Employee Service Capability (NV)	H2
Information Security (BM)	H3
Electronic Banking Service Products (SPDV)	H4
Technology System (CN)	H5
Marketing and Customer Care (MC)	H6

Development of Electronic Banking Services (PTDV)

Source: Proposed by the author

Based on the proposed model, the research hypotheses are as follows: Hypotheses H1, H2, H3, H4, H5, H6 all have a positive relationship with the development of electronic banking services in commercial banks.

2.6.2. Research Methods and Data

The study employs research methods including Exploratory Factor Analysis (EFA) and Multiple Linear Regression Analysis to determine the factors influencing and their degree of impact on the development of electronic banking services in commercial banks.

The data used in the study were collected from a survey of 179 customers who are using electronic banking services provided by commercial banks in Hanoi, Ho Chi Minh City, and several provinces and cities. In the survey questionnaire, the research proposes a measurement scale for six factors influencing the development of electronic banking services, comprising 29 variables. These variables are measured on a 5-point Likert scale with the following levels: (1) Strongly Disagree; (2) Disagree; (3) Neutral; (4) Agree; (5) Strongly Agree.

2.6.3 Research Results and Discussion

Research Results Statistical results of the surveys reveal:

Table 1: Statistical Results of Customer Profiles

Indicator	Quantity (People)	Percentage (%)
Gender		
Male	83	46.37
Female	96	53.63
Total	179	100
Age Group		
Below 30 years old	57	31.84
30 to 50 years old	89	49.72
Above 50 years old	33	18.44
Total	179	100
Educational Background		
High School or Lower	62	34.64
College; University	117	65.36
Total	179	100
Occupation		
State Employees	44	24.58
Labor in Enterprises	35	19.55
Self-Employed	48	26.82
Other Occupations	52	29.05
Total	179	100

Source: Compiled from survey results

Continuing with the assessment of the reliability of the measurements based on the Cronbach's Alpha coefficient, the results indicate that the measurements of both the dependent and independent variables used in the model all meet the requirement with Cronbach's Alpha coefficients greater than 0.6. This demonstrates the consistency and reliability of the measurements.

The results of the exploratory factor analysis show that the Kaiser-Meyer-Olkin (KMO) value is 0.894, which is greater than 0.5, and the Bartlett's test has a Sig. value < 0.05. Seven factors were extracted, all with Eigenvalues greater than 1. The total variance explained by the six factors is 74.59%, exceeding 50%, and the factor loading values in the rotation matrix meet the condition of > 0.5. This indicates that the results of the exploratory factor analysis are appropriate, and the measurements or observed variables are convergent and discriminant, making them suitable for regression analysis.

Table 2: Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	0.257	0.225		1.143	0.254		
TC	0.178	0.056	0.200	3.176	0.002	0.531	1.883

NV	0.143	0.060	0.152	2.383	0.018	0.522	1.915
BM	0.118	0.057	0.123	2.060	0.041	0.596	1.677
SPDV	0.149	0.054	0.171	2.771	0.006	0.552	1.811
CN	0.126	0.059	0.129	2.149	0.033	0.583	1.716
MC	0.235	0.053	0.243	4.411	.000	0.695	1.439
$R^2 = 0.592$							
Adjusted $R^2 = 0.579$							
Probability value of the F-statistic F = .0000							
Durbin-Watson statistic (d) = 1.823							

The source: Results of data processing using SPSS 26.0

Table 2 shows that the adjusted R-squared coefficient of the model has a value of 0.579, which means that the 6 independent variables in the model explain 57.90% of the variation in the dependent variable. The Sig. value of the F-test is < 0.05, indicating that the regression model is statistically significant and appropriate for the research data.

All six independent variables in the model have a linear relationship with the dependent variable, with Sig. values of the variables in the t-test all < 0.05, and the Beta coefficients of the variables are all positive. This indicates that all factors have a positive influence on the dependent variable. The results of the regression model show that all 5 research hypotheses are accepted.

Regression equation:

PTDV= 0.200*TC+ 0.152*NV+ 0.123*BM+ 0.171*SPDV+ 0.129*CN+ 0.243*MC

From the regression results presented in Table 1, the level of influence of the six factors on the decision to use electronic banking services is statistically significant in descending order as follows: Marketing and Customer Care (Standardized Beta = 0.243), Trust (Standardized Beta = 0.200), Electronic Banking Service Products (Standardized Beta = 0.171), Employee Service Capability (Standardized Beta = 0.152), Technology System (Standardized Beta = 0.129), and Information Security (Standardized Beta = 0.123).

* Discussion of Research Results

Based on the theoretical framework of electronic banking, electronic banking services, electronic banking development, and the research of Shorabi and colleagues (2013) and Grandon and Pearson (2004), six influencing factors and the observed variables for each factor were preliminarily constructed to measure the level of influence on the development of electronic banking services.

The results of the exploratory factor analysis extracted six factors with 28 observed variables, excluding the variable NV4 due to its factor loading coefficient being less than 0.5, along with three variables measuring the development of electronic banking services.

"Trust" has a beta coefficient of 0.200, indicating that a one-unit change in trust will result in a 0.200-unit increase in the development of electronic banking services, with other variables held constant. Customers believe that ensuring trust and the bank's credibility, as well as addressing customer inquiries and service requests, are crucial for the development of electronic banking services.

"Employee Service Capability" is a factor with a beta coefficient of 0.152, showing a significant impact on the development of electronic banking services in commercial banks. It indicates that a one-unit change in employee service capability will lead to a 0.152-unit increase in the development of electronic banking services when other variables remain constant. This factor includes variables related to employee attitudes, professional competence, appearance, etc. Human factors always require high standards. When employees display good attitudes, professionalism, and appropriate appearance, they are evaluated as having good service capabilities. In addition to professional knowledge, customers also demand employee qualities related to attitude and appearance.

"Information Security" is a factor with the lowest beta coefficient of 0.123 among the six factors analyzed. In the era of online banking, with the advancement of technology, information on the internet is vulnerable to theft, and personal account information is at risk of exposure. Therefore, customers have high expectations for information security, including account protection, security features, and prevention of account information theft, especially when using online electronic banking services.

"Service Products" is a factor with a beta coefficient of 0.171. When customers use electronic banking services, they expect a variety of service products and fee structures. The availability of diverse services and the fees associated with them influence customers' ease of use. In the current era, banks must compete by introducing new service products to the market with unique features and benefits to attract customer interest and usage.

"Technology System" is a factor with a beta coefficient of 0.129 after normalization. It is a factor that positively impacts the development of electronic banking services. This indicates that a one-unit change in the technology system will result in a 0.129-unit increase in the development of electronic banking services when other variables are held constant.

"Marketing and Customer Care" is a factor with the highest beta coefficient of 0.243 among the six factors, indicating the most significant impact on the development of electronic banking services. A one-unit change in marketing and customer care will lead to a 0.243-unit increase in the development of electronic banking services when other variables are held constant. This underscores the importance of marketing and customer care in driving the growth of electronic banking services.

2.7. Solutions recommended to develop e-banking services in the current digital economy

According to the current situation of e-banking service development in Vietnam, the author proposes some solutions to develop e-banking services in the digital economy, in specific:

Firstly, developing information technology, improving the level of modernization of banking technology constantly, applying new technologies to increase competitiveness, focusing on private and network security. Banks must concentrate on investing, researching and applying the most advanced security technologies in their e-banking services to create trust-worthiness for customers when using the services.

Secondly, the infrastructure and technical facilities need to be upgraded so that the implementation of e-banking services can become more feasible in non-urban regions, especially in remote areas, .., and even the international market.

Thirdly, if the e-banking services want to develop sustainably, three important factors should be combined: users (customers) - especially, customers' decisions to use e-banking services, service providers (e.g. banks) and environmental factors.

Fourthly, diversifying products, creating outstanding differences of products. When providing new services, the commercial banks must focus on customer participation, placing customers at the center of all services. At the same time, continuously innovate and diversify products and services of e-banking to attract customers, constantly improve the quality of products and services to satisfy customers' needs as well as ensure the implementation of commitments about the services provided.

Fifthly, paying special attention to customer care policy. Set up an online customer care department to advise and answer customers' questions 24 hours a day, and collect feedback from customers. Timely assessment of customer information and opinions contributing to improve the service quality and meet the increasing demands of customers.

Sixthly, banks need to actively invest in research and development, human resources, and develop specific and clear marketing strategies to promote the bank's images and enhance their brands.

Seventhly, simplification, that is, making everything easy to use is the most basic way for banks to win the hearts of online savings customers. The products themselves should be simple, the registration process for a product should be uncomplicated, but still ensure the necessary security and confidentiality.

3. CONCLUSION

Through analyzing the current situation, pointing out opportunities and challenges for the development of e-banking services in Vietnam, as well as through surveying customers using e-banking services, analyzing results from SPSS show factors affecting e-banking services. The author has proposed seven solutions to promote the development of e-banking services in Vietnam, including: Developing the information technology; attaching special importance to grow the infrastructure; combining the customers, suppliers and environmental factors; diversifying products; promoting the customer support and care policies; promote investment in human resource training and develop specific and clear marketing strategies; Simple process packaging to make it easy for customers to use and uncomplicated for consultants to advise. In order to implement these solutions, the close attention and direction from the Government, Ministries, Departments are necessary and most importantly, the focus on the banks themselves in the system are needed. Strong internal force will promote the strengths and limit the weaknesses. With this study, the author wishes to contribute to the development of e-banking services in the current digital economy era and to help e-banking services reach everywhere in all parts of the country.

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IMPACT OF SUSTAINABLE BOND ISSUANCE IN LATIN AMERICAN AND CARIBBEAN COUNTRIES: LESSONS FOR VIETNAM

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Abstract: *In this study, we delve into the correlation between the issuance of Green, Social, and Sustainability (GSS) bonds and the economic growth trajectories of countries within the Latin American and Caribbean (LAC) region. By analyzing variables such as the "Green Bond Issuance to Total Bond Issuance" ratio and the "Planned Sovereign Green Issuance", coupled with several pertinent economic and governance indicators, insights were derived using multiple linear regression techniques. Our findings elucidate that there is a positive correlation between certain variables, notably the planned sovereign green issuance and the private credit to GDP ratio, and economic growth. On the other hand, a more robust rule of law index displayed a negative correlation, suggesting an inherent trade-off between stringent legal adherence and economic efficiency. The primary datasets for this research were sourced from the Sustainable Banking Network (SBN) and the 2019 report from the International Finance Corporation (IFC). The period of 2016-2019 was earmarked for economic growth analysis, intentionally sidelining the anomalous economic patterns of 2020, attributed to the COVID-19 pandemic. Given the burgeoning importance of sustainable financing mechanisms in the global landscape and Vietnam's rapidly evolving economic ecosystem, the learnings from the LAC region present invaluable lessons. The key recommendations for Vietnam, based on our findings, are to foster the growth of GSS bonds, amplify private credit, and to cultivate a well-balanced legal framework, all essential for achieving sustainable economic growth..*

Keywords*: Sustainable Bond Issuance,Latin American and Caribbean (LAC),Green, Social, and Sustainability (GSS) bonds,Economic growth, Sustainable Banking Network (SBN), International Finance Corporation (IFC)*

1. INTRODUCTION

In recent years, the global financial ecosystem has witnessed a marked shift towards sustainable and responsible investments. At the heart of this transformation lies the concept of Green, Social, and Sustainability (GSS) bonds — financial instruments designed not only to raise capital but also to deliver positive environmental and social outcomes. With a worldwide emphasis on combating climate change, mitigating social disparities, and fostering sustainable growth, the adoption and issuance of GSS bonds have become a focal point for both developed and emerging economies.

The Latin American and Caribbean (LAC) region, characterized by its rich biodiversity, cultural heritage, and a blend of emerging economies, presents a unique canvas for studying the dynamics of sustainable bond issuance. While countries within the LAC domain are diverse in terms of their economic structures, political frameworks, and development trajectories, they share common challenges such as environmental degradation, social inequalities, and the need for sustainable economic growth. Therefore, understanding the implications of GSS bond issuances in this region provides not just regional but also global insights.

Vietnam, as an emerging economy in Southeast Asia, has been making significant strides in its economic development. However, like many developing nations, Vietnam grapples with challenges that intersect the domains of economic progress, environmental sustainability, and social equity. This makes the lessons from the LAC region particularly relevant. Drawing parallels

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between the LAC nations and Vietnam can offer a roadmap for integrating sustainable financial instruments into Vietnam's broader economic strategy.

In this study, we aim to dissect the relationship between GSS bond issuances and economic growth in the LAC countries. By doing so, we endeavor to provide a comprehensive understanding of the key drivers, challenges, and opportunities associated with sustainable bond issuances, with a special focus on deriving actionable insights for Vietnam. Drawing insights from the Latin American and Caribbean (LAC) region for Vietnam can be justified by several scientific considerations:

- Experience and Progression:

The LAC region has undergone economic and societal shifts that many developing countries, including Vietnam, might encounter. By learning from their experiences, Vietnam might sidestep potential pitfalls and capitalize on opportunities.

- Environmental Context and Economic Characteristics:

Both the LAC and Vietnam possess abundant natural resources and grapple with the challenges of advancing economically without detrimentally impacting the environment.

- Future Preparedness:

The LAC has made notable strides in sustainable bond issuances, garnering significant international investor attention. Vietnam can extrapolate from these experiences to prepare for a future where it might wish to issue sustainable bonds at scale.

- International Organizations and Support:

Numerous international entities have assisted the LAC in developing sustainable bonds. Drawing insights from the LAC could provide Vietnam with a better understanding of how to leverage such support.

- Diversification:

By referencing experiences from a region distinct from its own, Vietnam can acquire a more diversified perspective on the matter, thereby informing decisions based on a broader informational foundation.

In summary, turning to the LAC region as a reference for Vietnam can offer invaluable lessons regarding the approach and execution of sustainable bond strategies within its economic and environmental contexts.

2. LITERATURE REVIEW

The domain of sustainable finance, particularly the role and implications of Green, Social, and Sustainability (GSS) bonds, has garnered significant scholarly attention in the recent decade. This review aims to provide a succinct overview of the prevailing literature, charting the evolution of GSS bonds, their impact on economic growth, and their relevance in different regional contexts.

The burgeoning field of green finance has drawn the attention of both academia and industry, generating a plethora of research that delves into the intricacies of investments promoting environmental sustainability. This literature review aims to provide a panoramic view of the key insights and debates prevalent in the domain, with a particular emphasis on the evolution, impact, and challenges of Green, Social, and Sustainability (GSS) bonds.

2.1. Global Perspective on Green Finance

Yoshino et al. have painted a rather concerning picture of the global investment landscape when it comes to renewable energy and energy efficiency. Their study reveals a noticeable reduction in global investments geared towards these green avenues. One of the reasons postulated for this trend is the heightened attention financial institutions pay to fossil fuel projects, due to the perceived risks and lower returns associated with green technologies. This not only endangers energy security but also jeopardizes the broader objectives related to climate change mitigation and greenhouse gas emission reductions.

2.2. Birth and Evolution of GSS Bonds

Green bonds, which later diversified to encompass social and sustainability aspects (collectively denoted as GSS bonds), marked the inception of a significant paradigm shift in the financial world. These instruments originated from the aspirations of a group of Swedish pension funds aiming to invest in climate-conservative projects. Their collaboration with the World Bank in 2007 culminated in the issuance of the world's first green bond a year later . These bonds served as a conduit, bridging the gap between climate projects and investor financing.

The distinctive feature of these bonds is their dual appeal: they offer liquid fixed income assets and cater to investors with a heightened social consciousness who are keen on supporting green initiatives.

2.3. Classification and Growth of GSS Bonds

The Climate Bonds Initiative has been instrumental in tracking the global trajectory of these bonds. Their extensive reports have categorized these bonds into green, social, and sustainability sectors. The growth, however, has been uneven, with some regions showing more enthusiasm than others.

2.4. Focus on the Latin American and Caribbean (LAC) Region

The LAC countries present an interesting case study in the GSS bonds narrative. Fourteen nations from this region, as of 2020, have aligned themselves with the sustainability objectives endorsed by the UN, venturing into the capital market through the issuance of GSS bonds. This paper primarily revolves around analyzing the impact of these issuances on the economic growth of these countries, alongside addressing the limitations they face and distinguishing between sustainable and unsustainable bonds.

2.5. Research Linking GSS Bonds and Economic Growth

Despite the global interest in GSS bonds, there is a relative dearth of comprehensive studies that explore their direct relationship with economic growth. This paper seeks to fill this gap, especially focusing on the LAC countries, providing empirical evidence to shed light on this pivotal relationship.

- The concept of "green bonds" first emerged in the mid-2000s, with the European Investment Bank introducing the world's first labeled green bond in 2007 (Kidney, 2015). Zerbib (2019) outlined how these instruments rapidly gained traction, evolving from merely environmental concerns to encompass broader social and sustainability goals, thus giving birth to GSS bonds.

- Several studies have examined the economic benefits of sustainable bond issuances. For instance, Flammer (2018) observed that companies issuing green bonds witnessed a positive stock market reaction, indicative of the market's appreciation of sustainable initiatives. On a macro level, Ehlers and Packer (2017) highlighted how GSS bonds can play a pivotal role in financing infrastructure projects, subsequently stimulating economic growth.

- Focusing on the LAC region, Perez (2020) detailed how the region, with its unique set of environmental and socio-economic challenges, has turned to GSS bonds as a vehicle for sustainable development. Similarly, studies by Garcia and Torre (2018) emphasized the role of governance and institutional frameworks in the LAC region in influencing the uptake and impact of GSS bonds.

- A strand of literature has also explored the intricate relationship between governance structures and the efficacy of GSS bonds. A key finding from studies like Visser (2019) is that nations with robust governance mechanisms tend to derive greater benefits from GSS bond issuances, both in terms of economic growth and sustainable outcomes.

- Given the rising importance of developing economies in the global landscape, studies like Lee and Nguyen (2021) have pivoted towards analyzing the role of GSS bonds in these contexts. These studies underscore the dual benefits such bonds offer to developing nations: capital for growth and a framework for sustainable development.

- Considering the cross-regional relevance of sustainable finance, scholars like Rodriguez and Tellez (2022) have begun to draw lessons from one region (like LAC) and extrapolate them to others (like Southeast Asia). These comparative analyses serve as valuable blueprints for nations like Vietnam, looking to integrate GSS bonds into their financial landscape.

3. GREEN, SOCIAL, AND SUSTAINABILITY BONDS

3.1. Global GSS Bond Issuances

Global GSS Bond Issuances

The emergence and rapid growth of Green, Social, and Sustainability (GSS) bonds reflect the global financial market's heightened awareness and commitment towards a sustainable future. These bonds have not only provided a new dimension to financing but have also opened doors for diverse investors who prioritize social and environmental returns alongside financial gains.

1. Historical Overview

GSS bonds made their debut in 2007 when a coalition of Swedish pension funds collaborated with the World Bank to issue the very first green bond. This pioneering initiative marked the genesis of a financial instrument dedicated explicitly to addressing climate change and other sustainability challenges. Since then, the market for GSS bonds has exhibited exponential growth, transcending geographical boundaries and encompassing a vast array of sectors.

2. Classification and Market Expansion

The GSS bond market has evolved into a multifaceted entity over the years. The Climate Bonds Initiative has been instrumental in classifying these bonds into three distinct categories:

Green Bonds: Primarily aimed at environmental projects, these bonds finance endeavors that directly contribute to mitigating climate change, preserving biodiversity, and ensuring sustainable water and land use.

Social Bonds: These bonds fund projects that cater to specific social objectives, such as affordable housing, education, and healthcare, thereby addressing various social inequalities.

Sustainability Bonds: A hybrid of the above two, sustainability bonds finance projects that have both environmental and social benefits.

The global demand for GSS bonds has surged, with issuance reaching new records year after year. This trend signifies not just an appetite for sustainable investments but also a shift in the global consciousness towards a more responsible and resilient financial system.

3. Regional Dynamics

While GSS bond issuances have been a global phenomenon, certain regions have been more active than others. Europe has been at the forefront, followed closely by North America and Asia-Pacific. The Latin American and Caribbean (LAC) region, although a newer entrant, has shown promising growth potential, especially with the alignment of several countries to the sustainability objectives endorsed by the UN.

4. Sectoral Spread

The GSS bond market, initially dominated by multilateral development banks, has now expanded to include municipalities, corporations, and even sovereigns. Different sectors, ranging from renewable energy and transportation to agriculture and infrastructure, have tapped into this financing mechanism, underscoring its universal appeal and versatility.

5. Challenges and Opportunities

Despite the remarkable growth, the GSS bond market is not without its challenges. Issues related to transparency, standardization, and impact measurement have often been raised. However, with continual innovation, collaboration, and regulatory support, the GSS bond market holds immense potential to reshape global finance in line with the sustainability objectives of the 21st century.

The issuance of sustainable bonds was a response to the existence of polluting nations, thus giving rise for more than a decade to the commitment to ecological projects through the acquisition of sustainable bonds. Specifically, the global green bond market had its beginnings in 2007 when multilateral development banks raised funds for projects aimed to safeguard the climate. The first to enter this market, creating specific lists of green bonds, were the Scandinavian Stock Exchange and the London Stock Exchange, whilst the first green-type operation took place in Luxembourg with the European Investment Bank (EIB)

The World Bank set down the foundations of green bonds in a work coordinated by the International Association of Capital Markets (ICMA), also highlighting the social value of such bonds and their transparency. With all this, the World Bank issued the first green bond in 2008, linking the need for financing by investors with those projects seeking to protect the climate .

Since 2008, bond issuances have increased rapidly in size and coverage. The total amount of this market reached more than USD 550 billion in 2019. Figure 1 shows the cumulative amounts of issuances in Europe and the LAC region. According to the Climate Bonds Initiative , until 2020 the issue of GSS bonds is supposed to be USD 700,000 million, almost twice as much as in 2019 (USD 358,000 million). Likewise, ac- cording to the Climate Bonds Initiative, the sustainable bond market, at the end of 2020, reached USD 1.7 trillion, and almost 10,000 instruments were issued under the denomination GSS bonds since 2007. Figure 2shows the size of the market according to the type of bonds and Figure 3 shows the numbers of issuers and instruments during 2020.

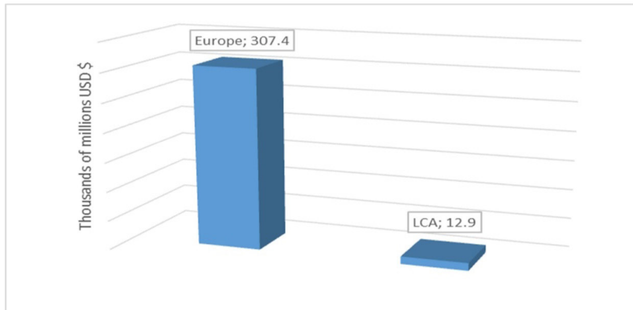

Figure 1. Cumulative issuance of sustainable bonds in Europe and the LCA region from 2019.

Source: Own elaboration based on

Figure 2. Cumulative size of GSS bond markets (December 2020). Source: Own elaboration based on

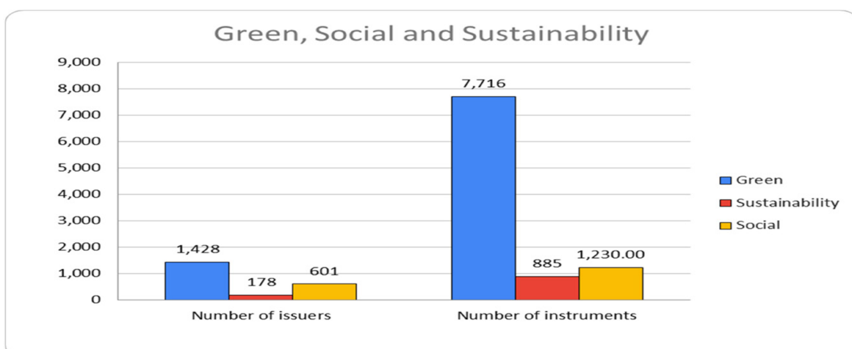

Figure 3. Cumulative number of GSS bond issuers and instruments (December 2020). Source: Own elaboration based on

3.2. GSS Bond Issuances in the LAC Region

In the LAC region, GSS bonds are a financial instrument with great potential given the increasing need for financing for the management of forests and hydrographic basins, and for infrastructures. This allows facing the damages caused by the climate change, by also increasing its transparency to attract investors.

In 2014, the first GSS bond issue was launched by Peru and, by 2020, there were twelve countries in this region issuing those bonds: Barbados, Mexico, Colombia, Ecuador, Peru, Chile, Argentina, Brazil, Panamá, Guatemala, Uruguay, and Costa Rica. Table 1 shows the cumulative amounts issued by these countries until December 2020.

Table 1. GSS bonds issued until December 2020 in the LAC region. Source: Own elaboration based on

Country	Number of Bonds	Number of Issuers	Amount Issued (in Millions of USD)
Argentina	4	3	610
Brazil	28	25	8260.30
Chile	10	3	9278.00
Colombia	3	3	332
Costa Rica	1	1	500
Ecuador	3	3	670
Guatemala	1	1	500
Mexico	12	9	4858.30
Panama	1	1	263
Paraguay	1	1	300
Peru	3	2	804
Supranational	9	4	2742.00
Total	76	56	29,117.60

Chile is the dominant country in the LAC region, representing 31.86% of total regional issuances, followed by Brazil with 28.37% and México with 16.69%. In the subsequent positions, we can find Peru, Argentina, Costa Rica, Colombia, and Uruguay, with partici- pation between 2.76% and 0.90%. The other three countries have a share of less than 1% (Figure 4). According to the number of issued bonds, the distribution is more fragmented; however, Brazil (37%), Chile (10%), and México (12%) keep the first places in the rank of the LAC countries.

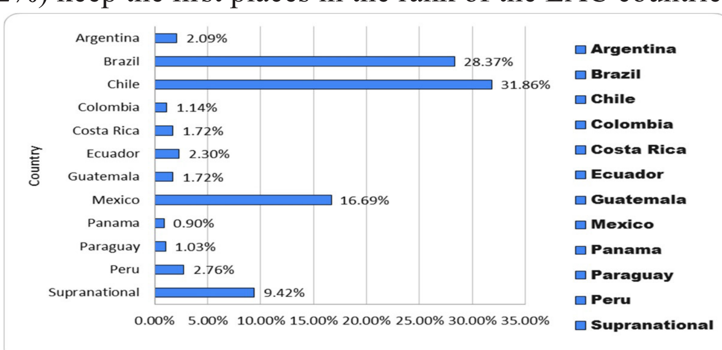

Figure 4. Share (%) of bond issuances in the LAC region. Source: Own elaboration based on

Figure 5 shows the use of the funds coming from GSS bonds, by type of project, high- lighting the relevance of renewable energies (44%), followed by those projects destined for the use of land and transportation. Renewable energies, as well as sustainable construction and transport projects, are the ones that make the most use of the resources obtained by the bonds at an international level.

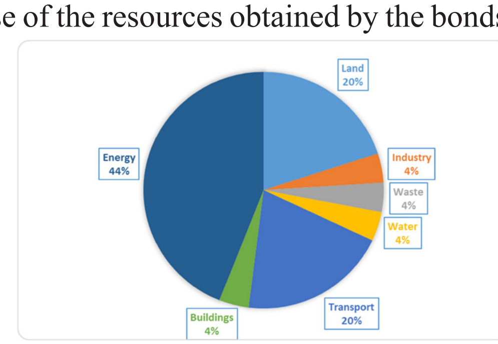

Figure 5. Use of GSS funds by type of project. Source: Own elaboration based on

Sustainable bonds in the LAC region have increased by 60% until June 2021. In spite of the impact of the COVID-19 pandemic, the LAC sustainable debt market continued to soar throughout 2020 and 2021. Thus, the total GSS issuance amounted to 16.3 bn in 2020. Table 2 shows the amount of GSS debt issued (in USD bn), number of issuers, and number of instruments.

Table 2. LAC sustainable debt market. Source: Own elaboration based on.

Country	Amount of GSS Debt Issued USD (bn)	% of LAC GSS Bond Market	Number of Issuers	Number of Instruments	% Benchmark insuance by Amount	Average Instrument Size USD (m)
Chile	17.800	36.60%	18	33	76%	540
Brazil	11.700	24.10%	53	90	30%	130
Mexico	7.800	16.00%	21	44	20%	181
Peru	1.200	2.40%	7	10	0%	118
Argentina	1.300	2.60%	11	13	0%	97
Guatemala	1.200	2.40%	1	2	58%	600
Bermuda	0.800	1.60%	2	2	88%	400
Colombia	1.300	2.70%	9	16	0%	80
Costa Rica	0.554	1.10%	3	3	0%	185
Uruguay	0.376	0.80%	2	3	0%	125
Panama	0.380	0.80%	4	13	0%	29
Ecuador	0.570	1.20%	3	3	0%	190
Barbados	0.090	0.02%	1	2	0%	4
Supranational	3.530	6.90%	3	12	47%	281
	48.60		138	246		

As formerly indicated, in the LAC area there are some countries that have made significant progress in relation to others such as Chile, Brazil, and Mexico, which have carried out projects aiming at sustainable development programs and its outlined objectives. However, there are other countries presenting certain drawbacks, called barriers. We can highlight (a) lack of knowledge and capacity development, (b) difficulties in identifying and creating green portfolios, and (c) lack of standardized monitoring mechanisms. Table 3 shows the barriers and progress made in the issuance of GSS bonds in the LAC countries.

As a solution to the expansion of the GSS bonds market in the LAC region, the management of development banks is required, through the structuring and evaluation of the projects to which the resources obtained by GSS bonds are going to be assigned, with the respective certifications, impact evaluations, and other types of internal and external reports [18–20]. Figure 6 shows the progress percentages of green financing with the management of development banks in the countries of the LAC region. It should be noted that, since 2016, the IDB group has given its support, strengthening the green capital market in the region and supporting more than 30% of issuances in terms of volume. Among some countries, we can cite Chile, México, and Ecuador.

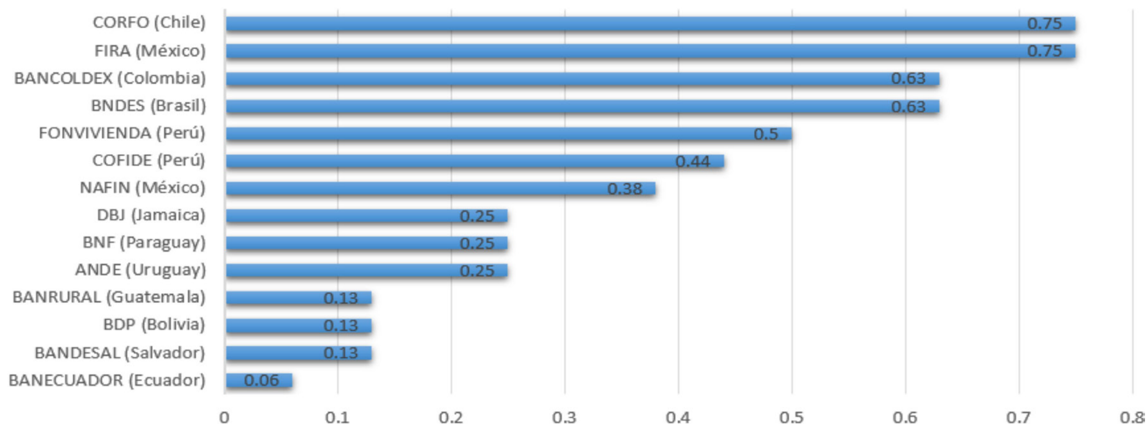

Figure 6. Development banks in the LAC region and progress in the green financing process. Source: Own elaboration based on].

Researching the impact of certain macroeconomic factors on the Financial Market in general and the Corporate Bond Market (CBM) in particular is not only necessary but also highly beneficial. It contributes to formulating solutions to address potential negative impacts stemming from macroeconomic factors on the CBM, and it aids in developing the CBM in alignment with the economic context. In recent years, this issue has garnered substantial attention from financial researchers. This study presents foundational theories that explore the relationships between macroeconomic factors and the financial market as a whole, with a specific focus on the Corporate Bond Market. The objective is to shed light on the intricate dynamics between these macroeconomic variables and the CBM, aiming to provide insights into potential avenues for mitigation and development.

6.3. Variables

In our analysis, we hypothesize that the economic growth of the countries in the LAC region is related to the volume of issuances of green bonds. To test this hypothesis, we are going to apply multiple linear regression. Therefore, we have to test the following contrast:

$$H_0: \gamma = \beta_0$$

$$H_1: \gamma = \sum_{k-1}^{n} \beta_k X_k + \varepsilon$$

where ε is the error term, by considering the following variables:

X1: "Green Bond Issuance/Total Bond Issuance", defined as the percentage of issuance of green bonds with respect to the total issuance during the period 2018–2019;

X2: "Sovereign Green Issuance: Total Planned";

X3: "Private Credit/GDP", defined as the ratio of financial resources provided to the private sector by financial institutions;

X4: "Market Capitalization" (in USD billion);

X5: "Political Risk Rating";

X6: "Regulatory Quality";

X7: "Rule of Law Index", which is a quantitative assessment of the extent to which countries are adhered to the rule of law and can be interpreted as the degree of compliance of a legal system;

Y: “Economic Growth”.

A summary of the just-defined variables, divided into explanatory and explained, can be seen in Table

Table 8. Defining the variables to be considered in the analysis.

	Explained Variable
Y	Economic growth
	Explanatory Variables
X_1	Green Bond Issuance/Total Bond Issuance
X_2	Sovereign Green Issuance: Total Planned
X_3	Private Credit/GDP
X_4	Market Capitalization
X_5	Political Risk Rating
X_6	Regulatory Quality
X_7	Rule of Law Index

	Explained Variable
Y	Economic growth
	Explanatory Variables
X_1	Green Bond Issuance/Total Bond Issuance
X_2	Sovereign Green Issuance: Total Planned
X_3	Private Credit/GDP
X_4	Market Capitalization
X_5	Political Risk Rating
X_6	Regulatory Quality
X_7	Rule of Law Index

The values of Y have been deduced from the figures of the GDP corresponding to the years 2018 and 2019 (see Table 9).

Table 9. Values of the explained variable used in the regression. Source: Own elaboration.

Country	GDP 2018	GDP 2019	GDP Variation (%)
Argentina	2.50	(1.80)	(1.72)
Barbados	0.80	0.10	(0.88)
Brazil	2.20	1.40	(0.36)
Chile	3.90	2.80	(0.28)
Colombia	2.60	3.30	0.27
Costa Rica	3.40	2.50	(0.26)
Ecuador	2.00	0.20	(0.90)
Honduras	4.10	3.50	(0.15)
Mexico	2.30	1.00	(0.57)
Panamá	5.60	4.90	(0.13)
Paraguay	3.40	1.60	(0.53)
Peru	4.00	3.20	(0.20)
Dominican Republic	5.00	5.50	0.10
Uruguay	1.62	0.30	(0.81)

The symmetric matrix in Table 10 shows the correlations between the explained and explaining variables used in our model.

Table 10. **Matrix of correlations of the independent variables.**

	Y	X_1	X_2	X_3	X_4	X_5	X_6	X_7
Y	1.0000	0.0998	0.3961	0.5492	0.1361	0.1590	-0.0888	-0.0121
X_1	0.0998	1.0000	0.5221	0.3714	0.5401	0.5988	0.4839	0.7298
X_2	0.3961	0.5221	1.0000	0.1451	0.3687	0.4572	0.4951	0.3622
X_3	0.5492	0.3714	0.1451	1.0000	0.3518	0.0750	0.0689	0.4920
X_4	0.1361	0.5401	0.3687	0.3518	1.0000	0.0142	0.1500	0.4526
X_5	0.1590	0.5988	0.4572	0.0750	0.0142	1.0000	0.4039	0.5260
X_6	-0.0888	0.4839	0.4951	0.0689	0.1500	0.4039	1.0000	0.7272
X_7	-0.0121	0.7298	0.3622	0.4920	0.4526	0.5260	0.7272	1.0000

The correlation matrix shows some multicollinearity problems (e.g., X1 and X6 are highly correlated with X7). So, after five iterations where non-significant coefficients have been removed, the results of the regression are shown in Table 11.

Table 11. **Regression results. Source: Own elaboration.**

Variable Coefficient Standard t-Stat	Coefficient	Standard Error	t-Stat	p-Value	VIF
Constant	−1.3615 (***,**,*)	0.3569	−3.8153	0.0034	
X2	0.1689 (**,*)	0.0727	2.3239	0.0425	1.1529
X3	0.3327 (***,**,*)	0.0996	3.3412	0.0075	1.3215
X7	−0.2090 (**,*)	0.0893	−2.3399	0.0413	1.4890
Significance level: *** = 1%, ** = 5%, and * = 10%.					

The coefficient of determination R2 equals 0.6148 which means that the predictors (Xk) explain 61.5% of the variance of Y. On the other hand, the adjusted R2 equals 0.4993. Finally, the coefficient of multiple correlation equals 0.7841. It means that there is a strong direct relationship between the predicted data (Yˆ) and the observed data (Y). With respect to the goodness of fit, F(3,10) = 5.3205 and p-value = 0.0189. Since p-value < 0.05, we reject

7. DISCUSSION AND CONCLUSIONS

a.. Discussion

The significant impact of Green, Social, and Sustainability (GSS) bonds on the economic growth of Latin American and Caribbean (LAC) countries offers valuable insights into the transformative potential of sustainable financing. The research has thrown light on three fundamental aspects:

Maturity of Economies: The positive correlation between Sovereign Green Issuance and economic growth underscores the fact that economies mature as they transition towards sustainable financing. Such issuances are reflective of a nation's commitment to longer-term, holistic growth strategies that resonate with global sustainability goals.

Private Credit Multiplier Effect: The observed relationship between the ratio of Private Credit/GDP and economic growth attests to the multiplier effect that private credits introduce. As financial systems deepen and expand, they amplify the economic outcomes of sustainable investment, fostering resilience and inclusiveness.

Rule of Law and Growth: The inverse correlation between the Rule of Law Index and economic growth poses intriguing questions. While robust legal systems ensure fairness and justice, they might sometimes add layers of bureaucracy that potentially slow down economic processes. This stresses the importance of a balanced approach where governance is both just and efficient.

b. Lessons for Vietnam

Drawing from the LAC experience, several lessons emerge for Vietnam:

Embrace GSS Bonds: As Vietnam aims to attain higher growth trajectories, embracing GSS bonds can be a pivotal strategy. Not only does it attract global investment, but it also aligns the country's growth with global sustainability benchmarks.

Strengthen Financial Systems: Ensuring that the financial system is receptive to sustainable financing is vital. This involves enhancing financial literacy, creating regulatory frameworks that incentivize green investments, and fostering a culture of innovation in the financial sector.

Governance Reforms: While ensuring rule of law is paramount, it is equally vital to ensure that governance mechanisms are efficient. Streamlined processes, transparency, and accountability can go a long way in ensuring that sustainable financing translates into tangible economic growth.

c. Conclusions

The emergence and growth of GSS bonds in the LAC region represents more than just a new financial instrument; it symbolizes the melding of progressive economic strategies with the pressing need for global sustainability. This trend is particularly salient for nations like Vietnam, which are poised at critical junctures in their developmental trajectories. The potential of GSS bonds goes beyond simply providing sustainable finance. Instead, they bridge the divide between economic progress and environmental stewardship.

Vietnam, like many other nations, is faced with a dilemma: how to achieve rapid economic growth without compromising the environment and the well-being of future generations. GSS bonds provide an innovative solution, offering a means of securing funds for projects that simultaneously propel growth and ensure ecological balance.

However, the introduction of GSS bonds is not without its challenges. To truly harness their transformative power, it is essential for countries to not merely emulate the models seen in the LAC region but to adapt them to fit their unique socio-economic, political, and cultural landscapes. This means a thorough understanding of domestic challenges, opportunities, and stakeholder aspirations, ensuring that the implementation of GSS bonds is not just effective but also inclusive.

In the intricate web of 21st-century challenges, where economic, social, and environmental threads are deeply interwoven, GSS bonds emerge as a promising tool. They represent the confluence of visionary financial strategy and a global commitment to sustainability. With the right approach, GSS bonds can indeed guide nations like Vietnam towards a future where prosperity does not come at the expense of the planet.

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VIETNAM BANK FOR AGRICULTURE AND RURAL DEVELOPMENT PROMOTES ENTERPRISES TOWARDS GREEN PRODUCTION

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Abstract: *The green economic trend is an essential aspect of sustainable development. Like many countries around the world, Vietnam has been implementing various solutions to promote a green economy, with green production being a crucial component of its sustainable growth strategy. The bank plays a significant role as a vital funding channel, actively supporting enterprises in expanding their production, especially in green production. Therefore, the implementation of solutions by the banking sector, through green credit lines, to promote green production in enterprises is highly necessary. Based on practical experiences, this article examines the current status of the Agricultural and Rural Development Bank of Vietnam (Agribank) in promoting green production within green credit and other related fields. It aims to evaluate and provide recommendations for promoting green production within the bank.*

Keywords: *Agricultural and Rural Development Bank of Vietnam, green production, enterprises, sustainable development.*

1. INTRODUCTION

In line with the global development trends, green production is becoming one of the models that many businesses are aiming for to meet new requirements and align with the overall development trends of the world. Simultaneously, it enhances the position and competitiveness of enterprises both in domestic and international markets. Green production is a manufacturing process where inputs and outputs are environmentally friendly and pose no harm to human health. The banking sector, as a crucial funding channel, actively supports reprocessing and expansion activities to promote economic growth. Therefore, implementing solutions from the banking sector will guide credit investments towards environmentally friendly and green production projects. This is also a top priority action in the context of global climate change. Green credit not only assists businesses and projects in adhering to environmental and social standards but also has the potential to drive the development of green economic sectors and promote efficient resource and energy utilization.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

2.1. Theoretical Background

Green production, also known as sustainable production, is a method of producing goods and services with the primary goal of optimizing business efficiency while minimizing negative impacts on the environment and society. The objective of green production is to balance the economic, environmental, and social aspects of producing goods and services. Green production has become a significant trend in business and manufacturing to address climate change risks and natural resource preservation. It helps businesses and organizations promote sustainability in their operations and meet the growing customer interest in environmental and social issues. The key principles of green production include: (i) Resource Efficiency: Promoting the efficient use of natural resources such as water, energy, and chemicals to reduce waste and greenhouse gas

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emissions; (ii) Sustainable Products and Services: Creating sustainable products and services with high durability, easy reusability or recycling, and no harm to the environment or human health. (iii) Supply Chain Optimization: Optimizing the supply chain from suppliers to production and product transportation.

Promoting green production involves stimulating the transition towards green production, a concept in production and environmental management aimed at optimizing production processes and business activities to minimize negative impacts on the environment and society while enhancing business performance and efficiency. The primary goal of promoting green production is to strike a balance between producing essential products and services for humanity and protecting the natural environment.

Banks play a central role as significant financial intermediaries, often referred to as the lifeblood of an economy. Through their business activities, banks promote green production in businesses through various means:

Providing Funds for Green Production: Banks prioritize offering products such as loans, investments, or green credit to businesses with green objectives. This enables businesses to access capital at lower interest rates for investing in green projects and green production activities.

Favorable Interest Rate Policies: Banks can establish favorable interest rate policies for loans or credit that businesses use for green purposes, such as improving energy efficiency or reducing greenhouse gas emissions. Lower interest rates can make green production activities more attractive to businesses.

Green Advisory Support: Banks can offer advisory services on how to improve production operations to achieve green goals. This includes analyzing and assessing projects, processes, and environmental risk management.

Encouraging Energy and Resource Efficiency: Through credit activities, banks can encourage businesses to use funding or policies to invest in energy, water, material, and natural resource efficiency measures. This includes support for technology upgrades, resource management systems, and other resource-saving measures.

Building Partnerships with Green Organizations: Banks can collaborate with green organizations, researchers, and the government to create funding products and policies that support green production.

In summary, banks can influence green production activities in businesses by providing financing, favorable interest rates, advisory services, and assessments while promoting energy and resource efficiency. This helps drive the development and implementation of projects and production activities that have positive impacts on the environment and sustainability.

2.2. Related studies abroad

1. Chunji Zheng, Feng Deng, Chengfeng Zhuo (2022), *Green Credit Policy, Institution Supply and Enterprise Green Innovation*, Journal of Economic Analysis, Vol. 3 No. 3

Green credit policy (GCP) relies on financial means to promote environmental governance. Whether it can achieve the dual goals of economic development and environmental protection, especially in the context of different institution supply, remains to be scientifically tested. Further analysis finds that the supply of environmental protection system by local governments can strengthen the green innovation effect of GCP. However, the institution supply of innovation has not yet released a significant positive impact. In addition, the impact of GCP on green innovation of heavily polluting enterprises shows significant heterogeneity due to the differences in the types of green patents, the nature of enterprise property rights and the level of regional financial development. This paper analyzes the policy effect of green credit from the perspective of micro-enterprise green innovation, and brings the institution supply of local government into the analysis framework, so as to clarify the relationship between green credit and green innovation on the one hand. At the same time, it also provides inspiration for local governments to scientifically issue environmental protection policies.

2. Chengchao Lv [a], Jingfei Fan [a], Chien-Chiang Lee (2023), *Can green credit policies improve corporate green production efficiency?,* Journal of Cleaner Production Volume 397, 15 April 2023. This paper uses a double difference model to investigate the impact of green credit policies on green productivity of corporate from 2007 to 2020. It is found that the implementation of the Green Credit Guidelines can significantly improve the green production efficiency of heavy polluting enterprises. The implementation of the Green Credit Guidelines has a greater effect on the green production efficiency of enterprises among enterprises with smaller commercial credit financing scale and enterprises with lower capital use efficiency than other enterprises. The impact of the Green Credit Guidelines on state-owned enterprises, large-scale enterprises, and enterprises in the central and western regions is more obvious. And the implementation of the Green Credit Guidelines can affect the green production efficiency of enterprises through the financing scale effect and financing cost effect

2.3. Related studies in Vietnam

1. Nguyen Van Ha and Do Ngoc Ha (2019), *Green Banking and Green Tourism: Current Status and Recommendations,* Banking Science and Education Journal, Issue 211, December 2019. This study has highlighted the involvement of green banks in supporting green tourism in several ways:

Firstly, they have been developing environmentally-friendly products and services to promote green tourism, such as online services.

Secondly, they have been implementing internal green initiatives to improve the environment, thus supporting the growth of green tourism. Banks have started to build green headquarters to raise customer awareness of green banking activities.

Thirdly, they have been increasing the provision of green credit for the development of tourism. The Green Banks have "greened" their investment portfolios by increasing credit support for businesses in need of equipment and technology upgrades for energy efficiency, waste management, and other environmentally friendly activities.

2. Thu Trang (2022), *Promoting Green Credit, Green Banks Contributing to Green Growth and Sustainable Development*, Research and Exchange Forum, State Bank of Vietnam. Regarding the development of green credit in Vietnam. This is a top priority trend in the context of global climate change. Green credit refers to loans provided by the banking sector to support projects in production and business that do not pose risks to the environment or are intended to protect the environment and contribute to the overall ecological preservation.

3. According to Hoai Linh and colleagues (2022), *Decision-Making for Green Credit in Environmental Protection and Climate Change Adaptation:* Research on Factors and Recommendations.

Green credit is described as credit provided by financial institutions in the form of money with three distinct characteristics: Firstly, green credit is granted to projects in production and business that do not pose environmental risks. However, not all projects with "green" elements qualify for green credit, as banks have specific criteria. Secondly, green credit primarily utilizes funds mobilized from various societal sources, not solely from the bank's own funds. The capital used for green credit is referred to as green capital. Thirdly, the process of providing green credit involves the participation of multiple relevant agencies. Therefore, to encourage investors, the government supports through tax policies and commitments to stable outlets for businesses investing in environmentally prioritized projects. This includes offering long-term capital with favorable interest rates. [3]

3. RESEARCH METHODOLOGY

Statistical Method: This method is used to present data related to green credit balances, the structure of green credit in green production sectors, and green production projects funded by Agribank that are relevant to the research topic. The data is organized in a logical and scientific manner.

Comparison Method: This method is employed to compare green credit balances across different years, allowing for the proposal of solutions to increase green credit at the bank.

Analysis Method: The analysis method is used throughout the entire content of the article to clarify the role and mechanisms by which the bank's activities, particularly green credit activities, impact green production.

Synthesis Method: This method involves synthesizing data and information collected for each topic and presenting them systematically to serve the research process.

4. RESEARCH RESULTS

4.1. The Current State of Agribank promotes enterprises towards green production

In Vietnam, green production is an essential component of the country's move towards a green and sustainable economy. As part of the "Restructuring the Economy towards Sustainable Development" in the direction of green growth, the government has issued the National Strategy for Green Growth for the 2021-2030 period with a vision to 2050 (according to Decision No. 1658/QD-TTg, dated October 1, 2021, by the Prime Minister). In the government's strategy, credit institutions are considered important entities to channel investments into environmentally friendly and sustainable production activities, reducing risks for national sustainable development. With its primary function of providing capital to businesses, in recent years, banks have actively promoted green credit to encourage businesses to engage in green sectors.

The Vietnam Bank for Agriculture and Rural Development (Agribank) has gradually developed and emphasized various strategies to promote green production in Vietnamese businesses, with a particular focus on the expansion and enhancement of green credit. Recognizing the profound challenges facing Vietnam's agriculture sector due to climate change, Agribank is determined to take the lead in implementing the State Bank of Vietnam's direction to promote green credit for green production in Vietnamese enterprises. Specifically:

4.1.1. Providing Funding for Green Production:

Agribank, with 30 years of experience in providing credit capital in the rural financial market, deeply understands that sustainable development is the key to stable income for producers and reduces credit risks. Therefore, Agribank prioritizes credit for safe, efficient, sustainable agricultural development that protects the environment. Agribank has issued documents on promoting green credit growth, policies for environmental and social risk management in Environmental and Social Credit Governance (ECG) operations, and ESG policies in the bank's operations. The purpose is to guide the entire system, research and improve credit policy mechanisms related to environmental and social management, training, communication, and increasing awareness of green credit activities, as well as promoting efficient use of energy and resources. In the credit process, Agribank's credit notebooks always include project assessments and loan purposes related to environmental, social, and environmental impact assessments approved by competent authorities in accordance with the law. Agribank firmly rejects credit for projects that have significant and serious environmental and social impacts. Therefore, Agribank has provided a significant amount of green credit, contributing to the promotion of green production in Vietnam.

** Green credit balance at Agribank in the 2020-2021 period:*

Green credit can be understood as loans used to finance or refinance all or part of green projects. Green loans can have fixed-term or revolving credit. The green nature of a loan is determined by the purpose of its use, as reflected in financial statements or business documents. For the bank, green credit refers to loans provided for consumer needs, investment projects, production, and business activities that do not pose environmental risks and contribute to environmental protection and the protection of the overall ecosystem.

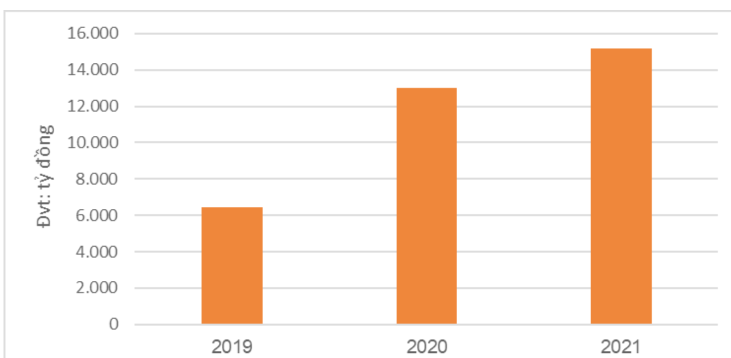

Chart 1: Credit Outstanding at Agribank during the period 2019 - 2021

(Source: Agribank Sustainable Development Report)

Looking at the chart, we can see that the green credit outstanding at Agribank during the period 2019 - 2021 has consistently shown an upward trend. In 2019, it reached over 6,000 billion Vietnamese Dong. By 2020, it doubled, with a growth rate exceeding 100% compared to 2019. In 2021, it increased by nearly 19% compared to 2020. This demonstrates that the bank is aligning with the directions set by the State Bank of Vietnam (SBV) in promoting a green economy and green production in businesses.

Structure of green credit outstanding:

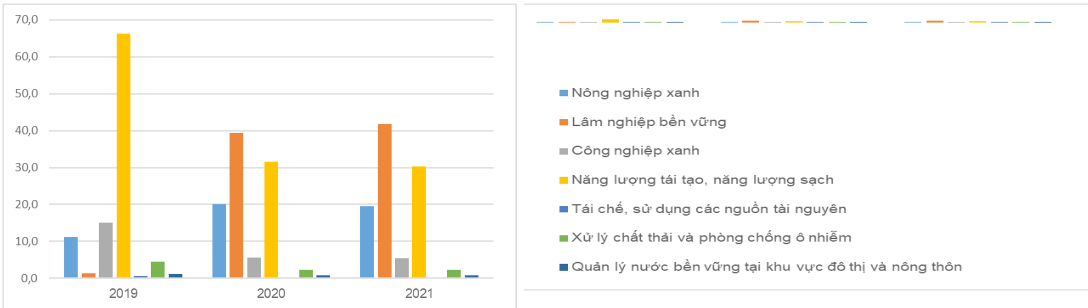

Chart 2: Structure of Green Credit Outstanding by Financing Sectors at Agribank during the period 2019 - 2021

(Source: Agribank Sustainable Development Report)

Examining the chart reveals that Agribank has actively contributed significantly to promoting green production in Vietnam, especially in sustainable forestry, which steadily increased and accounted for over 40% by 2021. Clean energy and renewable energy, however, showed a decreasing trend compared to 2019, making up more than 30% by 2021. Next were green agriculture at over 19%, followed by green industry and other green sectors.

Since 2016, Agribank has implemented a preferential credit program to serve "Clean Agriculture" with an initially unlimited capital scale, starting at 50,000 billion VND.

Green Agriculture Sector: Agribank has implemented a preferential credit program to support "Clean Agriculture" with an unlimited capital scale. Specific examples include flower cultivation (Lam Dong), large modelled fields (Can Tho), tra fish farm (An Giang), pig farm (Ha Nam), sugarcane (Khanh Hoa), corn (Son La), etc. Additionally, the bank collaborates with the World Bank and financial organizations to fund projects aimed at improving the quality and safety of agricultural products and developing biogas programs. These projects focus on low-carbon agriculture and risk management in the face of natural disasters.

Biogas and Waste Management: Agribank has implemented several projects utilizing biogas technology, providing renewable energy sources and organic fertilizer for agricultural cultivation. These projects also contribute to reducing environmental pollution and greenhouse gas emissions. For example, the bank collaborates with Lcasp to provide preferential loans for waste treatment in pig farming in the northern midland and mountainous provinces. This includes waste separation systems, biogas power generation systems, and wastewater treatment systems.

Sustainable Water Management: Agribank participates in the clean water supply and rural sanitation project in the Red River Delta region, funded by the World Bank.

Renewable Energy and Clean Energy: In terms of renewable energy development, Agribank invests in wind, solar, and hydropower projects that utilize unlimited resources. These projects provide stable energy costs, reduce mineral mining, and industrial waste discharge into the environment, contributing to long-term energy security for localities and the country as a whole. Specific projects include the TTC Phong Dien Solar Power Plant in Thua Thien Hue province and the Central Power Corporation's Solar Power Plant in Khanh Hoa province.

4.1.2. Preferential Interest Rate Policies

Agribank places a high priority on sustainable development. To stimulate credit demand in the green production sector, Agribank has implemented policies to reduce interest rates for customers engaged in green production. Interest rate reductions range from 0.5% to 1.5% per year compared to traditional interest rates, depending on specific cases. Agribank has initiated preferential credit programs with a minimum scale of 50,000 billion VND to serve "Clean Agriculture" for borrowers such as enterprises, cooperatives, cooperative unions, farm owners, etc, participating in various stages of the agricultural product production chain. These borrowers involve in safe, large-scale agricultural product production, with reduced interest rates ranging from 0.5% to 1.5% per annum compared to preferential interest rates for 662 agricultural and rural sectors. According to Agribank's statistics, the volume of credit benefiting from preferential interest rate policies during the period 2019-2021 is illustrated in the chart below:

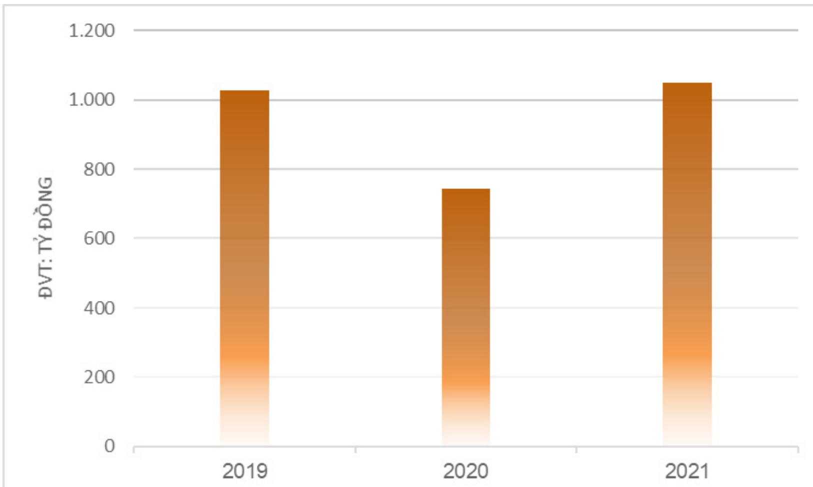

Chart 3: Volume of credit benefiting from preferential interest rate policies

(Source: Agribank Sustainable Development Report)

In 2019, Agribank provided over 1,000 billion VND in credit with preferential interest rates. In 2020, there was a decrease, but in 2021, it increased again, exceeding 1,000 billion VND. This demonstrates Agribank's continuous efforts to promote environmentally friendly production enterprises in the economy.

Additionally, customers borrowing capital under Agribank's programs for high-tech agriculture and clean agriculture will enjoy free money transfers within the Agribank system and a 50% reduction in fees for transfers outside the Agribank system...

4.1.3. Other Activities

Following the guidance of the government, Agribank not only encourages capital provision for green production but also "greenifies" all of its activities, playing the role of a company in Vietnam and providing various green services to enterprises. Agribank promotes the greening of its operations through various activities such as efficient use of resources within the bank and the application of technology to "greenify" banking activities. In reality, the activities of banks directly impact the environment. Recognizing this, Agribank, through the application of technology for paperless transactions, online banking, and more, contributes to promoting green credit. On a technological platform, Agribank has introduced a series of modern payment services such as cross-border payments with countries sharing borders, bilateral payments with commercial banks, with the State Treasury, ... facilitating green production enterprises in transaction and payment with partners.

4.2. Assessment of the Current State of the Agricultural and Rural Development Bank of Vietnam in Promoting Green Production in Enterprises

4.2.1. Achievements

Through the analysis above, Agribank has demonstrated its significant role in promoting green production enterprises in Vietnam. Specifically:

Firstly, green credit products have been diverse and not limited to just the green agriculture sector. Based on data on disbursements of green credit and the status of green credit outstanding at Agribank, it can be seen that the bank's green credit has significantly developed. In particular, green credits for green agriculture and sustainable forestry are the sectors to which the bank has lent the most. This shows the bank's shift towards focusing on sustainable business activities, setting the stage for the development of green production enterprises in Vietnam.

Secondly, Agribank has issued documents on promoting green credit growth and managing environmental and social risks in green credit activities.

Thirdly, Agribank has actively worked to promote its image as a green bank through its activities.

4.2.2. Limitations

Firstly, although green credit for green production enterprises has seen substantial and significant growth, it still represents a small portion of the total credit volume issued by the bank and has a relatively small share in the overall green credit in the economy.

Secondly, the structure of credit sectors for green production enterprises is not yet diverse and comprehensive, still primarily focusing on the bank's previous strengths.

Thirdly, the regulations defining what constitutes a green production enterprise, standards, and criteria are not specific and detailed, posing difficulties for the bank's credit officers in providing credit to green production enterprises.

4.2.3. Causes

Firstly, the regulations on environmental risk assessment by the bank are gradually being improved but have not been widely and thoroughly applied. The green credit granting process is still not fully developed and separate from the regular credit granting process.

Secondly, the professional staff for assessing environmental risks is limited and relies mainly on experience and assessments from external organizations.

Thirdly, the procedures for assessing green production enterprises are complex, making it difficult for businesses to meet the production requirements.

Fourthly, the credit approval process for green production enterprises often involves a lengthy period, large capital requirements, and long repayment terms. Therefore, the bank needs to calculate to ensure a minimum capital adequacy ratio for lending and comply with other regulations of the State Bank of Vietnam.

5. DISCUSSION AND CONCLUSION:

In conclusion, the Agricultural and Rural Development Bank of Vietnam has undertaken activities to promote green production enterprises in Vietnam, particularly through green credit.

Green credit is an inevitable and increasingly strong trend. Therefore, an economy with green production enterprises will be the direction for a green, sustainable, and circular economy.

To further promote the green production process in enterprises, Agribank should:

Firstly, Complete the credit granting process for green manufacturing enterprises specifically step by step according to IFC's instructions: The stage of receiving credit applications needs to screen for environmental risks (with a list of product fields). risky export); The stage of approving credit requests requires specific approval steps of environmental impact assessment for each industry and field surveys. When deciding to grant credit, banks must control environmental risks. After disbursement, environmental risks need to be monitored and reported. In the bank's organizational structure, there should be an independent department that evaluates the environmental and social impacts of projects based on the bank's risk management framework in accordance with the State Bank's roadmap and international practices. economics in granting green credit at banks. There is a team of specialized staff in identifying, evaluating and appraising green production projects.

Second, more preferential interest rates for green production projects, maintaining green production activities after disbursement. Interest rates can be reduced according to the enterprise's production roadmap, specifically: the longer the enterprise maintains green production activities, the interest rate will be reduced more than the initial interest rate reduction from 0.2 to 0.5% consistent with the bank's development goals, thereby encouraging green businesses.

Third, publicly report the environmental and social impacts of bank-funded projects, and publicly disclose the identities of businesses. This helps banks have more data about customers and help businesses be also more aware of their green production activities and creates an information system about green production businesses of the banking system in particular and the economy in general.

Recommendations for the Government and the State Bank of Vietnam (SBV):

Firstly, SBV should establish and implement a set of criteria for assessing and ranking credit institutions in terms of their commitment to social and environmental sustainability initiatives, particularly in actively promoting eco-friendly ecosystem balance, creating green ecosystems, adhering to green principles, and developing green products.

Secondly, the Government and SBV should facilitate and connect sources of green capital with international organizations to ensure that banks can continue to provide large amounts of funding to green production enterprises while maintaining risk safety in lending.

Thirdly, there should be a reduction in the safety risk ratio for lending to top credit institutions that excel in fulfilling their social and environmental commitments and providing green credit.

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PRIVATE ECONOMIC DEVELOPMENT - AN IMPORTANT DYNAMICS OF THE SOCIALIST ORIENTED MARKET ECONOMY

Ph.D Le Thi Hong Nhung[1], M.A Bui Xuan Hoa, BSc Vu Hai Duy[2]

Abstract: The private economy increasingly occupies a large proportion and plays an important role in the country's economic development. The socialist-oriented market economy model initiated and led by the Party has been increasingly completed, under which the private economy has grown stronger in quantity, quality and scale. During the recent congresses of the Party, the private economy was identified as an important driving force of the economy and the State made many appropriate decisions to encourage the private economy to continue to develop. However, the practice of private economic development still has many obstacles and limitations. The article outlines the process of awareness and development of the private economy, clarifies the current situation and causes of limitations, thereby, proposes some solutions to further affirm the important role of the private economy in accordance with the law spirit of the 13th Party Congress.

Key words: Private economy, market economy, improvement of economic institutions

1. INTRODUCTION

As a part of the socialist-oriented market economy, the private economy in our country is increasingly contributing to the cause of national construction and development. Implementing the Party's orientation, in order for the private economy to truly be an important driving force of the economy, it is necessary to continue to innovate cognitive thinking and create a favorable environment for the private economy to develop strongly next time.

Over the past years, the private economy in our country has continuously developed, contributing more and more to the cause of innovation and socio-economic development of the country, especially since the implementation of the Central Resolution. Chapter 5, Session IX "On continuing to innovate mechanisms and policies, encourage and create conditions for private economic development". To affirm the important position and role of the private economy; The Party and State's attention to the development of the private economy in the country's revolutionary cause, the 5th Conference, the 12th Party Central Committee issued Resolution No. 10-NQ/Central, June 3, 2017 on private economic development to become an important driving force of the socialist-oriented market economy (hereinafter referred to as Resolution No. 10-NQ/TW).

The 13th Party Congress affirmed that strongly developing the private economic sector in terms of quantity, quality and efficiency "truly becomes an important driving force in economic development". This is the Party's major and consistent policy of promoting the private economy to continue to develop; while promoting the role of this economic sector in socio-economic development and strengthening national security and defense in the new situation.

2. INNOVATION IN THEORETICAL THINKING AND INSTITUTIONS, MECHANISMS AND POLICIES FOR PRIVATE ECONOMIC DEVELOPMENT FROM THE 6TH PARTY CONGRESS TO PRESENT

Summarizing more than 35 years of innovation, General Secretary Nguyen Phu Trong in the work "Some theoretical and practical issues on socialism and the path to socialism in Vietnam"

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emphasized: “In The socialist-oriented market economy has many forms of ownership and many economic sectors. Economic sectors operating according to the law are all important components of the economy, with equality before the law and long-term development, cooperation and healthy competition. In which, the state economy plays the leading role; The collective economy and cooperative economy are constantly being consolidated and developed; The private economy is an important driving force of the economy; Foreign-invested economies are encouraged to develop in accordance with socio-economic development strategies and planning.

The innovation of economic thinking at the 6th Party Congress comes from the country’s reality, based on applying the views of V.I. Lenin, “considering a multi-sectoral economy a characteristic of the transition period”, officially recognized the private economy as an important component in investment and socio-economic development. Association in Vietnam, creating a political basis for the Party’s next breakthroughs in awareness of the position and role of the private economy.

Summarizing the development and contribution of the private economy to the country’s socio-economic development over more than 15 years of reform, the 5th China Conference of the IXth session issued Resolution No. 14-NQ/TW, dated November 18. March 2002, “On continuing to innovate mechanisms and policies, encourage and create conditions for private economic development” with many important solutions to encourage private economic development and private investment.

The 10th Party Congress officially affirmed that the private economy is one of the driving forces of the economy. The Party Central Committee (term X) issued Regulation No. 15-QD/TW, dated August 28, 2006, “On members working in the private economy”. The Politburo issued Resolution No. 09-NQ/TW, dated December 9, 2011, “On building and promoting the role of the Vietnamese royal family in the period of strong industrialization, modernization and international integration”.

The 11th Congress of the Home Page perfects mechanisms and policies to change growth models, economic infrastructure, improve the investment and business environment, and apply a variety of investment attraction formulas. . Attractive mobilization and effective use of all economic members’ resources, creating conditions for the formation of private economic corporations, encouraging private capital to contribute capital to state-owned economic corporations. At the 12th Congress, our Party affirmed that the market plays a key role in mobilizing, analyzing and effectively supplementing development resources, and is the main driving force to liberate production capacity, thereby setting the task continue to develop synchronously, operate across all types of markets, and at the same time evaluate the private economy as an important driving force of the economy. The 5th Plenum of the 12th Central Committee issued Resolution No. 10-NQ/TW dated June 3, 2017 on “On developing the private economy to become an important driving force of the socialist-oriented market economy” with specific goals and content for a group of solutions to encourage and support private economic development.

At the 13th Congress, our Party continued to affirm: “The private economy is encouraged to develop in all industries and fields where the law does not violate, and is supported to develop corporations into companies and business groups. The private economy is strong and has high competitive strength. Encourage private enterprises to cooperate and associate with state-owned enterprises, cooperatives, and household economies; develop joint stock companies with widespread participation of social actors, especially workers". Improving institutions, promoting public cooperation - consulting to mobilize social resources to develop infrastructure and provide work services. "Strive by 2030, to have at least 2 million businesses with the private economic sector's contribution to GDP reaching 60 - 65%"; Average total social investment reaches 33 - 35% of GDP.

From 2010 to 2022, the development of the Party's theoretical thinking has created the basis for building and perfecting institutions, mechanisms, and policies for private economic development in Vietnam. According to Article 51 of the 2013 Constitution, Vietnam's socialist-oriented market economy has many forms of ownership and many economic sectors; State economy plays a key role; All economic sectors are important components of the national economy, equal, cooperative and competitive according to the law. The State encourages and creates conditions for entrepreneurs, businesses and other individuals and organizations to invest, produce and do business; Legal assets of individuals and organizations investing, producing and doing business are protected by law and are not nationalized.

Mechanisms and policies for private economic development are constantly improved through the promulgation of the legal system, thereby: Fourth, Forming a common, unified legal framework on the establishment, organization and operation of private economic entities. The form of business organization applies to all business organizations regardless of the form of ownership and is increasingly consolidated with international regulations and rules; Second, property rights and business autonomy rights of individuals and organizations are institutionalized to protect consultants; Third, basically the private economy can compete on its own and be treated equally under the law compared to the state economy and the economy with foreign direct investment. What is special is that the process of accessing resources and the State's support for the private economy is gradually being ignored; Fourth, create favorable conditions for private investment to develop through improving tax policies, technology, and public administrative procedures.

3. CURRENT STATUS OF PRIVATE ECONOMIC DEVELOPMENT IN VIETNAM

The private economy has developed strongly. On average, in the period 2010 - 2021, on average, over 100 thousand businesses are established each year. In particular, in the period 2018 - 2022, each year more than 130 thousand new businesses will be established. Correspondingly, the annual registered capital reaches over 500 trillion VND. In the period 2018 - 2022, each year the newly registered capital reaches over 150 trillion VND.

Currently, the private economic sector has formed and developed a number of large-scale private sector enterprises, which are gradually doing multi-industry business and becoming large and important enterprises in the economy. In addition, some private sector enterprises have invested abroad and have had successes and built brands. The team of entrepreneurs is growing stronger, the entrepreneurial spirit, the spirit of innovation and the desire for improvement of the private economic sector are increasingly strong, social responsibility, ethics and culture are increasingly pervasive wide...

In fact, the private economy has many contributions to economic development:

First, in the period 2010 - 2021, the contribution of the non-state economic sector (including the private economy and collective economy) always accounts for over 50% of the country's GDP (50.55% in 2019; 50% in 2019; 56% in 2020; 50.04% in 2021, including the cooperative economic sector) and is the area with the highest proportion among the three sectors (state, private and FDI).

Second, the non-state economic sector (public, commercial, and service sectors outside national enterprises, excluding personal income tax) has an increasing contribution rate to the state budget in recent years period 2010 - 2021, from 11.7% in 2011 to 18.48% in 2021. In particular, since 2017, the private economic sector's contribution to the state budget has surpassed that of the state-owned enterprise sector and the FDI enterprise sector.

Third, the private economy gradually participates in links, production networks, and regional and global value chains through vertical links with the FDI sector. By 2021, the private economy will account for a very large proportion in the production of a number of products: 91.27% of sea salt output; 88.45% diameter output; 48.69% NPK fertilizer; 44.64% cement; 39.21% iron and steel in ingots or other raw forms; 49.91% rolled steel.

Fourth, investment by the private economy is constantly increasing, the proportion of the private economy in total social investment capital always exceeds that of the domestic economy and the FDI economy. In the period 2010 - 2021, the private sector's investment rate has increased from 44.6% in 2010 to 59.5% in 2021. In particular, although public investment is adjusted to decrease, total investment Infrastructure is still increasing. In particular, in the period 2010 - 2022, a series of large infrastructure projects undertaken by the private economic sector have been started, completed and put into use.

Fifth, private sector enterprises have a relatively stable capital turnover index, fluctuating between 0.7 and 0.78 times in the period 2010 - 2017, lower than the FDI enterprise sector (0. .84 to 1.08 times), but much higher than the state-owned enterprise sector (0.36 to 0.59 times).

Sixth, the private economy plays an important role in replacing investment capital in the context of reduced investment capital. In the period 2010 - 2021, the ratio of public investment in total investment in the highest year is 36.1% (2012), the lowest year is 24.1% (2019). However, the strengthening of private ownership and increased foreign investment contribute to economic stability.

Seventh, the private sector makes a very important contribution not only economically, but also socially - that is, solving labor and employment. In the period 2010 - 2021, although the proportion of workers aged 15 and over in the private sector has gradually decreased from 86.3% in 2010 to 82.6% in 2021, this sector has not yet resolved the problem. employment for more than 80% of the economy's workers. The average growth rate of the number of employees in the private economic sector in the period 2011 - 2018 reached over 3.6%, with the private enterprise sector alone reaching nearly 5.4%.

Besides, private economic development still has some of the following limitations:

Firstly, private economic development still has many barriers: 1- Although the political system's awareness of the private economy has changed, there is still stigma and discrimination, especially is a large part of officials, civil servants, and even people in the private economic sector. Lack of unity and still incorrect awareness of the role of the private economy in a socialist-oriented market economy; 2- The legal framework, mechanisms, and policies still have many inadequacies, overlaps, and lack of uniformity, not really facilitating business activities of economic entities, especially regional entities. private. Competition policy is not effective, there is also inequality in access to resources between economic sectors, and differences in the policy implementation process. Policies to protect domestic production, combat smuggling and trade fraud are not appropriate and have many limitations. 3- State management still has many shortcomings, especially in developing effective regulations and policies, the efficiency is not high, there are not many mechanisms and policies to encourage private enterprises to innovate, create products that are competitive in the international market. Improving administrative methods has not achieved the 3 reduction goals (reducing time, reducing costs, reducing paperwork). The implementation process is quick, duplicates, and overlaps at many stages. Operational support is still experienced and duplicated when the purpose, target audience and effectiveness below are not accurate. Vietnam's "compliance" costs and business costs at most stages are still in the group of countries with high business costs.

Second, private economic development still faces many challenges: 1- The number of economic establishments in the private sector is increasing rapidly, especially the number of newly established enterprises, but the proportion of enterprises is increasing rapidly. The rate of business shutdown, dissolution, and bankruptcy is still very high. The quality and operational efficiency of businesses in this field are slowly improving, most still operate in the commercial and service sectors. 2- Business entities in this area are mostly small and medium-sized groups, of which the proportion belonging to the micro group is quite high. If divided by the size of the number of employees, in 2017 there was up to 74% (this rate in 2010 was 63%). Only less than 1% of private sector enterprises have a scale of 200 employees or more, while the proportion of enterprises with a scale of less than 10 employees in the FDI enterprise sector is about 30% and State-owned enterprises are only about 7.7 - 13.4%; 3- The private enterprise sector has a high rate of loss-making enterprises, equivalent to the rate of the FDI enterprise sector in the period 2010 - 2017 (except for 2 years 2010 and 2012). The rate of loss-making enterprises in the private sector increased in the period 2013 - 2017 at 48 - 49% in 2016 and 2017 and is the area with the highest rate; 4- Social labor productivity of the private economic sector is lower than the average level of the economy.

Third, the private economy's contribution to economic growth is not commensurate with its potential. The proportion in the GDP base does not change in the period 2010 - 2021. The average size of domestic private economic units is small with the main component being individual economies contributing up to 30% of GDP, enterprises The private sector only contributes about 9% of GDP; The ability to participate in network production, regional and global value chains of large private enterprises but with regimes. Domestic private sector enterprises participate very little in the global value chain, only about 21% of enterprises. The domestic economy (including both domestic private and state-owned enterprises) only contributes 30% of exports, equivalent to 70% of regional FDI.

Fourth, the average income of workers in the private enterprise sector, although it tends to increase continuously over the years, is still at the lowest level among the three regions, from 3.4 to 7.5 million VND/person. /month in the period 2010 - 2021, equal to about 49 - 82.15% compared to workers in the state-owned enterprise sector and 73 - 90.1% compared to workers in enterprises in the FDI sector.

Fifth, the capacity of the private economy is still limited: 1- Private economic entities lack the capacity for innovation, technology development, and new production processes. According to the World Bank's assessment, Vietnamese enterprises' research and development costs have not improved much. If in 2008, the number of this index was 3.6/10 (ranked 42/134), increasing to 3.8/10 in 2010 (ranked 27/133), then by 2017 the index was at level 3, 5/10 (ranked 49/138); 2- The production capacity and ability to compete in both quality and price of the private sector, even businesses - the most capable actors of the private economy - are still very limited. The labor productivity growth rate of the private economic sector is still low, only equal to 34% of the labor productivity of the state-owned enterprise sector and about 69% of the labor productivity of FDI enterprises. Scientific and technological capacity is still limited, business investment in technological innovation only accounts for about 0.3% of revenue, much lower than in countries such as India (5%), and South Korea (10%)... Vietnamese businesses have not focused on improving connectivity and competitiveness to participate in regional and global value chains. Only about 21% of small and medium-sized enterprises can participate in part of the global value chain, and 14% succeed in connecting with foreign partners.

Sixth, private investment still has many surprises, there are signs that foreign investment and public investment overwhelm domestic private investment. In many fields, such as electronics, automobiles, motorbikes, etc., the widespread participation of FDI enterprises is not a factor in supporting and promoting the development of domestic private sector enterprises. , on the contrary, FDI enterprises compete and overwhelm domestic private sector enterprises. In addition, due to the development time of domestic private sector enterprises, FDI enterprises and state-owned enterprises have a shorter history, experience and operations, so they are still affected by external impacts. (strong, speculative) as well as the process effects of the market economy (speculation, chasing profits, group interests...)

4. SOME LESSONS ON PRIVATE ECONOMIC DEVELOPMENT IN THE NEW CONTEXT

Domestic and international circumstances pose many advantages and difficulties for private economic development

Firstly, the world is facing a recession, deflation and increased exchange rates of most currencies compared to the USD. The findings of some major economies are on the rise, causing negative impacts on world economic issues. Tightening monetary policy will put global economic growth at risk of decline. The world is facing a new recession.

Second, the world is intertwined and fragmented: on the one hand, new generation free trade associations (FTAs) and regional connectivity are promoted; On the other hand, divisive trends are also appearing, most notably the UK leaving the European Union (Brexit) and the Russia-Ukraine conflict. Russia is embargoed and the world is divided, European countries have difficulty with energy and many other related systems.

Third, capital flows are being transferred from some national media systems and operations to some emerging countries. Adjustments to national strategic goals to respond to key address risks. This is, on the one hand, economic development cooperation of transition capital trading countries; on the other hand, creating a competition to attract capital flows. As a result, countries must adjust their economic development.

Fourth, the world is in the fourth industrial revolution with many opportunities and methods. The fourth industrial revolution creates many opportunities, such as new economic space, new technology, new products; The world will be more open with stronger connections. However, the Fourth Industrial Revolution also creates disadvantages, such as the potential risk of capital movement and competition between the real world and the virtual world. In particular, along with adjusting business goals and strategies, a series of technology businesses are laying off thousands of workers.

Fifth, non-traditional security risks and strong climate change appear. Non-traditional security threats such as the Covid-19 pandemic have not yet seriously affected production and supply chains. Along the coast, climate change is happening faster and stronger, so it is expected to cause significant impacts on sea level rise, saltwater intrusion, drought, floods, tsunamis... on countries.

The reality of private economic development in recent times can draw some lessons

Firstly, renewing awareness about the role and position of the private economy... Unifying awareness and ideology about the role of the private economy in the economy needs to aim at being an important driving force to the national economy. It is necessary to have unified awareness in the socio-political system about the driving role of the private economy, thereby creating all conditions for private economic development, promoting the strengths and potential of the private economy.

Second, supplement and complete the legal framework, mechanisms and policies for private economic development to create a favorable and equitable business environment among economic sectors. Continue to improve the legal framework related to private economic development; Synchronously and effectively deploy the set tasks and solutions for private economic development. Building a streamlined, efficient and effective state apparatus; develop a team of officials and civil servants with integrity, strong political ideology, and high professional qualifications. Strengthen discipline, discipline, and drastically prevent and combat corruption, waste, and negativity.

Third, it is necessary to reform administrative procedures to achieve the 3 reduction goals (reduce time, reduce costs, reduce paperwork). Support economic development and advise employees by developing decisive and effective solutions to reduce costs for production and business activities; Have mechanisms and policies to create conditions for the private economy to actively participate in the process of international economic integration. Ensuring mechanisms and policies to encourage and support private economic development in accordance with market mechanisms; does not violate international connections, does not violate market principles; perfecting the autonomy and competition of the private economy. Supplement, complete and develop effective regulations and key lists related to private economic support, especially regulations on support for small and medium-sized enterprises.

Fourth, promote the role of private sector enterprises, honor private sector enterprises with innovative, creative models, and competitive products in domestic and international markets. . The private economic development account holder associated with the economic transformation process has created room, space and business opportunities for the private economic sector to invest in capacity building. Vietnam's economy is known to the world with a number of private corporations.

Fifth, Promote local private economic development. Private economic units must really make efforts to mobilize, update and firmly grasp the current regulations of the State to nurture and operate legally in the production and business process; Tool to find partners and links to improve competitiveness in the process of international economic integration. Enhance the responsibility of establishments and sectors in organizing and implementing and concretizing key accounts and policies on private economic development; Strengthen the State's discipline and discipline in developing and implementing the guidelines, laws, and policies for the private economy. Strengthen Party building activities in the private economic sector, preferably businesses. It is necessary to be proactive and responsive in honoring and rewarding iconic private economic enterprises and units with highly effective production and business activities, good compliance with legal regulations and many contributions. for the truth of socio-economic development...

Sixth, when dealing with investment in general and private investment in particular, it is important to resolve the main external resources, domestic resources must be decided. Really consider resources from the private sector as a driving force for development; At the same time, it is necessary to clearly identify the work of improving administrative practices and improving the business environment as an important foundation to encourage the development and investment of the private economic sector. Attracting FDI needs to be associated with attracting leading manufacturing and distribution enterprises to attract and absorb the domestic private sector. Promoting the guiding role of state investment to attract investment capital from society, including domestic private individuals. Consider state investment as a "bait" capital source to attract social resources and private sector investment in upgrading economic infrastructure, especially the transportation system.

5. CONCLUSION

In summary, it is necessary to note the following issues when developing the private economy: Creative capacity for the spirit of the private economy is an important driving force in account owners, policies, institutions, mechanisms, policies and implementation direction of the Party and State at all levels, sectors and localities. Create a favorable environment for the private economic sector in general and private sector enterprises in particular to develop at the same time as quickly removing barriers to the operation of private sector enterprises according to the law. direction to minimize shutdowns and bankruptcies. Encourage businesses in the private consulting sector to develop guidance on creating jobs and income for workers, especially the new workforce participating in guiding inclusive growth. Create funding sources to support newly established businesses and create an established environment for startups. In particular, attention should be paid to improving national competitiveness, enterprise competitiveness and industry competitiveness. Create an institutional environment, science - technology, finance, credit, land access, and enhance a fair competitive environment for all economic sectors to compete as a foundation for improving economic efficiency. . Important note for investment and private investment. Attracting resources from domestic businesses and people in infrastructure development in the direction of the state-led economy and avoiding public traps and foreign debt. Proactively have mechanisms and policies to attract resources to apply the achievements of the Fourth Industrial Revolution, with the focus on successfully digitally transforming the economy in the digital technology society./.

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DEVELOPMENT OF VIETNAM'S DERIVATIVES MARKET VIEWED FROM INTERNATIONAL EXPERIENCE

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Abstract:: This study aims to generalize basic issues about the derivatives market and derivatives transactions in the market and evaluate the current situation of the derivatives market in Vietnam from 2017 to present. Along with that, research experience in some markets around the world, in order to come up with solutions to develop this market in Vietnam.

Keywords: Stock market; derivatives and trading securities market

1. INTRODUCTION

After 23 years of operation, Vietnam's stock market has made significant developments. Total stock market capitalization today (August 2023) is about 8.2 million billion VND; equal to about 92.58% of the economy's GDP. From the first two listed and traded stock codes, REE and SAM, by the end of August 31, 2023, there were 1,585 stock codes listed and traded on all 3 exchanges. Although there have been strong developments, new trading products including stocks, fund certificates and bonds do not have risk prevention properties, while these are profit generating tools. Therefore, the introduction of derivatives and the formation of the derivatives market (TTCKPS) on August 10, 2017 in Vietnam is extremely necessary. It can be affirmed that the birth and operation of the Stock Market is an important milestone of Vietnam's stock market, making an important contribution to improving market structure as well as promoting liquidity in the basic market. However, in the process of operating the stock market, some limitations have been revealed. This article aims to evaluate activities, study the experiences of some countries, and propose some solutions to develop Vietnam's stock market in the coming time.

2. LITERATURE REVIEW

There have been many studies that were conducted to evaluate the importance of the development of the derivatives market for the stock market in particular and the economy in general, as well as studies on how to develop this market. .

Haiss and Sammer (2010) evaluated the role of derivatives in the relationship with growth through transmission channels: volume, efficiency and risk when researching in the markets of some developed countries. On that basis, the authors point out some experiences in developing and managing this market. Said point is that it is necessary to increase capital accumulation to promote positive effects of the derivatives market on the financial market; thereby helping to allocate resources more effectively; And at the same time, it is necessary to strengthen supervision of the use of derivative tools under the conditions that these tools are used to prevent risks.

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Sendeniz-Yuncu (2018) points out that effectively operating derivatives markets help businesses share risks, thereby promoting the implementation of projects with higher risks but with a potential of a higher profit yield. At the same time, investors and manufacturers themselves can rely on the derivatives market as an information channel to reflect upon the market supply and demand, thereby making the right decisions in resource and forces distribution. The author assesses that this requires derivatives market development policy to aim for a balance between speculation and risk prevention to ensure effective resource distribution, thereby bringing an efficient economy.

In addition, the research of IGC (2012) can be mentioned. Research points out to derivatives in developing financial markets; which covers the use of derivatives, how to operate the tools as well as some recommendations on market development.

3. RESEARCH METHODS

The study uses secondary data collected from announcements of the State Securities Commission; stock exchanges combined with some Fiinpro data. Regarding research methods, use the following methods to present results to the subject of analysis:

- Economic statistical method: statistics on transaction volume and value
- Comparison method: compare the results of derivatives transactions over periods

3.1. RESEARCH RESULTS AND DISCUSSION

3.1.1. Overview of derivative products traded in Vietnam

3.1.1.1. Future contract

a) VN30 index futures contract

VN30 index futures contract is a futures contract based on the underlying asset VN30INDEX index - this is an index representing 30 potential stocks, leading the market with large capitalization value and liquidity. high, listed on HoSE. VN30 index futures are standardized, listed and traded at the Hanoi Stock Exchange. The characteristics of this futures contract are as follows:

- Underlying asset: VN30 Index
- Multiplier: 100,000 VND, for example, 1,000 points is 100,000,000 VND
- Margin ratio: According to current regulations of VSD (Vietnam Securities Depository); The initial margin rate is about 10% - 15% of the contract value
- Minimum price fluctuation: 0.1 index point
- Trading method: trading VN-30 index futures is similar to stocks; In which the stock market opens 15 minutes earlier than the stock market and ends at the same time.
- The last trading day of a futures contract is set to be the 3rd Thursday of the maturity month.
- Maturity month: latest month, next month, last month of the latest quarter, last month of the next quarter

b) Government bond future contracts

Government bond futures contracts are listed derivative securities, with the underlying asset being a government bond. Government bond futures contracts are instruments traded on the Hanoi Stock Exchange with standardized terms. The standardized factors are regulated by the Hanoi

Stock Exchange. Basically, Vietnam Stock Market has deployed 2 government bond futures products: 5-year and 10-year government bond futures contracts. The government bond futures contract form approved by the State Securities Commission is as follows:

- Term: 5 years and 10 years
- Underlying asset: 1) 5-year Government bond futures contract: Government bond with par value of 100,000 VND, term of 5 years, nominal interest rate of 5%/year, periodic interest payment every 12 months, principal payment once upon maturity; 2) 10-year Government bond futures contract: Government bond has a term of 10 years, face value 100,000 VND, nominal interest rate 5%/year, periodic interest payment at the end of the term every 12 months, principal payment once when expire.
- Contract size: 1 billion VND, transaction unit or transaction volume: minimum 1 contract
- Maturity month: Government bond futures contracts have 3 months of maturity approximately according to the nearest quarterly cycle
- Margin ratio: decided by the Securities Depository Center on the basis of calculating the risk level and approved by the management agency, the State Securities Commission.

3.1.1.2. Warrants are covered

Currently, covered warrants are deployed and traded in Vietnam as follows:

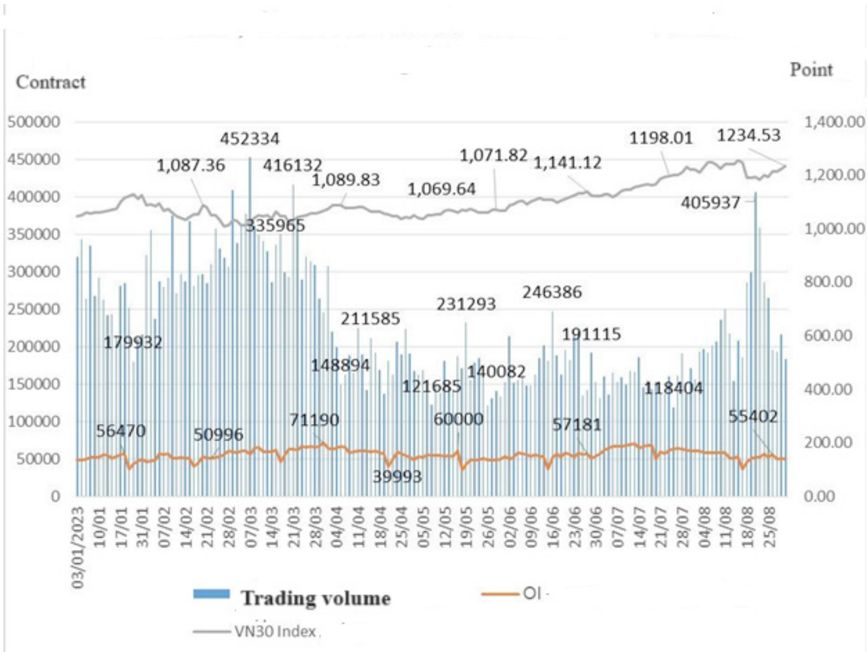
- Issuing organization: securities companies. However, to protect investors, the State Securities Commission requires securities companies to have sufficient conditions in terms of financial capacity, trading system, professional safety and personnel, as well as such as the ability to create a market... are allowed to become an issuing organization.
- Underlying asset: Currently, the underlying asset type in covered warrants in Vietnam is stocks. However, these stocks must meet the criteria of capitalization, liquidity and business operations. To ensure this condition, stocks will be screened in the VN30 group and periodically announced by HOSE on the Department's website.
- Type of warrants: Theoretically, there are two types of warrants: Call warrants and Put warrants. However, in the first phase of operating covered warrants in Vietnam, the purchased warrant type was chosen to be deployed at the HOSE
- Covered warrant trading: Investors open secured warrant trading accounts at securities companies similar to stock trading, and comply with the principle that when buying, they must have enough money and when The seller must have enough warrants. In addition, the exercise of warrants will be applied in European style, meaning investors can only exercise warrants at the expiration date. Another note for investors is that they are only required to exercise their rights to the warrants in a profitable state at the maturity date.
- Payment method: Pay the difference in money. Accordingly, the warrant owner will receive the difference when the payment price of the underlying security is higher than the exercise price.

3.1.2. The development of Vietnam's derivatives market

3.1.2.1. Future contract

Currently, futures contract is a stock index that is very popular with investors in the market. Along with the excitement in the underlying market, transactions on the stock market also have positive fluctuations.

Figure 1: Trading volume, futures OI of VN30 index and VN30 Index January - August 2023



Source: State Securities Commission

In August 2023, the VN30 index futures contract product had an increase in trading volume of 49.51%, an average of 228,360 contracts/session, an average transaction value (in contract terms) of 27,815 billion VND. VND/session, up 57.23% over the previous month. In particular, the largest trading volume of the month was at the trading session on August 22 with 405,937 contracts, this is also the session with the largest trading volume from the beginning of the year until now.

At the last trading session of the month, open interest (OI) volume reached 49,759 contracts, down 19.84% compared to the previous month. In particular, the trading session on August 1 recorded the highest open OI volume of the month with 60,926 contracts.

Regarding investor structure, the trading proportion of foreign investors in August 2023 accounted for 2.49% of the total market trading volume. The proportion of proprietary trading transactions of securities companies is 1.26% of the total market transaction value.

Table 1: Summary of futures contract transactions for the VN30 Index in August 2023

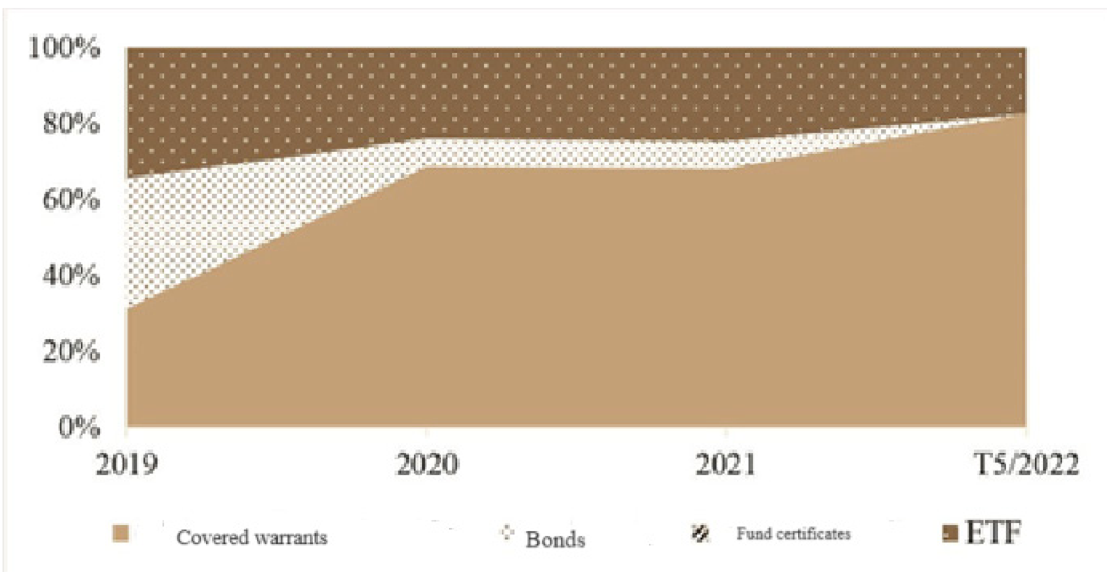
TT	Targets	Unit	July 2023	August 2023	Rise/fall (%)
1	Average trading volume per session	contract	152.739	228.360	49,51%
2	Average transaction value (in normal terms) per session	Billions dong	17.691	27.815	57,23%
3	OI volume (end of period)	contract	62.077	49.759	- 19,84%
4	Trading proportion of foreign investors	%	3,47	2,49	- 28,24%
5	Proportion of proprietary trading transactions	%	1,66	1,26	- 24,09%

Source: State Securities Commission

3.1.2.2. Warrants are covered

Covered warrants have been traded on HOSE since 2019 but have affirmed their solid position as the trading volume of this type of derivative securities is increasing. When compared with traditional financial products that have been around for a long time such as bonds, fund certificates, ETFs... on the HOSE trading floor, covered warrants account for an increasingly higher proportion than other instruments. (Figure 4). Furthermore, the transaction value of covered warrants also increased sharply during the 2 years of operation (Figure 5). Specifically, in 2021, the value of covered warrant transactions reached 17,694 billion VND, more than 3 times higher than in 2020 and 18 times higher than in 2019. The trading volume of this derivative product in 2021 reached 5,000,000 VND. 3 billion warrants, an increase of 1.83 times compared to 2020 and 14 times higher than 2019. In 2022, although the impact of the COVID-19 epidemic has cooled down, with the impact of the situation Political instability between Russia and Ukraine and changes in monetary policy of developed countries like the US have strongly affected the stock market. However, in terms of proportion, the trading volume and value of covered warrant transactions still grew quite well in the first 5 months of 2022 compared to other types of securities on the market.

Figure 2: Structure of trading volume of some securities on HOSE in the period 2017 - May 2022



In short, although two types of securities have just been put into operation, namely futures contracts and covered warrants, the securities market in Vietnam has developed rapidly, it can be said to have exceeded the expectations set by managers. This shows that this market has strong development potential, evidenced by its good growth rate with a rapid increase in both transaction volume and value.

4.2.3. Some challenges during the development of derivatives market in Vietnam

- First, although the legal basis for the operation of the derivatives market has basically been built based on the conditions of Vietnam's financial market. However, securities companies' ability to fully comply with legal regulations is still limited. Specifically, according to the 158/2020/ND-CP Decree on derivatives trading, securities companies must meet certain financial conditions such as self-trading of derivatives and must have charter capital and equity. Owning 600 billion VND or more, or operating derivative securities brokerage activities, it requires charter capital and equity of 800 billion VND or more... With such conditions, by the end of September 2023; there are only 24 securities companies that are members of derivatives trading. In addition to minimum capital regulations, securities companies must also meet other conditions on financial safety indicators, business profits, etc. With the general scale of current securities companies, further expansion of the securities market is difficult for authorities and lawmakers.

- Second, currently mainly trading VN30 products, other derivative products have not yet received a worthy position.

- Third, derivative products are different from the underlying market in that the underlying assets are mainly traded in the market on which they are listed, while derivatives can be issued by many different exchanges regardless of whether the underlying asset is traded on that same market. Specifically, currently on the Singapore stock market (SGX), there is a derivative product about the VN30 index futures contract with the code name FTSE Vietnam 30 Index that has been released by this exchange since 2019 and is still traded on the market. This is truly a challenging problem for the future development of Vietnam's derivatives market when having to compete for the same product with markets that are more developed in scale and depth.

4.3.Experience in developing derivatives markets around the world

4.3.1. Singapore

The Singapore derivatives market was formed in 1984 with the establishment of the Singapore international currency exchange market (SIMEX), the main products being futures contracts of the Nikkei 225 index. By December 1999, in order to create Favorable conditions for management while saving resources to build infrastructure and concentrate high-quality human resources, 3 commodity derivatives markets (SICOM), securities derivatives (SIMEX) and currency derivatives (SES) have merged to form a common stock exchange, Singapore Exchange (SE). SE is an independent organization, and it is also supervised by the Singapore Monetary Authority. Right from its inception, market managers made a reasonable decision to allow the Singapore derivatives market to connect with the Chicago market (the derivatives market has the longest history and most development in the world). world), thanks to which, investors are allowed to trade between the two markets without cost.

In addition, the conditions for participating in the market are also specifically regulated by SE for each group of subjects: (i) For individual trading members: must be a professional derivatives trader, fully qualified knowledge and understanding of derivative securities, no minimum capital required; (ii) For paying members: must have a minimum capital of 5 million Singapore dollars, have a license to provide capital market services and meet the highest financial standards. This regulation has attracted many investors to participate in the market in the early stages of establishment, creating a foundation to help the derivatives market develop quickly and sustainably. Since 2004, Singapore began adding stock options to trading and continued to reap many successes thanks to many policy mechanisms to facilitate investors such as: Replacing the on-premises order matching system with the online electronic transactions; Exemption from prospectus requirements; Relax options listing standards.

4.3.1. Korea

The year 1993 marked an important event when the Korean derivatives market was officially born. In May 1996, for the first time, derivatives and index futures contracts (KOSPI 200) were introduced based on the calculation of stock price index on the Korea Stock Exchange. After just one month of operation, the KOSPI 200 options market has clearly shown its operating efficiency and the need for an official derivatives market. Thanks to the success of putting this market into operation, Korean securities industry regulators decided to put the KOSPI 200 options market into operation in July 1997. Then, in April 1999, the Korea Futures Exchange (KOFEX) was established. In addition to derivatives being traded on KSE, options products and financial futures contracts are traded on KOFEX. Commodities listed on this Exchange are: Options and futures contracts Korean Treasury bonds, Interest rate futures contracts Currency stabilization bonds and KOSDAQ 50 futures index, options and futures contracts issued with denominations in USD...

Experience shows that to achieve the above success: (i) Korea has built a strict legal mechanism and has certain initial incentives for members participating in the stock market, specifically incentives tax incentives; (ii) Create a modern infrastructure, meeting the requirements of quick order matching transactions. Accept online transactions as soon as the derivatives market is put into operation; (iii) Applying a strict margin method when conducting derivatives transactions to prevent liquidity risks, the margin is made based on two regulations: the initial margin and the maintenance margin. maintain.

4.3.2. Japan

The Japanese derivatives market has a number of characteristics such as complex products, professional participants, highly speculative and risky transactions. Therefore, the derivatives market must be monitored and adjusted promptly and in accordance with the goal of stabilizing the market and protecting investors. The Tokyo Stock Exchange stipulates a number of principles of conduct for the market in a timely manner. Some specific cases include: (i) When the market price of futures contracts and options contracts exceeds the price of the underlying stock index, trading will be temporarily stopped for 15 minutes. (ii) When the TOPIX index fluctuates outside the allowed range, limit TOPIX trading to accounts jointly owned by securities trading organizations. (iii) When participating in a TOPIX trading transaction, the trading subjects must have a daily report on the change of position when participating in the transaction.

4.4. Solutions for developing Vietnam stock market

Nearly 6 years of establishment and operation have shown the strong development of the stock market in Vietnam. This market has made an impression on investors both domestically and internationally, reflected in its trading volume, attractiveness to investors as well as providing profit protection tools. This strong development lays a solid foundation for the future development prospects of the stock market, however, accompanying challenges are inevitable. Therefore, there need to be some appropriate solutions to develop Vietnam's stock market in the coming time:

Promote attracting investors by focusing on strongly attracting institutional investors on the basis of the issued legal framework. For individual investors, it is necessary to strengthen the implementation of training programs for them when participating in the stock market to increase professionalism.

- Continue to diversify goods for the stock market, first it is necessary to immediately deploy government bond futures contract products. This will be a trading product almost exclusively for institutional investors, so the proportion of institutional investors participating in the stock market will gradually increase. In addition, it is necessary to deploy covered warrant products and develop additional underlying indices to serve as base assets for derivatives.

- Strengthen supervision, handle violations, ensure market integrity and discipline, especially detect and strictly handle market manipulation acts.

- It is necessary to introduce a reasonable incentive mechanism for fees and taxes to increase the attractiveness of participating in the stock market to attract more investors and develop the market in the future.
- Narrow the number of intermediary financial institutions, especially securities companies with weak and ineffective operations; perfecting the operating model of securities trading organizations according to international practices; Improve the quality of risk management at these organizations based on equity and financial safety ratios.

CONCLUSION

Developing the stock market continues to be a very important content in the Vietnam Stock Market Development Strategy project for the period 2021 - 2030 that the Ministry of Finance is developing and submitting to the Government for approval. Regarding specific goals, the stock market size reaches a minimum of 100% of GDP by 2025 and a minimum of 120% of GDP by 2030. The bond market size reaches a minimum of 47% of GDP (corporate bonds reach 20% of GDP) by 2025 and reach a minimum of 58% of GDP (corporate bonds reach 25% of GDP) by 2030. The derivatives market grows on average 20-30% per year in the period 2021-2030. Therefore, the study hopes that its proposed solutions will be useful suggestions to help relevant agencies perfect the legal framework and implement solutions to promote the development of the stock market. Vietnam in general, TTCKPS in particular.

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FACTORS IMPACTING LIQUIDITY RISK MANAGEMENT FOR BANKS IN VIETNAM POST COVID-19 PANDEMIC

MSc. La Viet Anh[1]

Abstract: Post-Covid-19 period has brought unparalleled challenges to global economies, particularly the banking sector, emphasizing the criticality of risk management, notably liquidity risk management, for regulators and banking executives in light of the series of bank collapses at the outset of 2023. This paper investigates the challenges facing liquidity risk management in the banking sector of Vietnam following the global economic repercussions of the Covid-19 pandemic. The study analyzes key exogenous factors, including the divergence in monetary policies between the State Bank of Vietnam and foreign central banks, as well as the collapse of foreign and domestic banks. It also examines critical endogenous factors, such as the impact of short-term excess cash reserves and the implications of rapid digital transformation on liquidity risk management. Based on the analysis, the paper proposes three key recommendations covering risk regulatory, contingency funding plan and risk training enhancement for banks as well as the State Bank of Vietnam to strengthen their liquidity risk management practices, thereby promoting a more resilient and stable banking sector domestically.

Keywords: Bank liquidity, liquidity risk, liquidity risk management, post Covid-19.

1. INTRODUCTION

Post Covid-19 period presented significant challenges for the global economies and financial system. As social distancing restrictions and vaccination becomes less popular topics in 2022, the world shifted its focus on the aftermath and possible side-effect of the pandemic. Global economic condition become tightened as the central bank authorities started hiking interest rates, the Russia – Ukraine war occurred while China kept its country in lockdown. These events and many others contributed to the instability of the global financial system, particularly for banks. The series collapse of large US banks along with Credit Suisse – a GSIFIs[2] bank in the first half of 2023 has sent shockwaves throughout the financial system and raising critical questions for liquidity risk management of the global banking industry.

The business model of bank which takes deposits and grants loans makes it inherently susceptible to liquidity risks. Unlike credit risks or operational risks, liquidity risk has significant consequence once occurred due of its potential to trigger bank run, a phenomenon that leads to not only the collapse of any bank but also threaten the stability of the global financial system. Understanding sources of liquidity risk and factors that impact liquidity risk management, particularly during unfavorable market and economic conditions, have become paramount in preventing bank collapses and ensuring the robustness of the financial system.

Effectively managing liquidity risk is a multifaceted undertaking that demands comprehensive strategy. Risk managers at banks are tasked with the challenge of striking a delicate equilibrium between maintaining ample liquid assets to cover unforeseen cash demands while ensuring opportunities for higher returns for banks through longer-term loans and/or less liquid investments. This equilibrium becomes even more intricate due to market volatility, changes in regulations, and

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2 Global Systemically Important Financial Institutions.

the evolving landscape of business models. Additionally, the interconnected nature of the financial system amplifies the complexity, as liquidity issues in one institution can rapidly propagate to others, ultimately culminating in systemic risk. Consequently, managing liquidity risk extends beyond the purview of individual banks and necessitates a collective, system-wide approach, calling for collaboration among banks, regulatory bodies, and other stakeholders.

The unfavorable macroeconomic conditions after Covid-19 exposed weaknesses of global banking system in managing liquidity risk effectively. Until 2023, large US commercial banks such as Silvergate Bank, Silicon Valley Bank, Signature Bank, First Republic Bank, and even a G-SIFIs bank like Credit Suisse have complied Basel III standard[1] among other international risk management requirements. Nevertheless, the collapse of these banks in the second quarter of 2023 has reminded national supervisors and the financial system of the importance of sound liquidity risk management. Factors causing the liquidity collapse of these banks varies. For example, in the case of Silicon Valley Bank, external causes can be deduced to the Federal Reserve's interest rate hike, gaps in liquidity risk management from the authority, or the widespread panic on social media causing depositors to withdraw fund from the bank. Meanwhile, internal factors such as weakness of the banks in risk management oversight as well as inappropriate liquidity risk management strategy to ensure sufficient liquid assets have contributed to the downfall of these banks. For banks in Vietnam, the end of 2022 also witnessed a liquidity crisis of Saigon Commercial Bank (SCB) which required intervention from the State Bank of Vietnam (SBV).

The call for strengthen liquidity risk management practice becomes more vital for banks in Vietnam especially after the pandemic. By identifying factors that can impact the liquidity risk management, banks will be able to develop more effective practices and tools to enhance risk management capability and contributes to the stability of the banking system in Vietnam.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

2.1. Liquidity and liquidity risk management in bank

Banks are inherently susceptible to liquidity risk due to their fundamental function as medium in the economy by borrowing short-term from depositors and lending long-term loans. The concept of liquidity and liquidity risk particularly in the banking industry therefore has been well-studied. Knies (1876, cited in Duttweiler 2009) emphasized "liquidity" as the need for a cash buffer to compensate for negative gaps between flows of incoming and outgoing payments in cases where their respective maturity periods could not be perfectly controlled. Recent studies have referred to liquidity as the capacity to obtain cash when it is needed, not as possession of cash or assets that can be readily converted into cash (Matz and Neu, 2006). Duttweiler (2009) defines liquidity not as a ratio nor an amount, but rather a representation of the degree to which a bank is capable of fulfilling its respective obligations. This definition aligns with the Basel III guideline (2008) where the term liquidity refers to the ability to fund the increases in assets and meet obligations as they come due. Further studies of liquidity explore subsets of liquidity such as natural liquidity which refers to contractual maturity of an asset/liability of banks when it comes due, or artificial liquidity which is created through transforming an asset into cash before its maturity date (Duttweiler,

1 Basel III is a set of international banking regulations developed by the Basel Committee on Banking Supervision (BCBS) that focuses on risk management framework of banks

2009). Other subsets of liquidity include short-term liquidity - the capability of a bank to fulfill payment obligations as and when they occur, and structural liquidity - the capacity to borrow sufficient long-term funds at appropriate spreads to support asset growth (Schmitt, 2018).

While liquidity is ability to access cash when needed, liquidity risk for a bank specifically refers to the risk that bank does not possess sufficient cash to meet their financial obligation, at one or more future periods in time (Matz and Neu, 2006). Alternatively, Heffernan (2005) defined liquidity risk as insufficient liquidity for normal operating requirements, that is, the ability of the bank to meet its liabilities when they fall due. In Basel III guideline (2008), liquidity risk (particularly funding liquidity risk[1] related to banks) is comprehensively defines as a bank's incapacity to fulfill both anticipated and unanticipated present and future cash flow and financial obligation without negatively affecting daily operation or financial condition of the bank. Liquidity risk possesses several notable characteristics that differentiates itself from credit risk, market risk or operational risk. Firstly, liquidity risk is a consequential risk that stems from other risks (Duttweiler, 2009), that is, any issues arise that impact the bank, if not managed appropriately, can trigger liquidity risk. Secondly, liquidity risk contagious and systematic which means a bank's liquidity crisis can spread to other banks in the system as evidently seen in the global financial crisis of 2007 – 2008 or the recent bank collapse of 2023. Thirdly, although liquidity is often overlooked in day-to-day operation, liquidity risk of banks needs to be monitored and managed all the time, not on average or most of the time, to ensure bank have sufficient fund for its due obligation (Duttweiler, 2009).

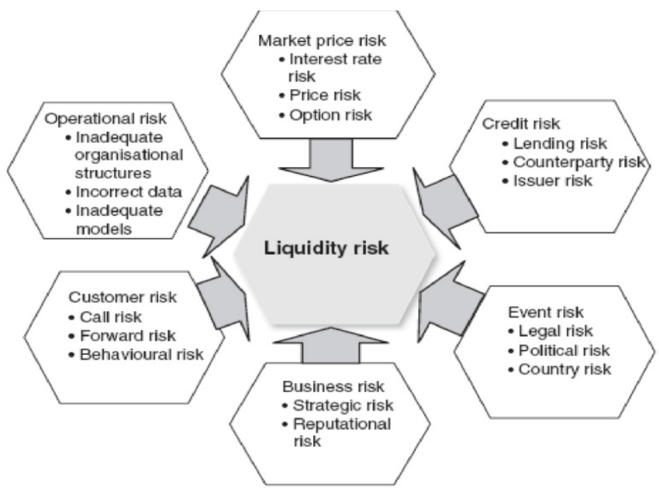

Figure 1: Liquidity risk relationship to other bank risks

(Source: Duttweiler, 2009)

The characteristics of liquidity risk makes liquidity risk management a complex process for any bank manager. Therefore, Basel III guideline (2008) was issued as an international standard to ensure that global banks have sufficient ability to fund increase in its asset and meet financial obligations as they come due at reasonable cost. The chance of liquidity risk occurs is often low, however, the consequence is severed to a bank once the risk happens. Therefore, the Basel guideline for liquidity risk management requires banks to manage intraday liquidity position on an ongoing basis as well as under various scenarios, including adverse market conditions.

[1] This paper focus on funding liquidity risk of bank which differentiates from market liquidity risk – risk that an organization cannot access liquidity in the market because of inadequate market depth or disruption.

2.2. Liquidity risk management practices

Best practices for liquidity risk management are widely studied among scholars. Some notable publications include Matz and Neu (2011), which provides a comprehensive overview of liquidity risk, its measurement, and management as well as the implications of Basel III; Venkat and Baird (2016), which cover liquidity tools such as liquidity metrics, regulatory reporting, operational processes, and stress testing; and La Ganga (2010), which discusses the lessons from the recent financial crisis and effective liquidity risk management and supervision, among others.

National supervisors also understand the importance of banking liquidity crises to the global financial system, hence the implementation of global liquidity risk management standards such as Basel III, Internal liquidity adequacy assessment process (ILAAP). Following these global standards, in Vietnam, SBV has issued regulatory requirements on liquidity risk management such as Circular 13 (2018)[1] or Circular 22 (2019)[2] and related circulars for banks in Vietnam to comply. These circulars mandate Vietnamese banks to implement a liquidity risk management framework that includes establishing risk strategy, setting risk appetite and limits on liquidity risk ratios, early warning system, stress testing, contingency funding plan and risk disclosure to stakeholders. These regulatory requirements from SBV align with the core of the Basel II guidelines to ensure the stability of banks in Vietnam and the global financial system.

2.3. Factors impacting liquidity risk management for banks

As mentioned, liquidity risk is a consequential risk, hence liquidity risk management at banks is influenced by a multitude of factors that can significantly impact the institution's solvency.

Previous studies and research consider numerous exogenous and endogenous issues that cause liquidity risk to global banks including banks in Vietnam. Matz and Neu (2006) described credit risk deterioration and operations risk as common internal factors while market disruptions, payment system issue or country risk are listed among common external problems leading to liquidity risk. Macroeconomic factors such as inflation control, interest rate fluctuations, credit market, regulatory requirements or monetary policy have certain influence on liquidity risk management of a bank. Various studies have been conducted to examine the relationship between macroeconomic factors and liquidity risk management of banks. Zhang and Zhao (2021)'s research on banks in China found that economic stability reduces the likelihood of liquidity risk; particularly, inflation control is an important factor in managing liquidity risk while stable monetary policies also help financial institutions reduce funding pressures and market volatility. Alternatively, Truong Quang Thong (2013) pointed out that a higher economic growth rate (GDP) in the current year has the effect of reducing the liquidity risk of banks in that year but will increase the liquidity risk in the following year. Furthermore, changes in inflation in the current year do not affect liquidity risk in that year, but they do have an impact in reducing liquidity risk in the subsequent year. Mazur & Szajt (2015) research indicated that macroeconomic determinants affect liquidity risk, particularly interbank interest rate for banks in EU countries.

Many studies and research have also been conducted to examine endogenous factors that impact liquidity risk of a bank. Delechat (2012) demonstrated that in Central American banks from 2006 to

[1] Circular 13/2018/TT-NHNN dated 18/05/2018 on internal control systems of commercial banks and foreign banks' branches

[2] Circular 22/2019/TT-NHNN dated 15/11/2019 limits and prudential ratios of banks and foreign bank branches

2010, factors such as the credit reserve ratio, net interest margin, market capitalization ratio, bank size, and the credit-to-GDP ratio had negative correlation with liquidity risk. Alternatively, factors such as the liquidity asset ratio and total assets exhibited a positive relationship with liquidity risk. Nguyen Thi Bich Thuan and Pham Anh Tuyet (2021) conducted a study on 25 commercial banks in Vietnam during the period 2013-2019, revealing that banks relying on market funding sources would increase liquidity risk. In contrast, increasing the scale, the ratio of equity to total capital, and the loan-to-deposit ratio, along with maintaining liquidity reserve ratios, reduces the likelihood of liquidity risk in banks. Ahamed (2021) research also pointed out that highly capitalized banks exhibit strong liquidity in the long run, whereas better asset quality can provide liquidity relaxation in the short run. Nga Phan Thi Hang, Hung Hoang Thai & Nguyen Thi Thuy Giang (2021) study of 27 Vietnamese commercial banks from 2010 to 2018 showed that technology investment will reduce the liquidity risk of commercial banks. In addition, the bank size, the ratio of Provision for Credit Losses (PCL) to the total credit outstanding, the ratio of equity to total assets, the bank's net interest margin, the ratio of loans to total assets, the ratio of cost to income and economic growth have affected to the liquidity risk of commercial banks in Vietnam.

In general, factors impacting liquidity risk management of banks are popular area for research. Whether global or regional, banking system in each country must consider similar external and internal factors to not only prevent but to manage liquidity risk effectively during adverse market conditions.

3. METHODOLOGY

In the article, the author applied the theory and methodology of dialectical materialism, historical materialism, systemization, interpretation, inductive, comparative method, etc. The article uses secondary data sources, mainly from reports and information originating from official sources of the State management agencies, scientific research works, books, textbooks, journals, e- information pages, etc.

3.1.Factors impacting liquidity risk management for banks in Vietnam in post covid-19 pandemic

On May 5th, 2023, the Head of the WHO[1] has declared an end to Covid-19 as a public health emergency. WHO stated that the pandemic has been on a downward trend since May 2022 which led to its conclusion on the end of Covid-19. Since May 2022, the global economic and banking system has encountered unprecedent challenges in the post pandemic period. Central banks and governments around the world struggles to maintain economic stability; meanwhile, the global banking system witnessed the series collapse of commercial banks in the United States along with Credit Suisse, the most prestigious bank in Switzerland in a few weeks of 2023. The current volatile environment calls for strengthening resiliency in bank's risk management framework, particularly liquidity risk management practice to prevent the spread of a global financial crisis. In the author's opinion, the events below are notable factors, both exogenous and endogenous, which are worthy of discussion in the context of strengthen the liquidity risk management for banks in Vietnam.

Exogenous factors - The gloomy macroeconomic outlook of the post pandemic period continues to be a major determinant in the turbulence of the global banking system. In overview, the post Covid-19 global economy faced complex challenges in 2022 with high inflation, tightening

[1] UN World Health Organization

monetary policies, Russia's military intervention in Ukraine, and the lasting impact of the Covid-19 pandemic. Policymakers revert to tight monetary and fiscal policies after providing unprecedented support during the pandemic to curb inflation and stabilizing the economy while looking forward to China's lifting Covid-19 restriction. Going into 2023, IMF reports indicated that challenges from 2022 still hindered recovery although the global economy became more resilient. Non-services sectors, including manufacturing struggles which lead to slowdown in economic activity coupled with weak productivity growth and reduced investment in productive capacity by firms. International trade and manufacturing indicate weaknesses while excess savings accumulated during the pandemic are decreasing. China's recovery, after an initial boost from pandemic opening, lost its momentum and is now facing issues of deflation, real estate firm collapse and other social structural issues. In Vietnam, however, the economic condition struggles in 2022 and continued to its slow growth into 2023. World Bank's report in June 2023 of Vietnam's economy indicated several notable trends including decline in real GDP to 3,72%; inflation declines quickly but still at high level of 4,3%; export and import both contracted due to lower external demand from trade partners; weaker private investment is reflected in low credit demand; both retail sales and private sector investment has fall sharply below pre-COVID period. However, FDI disbursement remains steady while public investment slowly improved compared to first half of 2022.

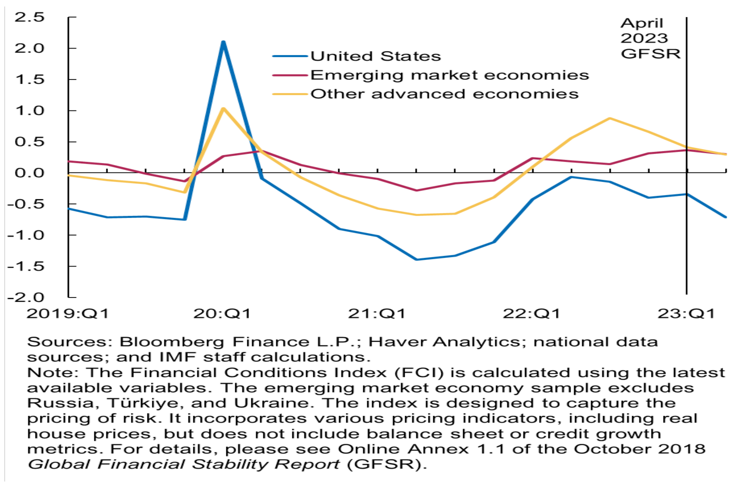

Figure 2: IMF report on global financial stability as of July 2023

The uncertain economic outlook both globally and domestically creates unprecedent difficulties for banks in Vietnam in terms of risk management capability. Among the macroeconomic trends, two notable macroeconomic trends that might impact domestic banks' risk management, particularly liquidity risk management includes:

First - The divergence between monetary policies of SBV in Vietnam and foreign central banks in post pandemic period. Central banks such as the FED[1] and ECB[2] monetary policies of post pandemic period focused on containing high inflation. This trajectory of hiking interest rate remains steady from 2022 until now. The FED has been increasing its federal funds rate from 0,25% in March 2022 to 5,5% as of September 2023; meanwhile ECB increased its rate from -0,5% in July 2022 to 4,25% in September 2023.

1 The Federal Reserve

2 European Central Bank

Figure 3: Federal Reserve fund rate hike between January 2022 – September 2023

(Source: Federal Reserve Bank of New York)

The constant tightening monetary policies aims to reduce inflation but comes with the consequence of collapse in the banking system during the first half of 2023. Starting in March 2022, several large commercial banks in the US such as Silvergate, Silicon Valley Bank, First Republic Bank and a G-SIFIs bank, Credit Suisse, suffered liquidity crisis as customers withdrew massive fund fearing loss of deposits. In the case of Silicon Valley Bank, the sharp increase of federal funds rate in 2023 created significant loss of value in the bank's bond portfolio which triggered panic among its investors and customers once the loss was disclosed. Meanwhile, banks in Vietnam must cope with sharp adjustment in monetary policies from SBV between 2022 and 2023. Under the pressure from foreign central banks to stabilize exchange rate, SBV had to increase interest rates twice between September and October 2022 by total of 2% along with open market operation (OMO) tool to lower supply of VND in the system. As consequence, interbank overnight rate increased sharply to almost 8% in beginning of October 2022 which indicated liquidity shortage in the system. In 2023, SBV has reverted its monetary policy by lowering interest rates to boost economic growth. However, the residual effect of high interest rate from 2022 remains as deposit influx increases significantly. Per SBV's statistics, retail deposit balance in the system as of June 2023 reached record of 6.3 trillion VND and wholesale deposit was 5.9 trillion VND. If banks struggle with funding in the end of 2022, they are now retaining significant excess funding amount. In 2022, liquidity risk managers struggle to maintain sufficient liquidity level while in 2023, they must cope with new issues of significant amount of short-term funding or increase foreign currencies outflow due to widen interest rate gap between VND and other foreign currencies like USD. Approaching the 4th quarter of 2023, while foreign central banks are likely to extend the rate hike trajectory, SBV on the other hand has not signal any reversal of its easing monetary policy to support GDP target in 2023. This divergence between domestic and foreign monetary policies will test liquidity risk managers of domestic banks to maintain (i) the balance of VND/foreign currencies liquidity reserve as well as (ii) to forecast the potential scenarios of current abundant deposit base being withdrawn in short-term.

Second – The collapse of foreign banks and SCB. The end of 2022 witnessed the unprecedent crisis of domestic corporate bond market and the bank run on Saigon Commercial Bank (SCB).

Although the government and SBV had intervene to prevent a contagious crisis in the banking system, these events startled the market and created further uncertainty in the banking system which led to further difficulty in interbank funding for banks. In the first half of 2023, the most significant liquidity crisis for banks since the GFC in 2008 occurred. In the period of two months, Credit Suisse, a G-SIFIs bank, collapsed while the failures of Silvergate Capital Bank, Silicon Valley Bank, Signature Bank, and First Republic Bank wiped out more than $500 billion of assets in the US banking system – more than the total assets of all failed banks in 2008 combined. The liquidity management failure of these banks shook the stability of many other banks around the world including banks in Vietnam. Although the liquidity crisis was largely contained due to government intervention, banks in Vietnam was reminded of the devastated consequence of liquidity risk. The rapid collapse of both foreign banks above as well as the case of SCB asked bank executives to review their liquidity risk management framework including contingency funding plan (CFP) in case of a liquidity crisis. CFP is a requirement by Basel II standard for bank to establish a compilation of policies, procedures and action plans for responding to severe disruptions to a bank's funding ability. Bank's CFP should detail the role, responsibility of each employee and clear communication within the organization as well as to external stakeholders of the bank. In the case of Silicon Valley Bank, the lack of a concrete CFP led to unclear communication to depositor who panicked and eventually withdrew their funds all at once. For Saigon Commercial Bank, SBV had to intervene and provide statement to assure the public before placing the bank under special monitor. The rapid responses from central banks indicated the contagious characteristic of liquidity risk in the financial system. Toward the end of 2023, although the global banking system has been largely stabilized, the liquidity crisis of both foreign and domestic banks provided valuable lesson for bank managers to further strengthen their oversight on liquidity risk management capacity, especially in unfavorable macroeconomic conditions.

Endogenous factors – Amidst the uncertainty of macroeconomic conditions, domestic banks also face internal challenges that might impact their liquidity risk management capability in post Covid-19 period.

First - The short-term excess cash reserve and cash equivalent in the banking system. Toward the end of 2022, interest rate increased as SBV tighten its monetary policies. In addition, rapid credit expansion of after Covid-19 while deposit level remained low created wide gap between deposit and lending thus put more pressure on liquidity of banks. Per SBV's statistic, credit growth of 2022 was 14,2% while funding only increased 6% compared to end of 2021. To compensate, banks in Vietnam offered competitive interest rate to attract funding from depositors. Moving into 2023, as funding became less of an issue, domestic banks have now encountered new problem of excess liquidity reserve. In the first half of 2023, as macroeconomic condition struggles, credit expansion only increased 4,5% while retail deposit balance in the system as of June 2023 reached record of 6.3 trillion VND and wholesale deposit was 5.9 trillion VND. In terms of liquidity management, the excess liquidity means lower net interest margin or profitability of the bank but also provide extra cushion against liquidity risk. However, further examination of the term of these excess cash indicates liquidity issue for banks if not managed properly. According to SBV analysis, 88% of deposit are short-term which matures within 12 months. Meanwhile 52% of loans from commercial banks are medium to long term. Banks' balance sheets are consisting of shorter-term funding and longer-term asset which put more pressure on liquidity structure of commercial banks as the deposit matures. Current economy outlook remains difficult but as market condition recovers, government spending and import/export improves then banks should expect higher level of cash outflow for lending purposes. As such, the current liquidity structure of short-term funding indicates potential source of liquidity risk. To support foreseeable credit growth, domestic banks must roll-overed the current short-term deposit continuously or attract more funding through competitive rate which appears against the current monetary policies of lowering interest rate from SBV. This scenario has not occurred, yet liquidity risk managers at banks must work closely with Asset-Liability management division to monitor the cashflow trend for different liquidity scenarios.

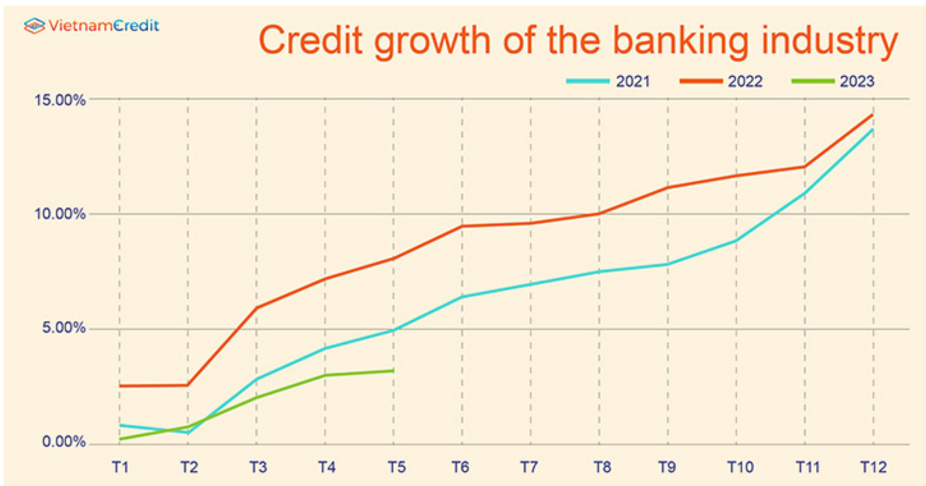

Figure 4: Credit growth comparison of Vietnam between 2021 – 2023

(Source: Vietnamcredit)

Second – Rapid development of digital transformation proposes challenge for liquidity risk management capability for banks. Digital transformation is significantly reshaping the landscape of risk management in banking. Banks are increasingly leveraging advanced technologies and data analytics to enhance their risk assessment and mitigation strategies through adoption of machine learning algorithms and artificial intelligence to analyze vast volumes of data in real-time, enabling more accurate identification of potential risks and fraud detection. Additionally, digital tools have streamlined the loan approval process, allowing banks to make quicker and more informed lending decisions. Following the development, SBV has issued a program in 2022 to promote digital transformation in banking system which aligns with the government's national strategy to develop digital economy by 2025 and orientation toward 2030[1]. In terms of liquidity risk management, the transformation enables banks to enhance risk forecast capability and manage liquidity risk exposure properly. This certainly is beneficial for banks but also proposes challenges to adapt and leverage technological advantages in risk management. First, digital transformation requires more advanced technological skills from human resources. Risk management staff must possess knowledge of data analytic with reporting, forecasting tools to apply to current liquidity risk management task. Second, digital transformation in risk management now requires further

[1] Decision 411/QD-TTg dated 31/2/2022 of Vietnam's Prime Minister on Approval for the national strategy for development of digital economy and digital society by 2025, orientation towards 2030

collaboration between IT, liquidity management division and risk management department to fully utilize the capability of system in managing intraday liquidity as well as dynamically forecasting risk scenarios as supposed to silo-working method among internal units as before. The factor of digital transformation not only ask risk manager to upgrade their technological understanding but also requires banks to streamline the risk management process between divisions to properly manage liquidity and forecasting liquidity risk when needed. Digital transformation will revolutionize risk management for domestic banks by empowering financial institutions with advanced tools to proactively identify, assess, and mitigate risks, ultimately contributing to a more resilient and efficient banking sector in the country. However, banks must be ready to support the transformation with capable human resource and appropriate risk management process in the short future.

The above exogenous and endogenous factors above, in the author's opinion, are notable trends that potentially impact the liquidity risk management landscape of banks in Vietnam in the period of post Covid-19. The struggling macroeconomic outlook, series of global bank collapse along with surprising liquidity surplus condition and rapid development of digital transformation are putting pressure on banks to further review risk management process while adapting to new issues that could impact the liquidity structure of the banks. However, this is also the opportunity for domestic banks to further enhancing their liquidity risk management and forecasting capability to become more resilient in case of severe disruption occur.

4. RECOMMENDATIONS FOR BANKS IN VIETNAM

Post Covid-19 pandemic presents difficulties for banks in Vietnam with unfavorable external conditions along with internal challenges. In terms of liquidity risk management, here are three recommendations for both banks as well as SBV with the objective of strengthening bank resiliency and promote system stability.

Firstly, SBV should issue regulation in line with Basel III standard for banks to comply. Basel III guidelines provide a globally recognized framework that promotes the resilience of banks by ensuring they maintain certain liquidity risk management level such as liquidity ratios. Basel III regulation by SBV will provide banks with specific guideline to appropriately measure liquidity risk ratios, thus establishing proper management control and reducing cost of retaining excess liquidity buffer. Furthermore, issuing Basel III guidelines demonstrates SBV's commitment to aligning the banking sector with international best practices, promoting transparency and consistency in regulatory standards and encouraging banks to adopt more prudent liquidity risk management practices.

Secondly, banks need to enhance contingency funding plan (CFP) and stress test practicality through routine exercises. Circular 13 (2018) issued by SBV requires banks in Vietnam to establish CFP along with regular stress test exercise for distress scenarios. As banks establish their CFPs, risk managers should review and implement trial exercises of the CFP regularly. The exercises ensure that bank employees understand the actions needed in distress situations. Actions need to be clear, concise, practical to implement, from executives to branch representatives. The CFP should include steps to integrate support from SBV if needed. In terms of stress test measurement, the objective is to ensure banks can properly implement liquidity risk measurements in distress scenarios. Therefore, banks should regularly review assumptions that are being used to establish stress test scenarios. The practicality of CFP and stress test implementation are crucial component of Basel standard but more importantly, they are lifelines for banks once liquidity crisis like bank run occurs.

Thirdly, banks should constantly provide risk management training for employees to (i) establish a resilient risk culture within the organization and (ii) enhance employees' technical and technological capability. Banks should review and upgrade their training programs not only for risk officers but also for executives and business employees to ensure that risk appetite and risk management processes are understood throughout the organization. Every employee, particularly business representatives, in the organization should be aware of the CFP and the risk level that the banks are exposed to before any business decision is made. On the other hand, digital transformation development requires risk employee in banks to possess knowledgeable skill in data and technological system. The quality of employees is crucial for risk management process in understanding real-time liquidity risk exposure and utilize advance tools to dynamically forecast potential risk sources for banks.

5. CONCLUSION

Post Covid-19 era has posed unprecedented challenges to global economies and the financial sector, with a particular spotlight on the banking industry. The emergence of liquidity risk as a critical concern for regulators and bank executives, evident in the series of bank collapses in early 2023, underscores the urgency of effective risk management practices. As the world grapples with economic and financial uncertainties in the aftermath of the pandemic, the banking sector in Vietnam must proactively assess and revamp their liquidity risk management strategies to ensure resilience and prevent systemic failures. This entails a comprehensive examination of both external and internal factors that influence liquidity risk management within the Vietnamese banking landscape.

Understanding the intricate implications of these factors is paramount for risk managers, as it enables them to identify vulnerabilities within existing processes. This, in turn, facilitates the development of a robust risk management framework that can adapt to the ever-evolving liquidity risk environment. To navigate the challenges posed by the post-pandemic landscape and uphold the stability of the banking system in Vietnam, a proactive and forward-thinking approach to liquidity risk management by leveraging the capability of high-quality human resource in combine with advance technological tools is imperative.

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BUILDING A FUNCTION TO ASSESSMENT OF CORPORATE LIQUIDITY VIA DISCRIMINANT ANALYSIS: A CASE STUDY OF LISTED CONSTRUCTION COMPANIES ON VIETNAM STOCK EXCHANGE

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Abstract: This paper uses the discriminant analysis method to build a discriminant function with measurments of liquidity on different aspects including traditional liquidity ratios, cash conversion cycle and operating cash flow ratios to measure and assess a company's corporate liquidity. At the same time, through the discriminant function to determining the value of liquidity score (LS) to classifying companies with good liquidity and companies with poor liquidity. With a research sample of 90 listed construction companies on the Vietnam Stock Exchange in the period from 2013-2022, the results of the discriminant analysis show that construction companies with LS value < -0.128 have good liquidity; construction companies with LS value > 1.087 are companies with poor liquidity; construction companies are on liquidity warning when -0.128 ≤ LS ≤ 1.087.

Keywords: Liquidity, corporate liquidity, construction companies, discriminant analysis

1. INTRODUCTION

Corporate liquidity is one of the most important indicators in assessing a company's financial situation. It represents the ability of a company to convert its current assets into cash so that it can settle its current liabilities at corresponding costs but not reduce its value. Deriving from ineffective use of assets, liquidity risks may arise and this is also the most challenging risk of the financial risks that firms face. Liquidity risk becomes more complex due to increasingly strong developments in financial markets. Therefore, accurately assessing corporate liquidity is always an issue that receives a lot of attention from business managers as well as financial analysts and researchers at any economic period.

There are many different measurement methods to assess corporate liquidity. The first approach is also the most traditional one which is based on analyzing the ratio of current assets to current liabilities, including current ratio, quick ratio and cash ratio. The second approach introduced later is the analysis of the cash conversion cycle, which is considered to be a more dynamic measure than the traditional ratios above. Another approach used in recent studies is analysing the cash flow from the operating activities of companies. Each method has its own advantages and disadvantages, so using a certain method to measurement the corporate liquidity of a company will not be able to fully assess its true corporate liquidity. Therefore, the aim of this study is to use the discriminant analysis method introduced by Altman (1968) to build an indicator that allows to measure the corporate liquidity of the listed construction companies on Vietnam Stock Exchange in the most complete aspects, at the same time, classified construction companies with good corporate liquidity and construction companies with poor coporate liquidity.

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2. LITERATURE REVIEW

2.1. Theoretical overview of corporate liquidity measurement methods

Over the decades, business managers, financial analysts as well as researchers have used a variety of techniques to measure liquidity to classify businesses with good liquidity and businesses with poor liquidity. Measurements are built on different perspectives when assessing corporate liquidity, including: (i) The method of measuring corporate liquidity is based on the relationship between current assets and current liabilities, known as traditional ratios; (ii) The method of measuring corporate liquidity is based on working capital management with cash conversion cycle; (iii) The method of measuring corporate liquidity is based on operating cash flow ratios.

2.1.1. Traditional ratios

The traditional ratios show whether a company's current assets are sufficient to cover the payment of its current liabilities at a given time. The traditional ratios include current ratio, quick ratio and cash ratio. They are widely used in financial analysis reports, especially corporate liquidity analysis of companies, so it can be said that this is the most popular corporate liquidity measure.

Subramanyam and Will (2009) argue that reasons for the traditional ratios's widespread use as a measure of liquidity include its ability to measure: (i) Current liability coverage, the higher the amount (multiple) of current assets to current liabilities, the greater assurance we have that current liabilities will be paid; (ii) Buffer against losses, the traditional ratios show the margin of safety available to cover shrinkage in noncash current asset values when ultimately disposing of or liquidating them. However, all three ratios are characterized by their static liquidity, as they only consider the firm's liquid resources reserves through balance sheet data at a certain time. Furthermore, the traditional ratios emphasize current assets liquidation rather than liquidity analysis.

2.1.2. Cash conversion cycle

According to Richards and Laughin (1980), meeting debt obligations through asset liquidation should only be considered a second line of defense. They find that securing operating cash flow instead of asset liquidation value is an important factor in corporate liquidity analysis. Therefore, to overcome the static feature of traditional ratios, Richards and Laughin (1980) introduced a more dynamic method of measuring corporate liquidity based on company's working capital management is cash conversion cycle. This indicator measures the time it takes for a firm to convert resources into cash flows, in other words, it reflects the length of time that the firm sells inventory and recovers inventory, recover receivable and pay bills. Since the introduction of Richards and Laughin (1980), the cash conversion cycle has been used by many scholars around the world in studies of corporate liquidity and it has been proposed as a measure of liquidity that is more consistent than traditional ratios such as Nordgren (1981); Kamath (1989); Katerina and Dan (1993); Gallinger (1997); Katerina and John (2000); Uyar (2009); Bhutto et al. (2011); AL-Shubiri (2015); Lin et al. (2014); Garanina and Petrova (2015); Bolek and Grosicki (2015). The results of these studies all show that the cash conversion cycle offers a more dynamic view, reflecting more truthfully about the true liquidity of a firm.

2.1.3. Cash flow ratios

Other than that it favors the cash conversion cycle, some other researchers argue that although cash conversion cycle is a more flexible indicator than traditional ratios, both measurement methods are affected by accrual accounting. According to Subramanyam and Will (2009), due to an accrual basis, financial transactions in the form of credit or cash are recorded when they arise instead of focusing on collection and payment in cash. Furthermore, accrual accounting determines net income based on estimates, deferred payments, amortization, and pricing, which are sometimes more subjective than cash flow factors. In addition, opposing views also indicate that the Balance Sheet's data is static and is only measured at a single point in time, while the Income statement has non-cash amortization items (such as depreciation expenses). The Cash Flow Statement, by contrast, records changes in other reports and off the books, focusing on issues that shareholders care about is the amount of cash available for business's operations and investment (Jagels and Coltman, 2001). Mills and Yamamura (1998) also state that the Cash Flow Statement shows more reliable information for liquidity analysis than the Balance Sheet and Income Statement. Due to these limitations, in recent years, cash flow ratios determined based on data on the Cash Flow Statements have gradually been of interest to financial analysts, managers and investors.

In the word, there are many authors used cash flow ratios in empirical research on corporate liquidity such as Ryu and Jang (2004); Kirkham (2012); Atieh (2014); Billah et al. (2015); Barua and Saha (2015); Pham Quang Tin et al. (2017). These studies focus on comparing the corporate liquidity as measured by traditional ratios (including current ratio and quick ratio) and cash flow ratios (including operating cash flow ratio and critical needs cash coverage ratio), and they also test which measure of corporate liquidity is more effective. The authors all find the conclusion that cash flow ratios reflect a better picture of a company's financial position, especially its liquidity, than traditional ratios.

It can be seen that over the decades with the development of the financial world, more and more indicators have been used to measure corporate liquidity based on various perspectives and needs from managers, investors as well as financial analysts. Although there have been many studies that give different measures to evaluate liquidity, the authors conclude that each measure has certain advantages and disadvantages, which are chosen to use based on different evaluation objectives and each has an important role in evaluating the corporate liquidity. That is the reason why this study decided to use a combination of the different measurement methods used in previous studies, to be able to assess the corporate liquidity situation of companies more generally and completely. To accomplish this, this study applies discriminant analysis in measuring and assessing corporate liquidity.

2.2. Discriminant analysis

Discriminant analysis is a multivariate classification technique that separates objects into two or more mutually exclusive groups based on measurable features of those objects (Altman, 1968). The measurable features are sometimes called predictors or independent variables, while the classification group is the response or what is being predicted. The discriminant analysis requires prediction of the number of groups and subjects in each group before performing the analysis, so the first step is to explicitly establish the groups, the initial number of groups from two or more. After the groups were established, data are collected for each group, using discriminant analysis to find a linear combination of characteristics for the clearest distinction between established groups through the following steps: Structure of the discriminant function to distinguish the expression of the dependent variables from the independent variables; next, texting if there is a difference between the groups when judged on the independent variables; Finally, it was concluded that the independent variables were the main cause of the differences between the groups or not.

The discriminant function introduced by Altman (1968) converts the individual variable values into a single distinction (Z-score) is presented as the following equation:

$$Z = a + V_1X_1 + V_2X_2 + \dots + V_nX_n$$

In there:

Z : The distinct value of the discriminant function

a : The constant

V_i: The discriminant coefficient

X_i: The independent variables

In the discriminant function, the discriminant coefficient V will be calculated such that the groups with different distinct values are as much as possible. Then, individual object score in one group will be calculated averagely to get the group means called "centroid", in the words, the group's centroid value shows the important location for a group. Differences between centroids indicate the degree of distinction between those groups could be observed. In the discriminant analysis of the two groups, the observations were assigned to the group with the closest centroid. The decision principle is usually to calculate a discriminant score or cutting point, if the discriminant is high than this value, it will be classified in the group with a large centroid, otherwise, if the discriminant of observations is low than this value will be classified as a group with a small centroid. Specifically:

If the two groups are of equal size, the discriminant score is the simple average of their two centroids:

$$Z_{CS} = \frac{Z_A + Z_B}{2}$$

If the two groups are of different sizes, the discriminant score is the weighted average of their two centroids:

$$Z_{CS} = \frac{N_A Z_A + N_B Z_B}{N_A + N_B}$$

In there:

Z_{CS}: Discriminant score (cutting point)

N_A : Number of observations in group A

N_B : Number of observations in group B

Z_A : Centroid of group A

Z_B : Centroid of group B

In the discriminant analysis, Wilk's Lambda value and Chi-square value are also examined to determine discriminating power. The Wilk's Lambda is used to measure the differences between groups and the homogeneity within groups. A low Wilk's Lambda and a large Chi-Square and with a significant p-value will indicate good discriminating power of the discriminant function (Ben et al., 2010).

2.3. Previous studies

The discriminant analysis method is proposed by Altman (1968) to correct subjective analysis ratios related to firm performance. Since the first study of Altman (1968), the discriminant analysis method has been used by many researchers in many different fields, especially those on financial distress prediction or operational efficiency of the business, and has shown its usefulness. The problem of liquidity is related to bankruptcy. A general view about financial distress is that results from a mismatch between the available current assets and its financial obligations. Therefore, in recent years, some researchers around the world also use discriminant analysis method related to forecasting and evaluating corporate liquidity.

Bhunia (2008) examined predictive ability in respect of the corporate liquidity position of a company through discriminant analysis. With twenty private-sector pharmaceutical enterprises in India divided into two groups of ten profit-making and ten loss-making, the author uses discriminant analysis is to identify liquidity position from two liquidity ratios (i.e., current ratio and cash position) as inputs which are relevant in distinguishing between profit-making and loss-making companies. The result of discriminant analysis shows that any company having a D-score higher than the cut-off score (1.905) is identified as a profit-making company with sufficient liquidity, at the same time a company with a D-score less than the cut-off score will be classified as a loss-making company with poor liquidity.

Bolek and Grosicki (2015) assessed the corporate liquidity of non-financial companies listed on the Warsaw Stock Exchange in the period 2004-2012. The authors built a discriminant function with independent variables including quick ratio, cash ratio, asset structure ratio, working capital to total assets ratio, short-term liabilities deferral period and cash conversion cycle. By discriminant analysis, the authors determine the difference and call the LS (L-score) to distinguish the liquidity of three groups: group "0" consists of companies generating a negative ROA-WACC and at the same time assigned as companies with a low level of liquidity, group "1" consists of companies with positive value of ROA-WACC, while assigned as companies with good liquidity, group "2" consists of companies with negative value of ROA - WACC, while assigned as companies with a high level of liquidity. The result of discriminant analysis shows if LS value in the range > -1.28 and < 0.74, it will indicate a good liquidity; if the LS value is higher than 0.74 than the liquidity is considered to be too low, and if it is lower than -1.28 than it is too high resulting in the profitability not covering the cost of capital.

The above studies have added to the theory of measures of corporate liquidity, but the limitation of these studies is that they only use ratios calculated based on the Balance Sheet and Income Statement without considering the Cash Flow Statement, so it is not possible to give a more general and complete assessment of the corporate liquidity. On the other hand, the number of empirical studies in the world using discriminant analysis methods to rank the corporate liquidity of compnaies is quite limited. The recent research in Vietnam by Nguyen Phuong Ha (2023) used the discriminant analysis method to assess the corporate liquidity of listed companies on HOSE in the period 2010-2019. The author uses the current ratio, cash conversion cycle and operating cash flow ratio to build a discriminant function to classify company liquidity. The results of the discriminant analysis show that companies with LS value < -0.349 have good liquidity; companies with LS value > 0.299 are companies with poor liquidity; companies are on liquidity warning when -0.349

$\leq$ LS $\leq$ 0.299. The research of Nguyen Phuong Ha (2023) has added more empirical evidence on the use of the discriminant analysis method to assess the corporate liquidity in Vietnam, however, this research builds a common discriminant function for all industries, while each industry has its own unique characteristics. Therefore, to supplement the empirical evidence in the economy of Vietnam in general and listed construction companies in Vietnam in particular, and at the same time, to help managers, investors and financial analysts can make better decisions, in this study, the author tries to find out the effectiveness of the discriminant analysis model in assessing the corporate liquidity of listed construction companies in Vietnam.

3. RESEARCH DESIGN

3.1. Research sample and data

The research sample includes 90 listed construction companies on Vietnam Stock Exchanges, including HNX and HOSE. Research data includes accounting data on financial statements of listed construction companies for the 10-year period from 2013 to 2022. The data is provided by Vietstock, a company specializing in collecting and analyzing financial data in Vietnam.

3.2. Corporate liquidity measurement

Based on the measurement methods used in previous studies on corporate liquidity, the indicators used to measure corporate liquidity in this study also include: traditional liquidity ratios, cash conversion cycle and operating cash flow ratios.

The selected variables are calculated and encoded as follows:

Table 1. Corporate liquidity measurement

Encoded Variables	Ratios	Formula	Referenced researches
X1	Current ratio (CR)	Current assets/ Current liabilities	Bhunia (2008)
X2	Quick ratio (QR)	(Current assets – Inventories)/ Current liabilities	Bolek and Wolski (2012)
X3	Cash ratio (CaR)	Cash and cash equivalents/ Current liabilities	Bolek and Wolski (2012)
X4	Cash conversion cycle (CCC)	ICP + RCP – PDP	Richards and Laughin (1980)
X5	Operating Cash flow ratio (CFO)	Cash flow from operating/ Current liabilities	Atieh (2014), Pham Quang Tin et al. (2017)
X6	Critical needs cash coverage (CNCC)	(Cash flow from operating + Interest paid)/ (Current liabilities + Interest)	Atieh (2014), Pham Quang Tin et al. (2017)

Notes: ICP: Inventories conversion period, RCP: Receivables conversion period, PDP: Payment deferral period.

3.3. Establish the discriminant function

To build a discriminant function that classifies good corporate liquidity or poor corporate liquidity, the research sample is divided into two groups. Usually a company's business is evaluated based on its profit achieved during the period. However, profit after income tax cannot be a suitable criterion for classification, because there are companies with positive profit after tax but it is not significant. On the other hand, the company's business performance should be considered based on how the company's profits are generated from the its resources. Kim et al. (1998) modeled the investment decisions in short-term assets of company. They claim that optimal corporate liquidity is determined by a trade-off between low return on assets and the benefit of minimizing costly external financing. They propose a model that predicts that the optimal investment in corporate liquidity increases with the cost of external funding. Research on capital markets in Poland by Bolek and Wolski (2012) also shows that investors prefer profitability over corporate liquidity and therefore managers should pay attention to this information when making liquidity decisions. However, managers also need to be concerned that the return on assets created is guaranteed to cover the costs of capital related to those assets or not. If the profitability of business operations is not enough to cover the cost of attracting capital, this will lead to overspending and bankruptcy (Dolbnya et al., 2020). Therefore, to evaluate whether a company is creating value when it invests in projects, return on assets (ROA) is compared with the weighted average cost of capital (WACC). If ROA is greater than WACC, the value of the company increases and vice versa. With the above problems, the study of Bolek and Grosicki (2015) proposes grouping in a discriminant analysis model to classify good or poor corporate liquidity based on the difference between ROA and WACC. If a company generates ROA higher than WACC, it means that liquidity management based on the selected ratios is good because the company can cover the cost of capital. On the contrary, if ROA is lower than WACC, it means that the company cannot cover the cost of capital, which means that the corporate liquidity is falling into a bad situation. Therefore, in this study, the sample is divided into two groups according to Bolek and Wolski (2012) as follows: The first group is the group of construction companies listed in the period 2013-2022 with a positive difference between ROA and WACC (coded as 1) including 699 observations; The second group is the group of listed construction companies in the period of 2013-2022 with the difference between negative ROA and WACC (coded as 0) including 82 observations.

The average cost of capital is determined as follows:

WACC = Re x E/(E+D) + Rd x (1 - corporate income tax rate) x D/(E+D)

In there:

WACC: Weighted Average cost of capital

E: Total Equity

D: Total Debt

Re: Cost of equity

Rd: Cost of debt

By limiting the scope of the variables to 0-1, and bearing in mind the multidimensional nature of the links between measures of corporate liquidity, after the group is identified and the data of the groups is collected, the discriminant analysis model is used to find the linear combination of these characteristics to best differentiate these two groups. Simultaneous analysis of all measures of corporate liquidity allows weighting for each individual indicator to be estimated. The discriminant function model built including the selected corporate liquidity ratios used in this study has discriminant weights, and thus becomes a new measure of corporate liquidity that considers all aspects of a company's liquidity. The aim here is to construct a distinguishing point for the level of corporate liquidity that is rated as "good" or "poor". For "good" corporate liquidity will correspond to a positive ROA-WACC, whereas a "poor" corporate liquidity will correspond to a negative ROA-WACC.

Inheriting and developing from the previous researches of Bhunia (2008) and Bolek and Grosicki (2015), a linear combination of the variables used to form the discriminant function in this study is as follows:

$LS = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$

In there:

LS: Discriminant Score of corporate liquidity

a: The constant

β: The discriminant coefficient of X

X_1: Current ratio - CR

X_2: Quick ratio - QR

X_3: Cash ratio - CaR

X_4: Cash conversion cycle - CCC

X_5: Operating Cash flow ratio - CFO

X_6: Critical needs cash coverage - CNCC

4. RESULTS

The results of discriminant analysis are as follows:

Table 2. Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
CR	0.919	68.032	1	779	0.000
QR	0.922	66.257	1	779	0.000
CaR	0.922	66.237	1	779	0.000
CCC	0.993	5.287	1	779	0.022
CF	0.998	1.303	1	779	0.025
CNCC	0.986	11.073	1	779	0.001

Source: Results were analyzed by the author from SPSS 23

Table 2 shows that all variables are statistically significant at the 5% level, that is, all of these variables are capable of significantly discriminating the difference between the group of positive ROA-WACC companies and the group of negative ROA-WACC companies.

Table 3. Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	0.708	100.982	6	0.000

Source: Results were analyzed by the author from SPSS 23

Table 3 shows the results of Wilk's Lambda's analysis. In this study there are only 2 groups, so only one discriminant function is estimated. Wilk's Lambda has values from 0 to 1, a value of 0 means a big difference and a value of 1 means there is no difference. The results from Table 3 show that Wilk's Lambda value is 0.708, while Chi-square 100.982 with degree of freedom (df) is 6, p-value 0.000 < 0.05, so we can confirm there is a difference between two groups analyzed by independent variables. In other words, the estimation function is statistically significant.

Table 4. Canonical Discriminant Function Coefficients

	Function
	1
CR	1.403

QR	0.151
CaR	-0.117
CCC	-0.001
CF	-0.148
CNCC	1.082
(Constant)	-1.094

Source: Results were analyzed by the author from SPSS 23

Table 4 shows the discriminant function coefficient of each variable in the discriminant function. Because the sample is divided into two groups, only one discriminant function exists. With the results in Table 4, the discriminant function model to classify corporate liquidity according to ROA-WACC criteria of listed construction companies on the Vietnam Stock Exchange in the research period is built as follows:

LS = -1.094 + 1.403CR + 0.151QR - 0.117CaR - 0.001CCC – 0.148CF + 1.082CNCC

Table 5 presents the descriptive statistics results of the value of the LS function of two groups "0" and group "1" in the period 2013-2022. The results show that the average value of the LS function between the two groups is significantly different. The group of companies with negative ROA-WACC (LS0) has an average LS function value of 1.0379 and the group of companies with positive ROA-WACC (LS1) has an average LS function value of -0.2251. This result also shows that classifying observations according to the values of the LS function built as above shows that the lower the overall value of this function, the higher the ROA-WACC value for a given observation is.

Table 5. Descriptive Statistics of LS values of two classified groups

	N	Minimum	Maximum	Mean	Std. Deviation
LS1	699	-5.1512	9.5058	-0.2251	0.8302
LS0	82	-1.9533	11.7852	1.0379	2.1824
Valid N (listwise)	0				

Source: Results were analyzed by the author from SPSS 23

Table 6 shows the "centroid" values of the two groups. The centroid value of the "0" group is 1.087 and the centroid value of the "1" group is -0.128.

Table 6. Functions at Group Centroids

ROA-WACC	Function
	1
0	1.087
1	-0.128

Source: Results were analyzed by the author from SPSS 23

From the centroid values of the two groups, the distinction between the group of companies with good liquidity and the group of companies with poor liquidity, also known as the Liquidity Cut Score (LCS) of listed construction companies on Vietnam Stock Exchange during the research period is determined as follows:

$$L_{CS} = \frac{N_0 Z_0 + N_1 Z_1}{N_0 + N_1} = \frac{82 \text{ x } 1.087 + 699 \text{ x } (-0.128)}{82 + 699} = -0.00043$$

In there:

N_0: Size of the negative ROA-WACC companies group;

N_1: Size of the positive ROA-WACC companies group;

Z_0: Centroid of the negative ROA-WACC companies group;

Z_1: Centroid of the positive ROA-WACC companies group.

Thus, the discriminant analysis model results show that the discriminant between good corporate liquidity and poor corporate liquidity is $L_{CS} = -0.00043$ with Centroid low (good corporate liquidity) of -0.128 and Centroid high (poor corporate liquidity) is 1.087. A company with an LS value < -0.128 is a company has good corporate liquidity with profit to cover cost of capital during the period. A company with an LS value > 1.087 is one that cannot guarantee to cover the cost of capital with the profit generated during the period and corresponds to poor corporate liquidity. A company is in a liquidity warning zone when its LS value is in the range -0.128 ≤ LS ≤ 1.087.

Table 7. Classification Results[a]

		ROA-WACC	Predicted Group Membership		Total
			0	1	
Original	Count	0	11	71	82
		1	6	693	699
	%	0	13.4	86.6	100
		1	0.9	99.1	100

a. 90.1% of original grouped cases correctly classified.

Source: Results were analyzed by the author from SPSS 23

Table 7 presents the results of the group classification accuracy. The data in the table shows that the classification is quite consistent with the accuracy level of 90.1%.

5. CONCLUSIONS AND RECOMMENDATION

There are many approaches with different indicators to measure a company's corporate liquidity, each indicator has a certain important role in assessing corporate liquidity. Therefore, it is difficult to put draw conclusions about a company's true corporate liquidity situation if the assessment is only based on a specific indicator. The biggest contribution of this study is to find a connection among different corporate liquidity indicators by building a discriminant function to help financial analysts as well as business managers consider overall and synchronously the indicators to assess corporate liquidity. This helps to limit the disadvantages of indicators when considering the corporate liquidity position of companies through each individual indicator. Through discriminant function with independent variables including traditional liquidity ratios, cash conversion cycle, operating cash flow ratio, critical needs cash coverage, the results of discriminant analysis identified the cut-off point to classify the group of listed construction companies with good corporate liquidity and those with poor corporate liquidity.

The corporate liquidity approach in this study can help managers evaluate and make decisions related to liquidity management. They can evaluate the corporate liquidity of the companies in general and construction companies in particular by analyzing the different ratios or can use the model proposed in this study to have a more general and complete view.

The study has made certain contributions to the theory of measuring and assessing corporate liquidity. However, in order to assess the corporate liquidity of a company, it is necessary to consider it in the context of other compnaies in the same industry because each industry has its characteristics. Therefore, the discriminant function built in this study may not be suitable to measure and evaluate the corporate liquidity of companies in other industries. However, the dicriminant analysis method and the grouping of companies proposed in this study can be used to measure and classify the corporate liquidity position for companies in other industries.

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STUDY ON ACCOUNTING STANDARDS FOR INVENTORY ASSETS AND PROPOSAL TO AMEND PUBLIC ACCOUNTING

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After a period of implementation, with the efforts of domestic and foreign scientists and the close and drastic direction of the political system, Vietnam has a roadmap to research and promulgate a system of accounting standards. Vietnam public sector by Decision 1299/QD-BTC dated July 31, 2019 approving the Project to announce the Vietnamese public accounting standards system (VPAS). To date, Vietnam has announced twice with a total of 11 VPASs [1]; In which the overall standards including Reporting standards and there 03 standards directly regulating tangible and intangible assets, including VPSAS 12 on Inventory, VPSAS 17 on factories, equipment, VPSAS 31 on intangible assets. This article delves into inventory standards (Vpsas 12), including the following contents: Which accounting items are recorded as inventory; when inventory is recorded; method of determining inventory book value; Present information about inventory on financial statements. Research regulations in the current accounting system on inventory, especially in Public accounting according to Circular 107/2017/TT-BTC and then propose amendments to administrative accounting. career in Vietnam in the coming time.

Key word: VPSAS 12; Public Accounting

1. EXPLAIN PUBLIC ACCOUNTING STANDARDS ON INVENTORIES (VPSAS 12).

VPSAS 12 is regulated to include 46 paragraphs, the main content of the Standard includes the purpose, scope of the standard, method of determining inventory value, recording costs and presentation of inventories on financial statements and the historical cost method are the dominant methods of inventory.

International accounting standards as well as Vietnamese accounting standards are presented and numbered in paragraphs. Researching each paragraph is necessary, but difficult to cover, so for me personally, I research one standard. need to be researched according to five questions: (1) Which accounting object is recognized by the standard (What)?; (2) When is that accounting object recorded?; (3) By what method is the recorded value of that accounting object determined?; (4) By what method are unusual situations recorded and evaluated?; (5) How to present information on the financial statements of the accounting entity that that standard regulates?.

With this research method, VPSAS 12 is understood as follows: [4]

1.1. Conditions for the recognition of accounting items as inventory and when inventory items are recorded.

This content in Vietnamese public accounting standards on inventories is specified in paragraphs 2, 3, 4, 5, 6, 8, 9, 10 and paragraph 11 of VPSAS 12.

Inventories are assets:

(a) Take the form of raw materials or tools and consumables during the production process;

(b) Take the form of raw materials or tools or consumables or distributed during the service provision process;

(c) Held for sale or distribution in the normal operating cycle; or

(d) In the process of production for sale or distribution.

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Inventories include: Inventories include goods purchased and held for resale, for example goods acquired and held for resale by an entity, real estate held for resale. Inventories also include finished products or unfinished products that the unit is producing. Inventory also includes raw materials and tools and equipment prepared for use in the production process; goods purchased or produced by an entity for distribution free of charge or at a nominal price to other entities. In some public sector entities, inventories are more relevant to the provision of services than are goods purchased and held for resale or goods produced for sale. In the case of an entity providing inventory services including the cost of performing the service, the entity has not recorded revenue related to the provision of this service.

Paragraph 9 of VPSAS details the forms of inventory, paragraph 10 regulates specific inventories in the public sector, the term commonly used in Vietnam is "print". Paragraph 11 requires that government-public sector strategic stocks be recorded as and treated as inventories.

1.2. Inventory valuation

Determining the value of inventory for book recording at the stages of inventory starting to be recorded (warehousing), inventory value (end-of-period inventory), inventory value and other recording situations Receiving the value of inventory is specified in paragraphs 12 to 25, which contain basic contents including: determining the value of inventory, method of recording inventory at cost and specific situations. For example, in the case of purchasing and processing yourself, there are costs other than purchasing and processing; Cost of inventory as a service, Cost of agricultural products harvested from biological assets...

Normally, inventory is determined at the lower price between cost and net realizable value, however in situations such as inventory acquired through non-exchange transactions (giveaways, gifts, etc.) sponsored, aided, transferred to, etc.), inventory must be determined at fair value at the time of receipt or inventory must be determined at the lower price between original cost and replacement cost. current position when inventory is held for: (a) Distribution free of charge or at nominal price; or (b) Consumed in the production of goods distributed free of charge or at a nominal price.

1.3. Methods and techniques for inventory valuation

Regulated from paragraphs 26 to 39. This content stipulates those techniques such as: standard cost method or retail method can be used for convenience if the result is approximately the original price. The standard cost method takes into account the normal consumption level of raw materials, tools, labor, efficiency and capacity of machinery and equipment.

The methods specified in this standard include: Name method, first in first out method or weighted average method;

Net realizable value: this is a new content in public accounting in Vietnam, writing down the original price of inventory to net realizable value is consistent with the principle of unrecognized assets. at a level that is greater than the future economic benefits or service potential that the entity expects to obtain from the sale, exchange, distribution or use of the asset.

With the regulation of net realizable value, public accounting in Vietnam will need to make adjustments in specific accounting policies in the coming time, thereby creating a provision for devaluation of inventory.

1.4. Exceptional situations in inventory accounting

Distributing goods free of charge or at a nominal rate, paragraph 39 provides: A public sector entity may hold inventories whose future economic benefits or potential services are not directly related to its ability to generate net cash inflows. These types of inventories may arise when the Government decides to distribute certain goods for free or at nominal prices. In these cases, the future economic benefit or service potential of the inventory for financial reporting purposes is reflected in the amount that the entity must expend to obtain the economic benefit or service. potentially necessary for achieving the unit's objectives. When the potential economic benefit or service cannot be purchased in the market, the entity should make an estimate of its replacement cost.

The regulation of future economic benefits or potential services of inventory is a new content that needs to be researched and applied to public accounting in the coming time.

The write-down of inventory and any loss to inventory is recognized as an expense in the period in which the write-down or loss occurs. The reversal of the decrease in inventory value will be recorded as an expense deduction in the period in which the reversal occurs. This is a new regulation and needs careful study to be applied in future public accounting policies.

1.5. Presentation of inventories on financial statements.

Regulated in paragraphs 43 to 46 of VPSAS 12,

2. CURRENT STATUS OF INVENTORY ACCOUNTING IN THE CURRENT ADMINISTRATIVE AND NON-BUSINESS ACCOUNTING POLICIES. [2],[3],[5]

According to the current HCSN accounting regime, inventory includes raw materials, materials, tools, instruments, and spare parts used for the unit's operations and types of products, goods, and expenses. Expenses for production, business and services in progress at units with production, business and service activities. The current HCSN accounting regime also regulates specific situations involving inventory, but does not regulate inventory for strategic reserves and inventory that is real estate held for sale.

Principles of inventory accounting:

- Detailed inventory accounting must be done simultaneously both in the warehouse and in the accounting department.

- Inventory purchased from any source must be reflected in that source even though it can be used for different purposes.

- Accounts reflecting inventory include: Account 152, Account 153, Account 155, Account 156, these accounts are used to reflect the value of raw materials, tools, products, and actual goods. import and export through warehouse. Raw materials, tools, instruments, products, and goods that are not warehoused (purchased for immediate use, produced for immediate sale) are not accounted for through this account.

- The accountant must open a detailed inventory tracking book in terms of quantity and value.

- Accounting for import, export, and inventory of inventory at actual prices. The actual value of inventory is determined on a case-by-case basis.

a) Actual warehouse price:

b) Actual ex-warehouse price

The unit may apply one of the following determination methods: Average Cost Method; Specific Identification Method (import price matched export price); First in - First out Method.

Inventory regulations for tax certificates.

Accounting principles for printing, distribution, management and use of printed matter, including:

- To reflect the import and export of printed materials, accountants use Account 152 “Raw materials”. Account 152 “Raw materials” must track in detail 2 types of issuance and sales orders:

Inventory accounting uses documents such as:

- Purchase invoice
- Purchase list
- Warehouse receipt (Form C30- HD)
- Warehouse release note (Form C31- HD)
- Minutes of inventory of raw materials, supplies, products and goods (Form C32- HD)
- Minutes of testing of raw materials, supplies, products and goods (Form C33- HD)
- Notice of broken items, lost tools, instruments, etc.

Record accounts:

Inventory accounting uses accounts 152 - Raw materials; Account 153 - Tools and supplies; account 155 - Products; Account 156 - Goods and related accounts.

Content and structure of inventory account:	
Debit side: - Actual value of imported inventory - Actual value of inventory detected in excess	Credit Party: - Actual value of warehoused inventory - The actual value of inventory is found to be lacking
Debit balance: Actual value of inventory currently in the unit’s warehouse.	

Accounting books used:

- General accounting books: Journal - Ledger or General journal and materials and tools account ledger or Recording vouchers, bookkeeping voucher register and materials and tools account ledger.

- Detailed accounting books: Warehouse books (S21 - H); Detailed book of raw materials, materials, tools, instruments, products and goods (form No. S22-H); Detailed summary table of raw materials, materials, tools, instruments, products, and goods (form No. S23-H); Book to monitor fixed assets and tools and equipment at the place of use (S26 - H).

3. THE DIFFERENCE BETWEEN VPSAS 12 AND INVENTORY ACCOUNTING IN THE CURRENT PUBLIC ACCOUNTING POLICIES

Through research and analysis in sections 1 and 2 above and through other studies, the author believes that the main differences need to be analyzed to find solutions to correct public accounting policies in general and administrative accounting. Future careers include:

Firstly, the object of inventory accounting recording:

Clearly specifying that inventory is a strategic reserve of the state, inventory is real estate held for sale, this is a new content that administrative and public accounting has not mentioned;

Inventories are services, this is an in-depth study, especially public units in Vietnam mostly provide public services, and currently the provision of public services must be settled on December 31. 12 and there is no clear plan for inventory accounting.

Second, VPSAS 12 stipulates recording inventory at "original cost", in administrative accounting, recording inventory at "actual price".

Third, a new concept added: Net realizable value is a concept that has no regulations in current public accounting policies as well as public administrative accounting.

Fourth, the recording of losses and provisions for devaluation of inventory has been clearly regulated in VPSAS 12, but in Circular 107/2019/TT-BTC there is no regulation.

Fifth, the situations recorded according to fair value of VPSAS 12 have not been specifically and clearly specified in current administrative accounting.

Sixth, the concept of future economic benefits or potential services that an entity is expected to obtain when selling, exchanging, distributing or using assets in VPSAS 12 is a subject that needs to be studied. Carefully study to amend Circular 107/2019/TT-BTC.

Seventh, inventory impairments have not been clearly defined in public accounting in general and current administrative accounting in particular.

4. SOLUTIONS TO AMEND THE PUBLIC ACCOUNTING POLICIES IN THE COMING TIME

4.1. Consolidate state budget funds accounting policies

The consolidation of state budget funds accounting policies such as public administrative accounting, social insurance accounting, national reserve accounting, and accounting in specific agencies such as the Party and Union, armed forces units, etc. It will be allowed to fully regulate accounting objects that are inventories such as strategic state reserves, and specific regulations will be researched in a separate content which is more specialized.

For public services, as one of the key contents, when administrative accounting is reformed towards full accrual, public services will have inventory when the service provision is completed or ended. end of the annual accounting period. Most public services do not end and are transferred on December 31, such as educational services that end and are transferred at the end of the school year, health services, etc. That is why the study includes Inventory for Public service services in accounting of administrative and public service units in the coming time are extremely urgent. To do so, we need to research to create a new account for accounting inventory as a public service. There are two items that need to be accounted for as public service inventory, including: (1) Time to transfer or provide public services, but the cost of providing unfinished public services and some public service items not really completed yet. (2) At the end of December 31, when determining operating results for the year, service costs have been incurred but the service has not been transferred yet. With these two contents, I propose to open an additional account to convert unfinished costs for services into inventory costs.

4.2. Determination of inventory value and method of determination

Synchronize and edit terminology from "actual" price to original price and stipulate cases based on original price and cases based on fair value.

Regulations and definition of net realizable value. This content requires quotes on the market, but getting quotes takes time and cost, so it is reasonable to allow price consultation on the free market, especially published on cyberspace. and the media. In other words, net realizable value depends more on accounting estimates, so if the content of net realizable value is specified, it is necessary to specifically stipulate the responsibilities and parties involved. participate in the estimate.

Consider implementing the concept of future economic benefits or potential services, because these are values that have not been determined with certainty, but can be estimated, so if this content is included in the public administrative accounting, risks arise for the chief accountant and account holder as well as parties with interests attached to the accounting unit. At this time, it is necessary to specifically stipulate the method for determining potential value, or it is necessary to allow for errors in the estimate, which are allowed to be adjusted when the final value is taken.

In determining and determining inventory losses, in my opinion, it is necessary to open an inventory reserve account, and thus when estimating the loss, it will allow the accountant to record an increase in costs and an increase in the reserve for a decrease. inventory price. When there is no actual loss, the accountant must reverse the provision, by reducing costs or reducing the difference between revenue and expenditure of the current period.

In summary, this research article aims to clearly point out the incompatibility between VPSAS 12 and the current administrative accounting regime, thereby using expert methods and direct inference methods. The author has proposed two groups of solutions to modify the administrative and public accounting regime in the near future. We look forward to receiving comments and comments from interested scientists.

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THE IMPACT OF DIGITAL TRANSFORMATION AND DIGITAL MARKETING ON THE BRAND POSITIONING AND CONSUMER BEHAVIOR

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Abstract: *This research aimed to consider the importance of digital transformation and digital marketing on consumer behavior, along with studying the indirect impact of this relationship through brand positioning. The authors conducted a survey of 300 leaders of small and medium-sized enterprises (SMEs) on "The impact of digital transformation and digital marketing on the brand positioning and consumer behavior" through online and direct forms using pre-designed questionnaires. Data analysis results showed tahat SMEs effectively use digital marketing tools to identify brand images in customers' minds and promote consumer purchasing behavior. At the same time, businesses with timely digital transformation contribute to increasing sales and increasing competitive advantage in the market. In addition, brand positioning plays an important role in the relationship between digital transformation and consumer behavior. The research results will be useful information for SMEs to fully exploit digital marketing means and transform strongly in the context of digital transformation to create a reputable and good image in the eyes of customers, and at the same time contribute to promoting consumer buying behavior in the coming time.*

Keywords: *digital transformation, digital marketing, brand positioning, consumer behavior, SMEs*

1. INTRODUCTION

Nowadays, when the world and the market are having a strong transformation under the impact of the Fourth Industrial Revolution, digital transformation is an inevitable trend, a vital issue for organizations and businesses all over the world. It is a process of changing thinking, applying digital technology to improve the efficiency of production and business activities, increase market speed, increase competitive position, promote revenue growth, increase labor productivity, expand the ability to attract and retain customers through responding to changing consumer behavior; digital transformation activities include the use of software, applications, information systems, artificial intelligence (AI), Internet of Things (IoT), cloud computing,... to collect and analyze data, automate business and management processes (Syaglova, 2019). In the age of digitalization, the best strategy for businesses is to connect with their customers through the internet environment - where they spend the most time during the day. Digital marketing is an indispensable optimal method for businesses at that time. This is a unique way to connect with customers through interaction, more effective than traditional marketing (Hawks, 2015; Edelman & Heller, 2015). Marketers are using digital marketing to dominate the market, because this tool has the ability to attract and influence consumers in an attractive but subtle way to increase customer satisfaction (Heller, 2015).

With positive changes from the application of digital transformation and digital marketing in business activities, businesses in the world in general and Vietnam in particular are gradually innovating to keep up with the development of technology and market. According to survey data from the Vietnam Association of Small and Medium Enterprises in 2022, more than 80% of business leaders want to digitally transform, 65% are willing to invest in digital transformation, especially

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after the incidents of the Covid-19 pandemic in recent years. At the same time, the Ministry of Planning and Investment coordinated with the USAID LinkSME Project to implement the program "Supporting businesses in digital transformation for the period 2021-2025" with a survey of over 1,300 businesses in 2022 with the following results: 57% of businesses are looking for online marketing solutions; electronic transaction solutions (43%), network and data infrastructure (39.6%), businesses with needs for data analysis and smart reporting (63.5%), customer system management and sales channel management (60.7%), solutions for enterprise resource planning system (57.8%), and data security (50.2%). According to the report of Vietnam Digital Marketing Trends 2021 by ANTS Digital, Accesstrade, Younet Group, Novaon (2021), digital marketing has become an important strategic part for all business activities in Vietnam when increasing from 18% in 2020 to 39% in 2021 of businesses using digital marketing tools, and businesses have spent nearly 20% of revenue investing in digital marketing activities. Therefore, it is important for SMEs to promote extensive research to fully exploit the benefits of the digital transformation process and digital marketing tools to increase business efficiency through understanding consumer behavior in the coming time.

In addition, there are many domestic and international studies on the issue of digital transformation affecting consumer behavior, specifically, digital transformation brings many opportunities for businesses but many challenges when consumers change the way they search, choose, and buy products or services (Kruizinga & Lesscher, 2022; Koo et al., 2022). At the same time, digital transformation also contributes to changing the brand's position in the market (Istrefi-Jahja & Zeqiri, 2021). Digital marketing tools have a strong impact on changing consumer purchasing behavior (Nizar et al., 2018; Sanzeeda, 2019; Phung & Nhung, 2021) and also plays an important role in consumer brand awareness (Alamsyah, 2021; Istrefi-Jahja & Zeqiri, 2021; Sanzeeda, 2019). Besides, brand positioning contributes to promoting consumer awareness and attracting them to permanently buy a brand as well as show loyalty to that brand (Azmat & Lakhani, 2015).

However, these studies only show the impact of digital transformation and digital marketing on consumer behavior; or brand positioning, but there is no research showing the mediating impact of brand positioning in the relationship between digital transformation and digital marketing on consumer behavior. Therefore, this reseach is carried out to fill in this gap.

2. THEORETICAL BASIS AND RESEARCH HYPOTHESES

2.1. Consumer behavior

Consumer behavior is the study of consumers and the processes they use to choose, use (consume), and dispose of products and services, including consumers' emotional, mental, and behavioral responses (Kotler, 2001). It starts when the consumer becomes aware of a need or desire for a product, then concludes with the purchase transaction (Howard, 1977). Fishbein and Ajzen (1977) in Theory of Reasoned Action (TRA) argued that consumer behavior is based on the intention to perform a behavior that depends on two factors including attitudes toward behavior and social influences related to that behavior. The TRA model is very useful in predicting behaviors that are under the control of the human will. Next, The Theory of Planned Behavior (TPB) proposes additional factors to control cognitive behavior to predict consumers' actual intentions and behaviors.

Consumer behavior involves studies, which look into how people decide to buy things, what they choose to buy, where they prefer to buy it, why, and when they buy it. It is a mix of psychology, sociology, anthropology, and economic elements (Muniady et al., 2014). It thrives to understand the buyer's decision-making process, both individually and in groups. Significant progress has been achieved in identifying the behavioral elements of buying, and a number of theories of buying have been postulated (Muniady et al., 2014). According to these studies, consumer behavior will be implemented under cognitive behavior control and in the case of food purchase behavior, the cognitive behavior control factor becomes relevant to product prices. Therefore, it is important to examine the relationships between external as well as internal factors and consumer behavioral responses to understand consumer needs and trends which create competitive advantage for businesses (White et al., 2019).

Consumer behavior is strongly influenced by the digital transformation process through the ways of communicating, gathering, and exchanging information about products and/or services, and obtaining and consuming them, drastically changed (e.g., Hennig-Thurau et al., 2010). Of course, one can think of buying online, easily searching online and comparing product offerings from different suppliers, writing, and reading online reviews to be informed, or engaging in showrooming, which is gathering information offline about certain productsand finally buying online (Gensler et al., 2017). An era of marketing digitalisation, customers are gaining enormous empowerment by development of new technologies; they are becoming more demanding, and their expectations are increasing (Syaglova & Mojsovska Salamovska, 2019). Moreover, digital marketing has also significantly changed consumer behavior (Loanals et al., 2014). Digital marketing provides a multi-stream platform for customers to control the purchase process through product testing and reviewing (Swieczak & Łukowski, 2016). Digital marketing also effectively strengthens the brand value by eliminating brand misunderstandings as a consumer exchange of ideas, opinions, and experience that lead to greater purchase intention (Tham et al., 2019). Besides, brand positioning of businesses through building brand image, value, and reputation makes a difference, increases competitiveness, and creates trust with consumers, thereby significantly changing consumer behavior in choosing to consume products or services of that brand (Cristancho et al., 2017).

2.2. Factors affecting consumer behavior

Brand position

Brand positioning elaborates everything that differentiate one brand from the other (Nunnally & Bernstein, 1994). A brand's positioning is designed to develop a sustainable competitive advantage on product attribute(s) in the consumer's mind (Gwin et al. 2015).

A strong position for a brand or product in the consumer mindset would be a big achievement for the firm. In contrast, lack of a strong position equally or even more profoundly results in all marketing efforts to be wasted, the firm and its products be overlooked by customers and market share be lost leaving the competition scene for competitors and ultimately, the firm recession and closed up would be happened (Najafizadeh et al. 2012). Brand positioning is important not only to the success of the company but also to the trust and the quality of the product that these businesses are giving to their consumers. Once one gets the trust and provides the quality purchasers are looking for in a product, then an entrepreneur can undeniably achieve success in their business. (Mina, 2020).

A strong brand position is a powerful asset for any business organization. Hence, building strong brand perceptions is a top priority for many firms today (Morris, 1996). Brand positioning is the act of designing the company's offering and image to occupy a distinctive place in the mind of the potential or target market. (Mina, 2020). The end result is the successful creation of a customer-focused value proposition, a convincing reason why the target market should buy the product (Kotler, 2003). Through positioning, these brands try to build a sustainable competitive advantage via product attributes in the mind of the consumer (Gwin & Gwin, 2003). The importance of brand positioning has its role in consumer's perception and to attract them to buy certain brand and to buy it again and again (Muhammad & Lakhani, 2015). In their study, Khan & Razzaque (2015) pointed out that brand positioning variables (brand credibility, brand prestige and brand image) strongly influenced consumer behavior through purchase intention thereby suggesting that people are more inclined towards purchase of a product if the brand or product has high image in their minds, considered it as a status symbol for them and/or consider it to be credible. Thus, suggesting that if people have high brand prestige, brand image and brand credibility in their mind, they will perceive the value and quality of the product to be high, they will also expect that little risk will have to be borne by them and lesser information will be required in making purchase decision which in turn will convince them to buy that brand or product gain and again. Building a strong brand with positive equity positively influences firms' performance through its effect on consumers' responses towards brands. Brand equity and positioning generate four consumer responses, i.e. Willingness to pay a price premium, attitude towards extensions, brand preference and purchase intention. The willingness to pay a price premium reflects the amount a consumer is willing to pay for a brand in comparison with other brands offering similar benefits (Stephen, 2010). Therefore, we propose the following hypotheses:

H_1: Brand position has a positive impact on Consumer behavior

Digital marketing

Digital marketing is the use of technologies to help marketing activities in order to improve customer knowledge by matching their needs (Chaffey, 2013). Digital marketing is the marketing of products or services using digital technologies, mainly on the Internet, but also including Search Engine Optimization (SEO), Search Engine Marketing (SEM), Content Marketing, influencer marketing, content automation, campaign marketing, data-driven marketing, e-commerce marketing, social media marketing, social media optimization, e-mail direct marketing, display advertising, e–books, and optical disks and games are becoming more common in advancing technology (Desai & Vidyapeeth, 2019). These techniques are used to support the objectives of acquiring new customers and providing services to existing customers that help develop the customer relationship through customer relationship management (CRM) (Kannan, 2017).

Today, companies have realized the importance of digital Marketing. Online web searches have played crucial roles in influencing consumers' purchasing decisions. Digital marketers are in charge of driving brand awareness and lead generation through all the digital channels – both free and paid at company's disposal, these channels include social media, the company's own website, search engine rankings, email, display advertising, and the company's blog (Desai & Vidyapeeth, 2019). The digital marketer focuses on different key performance indicator (KPI) for each channel so they can properly measure the company's performance across each one. In research by Phung & Nhung (2021) also shows that there are 6 digital marketing factors that impact apartment buying behavior, which are Social Media Marketing; Content marketing; Search Engine Marketing; Online public relations; Affiliate marketing; E-Mail Marketing, in which the Social Media Marketing element has the strongest impact on customers' buying behavior.

Digital marketing aims to achieve various goals such as the following: Increase market share, increase the number of comments on a blog or website, upgrade sales revenue, reducing costs (e.g., distribution or promotion costs), achieve brand goals (such as increasing brand awareness), increase database size, reach Customer Relationship Management (CRM) objectives (such as increasing customer satisfaction, frequency of purchase, or reference level customer), improve management of the supply chain (such as by increasing coordinating members, adding partners, or optimize inventory levels) (Djakasaputra et al., 2021). Järvinen (2016) stated that digital marketing does have a positive impact on brand positioning and investing in digital marketing transforms to brand positioning. Krishnaprabha et al. (2020) showed that digital marketing activities have a high influence in building brand awareness as well as digital marketing activities allow on perceived quality, brand awareness, and brand loyalty. Thus, we come with the following hypotheses:

H_{2a}: Digital marketing has a positive impact on brand position

H_{2b}: Digital marketing has a positive impact on Consumer behavior

Digital transformation

Digital transformation can be understood as the changes that digital technology causes or influences in all aspects of human life (Stolterman & Croon Forst, 2006). The Capgemini research of Westerman et al. (2011) specifies digital transformation as: "the use of technology to radically improve performance or reach of enterprises". At this level digital technologies enable innovation and creativity, and stimulate significant changes in professional and knowledge domains (Tolboom, 2016). Digital Transformation is the adoption of digital technology to transform services or businesses, through replacing non-digital or manual processes with digital processes or replacing older digital technology with newer digital technology, digital solutions may enable – in addition to efficiency via automation – new types of innovation and creativity, rather than simply enhancing and supporting traditional methods (Li, 2021).

Many researchers and practitioners see positive efects of the digitalization. They sense the manifold benefts that foster an increase in sales and productivity triggered by innovative forms of value creation and new ways of interaction with customers and suppliers (Downes & Nunes, 2013; Matt et al., 2015; Parviainen et al., 2017). In addition to that, consumers are provided with wide-ranging options to provide information to others and make it quite easy and convenient to talk to each other online (Hennig-Thurau et al., 2010).

A key to business success in a digitally transformed marketing environment are strategies that enable maximum customer engagement (Syaglova & Salamovska, 2019). As new technologies for marketing communications emerge, customer behavior continuously evolves, and the customers' expectations are being further shaped and fine tuned by their experiences in the overall internet landscape. Having in consideration that the superior understanding of customers is the only sustainable source of competitive advantage, it is clear that in digital era, the quality of customer experience is highly valuable source of differentiation (Syaglova & Salamovska, 2019). The changes in customer behavior regarding the expected level and form of digital engagement, directly imply the need for adjustment of companies' communication strategies, but also, to the overall marketing strategies in general, in order to develop and design new digital services that would enable them to acquire, but moreover, to retain their customers, in the study, the author also pointed out that digital transformation helps businesses improve their brand's competitive position in the market (Syaglova & Salamovska, 2019).

The digitalization affects consumers since the ways of communicating, gathering, and exchanginginformation about products and/or services, and obtaining and consuming them, drastically changed (Hennig-Thurau et al., 2010). Of course, one can think of buying online, easily searching online and comparing product offerings from different suppliers, writing, and reading online reviews to be informed, or engaging in showrooming, which is gathering information offline about certain productsand finally buying online (Gensler et al., 2017). After the introduction of digital technologies, a plethora of new media have made their entrance, which gives consumers many opportunities to become more active, connected, empowered, and informed, contribute to increasing the strength of your brand (Lamberton & Stephen, 2016; Verhoef et al., 2017). In their study, Istrefi-Jahja & Zeqiri (2021) also stated that digital transformation has a positive impact on brand positioning of businesses and it is digital transformation that brings better competitive advantage compared to other competitors (Malik et al., 2014). Therefore, we propose the following hypotheses:

H_{3a}: Digital transformation has a positive impact on brand position

H_{3b}: Digital transformation has a positive impact on Consumer behavior

3. Methodology and sampling

3.1. Methodology

The observed variables in the survey questionnaire are built based on qualitative research results, customer satisfaction scale is used from 5-level Likert scale: Level 1- Totally disagree; Level 2- Disagree; Level 3 - No opinion; Level 4- Agree; Level 5- Totally agree

According to Henseler & Chin (2010), the research model is evaluated through two steps: the evaluation of the measurement model and the structural model. First, the measurement model is evaluated through evaluating the reliability, convergence value and discriminant validity of the measurement concepts in the model.

- The reliability of the observed variables must have an outer loading coefficient greater than or equal to 0,5 to meet the requirements of reliability and composite reliability coefficient must be greater than or equal to 0,7 to achieve composite reliability (Hulland, 1999).

- Convergent validity is used to evaluate the stability of the scale. According to Fornell & Larcker (1981), the coefficient of AVE (average variance extracted) must be greater than or equal to 0,5 (average variance extracted) to confirm the convergence value. Load factor of each observed variable on the factor is greater than or equal to 0,7 and is significant as evidence of the reliability of the scales.

- Discriminant validity measures the discriminant validity to help ensure differentiation, there is no correlation between the factors used to measure the factors. To measure the discriminant value, the square root AVE of each measurement factor is larger than the latent variable correlations between that factor and other factors, showing the discriminant and reliability of the factors (Fornell & Larcker, 1981).

Next, the research model is evaluated through structural model testing.

Composite Reliability (CR) is best when the value is greater than 0,7 (Hair et al., 2010). However, in exploratory research, the composite reliability can range from 0,6 to 0,7 (Moslehpour et al., 2018).

The outer loading coefficient must be greater than 0,5 (Hair et al., 2014), then the scale is significant in terms of reliability. If a scale does not reach the threshold of reliability, it is necessary to remove each observed variable with the lowest external loading coefficient in order to improve.

According to Henseler & Chin (2010), the research model is evaluated through two steps: evaluating measurement models and structural models. First, the measurement model is evaluated through evaluating the reliability, convergence value and discriminant validity of the measurement concepts in the model. If the outer loading coefficient of observed variable is greater than or equal to 0,5, the sample is reliable (Hulland, 1999)

Convergent validity is used to assess the stability of the scale. According to Fornell and Larcker (1981), the average variance extracted (AVE) coefficient must be greater than or equal to 0,5 to confirm the convergence value. The loading coefficient of each observed variable on the factor is greater than or equal to 0,7 and is significant proving the reliability of the scale.

Discriminant validity ensures the difference, there is no correlation between the factors used to measure the factors. To measure discriminant value, the square root AVE of each measurement factor is larger than the latent variable correlations between that factor and other factors, showing the discriminant and reliability of the factors (Fornell & Larcker, 1981)

Next, the research model is evaluated through structural model testing.

- The structural model was estimated by assessing collinearity issues, the path coefficient significance level, the level of determination coefficient R^2, the effect size f^2, and the predictive relevance Q^2.

- If two or more constructs (as independent variables) of the structural model are highly related, there is a multicollinearity issue, and it is observed when the variance inflation factor (VIF) coefficient is higher than 5. The goodness of the path coefficients was tested by the bootstrapping technique and t-statistics.

- The R^2 reflects the level of the construct's explained variance and can take values between 0 and 1. For social science research, the following thresholds are applied: weak (0,25), moderate (0,50), and substantial (0,75).

- The effect size f^2 shows the change in R^2 when a certain (exogenous) construct is omitted from the model. According to Cohen, the effect sizes of 0,02, 0,15, and 0,35 are small, medium, and large, respectively.

- The Q^2 value assesses the predictive accuracy of the structural model. Stone and Geisser suggest using the Stone–Geisser test. The predictive relevance should be positive and with values higher than zero.

- Bootstrapping test

Since the data analyzed in PLS is assumed to be non-normally distributed, the significance of coefficients such as path coefficients cannot be tested by using the parametric significance test in the regression analysis. Instead, PLS relies on non-parametric bootstrap analysis to check for coefficient significance (Hair et al., 2014). To check if the path coefficient is significantly different from zero, the t-value is calculated via bootstrapping. In this study, the non-parametric bootstrapping technique was tested for 128 observations, with 500 repetitions to ensure the requirement of testing the linear structural model.

3.2 Sampling

To analyze the relationships among digital marketing, digital transformation, brand position, consumer behaviour, linear structural analysis method (SEM) is applied. This method requires a large sample size because it is based on sample distribution theory (Raykov & Widaman 1995). However, according to Hair et al. (1998) if the Maxium Likelihood method is estimated, the minimum sample size will be from 100 to 150. In addition, the sample size for the estimation method used in the linear structural model (SEM) has three types: small sample ≤ 100, average sample 100-200 and large sample ≥ 200. The sample size of this study is 300, thus basically meeting the requirements of the analytical method. The authors conducted a survey of 300 leaders of small and medium-sized enterprises (SMEs) on "The impact of digital transformation and digital marketing on the brand positioning and consumer behavior" through online and direct forms using pre-designed questionnaires.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Research results

Convergent and discriminant testing of variables (Figure 1)

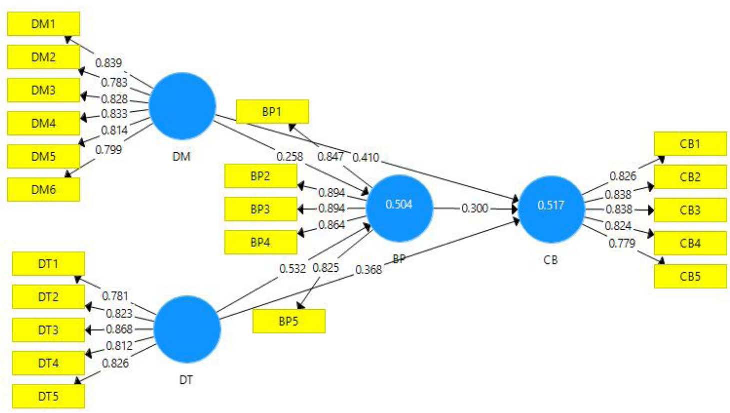

Figure 1: SMART PLS-SEM estimation model

Estimates show that the load coefficients of the observed variables are all over 0,7 with the official results as in Table 1.

Table 1. Results of analysis of external factor loading coefficients and convergent values of the variables

	BP	CB	DM	DT
BP1	0,847			
BP2	0,894			
BP3	0,894			
BP4	0,864			
BP5	0,825			
CB1		0,826		
CB2		0,838		
CB3		0,838		
CB4		0,824		
CB5		0,779		
DM1			0,839	
DM2			0,783	

DM3			0,828	
DM4			0,833	
DM5			0,814	
DM6			0,799	
DT1				0,781
DT2				0,823
DT3				0,868
DT4				0,812
DT5				0,826

(Source: Model estimation via SmartPLS)

Consistency test of factors (Table 2)

Table 2. Internal consistency test results (CA, CR, AVE)

Factor	Cronbach's Alpha	Composite Reliability (CR)	Average variance extracted (AVE)
BP	0,916	0,937	0,748
CB	0,879	0,912	0,675
DM	0,900	0,923	0,666
DT	0,880	0,912	0,676

(Source: Running the model via SmartPLS)

The analysis results show that all factors are reliable with Cronbach's coefficient Alpha greater than 0,7, specifically ranging from 0,879 to 0,916. Composite Reliability (CR) of all factors is satisfactory with coefficients greater than 0,7 and ranges from 0,912 to 0,937. Finally, the coefficient of the average variance extracted (AVE) of all factors are greater than 0,5 (ranging from 0,666 to 0,748) meeting the test requirements (Hair et al., 2014).

Structural model testing

The non-parametric bootstrap procedure was applied (Hair et al., 2014) to test the significance level. In this study, the initial sample contained 300 observations, each bootstrap sample also contained 300 observations. The number of bootstrap samples must be high but must be at least equal to the number of valid observations in the data set. In this study, the authors carried out the Bootstrapping technique 500 times to ensure the requirements of testing the linear structural model.

Test of multicollinearity violation assumption. (Multicollinearity)

The problem of collinearity of the structural model needs to be examined for the relationship between the factors. Variance inflation factor (VIF) is tested for multicollinearity. The results show that the VIF results show that the association between predictors does not violate the assumption of multicollinearity, because all coefficients are in the acceptable range (VIF = 1,767 – 3,171 < 5), (Hair et al., 2014).

Model fit test (Table 3)

Table 3. Tested by R Square and R Square Adjusted

	R Square	R Square Adjusted
BP	0,507	0,504
CB	0,522	0,517

(Source: Model estimation via Smart PLS)

The fit of the model was tested by using the R^2 value.

The analysis results show that the adjusted R^2 value of Brand position model is 0,504 and the adjusted R^2 value of Consumer behaviour model is 0,517, which meets the statistical standard of the model's suitability.

Table 4. Results of f^2 value and degree of influence

The relationship between variables	f^2 value	Influence level
DM->BP	0,090	Small impact
DT->BP	0,383	Great impact
BP->CB	0,093	Small impact
DM->CB	0,142	Average impact
DT->CB	0,044	Small impact

(Source: Running the model via SmartPLS)

The effect of predictors is tested by the effect of (f^2) (Cohen, 1988). The results show that all factors have impact levels ranging from 0,090 to 0,383.

Linear structure results

The results of testing the relationship between variables are shown in Table 5.

Table 5. Results of direct effects of relationships

The relationship between variables	Original Sample (0)	T Statistics	P Values
BP -> CB	0,300	3,284	0,001
DM -> BP	0,258	3,568	0,000
DM -> CB	0,333	5,056	0,000
DT -> BP	0,532	8,196	0,000
DT -> CB	0,208	2,650	0,008

(Source: Running the model via SmartPLS)

From the statistical analysis table of the regression coefficients in Table 5, it shows that the model has all relationships with statistical significance <0,05.

The above results show that all P Values of the effects are equal to 0,000 < 0,05, Therefore, these effects are all statistically significant.

+ There are 3 variables that affect CB: BP, DM, and DT. The standardized impact coefficients of these three variables are 0,300, 0,333, and 0,208, respectively. Thus, the level of impact of these 3 variables on CB in order from strong to weak is DM, BP, DT.

+ There are 2 variables affecting BP: DM, DT. The standardized impact coefficients of these two variables are 0,258, and 0,532, respectively. Thus, the level of impact of these 2 variables on BP in order from strong to weak is DT, DM.

4.2. Discussion

In this study, the authors discovered the impact of digital transformation and digital marketing on consumer behavior, and pointed out the role of brand positioning in that impact. The results of testing the hypotheses are consistent with the results of previous studies and have new research results compared to previous studies. The results of hypothesis testing will be discussed in detail as follows:

Digital marketing helps provide a multi-channel platform for customers to easily find information related to their needs, evaluate the value of products/services and be convenient during the purchasing process, this proves that digital marketing has an positively effect on consumer behavior; This result shows that hypothesis H_{1b} is accepted with positive impact coefficient β = 0,333 and p value less than 0,05. This result is quite consistent with Gartner's research (2021) stating that more than 91% of customers will search for information and knowledge on the Internet; and up to 67% of customers prefer to search for information or respond to reviews on media channels rather than having a direct conversation with a representative; the development of e-commerce platforms and retail websites tends to increase proportionally with increased online consumer demand, reaching 1,83 billion websites worldwide in 2021. According to NielsenIQ Vietnam, up to 64% of Vietnamese people said they will continue to shop online even when the Covid-19 epidemic is over. Forecasts from now to 2040, about 95% of shopping transactions are expected to be through e-commerce. This finding is also consistent with some previous studies such as the study of Ioanăs & Stoica (2014), Swieczak & Łukowski (2016), Nizar et al. (2018), Sanzeeda (2019), Phung & Nhung (2021). In addition, hypothesis H_{2a} is also accepted and shown in the context of digital transformation, small and medium-sized enterprises always focus on using digital marketing tools to strengthen their brand position in the market, this result is consistent with the research of Järvinen (2016); Krishnaprabha et al. (2020).

Hypothesis H_{3b}: digital transformation has a positive impact on consumer behavior, which is accepted because the impact coefficient is 0.208 and the p-value is less than 0,05. Some previous studies have presented similar results when digital transformation has drastically changed the way consumers collect information, interact with purchases (Gensler et al., 2017), or digital transformation has changed consumer behavior in shopping choices from sensing needs to searching for information and evaluating post-purchase feelings (Syaglova & Salamovska, 2019; Kruizinga & Lesscher, 2022; Koo et al., 2022).

At the same time, the research results also show that digital transformation contributes to changing the brand's position in the market and plays an important role in consumer brand awareness. This result is consistent with the research of Istrefi-Jahja & Zeqiri (2021) Alamsyah (2021), Sanzeeda (2019). This is also proposed by hypothesis H_{3a}. A reputable brand with a position in the market will easily convince consumers in their behavior, they are willing to pay higher prices, buy more, have a more open attitude, and buy again and again for the same products or services of these brands. This is the result collected by the authors on the impact of brand positioning on consumer behavior through hypothesis H_1 (positive impact coefficient β = 0,300 and p-value less than 0,05). This result is consistent with the research of Khan & Razzaque (2015), Azmat & Lakhani (2015).

5. RECOMMENDATIONS AND CONCLUSION

From the assessment and discussion of the above research results, the authors propose some managerial implications to help businesses find solutions for digital marketing and digital transformation to increase consumer behavior through brand positioning as follows:

Firstly, it is likely to build an overall digital marketing and digital transformation strategy for marketing activities in the overall picture of the business's common technology application and platform system. An effective digital marketing campaign needs to follow these basic steps: defining target customers; analyzing their internet usage behavior; rating competitors; defining campaign goals and budget; forming the strategy of the campaign; dividing time of stages; setting the main message; deciding on the preferred access channel; stting performance evaluation criteria; running campaigns and optimize.

Secondly, it is likely to fine-tune technical channels, evaluate, review current marketing tools and channels such as website, SEO, social media, customer database, … integrate multi-channel marketing platform to unify content and enhance brand awareness at touch points.

Thirdly, building and completing a customer management platform, understanding customer data and the information around it which is the core and central value for the future development of the business.

Fourthly, enhance customer experience with AR, VR, artificial intelligence, chatbots,… to make the shopping experience of dry aluminum products more enjoyable. It is likely to use big data and AI solutions to create personalized experiences, at the same time, bring many new marketing ideas

Fifthly, it is likely to develop specific customer communities on a digital platform, improve online ordering and payment methods, allow debt limits and more effective utilities with customers.

Sixthly, it is likely to implement data-driven marketing campaigns, personalized with intelligent creative content, capable of attracting leads and optimizing conversion rate (CRO).

Seventhly, digital marketing is an effective arm for businesses to increase brand recognition for customers and users. Digital marketing has gradually touched the lives of customers to help increase brand awareness of businesses, make a strong impression in the customers' mind. Promotion and communication activities on TV, phone, and Internet contribute to spreading the corporate brand, offering free public relations, creating crowd effect, increasing brand sympathy

In summary, increasing digital marketing and digital transformation measures and brand positioning is important and urgent, in line with an increasingly fiercely competitive market. At the same time, businesses with timely digital transformation contribute to increasing sales and increasing competitive advantage in the market. In addition, SMEs to fully exploit digital marketing means and transform strongly in the context of digital transformation to create a reputable and good image in the eyes of customers, and at the same time contribute to promoting consumer buying behavior in the coming time.

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AUDITING CONSOLIDATED FINANCIAL STATEMENTS: AUDIT RISKS ARISING FROM VIETNAM LISTED STEEL COMPANIES

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Abstract: This study aims to identify and explain the risk factors which arise from audit of consolidated financial statements for Vietnam listed steel companies. The qualitative research methodology was used including questionnaires and interviews with professional auditors of independent audit firms in Vietnam, who have experience in conducting group audits for listed steel companies. The results showed that the high decentralization of managerial decision making due to private ownership, high number of components in group, the diversify of locations, high decentralization of accounting system, special reporting requirement for listed entity, steel production related risks are factors that could lead to high audit risk in audit of consolidated financial statements for listed steel company. The main contribution of this study is to explain the risks factors and suggest recommendations on auditor responses to help the audit firms in managing audit risk to be at acceptable level and perform a quality audit.

Keywords: audit risk, audit response, group audit, consolidated financial statements, steel companies.

1. INTRODUCTION

In audit of consolidated financial statements, audit risk is the risk that group auditor expresses inappropriate audit opinion when consolidated financial statements contain material misstatements. Audit risk in group audit is "higher risk" than stand-alone financial statement audit because of the complexity of audited entity and audit subject matter. Consolidated financial statements comprise the financial position and financial performance of parents and subsidiaries, in which the locations of subsidiaries will be diverse in different geographic areas, not limited to one country but can in all over the world. The financial reporting framework is also complicated with challenging judgements. Therefore, the auditors need to make audit risk assessments in a thorough consideration. The significant audit risks factors should be identified, and the appropriate audit response should be proposed to reduce the audit risk to an acceptable level.

ISA600 [1]including when component auditors are involved. The standard includes new and revised requirements and application material that better aligns the standard with recently revised standards, such as International Standard on Quality Management 1 and International Standards on Auditing 220 (Revised highlights the need for group auditor to take a "top-down" approach to the assessment of risk of material misstatement, and ISA315 [2] require the group auditor needs to obtain understanding of the group and its subsidiaries to appropriately conduct the risk assessment. The knowledge of the auditor regarding characteristics of audited entities and the environment surrounding the entities (i.e., specific industry or regulations) is very important to help the auditor in recognizing the risks factors associated with the auditee and financial statements.

In this study, we examines the risks factors arising from audit of consolidated financial statements of listed steel companies in Vietnam, because the following reasons: (i) consolidated financial statement of listed companies has numerous users of interest; (iii) steel enterprises

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listed on the stock exchange are mainly privately owned, but currently occupy a major part in the supply chain of steel industry; (ii) the largest steel manufacturing companies are operating under group structure (i.e. parent – subsidiary model); and (iv) this group structure will expand in future due to the trend of vertical integrated model to achieve the advantages of raw materials input to production (upstream) as well as the distribution and outputs further down the supply chain (downstream). Those characteristics give rise to big concern of how those operations model and accounting system of those listed steel companies could be significant matters that lead to risks of material misstatement in consolidated financial statements.

2. LITERATURE REVIEW AND RESEARCH QUESTION

Research on audit risks of group audit:

The concerns on identifying and assessing the risks of material misstatement in performing group audit started since the scandal of McKesson and Robbins Group in 1938 [3] in which overstatement of inventory existed in consolidated financial statements but the auditor failed to detect due to underwork performed at subsidiaries. Then in 1992, fraudulent consolidated financial statement of Phar-Mor Group has overstated inventory and then overstated profit in three consecutive years, but the auditor did not notice that fraud. The audit failure was on audit procedures of attending stock count. Phar-Mor group has more than 300 stores in different locations, and the group auditor selected samples of stores to attend stock counts, and the fraud existed in not-selected samples [4]. These audit failures did give the focus on the importance of identifying and assessing the risks of material misstatement of the consolidated financial statements which comprise of financial information from multiple components and multiple locations in different geographic areas.

Research of Allen (1998) [5] gave a framework for risk factors specific to multi-location audit. The framework was developed by (i) identifying risk factors which are important in audit planning, (ii) evaluating the risk factors through interviews with auditors, (iii) examining the policy and procedure manuals of public accounting firms. The following are risk factors summarized by Allen in his research:

- Inherent risks: diversity of location, global operations, number of locations, proximity of locations, dollar value distribution
- Control risks: centralization of accounting system, effectiveness of controls, effectiveness of internal audit
- Audit risk: special reporting requirement

This framework was considered as a starting point for future research related to audit risks in group audit.

Then, Hegazy (2012) [6] performed an empirical study to assess the Allen's audit risks factors applied in the Egyptian audit firms, using descriptive data analysis and Spearman correlations. The results of study showed that: (1a) There is a high multilocation audit risk when the client is using decentralized the accounting information system (AIS); (1b) The decentralization of the managerial decision making result in the higher multilocation audit risk; (2) the higher consistency of the application of the internal control system's elements result the lower multilocation audit risk; (3) There is a negative relationship between the effectiveness of the internal audit and the multilocation audit risk; (4) There is a positive relationship between the client's operation of multiple business locations and the multilocation audit risk; (5) There is a positive relationship between the close proximity of locations in addition to transferability of the client's assets and the multilocation audit risk; (6) There is a negative relationship between the distribution of the dollar values in locations and the multilocation audit risk. From this, the study recommends the framework of audit considerations in planning audit and substantive testing so that the group auditor can make proper assessment on level of audit risks and have appropriate response to ensure the quality of the audit.

In perspective of audit regulation, auditing standards reflect the consistency of risk-based approach in group audit. ISA 600 (2009) requires auditor should identify and assess the risks of material misstatement through obtaining an understanding of the entity and its environment. The group engagement team shall (a) Enhance its understanding of the group, its components, and their environments, including group-wide controls, obtained during the acceptance or continuance stage; and (b) Obtain an understanding of the consolidation process, including the instructions issued by group management to components. And then the ISA600 give some examples of conditions that may indicate risk of material misstatements in the Group financial statements, including: A complex group structure; Poor corporate governance structures; Non-existent or ineffective group-wide controls; Components operating in foreign jurisdictions, Business activities of components that involve high risk; The existence of complex transactions, different accounting policies between component and group, different financial year-ends between component and group, etc.

ISA 315 revised in 2012 [2] give the guidance for auditor when obtaining understanding of an entity that auditor should consider the matter "Whether the entity has a complex structure, for example, with subsidiaries or other components in multiple locations. Complex structures often introduce issues that may give rise to risks of material misstatement. Such issues may include whether goodwill, joint ventures, investments, or special-purpose entities are accounted for appropriately".

Auditing Standard AS 107 issue by AICPA (2006) [7] "audit risk and materiality in conducting an audit" have guidance regarding extent of audit procedures should be performed at selected locations or components in case of multi-location audit or multi-components audit. The factors an auditor should consider regarding the selection of a particular location or component include (a) the nature and amount of assets and transactions executed at the location or component; (b) the degree of centralization of records or information processing; (c) the effectiveness of the control environment, particularly with respect to management's direct control over the exercise of authority delegated to others and its ability to effectively supervise activities at the location or component; (d) the frequency, timing, and scope of monitoring activities by the entity or others at the location or component; (e) judgments about materiality of the location or component; and (f) risks associated with the location, such as political or economic instability.

In addition, in the comments of the American Auditing Standards Board [8] responding to the IAASB's invitation on issues related to group audits, experts stated that risks factors identified in current ISA600 is appropriate, however, the regulators should consider additional risks factors in study of Allen (1998) and Hegazy (2012) when performing a group audit, in which the focus should be: group control environment, special financial reporting of components, proximity between components in group.

As a results, new ISA600 (2022) [9] to be effective for audit of group financial statement from 15 December 2023 further support the development of the risk-based approach, in particular, to drive greater focus by the group engagement team on their responsibility to identify and assess the risks of material misstatement of the group financial statements and to design and perform further audit procedures that are responsive to those risks, in order to obtain sufficient appropriate audit evidence in respect of the group as a whole.

However, the auditing standards are still limited to the audit procedures for risks assessments and cannot give specific examples on audit risks. The audit risks will depend much on the characteristics of the consolidated entity (the group) and the consolidated financial statements.

Therefore, the topic "*auditing consolidated financial statements: audit risks arising from Vietnam listed steel companies*" will give a practical view on audit risks in a group audit.

Research question:

In our study, we investigate the following research questions (RQ):

RQ1: what are audit risk factors arising from audit of consolidation financial statements of listed steel companies in Vietnam?

RQ2: How should audit firms do to identify and response to those risks?

3. RESEARCH METHOD

This paper used qualitative method to solve the research objectives. To identify the audit risk factors in audit of consolidated financial statements of listed steel companies in Vietnam, and analyze the response of independent audit firms to those risks, the researcher used the following techniques:

- Obtain the legal documents, technical articles, professional reports, and other information sources related to group audit, consolidated financial statements, listed steel companies in Vietnam. Conduct the analysis of the current situation to answer the RS1.

- Sending the survey questionnaire and performing in-depth interviews to auditors of audit firms that have experiences in group audit: to obtain the auditor's view regarding RS1 and the current practice audit regarding RS2.

4. RESULTS AND DISCUSSION

The following are risks factors arising from listed steel companies that auditor should consider in audit of consolidated financial statements:

Firstly, listed steel companies are privately owned but hold the largest market share of the steel industry

Steel companies joined stock exchanges 10 years ago. Currently, there are 20 listed steel companies in HOSE and HNX, and other 17 companies are trading in UPCOM [10]. Almost all the listed steel companies are privately owned, but they are the largest manufacturers in the steel industry, i.e., Hoa Phat Group, Hoa Sen Group, Pomina Steel company, Nam Kim group, Viet Duc Steel company, SMC Steel company. In which, Hoa Phat Group holds the largest market share in Vietnam for construction steel and steel pipes; and Hoa Sen Group is the leader of corrugated iron market share [Table 1]. This fact shows the Government's facilitation for private enterprises in the steel production sector.

Table 1: Market share of largest steel manufactures in Vietnam

Source: Vietnam steel industry 2021-2022 report – Vietnam Steel Association [10]

Audit risk consideration: private ownership creates centralization in managerial decision making then will impact the audit risk.

Because most of the leading listed steel companies are private-owned, therefore, there is high centralization in managerial decision-making and control over assets. Group management can have significant influence on components and therefore has the ultimate authority to decide the controls of assets or authorization of transactions. The degree of centralization of management decision making influences audit risk. If decision making and controls are centralized, then the auditor may easily obtain audit evidence related to consolidation process and group wide controls then reducing the audit risk. However, the high centralized management could lead to the risk of fraud due to management over-ride control. In another extreme, in case that the managerial decision making is decentralized between components in the group, no test of control can be performed for group wide controls at group level, this will increase the audit work at component level and increase the audit risk.

Secondly, listed steel companies have increasing number of components and diversity in business lines due to vertical consolidation

Among listed steel companies, there are eleven (11) companies operating in parent – subsidiaries model (which are referred as "group" or "corporation") and are required to prepare consolidated financial statements. The number of components in steel groups varies depending on the scale of each. In which, Hoa Phat Group, Hoa Sen Group and Son Ha Group are the three-leading groups in number of components and the complexity of group structure also.

Table 2: Listed steel companies operating in parent – subsidiary model

Name of listed company	Number of subsidiaries	Number of Associates and Joint ventures
Hoa Phat Group	5 subsidiaries level 1 24 subsidiaries level 2, 38 subsidiaries level 3, 4 subsidiaries level 4, 1 subsidiaries level 5	3
Hoa Sen Group	9	1
Nam Kim Group	4	-
Pomina Steel Corporation	1	-
SMC steel company	12	3
Dai Thien Loc steel company	2	-
Son Ha Sai Gon company	1	-
Son Ha Corporation	18	5
Tien Len Steel company	5	-
Thien Nam Group	1	-
Viet Duc Steel company	1	-

Source: author summarized from consolidated financial statements of listed steel corporation

Business consolidation is the development trend of steel manufacturing companies to create competitive advantage of reducing input cost of production (i.e., iron and coals as raw materials cost) and reducing the distribution and logistics costs through expanding the distribution network within the group and enhancing the power. This trend is known as vertical business integration, that is the merger of two enterprises that are at different stage of production - for example, steel production and iron ore mining, to form a closed chain of input to output consumption, to remove the middle cost and added cost from the process of making steel and achieve long-term benefits.

Hoa Phat is the leading of this vertical integration [10]. The most important cost streams for steel manufacturing companies are iron ore and coke, in which iron ore account for 30 – 40% of the input cost of steel production process using blast furnace and oxygen blast furnace technology. Since Hoa Phat Dung Quat Iron and Steel Production Complex was completed and comes into operation, Hoa Phat now owns a closed process, from iron ore to hot rolled steel, that lead to an increase four times in profit compared with previous years. To be self-sufficient in iron ore sources, in 2020 and 2021, Hoa Phat Group will not only maintain and develop domestic ore mines (in Ha Giang, Lao Cai, Yen Bai, Phu Tho), but also expand its ownership of an ore mine in Australia, that remark Vietnam steel production to the world. Hoa Phat continues to look to buy several new iron mines in Australia to respond at least 50% of its long-term iron ore demand. Otherwise, Hoa Phat bought a fleet of ships to transport mined ore to Vietnam. This business development creates the multiple and diverse components in Hoa Phat Group [Table 2] [11].

In addition, steel manufacturing enterprises can also acquire distribution channels when they want to capture the output market more deeply, to reduce labor costs as well as gain distribution centers in the future. For example, besides steel production, Hoa Phat Group and Hoa Sen Group expand their business in the other business lines, i.e., real estate, construction materials, furniture, and home appliances. These industries are considered to consume output products for the steel manufacturing industry. Specifically, in 2021, Hoa Phat established Hoa Phat Electrical Appliances Corporation, officially participating in large and methodical investments in the household electrical appliance industry. This step is part of the strategy to close the steel value chain of Southeast Asia's largest steel manufacturer from downstream to upstream, from ore mining, steel billet production, finished construction steel products and hot rolled steel coils; then this steel products are input for industries that bring high profits such as mechanical processing, automobiles, household products such as refrigerators, air conditioners, ovens, dishwashers.

The above trend of business consolidation is consistent with the steel industry in the world. This will create increasing numbers of components (including subsidiaries, associates and joint ventures) and diversity of business lines in steel groups in Vietnam in the future.

Audit risk consideration:

The number of components in the listed steel group are quite different. Therefore, for those groups which have a small number of components, each component might be significant to the group and the determination of audit scoping is quite simple. But for those that have a high number of components and even multiple levels, this complex group structure could impact the auditor's consideration in audit scoping. Auditors may find challenging in the selection of representative components to perform full scope audit or specific procedures to ensure sufficient and appropriate audit evidence as a basis for audit opinion. Otherwise, in the development trend, when the steel companies become more diversified in business activities, the audit risk will increase and create challenges to audit.

Thirdly, multiple location between components in listed steel corporation

Since the steel production needs the large factory scale and the location of manufacturing plants to be located near the geographic area of input materials to minimize the transportation cost, the component in group has multiple area located, for example, components in Hoa Phat Group spread across the country, some components are in another country (Australia, Singapore). Normally, steel production should be close to iron ore mines or coal mines or seaports.

Audit risk consideration:

If the location of components is close, there is a risk that assets can be transferred between components, for example, in between inventory observations. This fraud led to overstatement of inventory in consolidated financial statements.

If the location of components in group is fragmented and diverse, this will increase the audit work and difficulty in audit. The audit risk will increase due to the pressure of workload, audit time and cost. In addition, the internal controls will be different between components, so it is difficult for auditor to attend inventory count at 100% warehouse while this is the rebuttable procedures in audit. Auditors need to design an audit program to ensure that the sampling is representative for the whole population. Especially, if the component is in foreign country, then the decision to physical site also challenges the auditor.

Fourthly, centralization of accounting system for consolidation purpose

Entities may operate the accounting system for the purpose of preparing consolidated financial statements in two ways: (i) centralization and (ii) de-centralization. This degree of centralization will impact the audit risk and audit approach.

Among listed steel companies, only Hoa Phat group has organized the centralization for the purpose of consolidation reporting. In which, there is a consolidation team in the group responsible for recording accounting information of the whole group that is necessary for preparing consolidated financial statements. All information that is used for consolidated financial statements will be recorded at both group level and component level. The Group currently use the accounting software to support this work. The Group then uses the direct method for consolidating multiple levels of subsidiaries, in which the information of subsidiaries level 1 to level 5 is directly reported and summarized at group level. This accounting system will ensure higher accuracy and minimize the risks of errors. This centralization also helps the group in reducing the consolidation timing and the dependency on components in the process of preparing consolidated financial statements.

At the other extreme, the other steel companies still maintain the decentralized accounting system for consolidation purposes. In case the group has multiple levels of subsidiary, indirect method will be used for consolidation purposes. Each component will be responsible for recording and preparing its own financial statements. Then at the end of the accounting period, components will send the single financial statements to the group. The consolidated financial statements will be prepared based on those single component financial statements. The benefit of this accounting system is to reduce the pressure for consolidation team at group level, the consolidation process is also more convenient due to the component accountants have good understanding on their own transactions rather than group team. However, the group will have certain difficulties in managing and collecting information from remote geographical locations.

Audit risk consideration:

Auditors should base the degree of centralization in accounting system to consider the proper audit approach for group audit. When the accounting system is centralized, the auditor can decide to perform audit procedures for certain account balances or transactions at group level. In decentralized systems, the group auditor should determine the scope of work for each component. Auditors should also consider increasing the scope of work and the diversity of audit procedures for each component. Therefore, if the accounting system is moving toward decentralization, the higher of audit risk it would be, whereas the higher centralization of accounting system, the lower of audit risk in group audit.

Filthy, special reporting requirement for listed entity

As the listed entity, there is some special reporting requirement that differ with other entities as follows: (i) Listed entities are required statutory audit by independent audit firms approved by State Exchange Committee; (ii) The listed entity need to public the consolidated financial statements for unaudited figure and audited figure; and explain for any difference arising from those figures; (iii) Half-year consolidated financial statements are also reviewed by approved audit firms; (iv) The audit opinion for consolidated financial statement should be unmodified opinion. In case of qualified opinion, the listed entity should have the proper explanation and confirmed by audit firms for this impact of audit opinion; (v) Listed entities will be removed from stock exchange market if continuing loss in 3 years.

Audit risk consideration:

When the audited entity is listed, the audit risk will be higher. Because the listed entities must disclose a large amount of information and must also comply with a wide range of relevant standards, regimes, and regulations. In addition, listed companies must also be subject to review and supervision by state agencies, to ensure the reliability of financial statements to serve as a basis for economic decisions of users and stakeholders.

Finally, steel production related risks

Steel production activities can lead to some certain specific risk of material misstatement in consolidated financial statements of listed steel group as follows: (i) Inventory have large size, diverse in types and located in large store, and the counting inventory (such as iron ore, coal) need involvement of experts because of its special counting techniques; (ii) Complexity in manufacturing process of steel create the challenging in determination of production cost per unit, which involves lots of production phases and related cost; (iii) High level of slow moving inventory due to the current low demand of construction and real estate market; (iv) High value of depreciation and capitalization of fixed assets because steel manufacturing require the significant capital investment, mainly in plants and machinery, and production technology as well; (v) high volume of foreign transactions to import raw materials from foreign suppliers; (vi) environmental obligations due to steel production activities, including waste water treatments, carbon dioxide emissions or environmental recovery for iron ore mines, etc. (vii) the potential obligations related to the risk of trade defense barriers from many countries which could lead to litigation and claims.

Audit risk consideration:

The group auditor should consider whether the above matters could lead to significant risks of material misstatement in consolidated financial statements. The impact could be considered on financial statements level and assertion level. Identification of the risk of material misstatement in a specialized industry (i.e., steel industry) should be approached in the same way as in any other audit – by obtaining an appropriate understanding of the business and its environment. This requires the auditors to have competence regarding the specialized industry. The audit firm is likely to have additional resources available, for example technical guidance for industry risks, to support auditors.

Large audit firms (such as Big Four firms) have the competitive advantage in competence for specialized industry because they already possess the know-how technique and information through having existing clients in the industry or have the resources transferred from global networks. Smaller audit firms may have to carefully consider their competence when taking audit engagement in a specialized industry if they have not previously worked with an audit client in the same industry. Therefore, when accepting an audit engagement for listed steel companies, audit firms should consider of whether the audit firm has enough resources to do the group audit, enough knowledge of relevant industries and has experience with relevant regulatory or reporting requirements, or the ability to gain the necessary skills and knowledge effectively.

5. RECOMMENDATION ON AUDIT'S RESPONSE

The group audit represents a complex practical issue that challenges the auditor during performing an audit. Understanding the nature of audit risk factors should allow auditors to focus on specific problems and consider the appropriate audit responses. Based on the above risk factors arising from characteristic of the listed steel group and their consolidated financial statements, the following recommendations are suggested for group auditor to further consider in responding the risks to achieve the audit risk at acceptable level.

Firstly, in case of group has multiple components and the business line between component are diverse, this will be an indicator that aggregation risk exists, then auditors should notice that this factor will impact on the audit scope and procedures. Because the auditor cannot audit 100% of components in the group, therefore, the auditor should consider the sampling to ensure the aggregated risks to be at the acceptable level.

- The higher number of components and business lines, the higher aggregation risks, therefore, the auditor should lower the component materiality in relation to group materiality. This will increase the audit workload, together with consideration of staffing and the need to use experts.

- The auditor also considers this factor when determining significant components and then determines the audit scoping. If the component is financially significant, then the scope of work will be full scope audit. If the component is significant due to its nature (relating to risk of material misstatement in consolidated financial statements), the auditor should consider performing (i) full scope audit; or (ii) audit of specific account balances or (iii) specific audit procedures related to risk of material misstatement.

- For the component which has no financial significance and no "risk" significance, in case there is great number of relatively equal size components, the auditor should consider the additional information to support determination of audit sampling, for example: the centralization of accounting information system and internal controls; the rotation policy on choosing representative samples to test; other audit techniques focusing on the components which used to have material misstatement from previous audit; randomly select component for site visit, etc.

Secondly, when listed steel group have components in multiple locations:

- If the locations are geographically dispersed, auditors need to consider an appropriate percentage of components that they have perform testing (for example, attending inventory count). For example, the suggested percentage could be at least 60% of inventory balance in consolidated financial statements are audited by group auditor or component auditor who are in the same network with group auditor, remaining can be audited by component auditor from other audit firms. Moreover, auditors should consider performing testing on the small components or even far distance so that it is unpredictable to the audited entity. Because normally it is predictable that auditor will test the significant components or the components in the convenient logistic.

- If the location of components in group are proximity (close) to each other, to mitigate the risk that assets can be transferred between components, the auditor should gather information and evaluate the value of assets and the location of those assets, whether assets are stored in separate warehouses. The following information are risk indicators that could lead to fraud such as: no supporting documents for assets, group management and component management ignore the deficiencies of internal controls related to assets. Auditors should interview the client regarding assets procurement including related internal controls; attending the physical count of assets and observe the counting process; perform analytical procedures to identify any unusual transactions.

Thirdly, if there is a centralized accounting system at group level for consolidated financial reporting purposes, group auditors can consider performing audit procedures at group level using the group materiality and then not necessarily perform at component level**.** Because all the components use the same system and each line item (balance) in the group financial statement is audited as one aggregated amount, which indicates there is no aggregation risk and, therefore, no need to allocate materiality to components. For example, when accounts receivable uses the same system at all components and the risks of material misstatement relating to account receivable balances are similar among components, the group engagement team may be able to audit the account receivables balance of all components as one aggregated amount.

In contrast, if account receivables use different systems at different components, it is more likely that aggregation risk exists, and materiality would likely need to be allocated to significant components. Then group auditors should allocate audit resources for components with financial significance and risk significance; and consider the sampling of remaining components to test. If the remaining components have similarity in business activities and operation, internal control, etc., auditor can perform sampling and then systematize to the whole population to achieve the efficient audit.

This determination becomes more difficult when there is a case that certain financial statement line items are audited at the group level and others are audited at the component level. For example, when accounts receivable uses the same system at all components relating to accounts receivable, the group engagement team may be able to audit the accounts receivable of all components as one population. However, there are some procedures which are required to perform at component level even in the case that a centralized accounting system exists, for example verification of existence of inventory and fixed assets.

Because, for those assets as inventory and fixed assets, it is quite difficult to establish centralized financial reporting and internal control at group level because this requires specialization. Therefore, inventory management normally is decentralized and uses different systems at different components, then aggregation risk exists, and the group engagement team may not be able to audit inventory of all components as one aggregated amount.

In conclusion, the suggested approach is to consider audit procedures by audit area. Even though materiality has been allocated to components, the group engagement team may decide to test certain areas (e.g., accounts receivable) at the group level using group materiality if there is no aggregation risk as it relates to that financial statement line item, while testing other audit areas (e.g., inventory) at the component level using each component's materiality. In other words, the auditor can use different approaches in the same group audit for different line items.

Fourthly, if internal controls are effective, the number of components to visit will be reduced due to the lower assessed audit risk. When performing test of effectiveness of internal controls, auditor should focus on: (i) internal controls that could prevent, detect material misstatement in consolidated financial statements; (ii) if components has high similarity in internal control's structure and operation, the auditor can use the standardized procedures to test the operating effectiveness of internal control; (iii) auditor usually perform test of control to significant components and not applicable to non-significant component. However, to reduce the aggregated risk of non-significant component, the auditor should test of group wide control to determine whether additional work should be performed; (iv) There is different between internal control in component to component because internal control should be specified to fit the business activities and operations of each component.

Fifthly, for those specific significant risks identified that could lead to material misstatement in consolidated financial statements, the appropriate audit procedures should be specific to respond to the risks. For those steel industry-specific risks which are complicated (for example, the complex inventory valuation, environmental obligations or litigation and claims), for which the auditor may not have the necessary specific expertise in some areas, the auditor can consider using experts to obtain audit evidence. When reliance on experts, the auditor should evaluate evaluates the relevance and adequacy of the expert's findings or conclusions. It is important that using the work of experts does not mean that auditor can pass all responsibility over to an expert. The auditor should consider whether the findings of experts are consistent with the auditor's understanding of the client and conclusions of other audit procedures, any inconsistencies must be investigated.

6. CONCLUSION

This paper aims to explore and explain audit risks factors that could arising from audit of consolidated financial statements of listed steel companies. The risk factors are identified through examination of documents and interview with experienced auditors. The recommendations are proposed based on the risks factors and can be informative to practitioners and regulators as they continue to search for ways to improve the risk-based audit. Future research can focus on how group-wide controls at group level can be considered in risk assessment procedures and how those controls can affect the audit scoping.

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EVALUATING THE LEVEL OF FINANCIAL REPORTING TRANSPARENCY OF SMES IN VIETNAM

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Abstract:The business sector, especially small and medium enterprises (SMEs), plays an important role in socio-economic development. Over the past years, Vietnam has witnessed impressive development of small and medium-sized enterprises. However, the small and medium-sized enterprise sector still faces many difficulties in maintaining and developing. Investigation reports on business activities show that this area is facing many barriers compared to large-scale businesses. According to data from the General Statistics Office, in recent years, the capital access rate of small and medium-sized enterprises in our country is very low, about 30%. A main reason is the widespread lack of transparency in business financial reports, making it difficult for banks to accept loan requests. Therefore, understanding clearly what financial reporting transparency is will help find measures to increase the transparency of financial statements. The study sets out criteria to evaluate the level of financial reporting transparency, thereby evaluating the level of financial reporting transparency of SMEs and proposing solutions to enhance the financial reporting transparency of SMEs in Vietnam

Keywords: SMEs, financial reporting transparency, access to capital

1. INTRODUCTION

Over the past three decades, the small and medium enterprise (SME) sector in Vietnam has grown exponentially. The number of registered enterprises has increased significantly, reflecting the formalization of household businesses as well as the establishment of new enterprises. The increase in the number of SMEs has led to strong growth in capital by private sector enterprises. SMEs have made major contributions to Vietnam's economic growth in recent years by creating jobs, contributing to poverty reduction, improving living conditions as well as inclusive and sustainable growth in Vietnam. Despite impressive growth in quantity, the scale of SMEs in Vietnam is still small. Vietnamese enterprises, especially micro and small enterprises, are growing slowly in scale. Upgrading is an important issue in the Vietnamese SME sector due to limitations in the business environment, access to capital and finance, human resources, management skills, access to the markets and technology, and innovation capacity, etc.

Thus, limited access to capital is a major obstacle to the growth and development of SMEs. The reason is that when accessing credit, the parties do not trust each other and do not cooperate with each other simply because of the "lack of transparency", especially the transparency of enterprises' financial reports. The accounting and financial reporting work of a part of businesses is still weak in terms of qualifications and poor awareness of complying with legal regulations, therefore, they are not capable of supporting commercial banks in accurately assessing the production and business efficiency of enterprises. Business financial disclosure still lacks transparency, most SMEs do not have a standard accounting system. Enterprise reports are not audited annually, so the level of reliability is low. These are the reasons why it is difficult for SMEs to receive credit guarantees even though this form of support has been available for many years. That pushes SMEs to implement information transparency, including financial reporting transparency. However, what is financial reporting transparency? What is the method of measuring the level of financial reporting transparency? Especially for SMEs in Vietnam? Many researchers are looking for answers to these questions.

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2. LITERATURE REVIEW

Studies on financial reporting transparency have been conducted by domestic and foreign researchers. Specifically, research projects around the world have analyzed different aspects of corporate information transparency such as the level of information disclosure and the level of information asymmetry of businesses. Measures with different approaches have also been used and validated in many markets. A typical study by Yu-Chih Lin and colleagues (2007) was based on the Information Transparency and Disclosure Rating System index - Information Transparency and Disclosure Rating System (ITDRS).) to evaluate the level of information transparency of listed companies. This is an evaluation index ranking the transparency and disclosure of information of listed companies built in Taiwan. This index includes 88 disclosure items divided into 5 contents: (1) Compliance with regulations on disclosure; (2) Timeliness of reports; (3) Issues in publishing forecasts financial statements; (4) Publish annual reports; (5) Publish information on the company's website.

Jouini Fathi's (2013) study on factors affecting the quality of disclosed financial information of listed companies in France, examines the relationship between the quality of publicly disclosed financial information and the mechanism. management for 4 groups of influencing factors including: (i) Enterprise characteristics (Leverage, profit, listing status and industry); (ii) Characteristics of the board of directors (iii) Audit quality; (iv) Ownership structure for listed French enterprises for a period of 5 years from 2004 to 2008. The results show that the positive effects of a number of variables on the quality of financial market are announced. However, the holding ratio of institutional shareholders has an opposite effect.

In 2015, Zinatul Iffah Binti Abdullah and his colleagues researched and found the relationship between accounting standards, corporate governance, external control, internal control and ethical standards with financial statements based on the perspective of Auditors and management perspectives in Malaysia. Research results show that the above factors all affect information on financial statements. In particular, the factors of accounting standards, internal control, and ethical standards have a higher level of influence on financial statements than the remaining criteria.

In Vietnam, there are also a number of research projects on information transparency in financial statements such as the thesis of Nguyen Phuc Sinh (2008) researching the role and usefulness of financial reports in the operations of Vietnamese enterprises. . The author has used both international and domestic accounting theory and practice to analyze and evaluate the provision of useful information of financial statements in Vietnam and provide solutions to improve the usefulness of financial statements as well as standardize them.

Nguyen Thi Minh Tam (2009) discussed transparency in the operations of businesses and banks and the role of accounting and auditing. The author commented that transparency is an important basis for sustainable development, increasing the value of businesses in general, so businesses and banks need to promote transparency, in which the accounting – auditing system is an indispensable tool to implement transparency in company management. The reasons why financial information in our country is not truly transparent are that financial reporting transparency is not given due importance, and general provisions of international accounting standards on financial reporting have not been fully implemented. Preparation and presentation of financial reports, disclosure and transparency of published financial information have not been processed properly by law.

Research by Nguyen Thuy Anh (2012) also mentioned the issue of information transparency in the stock market. The study also used Standard and Poors (S&P) criteria to rank the level of information transparency of 89 companies listed on the HSX. This study mainly uses qualitative methods to explain and clarify the conclusions, and only uses a few typical cases to analyze the weakness in the level of information transparency.

In addition, there are a number of studies measuring the level of information disclosure based on a common rating system of the entire market or applying a rating system from a world organization to evaluate Vietnamese businesses (Le Xuan Thai and Truong Dong Loc (2019); Tran Thi Thanh Tu and colleagues (2014)).

In general, the mentioned study have just analyzed information transparency on financial statements of enterprises in general, or listed enterprises. There is no topic that systematically evaluates the financial reporting transparency of SMEs, especially the SMEs in Vietnam.

2. INFORMATION TRANSPARENCY AND THE ROLE OF FINANCIAL REPORTING TRANSPARENCY

2.1. Information transparency

There are a number concepts of information transparency. Winkler (2000) stated that information transparency is the amount of information on which economists base their decisions or expectations. DiPiazza and Eccles (2002) defined information transparency as the mandatory availability of information necessary for shareholders to make decisions.

Dau Anh Tuan (2006) believed that transparency includes opportunities, equality in access to information, reliability, consistency of information, predictability and openness of information providers. Information transparency in financial reports is very important to ensure the reputation and trust of business stakeholders, including shareholders, investors, business partners, banks and state agencies.

According to Vaccaro and Madsen (2009), information transparency is the completeness of information provided by each company to the market, related to their business activities. According to Bushman et al (2004), information transparency in the financial sector is the availability of company-specific information to outside investors and shareholders. OECD (2004) regarding the issue of information disclosure and transparency stated: “The corporate governance framework must ensure the timely and accurate disclosure of information on all important matters relating to the company. company, including its financial position, operations, ownership and corporate governance. According to Tran Minh Da Hanh (2014), financial reporting information transparency is demonstrated through the complete provision and honest presentation of useful information for users to make decisions, along with the degree of disclosure of information to the outside and the degree of ease of accessing information. Le Thi My Hanh (2015) pointed out that information transparency is the provision of reliable, timely, accurate, complete and consistent financial information in a way that the public can conveniently access.

Information transparency not only requires the quality of disclosed information, the content of the information as well as the relationship with the public and the method of disclosing information, but also requires necessary conditions in terms of legal framework, State macro management, operating functions of auditing companies, credit ratings, and information disclosure by issuing enterprises.

2.2. Financial reporting transparency

Although widely used to describe desirable attributes of financial reporting, the term "financial reporting transparency" lacks an agreed upon definition. For example, it does not appear as a qualitative characteristic in the IASB or FASB conceptual frameworks. We believe that the idea of transparency has been introduced into discussions of financial reporting from a variety of contexts, each of which describes a distinct meaning for the term and consideration of these contexts. This difference can be helpful in understanding the meaning of financial reporting transparency.

The important meaning associated with transparency, at least in some contexts, is accountability - the basic idea is that the ability to clearly perceive an activity is a prerequisite for assigning responsibility for that activity. For example, Transparency International, a global non-governmental anti-corruption organization, views transparency as allowing "those affected by administrative decisions, business transactions or philanthropy not only knows the basic facts and figures but also the mechanisms and processes" and associates transparency with visibility, predictability and understandability.

Extrapolating from the use of the term transparency in other contexts and applying our knowledge of what financial reporting is intended to achieve, we propose a definition that can be applied in the context of financial reporting. Specifically, we propose that financial reporting transparency is the extent to which financial reporting reveals the underlying economic position of the entity in a way that can be understood by financial reporting users.

3. IMPLICATION OF FINANCIAL REPORTING TRANSPARENCY

Financial reporting transparency is related to increasing the level of disclosure of the underlying financial position of information in financial statements and reducing information asymmetry among investors because the information is easy to understand. Research supports the view that financial reports with these characteristics – that is, transparent financial statements – can deliver benefits by reducing the cost of capital. For example, Easley and O'Hara (2004), have argued that reduced information asymmetry between investors – demonstrated by transactions in which the parties involved have complete information – causes costs to decrease. lower capital costs. Amihud and Mendelson (1986) developed an asset evaluation model in which investors demand a liquidity premium to compensate them for the costs of trading a company's securities, including stocks and bonds. In the model, adverse selection costs, a key component of liquidity costs, will decrease if managers provide more and better information to investors.

Diamond and Verrecchia (1991) developed an equilibrium model based on Kyle (1985) that showed similar results, namely that more information disclosure increases liquidity and demand for a stock. Studies by Klein and Bawa (1976), Coles and Loewenstein (1988), Clarkson and Thompson (1990), Handa and Linn (1993) have shown that information asymmetry may be related to to low financial transparency. This study has shown that information transparency in financial statements can reduce a firm's cost of capital by increasing the level of information that reflects the underlying economic situation and by reducing information asymmetry.

Applying a different approach, Lambert, Leuz, and Verrecchia (2007) show that the quality of information provided to investors, is reflected in the average accuracy of their assessment of the company's future cash flows, directly affecting the cost of equity capital – this result cannot be achieved if there is information asymmetry. Their accurate valuation structure is relevant to financial reporting transparency because information that is both easy to understand and revealing about underlying economics increases the accuracy of investors' assessment of cash flows.

Research also shows that transparency in financial reporting can bring macroeconomic benefits. Beginning with LaPorta, Lopez-de-Silanes, Shliefer, and Vishny (1998), the international law and finance literature finds a positive association between the comprehensiveness of financial reporting disclosure in a country and its gross national product. This line of research provides indirect evidence of economic benefits arising from greater transparency of information in financial statements.

4. METHODS FOR MEASURING FINANCIAL REPORTING TRANSPARENCY

4.1. Criteria for evaluating financial reporting transparency

Vishwanath and Kaufmann (2001) proposed the attributes of information transparency including: accessibility, completeness, relevance, and reliability of information.

- Accessibility: information must be available to all interested parties and must be easily accessible, through mass media. Information needs to be accessible equally to everyone. Delaying or limiting access to information negatively affects transparency and the interpretation and use of information by interested parties.

- Completeness: information must be provided fully and completely. Financial information must be fully presented in all material respects. Information is considered material in cases where lack of information or inaccurate information can affect the decisions of users of the reporting entity's financial information. Materiality depends on the nature and magnitude, or both, of the relevant items presented in the financial statements of a particular entity.

- Relevance: One of the purposes of financial statements is to be used to mobilize capital. A company often has to provide financial statements to banks and creditors with the expectation of being able to mobilize money for production and business activities. Companies also often have to provide financial statements to investors when mobilizing and maintaining equity capital. Managers, banks, and investors can choose to use financial ratios to evaluate a company's solvency, ability to generate revenue, and profit.

The balance sheet alone will not provide a complete picture of a company's financial health. Many financial ratios must be based on data contained in the balance sheet, income statement and statement of cashflows as well to present an overall picture of financial condition and operating results of the entity. Therefore, the items presented on the financial statements need to be arranged appropriately, separating assets and capital components, revenue, costs and profits, cash inflows and cash outflows and explain key issues into different reports. This will help users of financial statements get a comprehensive picture of the position and operating results of the enterprise, from different angles in a clear, detailed and specific way. At the same time, in each report, the way to collect and classify accounting data in each large item, and the way to arrange it from top to bottom according to a unified standard will help accountants as well as users access information quickly.

Ensuring the relevance of information is definitely a difficult task. First, because information is subjective, the information needs for each user are different. Investors need information about debt and risks, depositors need information to ensure their deposits are safe, the public needs to know about the entity's current financial situation. Therefore, determining what information is appropriate for information users is not the same in different contexts. The entity also cannot find a way to meet all information needs of all information users because that is extremely expensive and time-consuming. Second, the rapid development of information technology leads to an overload of information, which leads to a paradox: the information overload itself risks diluting the relevance of information.

- Reliability of information: information is reliable when it can be verified. Verifiable information means that different qualified and independent observers and evaluators can reach consensus on the information presented, although it is not entirely about the information being presented truthfully.

4.2. Measuring financial reporting information transparency

There are a number of methods to measure information transparency such as methods to measure the level of information asymmetry, methods to measure the level of market efficiency or establish a set of indicators to evaluate the level of transparency. One of the methods applied by most countries around the world is to establish a set of information transparency assessment indicators. Accordingly, the better the set of criteria reflects the attributes of information transparency as proposed by Vishwanath and Kaufman (2001), the higher the quality. However, each country can establish its own set of indicators depending on the laws and characteristics of each country. Each study can also establish its own set of indicators suitable to the characteristics of the research object. Below are some indicators measuring the level of information transparency currently applied in some countries:

- Standard and Poor's Transparency and Disclosure Index – T&D Index

In 2001, the world's leading credit rating organization S&P first introduced a method to rank transparency and information disclosure for more than 300 companies based on annual financial statements using 98 questions divided into 3 groups.

(1) Ownership structure and investor rights,

(2) Financial transparency and information disclosure, and

(3) Board and management structure and process.

Surveyed companies will answer questions in the form of "yes/no" and score them on a 100-point scale.The study indicates whether these individual items are disclosed, focusing primarily on annual reports as the primary source of corporate disclosure. In addition, this study also considers about additional forms of regulatory filings for another source of corporate disclosure. Therefore, the study evaluates disclosure patterns both on annual report alone, which is called annual basis, and on a composite basis, which incorporates annual reports, 10-Ks, and other proxy statements.

Each ranking of the three categories is evaluated on both two bases and then the final rankings of these two bases are calculated. We use these two final rankings respectively as the proxy for firm's disclosure practices, and want to examine if the ranking can be a good proxy for firm's disclosure practices by testing whether the ranking is significant negative to the effective spread and adverse information component.

- The Singapore Governance and Transparency Index (SGTI) is aimed at assessing companies on their corporate governance disclosure and practices, as well as the timeliness, accessibility and transparency of their financial results announcement. The SGTI is a joint initiative of CPA Australia, NUS Business School's Centre for Governance and Sustainability (CGS), and Singapore Institute of Directors, supported by The Business Times.

The SGTI score has two components: the base score and the adjustment for bonuses and penalties. The base score contains 5 domains: board responsibilities (35 points), rights of shareholders (20 points), engagement of stakeholders (10 points), accountability and audit (10 points), and disclosure and transparency (25 points). The aggregate of the bonuses and penalties (positive or negative) is incorporated to the base score to arrive at the company's overall SGTI score.

- Information Disclosure and Transparency Ranking System: The Securities and Futures Institute, entrusted by the Taiwan Stock Exchange Corporation and the Taipei Exchange launched "Information Disclosure and Transparency Rankings System"(IDtrs) to evaluate the level of transparency for all listed companies in Taiwan since 2003

The IDtrs gauged the level of corporate transparency by searching annual reports, regulatory filling via internet, and company websites. In order to access the transparency and disclosure practices of listed companies, IDtrs identified disclosure items as evaluation criteria grouped into the following five categories:

1. Compliance with the mandatory disclosures
2. Timeliness of reporting
3. Disclosure of financial forecasts
4. Disclosure of annual reports
5. Corporate website disclosure

In 2003, at the first evaluation, this set of criteria included 62 questions. In 2004, it was adjusted to 88 questions, and in 2012 it increased to 113 questions. Each disclosure item is in the form of a "yes" or "no" question to ensure objectivity (each "yes" question is equal to one point and each "no" to zero). Since IDtrs focuses only on the existence of each disclosure item, IDtrs does not endeavor to access the accuracy of the information.

Up to now, there is still no common formula or measure to evaluate the level of information transparency on a company's financial statements because this is a challenging task. Fully understanding information transparency in general and information transparency on financial statements in particular requires a lot of time and effort in research. In many countries, including Vietnam, there is still no organization that has developed and published an official set of criteria to evaluate the level of financial statement transparency of enterprises.

5. RECOMMENDATIONS AND SUGGESTIONS

Currently in Vietnam, a number of agencies and organizations have conducted evaluation reports on information transparency of public companies, such as Vietstock, or Hanoi Stock Exchange. However, these reports are currently only limited to a few large-scale public companies, or have just been published according to aggregate data. Specific evaluation data for each entity is not published. The transparent assessment of financial statements of SMEs has not been given due importance. In addition, the quality of these assessment reports also needs to be carefully considered if they want to be used in market management and supervision. To more effectively use these assessment reports and take advantage of expert resources from businesses and research facilities, the Ministry of Finance needs to consider issuing bidding packages on transparent measurement of enterprises' financial reports, including specific requirements for contractor capacity, implementation methods, as well as consult advice from reputable rating organizations in the world. Once the quality of the transparent assessment of the enterprise's financial statements has been ensured, based on the results of the assessment reports, a list of enterprises will be issued according to different information quality groups, and put businesses on the warning list under special supervision.

In Vietnam, there is currently no specific and official measure to measure the level of financial reporting transparency of businesses in general and SMEs in particular. Applying evaluation criteria commonly used in the world makes the results of assessing the level of information transparency of businesses still have certain limitations due to in political institutions, economics, culture, law, and business practices of Vietnam compared to foreign countries. Therefore, it is necessary to have a direction to support research to build a model to evaluate the level of information transparency on the financial statements of Vietnamese enterprises. In the immediate future, many different measurement systems can be used based on OECD corporate governance principles, the ASEAN corporate governance scorecard, and S&P's transparency and disclosure index. These measurement systems can be used to evaluate the same research sample for comparison and propose a model suitable for Vietnam. At the same time, it is necessary to have regulations as a legal basis to build an index system to evaluate the transparency of financial statements of enterprises and officially recognize the legality of information transparency ranking activities. Evaluation and ranking activities can be carried out by an independent organization or an independent council. Building a transparency assessment index system and organizing the assessment is an important basis for a more accurate and fair assessment of the level of information transparency, first of all on the financial statements of listed companies. and then other businesses including SMEs.

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GREEN CERTIFICATION AND SUSTAINABLE DEVELOPMENT OF VIETNAMESE BUSINESSES

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Abstract: *Green certification is a tool for recognizing and promoting business activities that have a positive impact on the environment, while sustainable businesses represent a holistic business model where operations are designed to ensure a balance between economic, environmental, and social benefits. In this research, we aggregate, compile, and analyze data related to LEED green-certified projects in Vietnam by region, the time taken from application submission to certification, the number of projects at different certification levels; We analyze the LEED green certification standards and government policies that support businesses in their green initiatives. This research highlights the benefits that green certification brings to businesses while identifying the challenges companies face in achieving the green certification standards. Additionally, this research provide recommendations for businesses to navigate the evaluation criteria and work towards the standards of green certification as a commitment to building sustainable enterprises..*

Keywords: *green certification, sustainable business, benefits, policies..*

1. INTRODUCTION

Green certification is a type of certification awarded to products, services, or organizations that meet environmental standards and regulations. Green certification typically assesses and confirms that the activities of a product, project, or organization have ensured compliance with standards and criteria and have a positive impact on environmental protection, sustainable resource use, and the minimization of negative impacts on the environment..

There are various types of green certifications, such as LEED (Leadership in Energy and Environmental Design), BREEAM (Building Research Establishment Environmental Assessment Method), LOTUS, EDGE, and more. Each certification has its own standards and evaluation processes, but the common goal is to encourage sustainable environmental practices and minimize adverse effects on ecosystems. Leadership in Energy and Environmental Design (LEED) is one of the most widely used green building rating systems. It was developed by the non-profit U.S. Green Building Council (USGBC). As of 2019, nearly 100,000 projects registered and certified LEED commercial projects [1].

Table 1. Basic information of 10 GB certification systems presented in Vietnam

Year	Country	Certification system	Organization	Target markets
1998	US	LEED	U.S. Green BuildingCouncil	U.S/International
2002	France	HQE	Alliance HQE-GBC (France) and Cerway(award HQE worldwide)	Europe and developing countriesin Africa
2003	Australia	Green Star	Green Building Council of Australia	only Australia
2005	Singapore	Green Mark	Building and Construction Authority (Singapore)	Singapore and Asia
2009	Germany	DGNB	German SustainableBuilding Council	Developing countries

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2010	Viet Nam	LOTUS	Vietnam Green Building Council	Viet Nam
2013	Switzerland	EDGE	IFC – World BankGroup	Developing countries
2014	US	WELL	International WELLBuilding Institute	U.S./International
2017	US	FITWEL	U.S. Department ofHealth and Human Services	U.S.
2017	Viet Nam	GO - AIT VN (Green Office)	Asian Institute of Technology in Vietnam (AIT VN)	Viet Nam

Source Authors

LEED can support all building types, such as offices, schools, hospitals, and homes. It is comprised of 9 credit categories, from regional priority to indoor environmental quality (IEQ). A project pursuing LEED certification can earn one of four LEED rating levels - Platinum (>80 points), Gold (60-79 points), Silver (50-59 points), and Certified (40-49 points)-based on the total points earned across those categories [2].

The term "green certification" is often used to express concern and commitment to environmental protection and sustainable development.

2. LITERATURE REVIEW

Occupants' satisfaction with buildings can be attributed to IEQ (e.g., lighting, temperature, air quality), workplace, and building features such as aesthetic appearance, furniture, cleanliness, amount of privacy, and level of personal control [3][4], in addition to running energy cost [5]. The largest database of occupant indoor environmental quality survey by the Center for the Built Environment (CBE) focuses on seven areas of indoor environmental performance. It has been implemented in more than 1000 buildings with over 100,000 individual occupant responses as of March 2017 [6]. Based on the analysis of a subset of the dataset, office buildings with LEED certification outperformed non-LEED-certified buildings in occupants' satisfaction regarding building overall, cleanliness, colours and textures, and air quality, even though the effect sizes of the difference was negligible [4]. Using the same dataset, Lee and Kim [7] concluded that LEEDcertified buildings received higher satisfaction with office furnishings, thermal comfort, indoor air quality, and cleanliness and maintenance but lower with office layout, lighting, and acoustics. The CBE database has revealed marginal advantages of LEED certification in promoting occupants'satisfaction in office buildings.

Over the past decades, Vietnam has witnessed negative impacts on the country's development and economy from global warming and climate change. The government, organizations, stakeholders and citizens have all joined hands in the mitigation of this problem. In 2015, the United Nations General Assembly established the 2030 Sustainable Agenda with 17 global goals set to end poverty, protect the planet, and ensure prosperity for all. In that context, Vietnam has adopted various national strategies for sustainable development, specifically 115 detailed targets, compared to 169 set in the Sustainable Development Agenda 2030 [8]. Of this, the construction industry is placed at a high priority as it exerts great influence on the natural environment, resource consumption and human health. As a result, the importance of sustainability in the construction industry has been recognized and promoted both globally and locally. In response to the demand for more sustainable buildings, Vietnam has experienced a significant increase in the number of GBs. This makes GB an emerging crucial element in the process of reducing the detrimental impacts of the construction industry.

Although LOTUS was established in Vietnam over a decade ago and has gained significant attention from construction professionals, stakeholders and the government, its adoption process by Vietnamese construction professionals is still slow and in its initial stage [9]. Moreover, LOTUS has less recognition in Vietnam than LEED. Despite earlier claims about its higher applicability and lower cost, it does not have a significant advantage over GM in the housing market [9].

POPULARITY

		LOTUS	LEED	EDGE
Type of certification		Voluntary		
Released year		2010	1998	2013
Target market		Vietnam	US and International market	Emerging countries
Application (World)	All	51 projects	+ 111,000 projects	6,489,000 m2
	Certified	17 projects	+ 94,000 projects	3,547,500 m2
Application (Vietnam)	All	51 projects	168 projects	1,017,300 m2
	Certified	17 projects	54 projects	850,000 m2
Latest version		v3	v4.1	v2.1

Figure 1. The popularity levels of LOTUS, LEED, EDGE certifications (Source: https://vgbc.vn/)

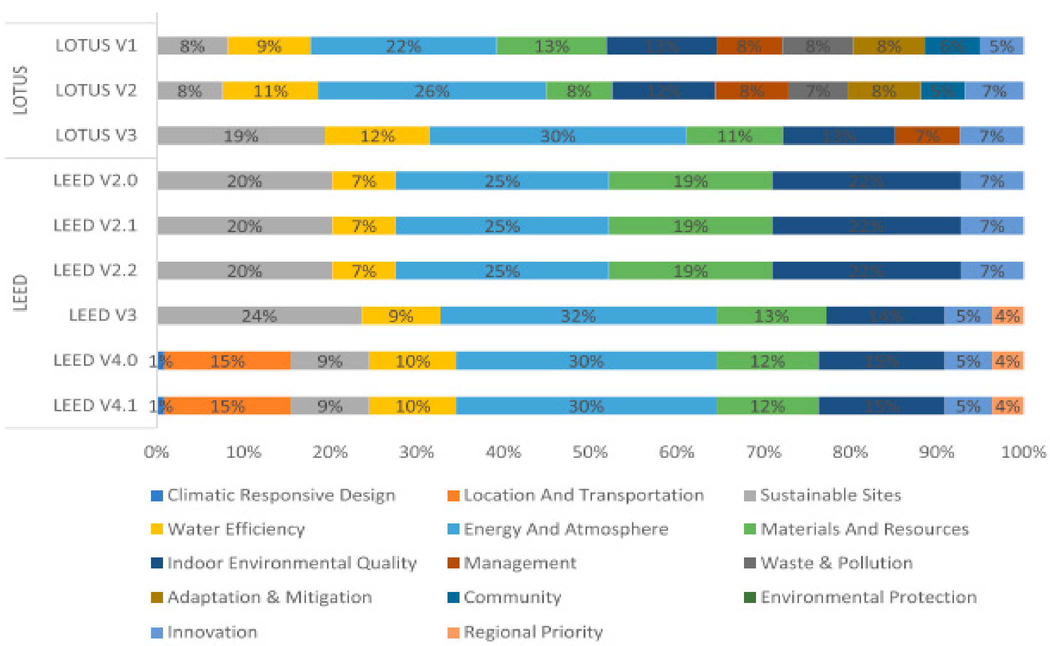

Figure 2. Credit structure of LEED and LOTUS (Source: Authors)

Figure 3 also shows that LEED and LOTUS are similar in terms of their credit structures. This is because both GBRSs were established by non-government third parties, with LOTUS's development influenced mainly by the LEED strategy. Hence, the Vietnam Green Building Council acknowledged that LEED is a focal point in the development of LOTUS. Despite using different terminology for their categories, both LEED and LOTUS focus on 'Site Location', 'Energy', 'Water', 'Materials', and 'Indoor Environmental Quality'.

Table 2. A comparison of the three pillars of sustainability by credits

Sustainability	LEED	LOTUS
Environment	Location & Transportation (13.7) Sustainable Sites (8.2) Water Efficiency (9.1) Energy & Atmosphere (29.1) Materials & Resources (11.8) Innovative (4.6) **Total = 76%**	Energy (26.9) Water (11.1) Materials (11.1) Site & Environment (13.0) Management (5.6) Exceptional Performance (7.41) **Total = 75.0%**
Society	Integrative Process (0.9) Location & Transportation (0.9) Sustainable Site (0.9) Indoor Environment (14.6) Innovation (0.9) Regional Priority (3.64) **Total = 21.8%**	Energy (0.9) Health & Comfort (13.0) Site & Environment (6.5) Management (1.85) **Total = 22.2%**
Economy	Water Efficiency (0.9) Energy & Atmosphere (0.9) **Total = 1.8%**	Energy (1.9) Water (0.9) **Total = 2.8%**

(Source Authors)

Table 3. Case studies of lately GB projects in Vietnam

Project		**ATAD factory office**	**Haus Neo**	**Genesis school**
Image				
Address		Lot F, Long Khanh Industrial Zone, Dong Nai	District 9, Ho Chi Minh City	West of Ho Tay New Urban, Hanoi City
Type of building		Office	Residential	School
GFA		6.963 m^2	43,467 m^2	6.128 m^2
Year		2017	2018	2019
Certification		LEED Platinum (83/110 points)	EDGE	LOTUS Gold (72/118 points)
Green features	Energy	• 48% improvement on baseline buildingperformance rating • 13% on-site renewable energy	• 29% energy savings	• 5.74% renewable energy • 60.9% energy using reductions
	Water	• 100% reduction in potable landscapewater • 50% reduction in wastewater • 40% reduction in baseline indoor wateruse	• 32% water savings	• Rainwater is used for irrigation • 11.45% water consumption 47.9% water savings through fixtures
	Materials	• 20% recycled materials • 20% local and regional materials • 75% diversion of construction anddemolition debris	• 47% less embodied energy in materials • Cored bricks with plaster for external and internal walls	• All products, coatings and floorings arelow-VOC
	Greenery spaces	• 90% of occupied space has quality views	• 80% of bedrooms have access to a logia • Total CO_2 savings: 339.5 tCO2 per year	• 39.2% of the site area is vegetated • 835 m^2 green roof area • 94% of occupied areas have quality views

In this study, the author will focus on understanding and analyzing the standards, processes, and data related to the LEED certification system. LEED is a U.S.-based performance-based assessment system for green buildings and communities developed by the U.S. Green Building Council (USGBC). This certification has become an international standard for designing, constructing, and operating environmentally friendly buildings. LEED is not only applicable to new buildings but also to the renovation of existing buildings, interior design, and urban planning. LEED certification helps increase project value, reduce operating costs, and benefit the environment.

LEED evaluates a project based on various criteria, including:

- Sustainable landscape planning and sustainable urban planning: This criterion considers the protection and enhancement of community and environmental health.
- Energy efficiency: It minimizes energy consumption by optimizing building performance, utilizing renewable energy, and implementing various measures.
- Efficient water use: It reduces water consumption in buildings and during construction.
- Materials and resources: It encourages the use of recycled, reused, and locally sourced materials.
- Indoor environmental quality: It optimizes indoor air quality and reduces health risks for occupants.

In Vietnam, the journey of creating a chain of green projects started relatively late. The first projects to achieve LEED Silver certification in 2010-2011 included the Colgate factory and YCH Protrade Distripark's logistics center. At that time, Vietnam did not focus significantly on green aspects such as the environment, people, waste reduction, and treatment compared to other countries in the region.

However, over the past decade, there has been a significant change in the general landscape of multidisciplinary real estate projects regarding research and green design. Evidence of this shift is seen as numerous new projects confidently submit LEED certification registration applications. To date, more than 400 projects have submitted registration applications to the U.S. Green Building Council (USGBC) for verification of sustainable green elements.

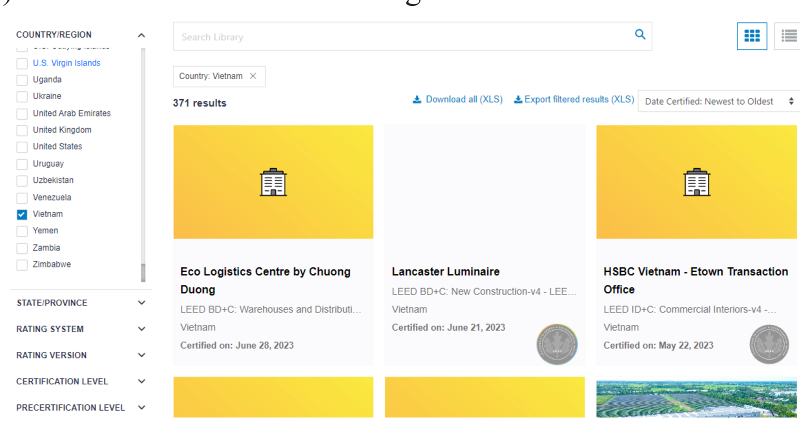

Figure 3. Projects that have submitted registration and projects that have achieved LEED certification

(Source: https://www.usgbc.org/)

Vietnam currently holds the 28th position globally in terms of green projects achieving LEED certification. According to Mr. Gopalakrishnan Padmanabhan, the CEO of GBCI India, Southeast Asia, and the Middle East, this is a significant milestone compared to the time when the U.S. Green Building Council (USGBC) and GBCI first began accepting certification applications in the 2008-2010 period..

3. LEED GREEN CERTIFICATION

3.1.1. LEED Green Certification process

The LEED Green Certification process consists of the following steps:

1. Registration: Businesses or organizations planning to construct or renovate a project can register to participate in the LEED program. Registration requires providing basic project information and selecting the specific LEED certification type the business intends to achieve.

2. Planning and Design: With the assistance of a LEED expert, often an accredited LEED professional, a detailed plan and design for the project are developed to meet LEED criteria and requirements. This includes selecting and employing green materials, technologies, and design methods.

3. Submittal: When the project is completed or has achieved some of the LEED criteria, the business will need to submit documentation to the LEED certification management organization. This submission contains detailed information about the project's green elements and necessary evidence.

4. Assessment: The LEED certification management organization evaluates the business's documentation to verify that the project meets LEED requirements and criteria. This assessment process may involve meetings, requests for additional information, and discussions with the business's design team.

5. Approval: After evaluation and review of the documentation, the LEED certification management organization makes a decision regarding the approval of the LEED certification for the business's project. If the project meets the requirements, the business receives the corresponding LEED Green certification.

6. Recognition and Promotion: Once LEED certification is achieved, businesses can use it for advertising and recognition of their commitment to environmental protection and sustainable construction. This enhances the company's image and attracts the interest of customers and partners.

The LEED Green Certification process may have additional specifics and detailed requirements depending on the specific certification type and project. For detailed information, businesses should refer to the official documentation and contact the LEED certification management organization, such as the United States Green Building Council or a similar organization relevant to the country or region where the business operates.

3.1.2. Levels of LEED Green certification

LEED Green Certification has different evaluation levels based on the extent of compliance with LEED standards. Here are the primary evaluation levels of LEED Green Certification:

1. LEED Certified: This is the basic level of LEED certification, indicating that the completed project has met the fundamental requirements of LEED standards. To achieve LEED Certified status, a project must meet specific point requirements within the LEED assessment system.

2. LEED Silver: Achieving LEED Silver level requires the project to achieve higher LEED points compared to LEED Certified. This is an upgrade that reflects higher standards for energy efficiency, green materials usage, waste management, and other LEED criteria.

3. LEED Gold: Attaining LEED Gold level demands the project to meet even higher LEED standards and earn more points than LEED Silver. Significant improvements are needed in energy efficiency, indoor air quality, water management, and other green elements.

4. LEED Platinum: This is the highest level within the LEED certification system. To achieve LEED Platinum, the project must meet more stringent requirements, with significant advancements in energy efficiency, green materials usage, indoor air quality, and other elements. LEED Platinum represents a commitment to excellence in green and sustainable projects.

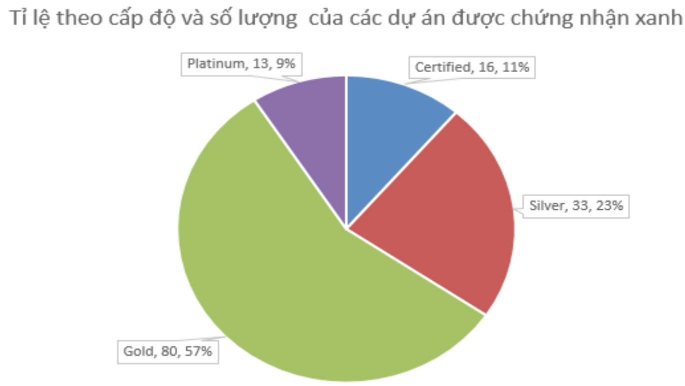

Figure 4. Proportion of projects in Vietnam awarded LEED certification by four levels

(Source: Compiled by the author from data from USGBC, September 2023)

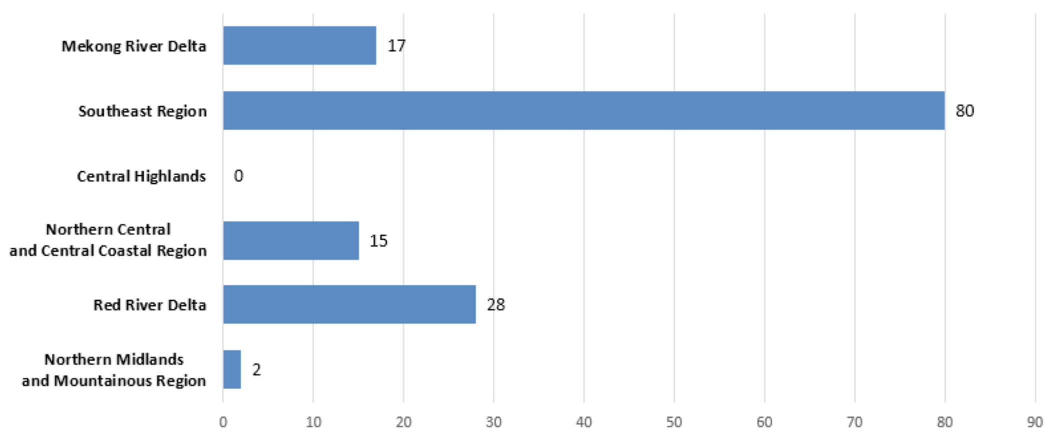

Figure 5. Number of LEED-certified green projects in Vietnam distributed by regions

(Source: Compiled by the author from data from USGBC, September 2023)

The determination of the LEED rating is based on the number of points earned by the project through the LEED assessment system. The project's point score defines the level of green certification.

4. BENEFITS AND CHALLENGES FOR BUSINESSES IN GREEN CERTIFICATION

4.1.1. Benefits of green certification for businesses

Several previous studies have indicated that globally, the construction industry consumes ~50% of the energy produced, nearly 40% of the raw materials, and 16% of the water, and is responsible for 35 % of the $CO2$ produced [10–17]. It also contributes to problems such as air pollution, noise pollution, and waste pollution, among others [16-17].

To address these issues, sustainable construction practices and green building solutions are being implemented in countries around the world, optimizing resource use, reducing energy consumption, and minimizing the impact of buildings on the surrounding environment [18,19]. Sustainable construction has become a major global trend in the construction industry [20,21] because of its benefits and its ultimate goals of preserving our quality of life by minimizing negative environmental impacts and protecting valuable resources that will be needed by future generations. [22–24].

As in many other developing countries, Vietnam's rapid economic growth is creating considerable pressure on housing demand and raw resources, as well as environmental pollution [26,26]. Vietnam's long coastline and low-lying and densely populated delta regions make it one of the five nations in the world that are most severely affected by rising sea levels and climate change [27–29]. As the construction industry made up ~34.28 % of Vietnam's GDP in 2018 [30], the government considers promoting sustainable construction to be a potential solution that not only addresses issues related to housing demand and energy consumption but also minimizes the nation's environmental vulnerability [31]. Nguyen et al. found that the low cost of electricity in Vietnam is one of the worst drivers of investment decisions that ignore energy efficiency because of the long payback time [26]. In an attempt to address this issue, the government increased electricity prices by 8.36% in 2018, significantly increasing operating costs for buildings. It has also implemented a policy of purchasing electricity (paying US$0.0935/kWh) from owners who install renewable energy systems [32]. Due to these incentives and the better payback compared to previous green investment opportunities, the number of developers interested in green building projects has been increasing [26], as shown by the significant increase in the number of green certifications issued in recent years.

Obtaining green certification offers numerous benefits for businesses, including:

1. Enhanced competitiveness: Businesses with green certification are often seen as trustworthy and environmentally responsible. This enhances the business's image and reputation, attracting customers and partners interested in environmental protection.

2. Resource savings: Applying green standards and processes helps businesses optimize resource and energy usage, reducing waste in production and operations. This leads to cost savings and increased competitiveness.

3. Regulatory compliance: Green certification ensures that businesses comply with environmental regulations and standards. This helps avoid legal risks and social responsibility issues while building trust with customers and the community.

4. Improved operational efficiency: Implementing green standards enhances the performance and efficiency of business operations. Optimizing processes, technologies, and management systems reduces waste, increases productivity, and minimizes environmental risks.

5. Company image enhancement: Achieving green certification is a clear statement of a business's commitment to environmental protection and sustainable development. This helps build a positive image, attracting talent, partners, and investors concerned about environmental issues.

Obtaining green certification not only provides economic, social, and environmental benefits to businesses but also contributes to building a sustainable economy and environmental protection. Green-certified projects have the potential to save energy, water, and other resources, preserving ecosystems, creating a healthy environment, ensuring health, increasing worker productivity, raising rent prices, attracting incentives, reducing carbon emissions, and other taxes, ultimately resulting in long-term financial benefits for investors. Within 20 years, the financial benefits often exceed the additional upfront costs of green building by 4 to 6 times. In Australia, optimized green projects can increase worker productivity by up to 30%. Moreover, the significant benefit is the reduction of greenhouse gas emissions and pollution, providing benefits to both the community and the planet. Therefore, the key point here is that designers must clarify the "Investment cost - long-term financial benefits" equation for investors.

4.1.2. Challenges faced by businesses in green certification application

There are several challenges that businesses may encounter when going through the LEED certification application process. Here are some common challenges:

1. Cost: Implementing LEED standards requires an initial financial investment for designing, constructing, and operating green buildings. Green technologies and materials often come at a higher cost compared to traditional methods, which can pose financial challenges for businesses.

2. Expertise: Achieving LEED certification requires a deep understanding and effective application of green construction and design methods. Businesses may struggle with training staff and building a workforce with specialized knowledge in green construction and management.

3. Time and effort in document preparation: The LEED certification application process can be complex and time-consuming, requiring significant time and effort. Businesses need to carry out preparatory steps, collect data, plan, implement green measures, and prepare the necessary documentation for submission. This can make the process demanding in terms of management and coordination.

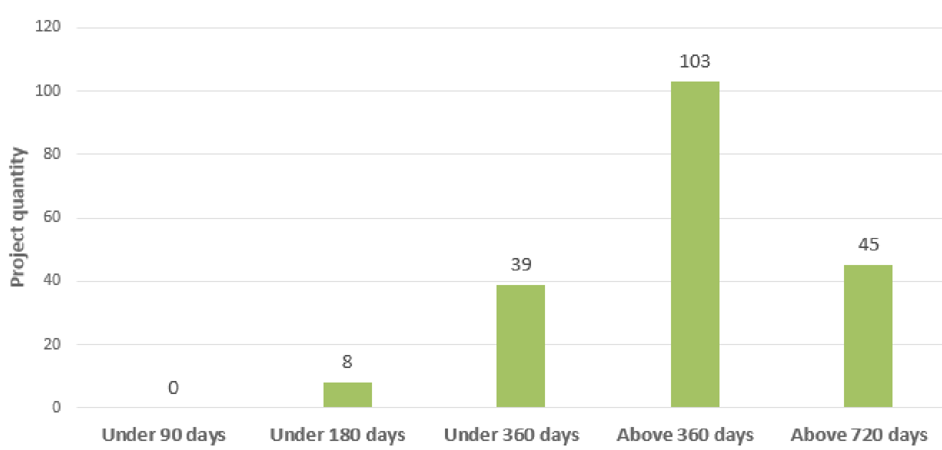

Figure 6. Number and time from registration to certification of projects in Vietnam

(Source: Compiled by the author from data from USGBC, September 2023)

4. Changes in processes: The LEED certification application process may change over time and depend on updated regulations. Businesses need to stay updated on these changes to ensure compliance and meet new requirements.

5. Local laws and regulations: Local building regulations and codes may not always align perfectly with LEED standards and requirements. Businesses may need to work with local authorities to understand and discuss the application of LEED standards within local legal frameworks.

Despite these challenges, implementing the LEED certification application process is certain to bring many benefits in terms of energy savings, environmental sustainability, and cost-efficiency for businesses.

5. RECOMMENDATIONS FOR BUSINESSES IN THE FACE OF THE GLOBAL TREND OF GREEN CERTIFICATION

In light of the global trend toward green certification, the research group offers several recommendations for businesses:

1. Conduct analysis: capture the trends and directions of the world regarding green certification by analyzing and researching policies, regulations, and green standards in the countries and regions where the business operates. Understand the requirements and criteria to meet green standards, as well as market demands and requirements.

2. Provide training support: ensure that employees of the business have the necessary knowledge and skills to implement green certification standards. Offer training programs and study materials to help employees understand and apply leed standards and requirements.

3. Assess green capability: evaluate the green capabilities and performance of the business, including internal processes, policies, and regulations. Identify opportunities to improve green performance and take improvement measures to achieve green certification.

4. Set green goals and plans: establish specific goals and plans to implement and achieve green certification. This includes identifying actions to be taken, required resources, and scheduling to ensure the business's green objectives are met.

5. Enhance interaction and collaboration: collaborate with organizations and partners in the field of green certification to learn, share experiences, and jointly create sustainable green solutions. Engage in networks and related events to expand your network and create collaboration opportunities.

6. Promote and build a green brand: use green certification as a tool to promote the business's commitment to environmental protection and sustainable development. Build a green brand and enhance the company's reputation by effectively recognizing and promoting green certification.

7. Continuous improvement: green certification is not just a single goal but a continuous process. Businesses should continuously monitor and improve their green performance, as well as be prepared to adapt to new regulations and trends in the field of green certification.

By implementing these recommendations, businesses can leverage and benefit from the global trend of green certification and contribute to building a sustainable business foundation.

In addition to the points mentioned above, businesses can also take advantage of government support through the "Program to support sustainable private sector businesses 2022-2025". This program aims to support approximately 10,000 businesses in sustainable development, aligning with the government's commitment to Net Zero 2050.

Sustainable businesses are eligible for the following support:

- Consultation and training, including on-site training in strategy development, sustainable business model design, business plans; human resources; finance, production, sales, marketing, internal management, and other related activities.

- In-depth training, both domestic and international, on the application and development of sustainable business models.

- Technology support, including researching, selecting, decoding, and transferring technology suitable for the business; applying standards and technical regulations; testing, calibrating, quality testing of products and services; intellectual property consulting, intellectual property asset exploitation and development; consulting on selecting digital transformation solutions.

- Support for renting or purchasing digital transformation solutions; testing, perfecting products, and sustainable business model.
- Financial access consultation and investment capital raising.
- Communication support, trade promotion, market expansion for the sustainable business products and services: successful registration of product and service sales accounts on international e-commerce platforms; support for maintaining accounts on domestic and international e-commerce platforms; support for renting locations, booth design and setup, transportation of display products, travel expenses, and accommodation for business representatives participating in domestic and international trade fairs and trade promotion events.

Sustainable businesses are defined as small and medium-sized businesses that receive the highest support levels specified by the small and medium-sized enterprise support law and guiding documents..

6. CONCLUSIONS

In the evolving landscape of global business, green certification has emerged as a pivotal indicator of a company's commitment to environmental and sustainable practices. Such certifications aren't mere badges but are reflective of the deep-rooted values and operational guidelines of a business. While the journey towards achieving these certifications is undoubtedly resource-intensive, encompassing rigorous documentation and implementation of eco-friendly practices, the long-term benefits often offset the initial outlay.

The competitive edge offered by green certifications extends beyond the immediate market appeal. It communicates to stakeholders, ranging from customers to investors, that the business is forward-thinking, responsible, and aligned with global sustainability goals. This not only fosters trust but also positions the company favorably in markets where environmental compliance is becoming a significant determinant of business success.

However, for this competitive advantage to be fully realized, the source of the certification must be thoroughly vetted. Certifications from globally respected and recognized entities carry weight, ensuring that the standards met are both rigorous and in line with international best practices. It is also crucial that businesses don't treat this as a one-time achievement. Continual commitment to the principles that earned them the certification is essential. In a world of increasing transparency, only those businesses that genuinely practice what they preach will stand out and thrive in the long run.

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APPLICATION OF BLOCKCHAIN TECHNOLOGY IN ACCOUNTING AND BUSINESS MANAGEMENT IN THE DIGITAL ERA

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Abstract: *In the digital age, the application of blockchain technology in accounting and business management is not just a novel trend, but a significant breakthrough. Blockchain, with its fundamental features like transparency, security, and immutability, is enhancing the process of recording and verifying information in accounting, reducing fraud risks, and bolstering confidence among stakeholders. This application goes beyond merely tracking and verifying transactions. Blockchain also has the potential to revolutionize asset management, contract management, and even supply chain oversight. By creating a system of information that is externally tamper-proof and easily verifiable, blockchain helps businesses save time, reduce costs, and increase operational efficiency. However, the adoption of this technology is not without challenges. Issues concerning privacy, technological understanding, and integration into current systems are all points that need careful consideration. This paper aims to provide a comprehensive overview of the potential and challenges that blockchain technology presents in the fields of accounting and business management in today's digital age.*

Keywords: *Sustainable Bond Issuance,Latin American and Caribbean (LAC),Green, Social, and Sustainability (GSS) bonds,Economic growth, Sustainable Banking Network (SBN), International Finance Corporation (IFC)*

1. INTRODUCTION

In the evolving landscape of the digital age, businesses are constantly seeking innovative solutions to enhance efficiency, reliability, and security in their operations. Among the myriad of technological advancements, blockchain technology emerges as a potent game-changer, especially in the realms of accounting and business management. At its core, blockchain offers a decentralized ledger system that promises unparalleled transparency, security, and immutability. These features are not just abstract technical jargon but have profound implications on how businesses record, verify, and manage their transactions and assets. The allure of blockchain is multifaceted. For accountants, it promises a future where entries are tamper-proof and easily verifiable. For business managers, it presents an opportunity to streamline operations, from asset and contract management to an entire supply chain oversight. But, like all innovations, blockchain is not a panacea. As businesses venture into this new frontier, they face challenges in adoption, including concerns about privacy, the steep learning curve associated with new technology, and the intricacies of integrating it into existing systems.

This paper delves into the transformative potential of blockchain technology in contemporary accounting and business management. Through a comprehensive exploration, we aim to shed light on its applications, benefits, and the challenges faced by enterprises in today's digital era. By the end, readers should have a clearer understanding of how blockchain can reshape the future of business operations and the hurdles that lie in the path of its widespread adoption.

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Join us on this journey as we unravel the intricate tapestry of blockchain's role in modern business.

2. LITERATURE REVIEW

Blockchain, since its inception with Bitcoin in 2008, has been extensively researched and discussed in various academic and industry circles. This section provides an overview of the key studies, findings, and prevailing thoughts about the application of blockchain technology in accounting and business management.

1. Fundamentals of Blockchain:

Nakamoto, S. (2008) introduced Bitcoin and the underlying concept of a decentralized ledger or blockchain. This seminal work laid the foundation for the majority of blockchain applications in various fields, including business.

2. Blockchain in Accounting:

Tapscott, D., & Tapscott, A. (2016) in their book "Blockchain Revolution" explored how blockchain could revolutionize the accounting industry. They posited that blockchain's transparent and immutable nature could greatly reduce the incidences of fraud and errors in financial reporting.

Peters, G. A., & Panayi, E. (2016) discussed the potential of "triple-entry accounting," where blockchain serves as a third, independently verifiable system to ensure accounting integrity.

3. Blockchain in Business Management:

Mougayar, W. (2016) in "The Business Blockchain" delved into practical applications of blockchain in various business management areas, highlighting its potential in supply chain management, contract administration, and asset tracking.

Casey, M. J., & Wong, P. (2017) discussed how blockchain could transform various business models by offering decentralized trust, thereby streamlining operations and potentially reducing intermediary costs.

4. Challenges in Blockchain Adoption:

Yli-Huumo, J., Ko, D., Choi, S., Park, S., & Smolander, K. (2016) conducted an analysis of the challenges faced by organizations in adopting blockchain. Key concerns identified included scalability, privacy issues, and the lack of standardization.

Werbach, K. (2018) in "The Blockchain and the New Architecture of Trust" emphasized the tension between the decentralized nature of blockchain and the regulatory demands of businesses, suggesting that reconciling the two remains a significant hurdle.

5. Integration with Existing Systems:

Crosby, M., Pattanayak, P., Verma, S., & Kalyanaraman, V. (2016) shed light on how businesses can integrate blockchain with their current infrastructures. They detailed the considerations for choosing between private and public blockchains based on business needs.

In summary, the literature underscores the transformative potential of blockchain in the domains of accounting and business management. However, it equally emphasizes the challenges that businesses need to navigate for successful integration. While there is an abundance of optimism regarding blockchain's capabilities, it's evident that more research is necessary, especially as real-world applications continue to evolve.

3. RESULTS AND DISCUSSION

Given the context provided earlier, let's assume we're discussing a study on the adoption rate of blockchain in accounting and business management across a spectrum of industries. Here's a hypothetical results section:

Adoption Rate of Blockchain

Our survey of 500 businesses across 10 major industries revealed that 45% of companies have adopted some form of blockchain technology in their operations. The breakdown is as follows:

Banking and Finance: 70%

Supply Chain and Logistics: 55%

Retail: 40%

Healthcare: 35%

Real Estate: 30%

Manufacturing: 25%

Energy: 20%

Education: 15%

Entertainment: 10%

Public Services: 5%

Perceived Benefits

Of the businesses that have adopted blockchain:

80% report enhanced transparency in transactions.

75% have seen a reduction in fraud-related losses.

60% believe it has streamlined their operational processes.

55% attest to improved trust among stakeholders.

50% have experienced cost savings.

Challenges Faced in Blockchain Integration

Businesses cited several challenges they encountered while integrating blockchain:

Technical Understanding: 70% of businesses reported that understanding the technical intricacies of blockchain was a significant barrier.

Integration with Existing Systems: 65% found it challenging to integrate blockchain with their current operational systems.

Regulatory Concerns: 55% expressed concerns about the regulatory landscape and how it might impact their use of blockchain.

Cost of Implementation: 50% cited the initial cost of adopting blockchain technology as a deterrent.

Future Prospects

Looking ahead:

90% of businesses that have adopted blockchain are planning to expand their use of the technology.

70% of businesses that haven't adopted yet are considering blockchain adoption in the next five years.

Top areas of interest include smart contracts (80%), supply chain optimization (70%), and digital identity verification (65%).

Trends in the issuance and circulation of virtual currencies (cryptocurrencies), as well as changes in the perception of the role of central banks in terms of regulatory function in countries and other bodies in monitoring compliance in this area have significant differences. For Ukraine, the small flow of such an asset in total turnover creates significant risks to the stability of the national market. However, given the development of computer networks, a direct ban on cryptocurrencies is unlikely. This affects the transactions between legal entities and individuals when using virtual money. It is necessary to be aware of the risks of using such assets, their value and exchange rate differences on the date of signing contracts and delivery of finished products.

For example, Turkey has the largest number of cryptocurrency owners. This is since the devaluation of the Turkish lira has decreased by 40 percent. This study was conducted by ING News. Below are company statistics for countries that use cryptocurrencies as a means of payment (Table 1).

Table 1 Countries that use cryptocurrencies as a means of payment

Country	Percentage of cryptocurrency on the totalmoney supply, %	Traditional cash, %
Luxembourg	4	96
Italy	8	92
Germany	8	92
Spain	10	90
Poland	11	89
Romania	12	88
Turkey	18	82

It is worth noting that in the United States and Austria own cryptocurrencies 57 and 70 percent, respectively. About a third (35%) of Europeans agree that bitcoin is the future as an online currency. Slightly fewer (32%) respondents agree that cryptocurrency is the future for investing.

The use of virtual currency carries the following risks (Efimenko, 2017):

The possibility of losing money due to a cyber-attack on the user's infrastructure or on the objects of platforms for the exchange of such currencies. Although they claim that blockchain technology protects against unauthorized access, information security experts have repeatedly proven that it is possible to illegally seize cryptocurrency through exchanges for trading such currency and its exchange;

Unreliable warranties. Assets held in cryptocurrency are not guaranteed in Ukraine by the Deposit Guarantee Fund of individuals, as it is not recognized as safekeeping transactions, ie they are not bank deposits. The recognition of cryptocurrency is necessary not only in the accounting of enterprises for the purpose of accounting for such assets, but also for the accounting of assets in the banking sector or in any financial sector; Lack of legislative certainty in Ukraine. Virtual currencies are not common in outlets and services. They are neither a legal tender nor a currency. Therefore, entrepreneurs have no legal obligation to accept certain payments in such currencies, even if they have done so before;

Abuses in connection with financial transactions in different jurisdictions, where there is a different level of investor protection. As a result, unforeseen situations may arise when fulfilling contractual requirements;

High volatility of such assets is achieved due to instability, so transactions in the calculation of where virtual currencies are used significantly affect the balance of interests of the parties to the contract;

The emergence of areas of guaranteed enrichment, including through the shadow or semi-legal business, as a result of which the national innovation potential will be used mainly to generate profits abroad. The development of a globalized digital economy around the world has a significant impact on accounting and tax practices.

Preparation of financial statements of enterprises from European countries and Ukraine. At the request of national legislation, domestic accountants had to increase their level of competence in the field of IT - technology. Because of this, it was necessary to master electronic document management for reporting to state bodies of Ukraine, digital signatures and seals, electronic office of the taxpayer and much more (Osmyatchenko & Oliynyk, 2018).

Each of the traditional stages of accounting is provided by a certain method of implementation, which changes. Such stages include: identification, measurement, generalization and accumulation of information regarding the economic activity of the enterprise. In terms of recording a business transaction, the technology for displaying data in documents and summarizing information has changed from simple accounting, which is to record such an event to a double entry, when events are displayed together with the basis of their occurrence. From the beginning, such records were made on paper registers, over time they were adapted and transferred to a digital environment with extensive use of various software. As a result, the method of data collection has changed, and after the creation of XBRL technology, new requirements for the presentation of business (financial) reporting data and their transfer to stakeholders are violated. Approaches to providing users with confidence in the accuracy of information in reporting accounting documents remain relevant and virtually unchanged: the need for their processing by auditors, verification of accounting data, regardless of the form (paper or digital).

Credentials of modern enterprises are entered into databases, which are formed in a special software environment. Such a software environment can be installed locally, at the accountant's workplace or on "cloud" computing platforms. In our country at the legislative level identified trends in innovative changes in accounting practices through the introduction of digital technology XBRL for the preparation of financial statements of enterprises in a single digital format. These changes affect the theory and methodology of accounting, so it is necessary to fill it with developments on the realities of the implementation of modern IT- technologies (Kurgan, 2019). With the invention of the distributed blockchain database and the corresponding data processing technology, the question arose today about its application for accounting and control purposes. This technology is designed to expand the possibilities of accounting and increase public confidence in accounting information. In this regard, it is important to study the issue of accounting, measuring the level of risk of such transactions when calculating the virtual funds between buyers and customers.

Accounting supersystem should include at least three subsystems – financial, administrative, and tax accounting. It is clear that it requires the development of absolutely new theory on the basis of philosophical conceptualization of the role of accounting in the society and business as a controlling service information system which may be developed only on the basis of the theory of scientific knowledge. Complex problem of generation of information in economic systems may be solved only by a new science which considers information and interests of its users as the center of knowledge while a procedure of collection and processing of the facts is being sidelined. Due to that fact, the science of accounting is called "informology" (Pushkar & Semaniuk, 2017).

Since the developed countries have the examples of using modern monetary means (i.e. cryptocurrencies) to pay for products, works, or services, our country should join that process. For instance, there are countries which demonstrate their loyalty to cryptocurrencies for their population and government using those means along with the traditional monetary means. First of all, those countries include Estonia, the USA, Denmark, Sweden, the Netherlands, Finland, Canada, and Australia.

To reduce the information chaos at modern enterprises and level of uncertainty in the functioning of a system and fluctuation of the environment as well as to counter the destructive factors of the system development, which may retransform the order into chaos, it is required to replace traditional approaches to the accounting of transactions between consumers and orderers.

In order to understand the functioning of any system it is necessary to analyze its structural elements. For example, the existing system of cash or information flows has a centralized structure. That is especially notable in the structure dealing with the organization of money turnover at local, regional, state, and international levels. Monopoly of state or some certain establishments for the databases available nowadays in the social spheres ensures information protection and trust for those sources, from which that information has been obtained. Government controls and protects such databases connected with the data of passports, driving licenses, property rights, monetary means possessed by the bank clients, e- mail and other telecommunication services. Moreover, it should be noted that each current Internet-transaction relies on a certain structure which the society trust more or less: when it goes about money transfer, we have to rely on the legality of banks, payment systems, or supervisory bodies controlling that sphere. It should be also mentioned when we talk about the mail service notification concerning the right/wrong delivery of our message to an addressee or information from our computer's antivirus software that the system safety is beyond the threats (Melnychenko & Hartinger, 2016).

Users are sure that the system is reliable and nothing threats its safety until everything functions in standard mode. However, it should be stressed that the information reliability depends on its checking method and sources. For instance, banking establishments check financial soundness of physical entities and their credit rating before approval of a consumer loan. At the same time, if the bank is not recognized to be financially sound, social security is under a threat. That happens when the loan debtors and customers are not reliable anymore, i.e. they are not financially sound. That situation has its pre-history which indicates that they have managed to hide their unfavourable conditions from the bank or provide the distorted information violating the confidence level in a society and increasing risks.

Modern enterprises spend considerable finances to provide information security and search for the innovative principles of the efficient use of reliable technologies. Thus, it is necessary to rely on the technologies minimizing risks or making them impossible relative to the object of cooperation. Any enterprise owner is interested in the fact that the amounts, invoiced from the consumers for goods, works, or services sold on credit, will be paid back timely as in case of current receivables within the 12-month period from the balance sheet date, which then will change into the long-term ones to be paid back after the 12-month period, it will not change into the uncollectible receivables with the expired period of positive age or there will be the confidence in its not being paid back.

It is possible to evaluate efficiency of any enterprise using certain conditions connected with the collective responsibility, e.g. modern individual transportation service relies on the collective responsibility and social assessment and rust. Certain inspection at the conventionally nationwide level analyzes the operation in terms of specific list of the objective factors: reliability of the transportation vehicle mechanisms, driver's license of the required category, available first-aid kit and fire extinguisher, medical condition of a driver. Success of Uber is based on the drivers' rating and reputation built on the opinions of each customer who has made use of the driver's transportation services.

Consequently, it is quite possible that the enterprises which have decided to use cryptoassets (cryptocurrency) for their settlements should be rated to determine the reliability and confidence that the receivables will be repaid within the established deadlines. Thus, the distributed data register makes it possible to assure each customer that the obtained data are reliable. All the system participants keep such a register, and it is updated automatically to the latest version if someone makes any amendments in it; each participant guarantees the information reliability in that register. Such a register is actually the accounting book of the events in the digital environment. Once the information is recorded, it cannot be changed or destroyed.

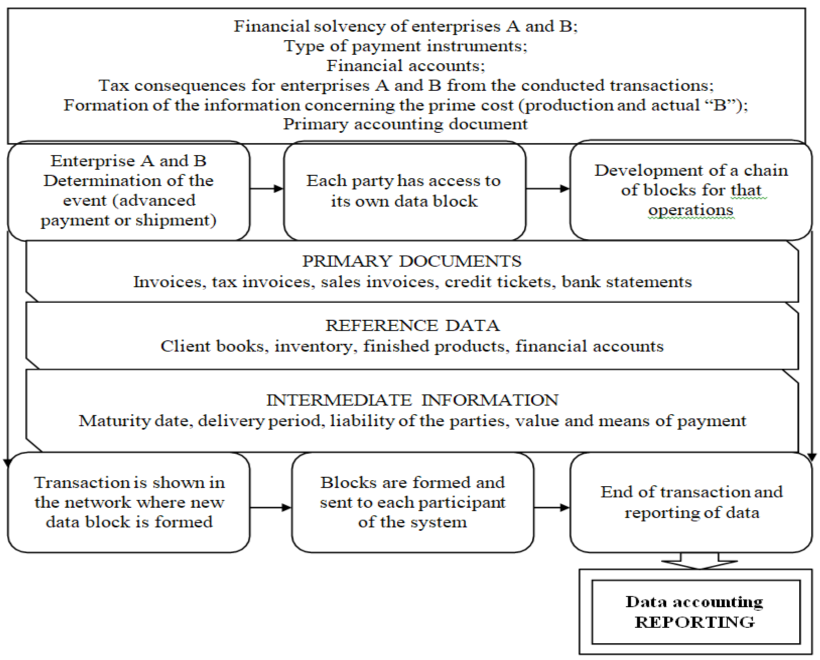
Ukraine should study the practice of those countries which has been applying actively the blockchain technology. For instance, in Georgia that technology is used at the National Agency of Public Registry. That technology allows receiving official records concerning the required real estate asset. Blockchain helps considerably carry out the tax control procedures. In particular, main problem in the PRC is the optimization of tax legislation and tax evasion. Thus, the Chinese government has charged the internet-provider Tencent (Chinese officers are going to collect taxes by means of blockchain) with the task to develop the blockchain-based "smart tax" to identify tax evasions. Owing to that innovation, the network of digital payment for invoices, consignment bills, and tax invoices has become transparent. That has made it possible to eliminate "unreliable" accounts.

Besides, the Revenue Service of Florida has announced the cooperation with the processing service BitPay to start accepting taxes and fees for property, driving licenses, identity cards, vehicle plate numbers and other documents in Bitcoin and BitcoinCash cryptocurrencies (Dubinina, 2018).

National enterprises perform constant control of the amount and critical level of the receivables in general as well as in terms of each debtor in particular; however, insufficient attention is paid to their repayment period. Due to that fact, enterprises form considerable amount of the doubtful debt having further effect on the financial situation of an enterprise (Cherchata et al. 2020). Consequently, if enterprises provide integrated blockchain-based accounting system before their operations with another company, there will be the possibility to get the initial information about that company. Secondly, while using cryptocurrency as the payment instrument, the system will rate automatically each enterprise representing the information concerning previous practice of the similar operations. Basing on that, Enterprise A and B will estimate the event immediately and define the procedure of their interactions: either product shipment before payment or advanced payment with the following product shipment (Wang, 2019).

Each transaction between the enterprises is formed in one data block which is encrypted and which has encrypted copy of the data block from the previous one. After that, the blocks form a chain of actions united with the help of cryptographic signatures. Information in the blocks has time marks of the transactioning distributed and protected against the fraud. First of all, that helps obtain certain level of data and transaction protection as there is no possibility to change the data in one of the blocks unnoticeably since the system checks the data and monitors their actuality all the time. According to that, the blockchain acts automatically as an accountant since it monitors financial operations in the real-time mode preventing the system from errors or intentional manipulations with the data. Such a technology widens significantly the accounting capabilities and increases social confidence in the accounting information. Following improvement of the settlements between enterprises involving cryptoassets in the blockchain environment is proposed (Fig.1).

Figure 1 Blockchain-based accounting



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First of all, method of the operation conducting and type of payment instrument to be used are rather important conditions (DellaSeta et al. 2020; Andrusiv et al. 2020). Thus, it is required to make a managerial solution basing on the following conditions:

- Initial price for product P_1;

- Whether the initial price includes transportation costs;
- What monetary means will be used for settlement;
- What rating (in terms of what "event") the enterprise has;
- Index of financial solvency and position of accounts receivable (payable).

For instance, P1 = UAH 2,400; P11 = USD 100; P111 = 0.3 bch or 0.01 btc (as of 27.01.2020).

Shares of expense item A = 30 % - without the transportation costs; Shares of expense item B = 40 % - including the transportation costs; Shares of expense item C = 25 % - a customer will pick up the products.

Consider a matrix of consequences for index A in more detail

$$Q_1 = \begin{bmatrix} 30 & 40 & 25 \\ 40 & 25 & 40 \\ 30 & 35 & 35 \end{bmatrix} \tag{1}$$

Assume that the settlements will involve traditional monetary means in the national currency – q1 – 0.4; monetary means in some foreign currency – q2 – 0.5; and in some cryptocurrency – q3 – 0.1.

In this context, probability level is q1 + q2 + q3 = 1 First of all, find the expected income from the set Q1.

$$\left\{\begin{matrix} 30 * 0.4 & + & 40 * 0.5 & + & 25 * 0.1 \\ 40 * 0.4 & + & 25 * 0.5 & + & 40 * 0.1 \\ 30 * 0.4 & + & 35 * 0.5 & + & 35 * 0.1 \end{matrix}\right\}$$

$q_1 = 34.5$

$q_2 = 32.5$

$q_3 = 33$

According to the criteria of maximum expected income, it is expedient to choose first solution q1 = 34.5

Determine risks of using specific monetary means.

$$\sqrt{(q1 - q1)\,A\,2 \;*\; P1} \tag{2}$$

$R_1 = 97$

$R_2 = 5$

$R_3 = 82$

According to the criterion of minimal risk, it is necessary to choose R1. Thus, if the operation of finished goods shipment is on the advanced-payment basis and a consumer picks up the purchase, then the settlement should be in the national currency. However, if there arises the account receivables and we are not sure in the consumer's reliability and financial solvency, it is reasonable to choose the cryptocurrency variant. Since the product price in UAH depends on the USD exchange rate and the expected bitcoin cash value depends on the bitcoin, it is expedient to choose risk R3, as the rating is applied only for the enterprises which use cryptoassets (Li et al., 2019).

8. DISCUSSION AND CONCLUSIONS

a. Discussion

The results underscore the growing importance and acceptance of blockchain technology across various industries. Notably, sectors such as Banking and Finance, which handle a significant volume of transactions and require trust and transparency, have been the most eager adopters. This aligns with the inherent strengths of blockchain, particularly its capability to offer transparent, immutable, and verifiable transaction records.

The perceived benefits reported by businesses further validate blockchain's potential in enhancing operational transparency, reducing fraudulent activities, and streamlining processes. These findings resonate with literature like Tapscott and Tapscott (2016) and Mougayar (2016), who have previously touted blockchain's revolutionary potential in business applications.

However, the challenges reported by companies also underline a critical aspect: blockchain is not a plug-and-play solution. Its technical complexities, integration issues with existing systems, and evolving regulatory landscape demand a strategic, well-informed approach for implementation. The concerns over the initial cost, while valid, should be weighed against the long-term benefits and cost savings that the technology can offer.

b. Conclusions

Blockchain technology, despite being in its relative infancy, is making significant inroads in the business world. Its transformative potential in enhancing transparency, trust, and efficiency is becoming increasingly evident. However, for businesses to harness the full spectrum of blockchain's capabilities, a nuanced understanding of its intricacies, potential challenges, and a strategic approach to its integration is imperative.

Looking ahead, as more industries begin to recognize the benefits and address the challenges, it's plausible to expect a broader, more comprehensive adoption of blockchain. Furthermore, as the technology matures and solutions to its current challenges are developed, blockchain might well become a cornerstone of digital business operations in the future.

In light of our findings, it's recommended that businesses keen on adopting blockchain:

Invest in training and capacity-building to better understand the technology.

Collaborate with experts in the field for smooth integration.

Stay abreast of the regulatory landscape to ensure compliance and leverage opportunities.

The future is promising, and with informed, strategic decisions, businesses can ride the wave of blockchain revolution to new operational heights.

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STATE MANAGEMENT OF ONLINE PUBLIC ADMINISTRATIVE SERVICES IN VIETNAM

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Abstract: *The adoption of online public administrative services has brought about significant benefits for citizens and businesses, including improved efficiency, convenience, and reduced administrative burdens. With the rapid advancement of science and technology, many nations are transitioning from traditional administrative systems to modern, technology-driven approaches. Despite the Vietnamese government's efforts to implement various strategies to promote online public administrative services, several limitations persist. Consequently, this research critically examines the current state management of online public administrative services in Vietnam, aiming to provide valuable insights and propose recommendations for advancing public administrative services within the country.*

Keywords: *online public administrative services, State management, Vietnam.*

1. INTRODUCTION

The Fourth Industrial Revolution is currently taking place extensively, with incessant development happening worldwide, across all fields of society. The application of information technology enhances the effectiveness and efficiency of management and operations; establishes innovative, transparent, and service-oriented governance, and ensures improvements in the business environment; providing advantages for both citizens and businesses. This has become the goal of governments in numerous countries around the world. Online public administrative services are a significant activity of governmental agencies to address the rights, obligations, and responsibilities of their civil. Public administrative services have an impact on civil life, which can be motivating but can also hinder economic development.

The transition to online public administrative services facilitates citizens and businesses in expediting procedures, rendering them more convenient, and notably reducing travel time to perform administrative processes. Moreover, online public administrative services contribute to enhancing the operational efficiency of the administrative system, curbing corruption, and ensuring transparency of information. The provisioning of online public services is also a central facet of administrative reform of each country in the world, serving to compress spatial limitations, save time, and engender effective risk management capabilities.

In developing countries, including Vietnam, where resources are limited, the public administrative system presents several challenges. These encompass deficiencies such as inadequacies in the number of employees in public officials and an outdated administrative technological infrastructure. Therefore, the investigation into online public administrative services carries a heightened significance. It plays a key role in enhancing the effectiveness of the public administrative framework and making a substantial contribution to the economic development of the nation.

In Vietnam, the administrative reform program has ushered in a paradigm of information and data connectivity among public officials. The government has established a national document

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exchange channel, enabling electronic document transmission and reception among 95 state agencies, spanning from central to local levels. This is a pivotal foundation for accumulating interconnected data across various sectors. For instance, information related to ethnicity, income, residential regions, income tax remittances to the state, and more can be aggregated. The application of information technology in delivering public administrative services is discernible through numerous documents, programs, implementation plans, technology development initiatives, and applications within state governance activities. The Vietnamese government has issued numerous documents related to online public services, including various programs, implementation plans, technology development initiatives, and projects for information technology applications in state agencies. The Vietnam Online Service Index (OSI) recorded an increase from 0.30476 in 2010 to 0.6529 in 2020, surpassing the global average online service index (0.562 in 2020) [1]. However, in practice, the application of information technology in delivering public services in public agencies have not met the need of the Vietnam government. Many public agencies have reported encountering obstacles including the systematization of records, the presence of numerous procedures without electronic templates, limited budgets, and a lack of guidance in procuring information technology services for providing online public services. The number of online-generated records remains modest. In the first quarter of 2018, the ratio of online-generated records stood at 24.24% in comparison to the total public services provided by Ministries and at 9.69% within the total public services provided by local agencies [2]. *This article aims to analyze the Vietnamese government's public administration management related to online public administrative services. It mentions aspects of the legal framework, policies, and supervisory activities related to online public administrative services. From this analysis, the article will propose solutions to push the provision of online public administrative services in Vietnam, with the ultimate goal of enhancing Vietnam's competitiveness on the global stage.*

2. LITERATURE REVIEW

Information communication technology in public administration has attracted significant attention from researchers worldwide. This paper has shown the positive role of the modern administrative system in many countries. Following Erkut (2020), governments can leverage data through online public services with their citizens. The exploitation of this data can meet researchers' and businesses' needs which contribute to the government's state budget (Erkut, 2020). The primary benefit for users of online public administration services is the increased accessibility and ease of accessing information. Individuals and businesses prefer digital services to non-digital services [4].

According to Riany (2021), for an organization seeking to optimize its resources, a technology strategy is often the best approach. This is particularly relevant in the public sector, where the technological application in delivering public administration services can enhance government efficiency, integrate multiple public services, and improve government accountability [5]. In addition, the nation's competitiveness is improved by delivering online public administrative services [6].

Most studies exploring the utilization of online public administration services are typically presented in articles and journal papers. These research works examine a wide range of factors, including the roles and influential aspects as well as the limitations in adopting information technology for the delivery of government services. As the pandemic swept across the globe, societies were compelled to adopt online public administration services as a means of curbing the spread of the virus. Against this backdrop, Vietnam must expedite the distribution of its online public administration services more than ever before. The objective of this research topic is to present a comprehensive analysis of the online public administration services offered in Vietnam amidst the ongoing global digitization trend. The study aims to put forward effective solutions that can improve the delivery and accessibility of online government services in Vietnam.

3. STATE MANAGEMENT OF ONLINE PUBLIC ADMINISTRATIVE SERVICES IN VIETNAM

** The strategy, legal framework, and policies for providing online public administrative services*

The strategy for providing online public administrative services typically involves a comprehensive plan and framework for the digitization and delivery of government services to citizens and businesses through online platforms. The issuance of a comprehensive legal framework serves as an essential prerequisite for the advancement of online public administrative services. Over recent years, Vietnam has enacted various strategies and has established a relatively comprehensive legal system to facilitate the enhancement of online public administrative service delivery.

From 2010 to 2020, as part of the comprehensive program, the Government progressively refined the institutional and policy framework for the development of information technology applications in state activities. These institutional policies spanned various areas, ranging from national programs to directions, and included the provision of information and public services. In 2011, Resolution 30c/NQ-CP on administrative reform marked the state's policy shift from traditional administration to e-government. It set the goal of modernizing administration by 2020, aiming for 90% of official documents and papers exchanged among state agencies to be in electronic form. Most transactions of state agencies were to be conducted in an electronic environment, anytime, anywhere, using various multimedia communication applications. The resolution also called for the disclosure of a list of public administrative services on the government's e-administration information system over the Internet. It emphasized the unified use of electronic forms in transactions between state agencies, organizations, and individuals to simplify and streamline administrative procedures. A significant milestone in the implementation of e-government services was the issuance of Government Decree No. 43/2011/ND-CP on June 13, 2011, regulating the provision of online public services on electronic information portals or electronic gateways of state agencies.

On July 1, 2014, the Politburo of the Communist Party of Vietnam issued Resolution No. 36-NQ/TW, emphasizing the acceleration of information technology application and development to meet the requirements of sustainable development and international integration. Resolution No. 36-NQ/TW provided consistent guidance for the IT application strategy to meet international integration demands. Building on this foundation, many legal documents were issued to put the Party's directives into practice: Government Decree No. 36a/NQ-CP dated October 14, 2015, on e-government. Decision No. 1819/QD-TTg dated October 26, 2015, by the Prime Minister, approving the national program for the application of IT in state agency activities for the 2016-2020 period; Decision No. 846/QD-TTg dated June 9, 2017, by the Prime Minister, promulgating the list of level 3 and 4 online public services to be implemented in ministries, sectors, and localities in 2017; Resolution No. 17/NQ-CP dated March 7, 2019, by the Government, on some key tasks and solutions for e-government development for the 2019-2020 period, with an orientation toward 2025; Decision No. 749/QD-TTg dated June 3, 2020, by the Prime Minister, approving the "National

Digital Transformation Program until 2025, with a vision to 2030”; The regulations on digital signatures and digital signature authentication services in Decree No. 130/2018/ND-CP marked a turning point in the legal system for the development of online public services. Additionally, Government Decree No. 45/2020/ND-CP dated April 8, 2020, outlined the implementation of administrative procedures in the electronic environment. Government Decree No. 47/2020/ND-CP dated April 9, 2020, covered data sharing and connection among state agencies.

The National Public Service Portal, as outlined in Decision No. 274/QD-TTg dated March 12, 2019, emphasizes the transparency and openness of administrative procedure-related information. It aims to provide and support the execution of public services based on users’ demands. This approach ensures the ability of individuals, organizations, and state agencies to monitor, inspect, and assess the performance of public services. The National Public Service Portal features a user authentication function that allows individuals and organizations to log in and declare their information only once on the portal. This enables them to access various online public services provided by different ministries, sectors, and localities, by the authentication requirements of each public service: Implementation of a high-security authentication system through mobile identity solutions utilizing SIM cards integrated with digital signatures and other digital certificate devices; Research and deployment of advanced authentication solutions, such as authentication through digital signatures integrated into mobile applications and the use of biometric authentication methods; Integration with the National Single Window Portal, the National Public Service Portal, the electronic one-stop information system of ministries, sectors, and localities, as well as the public service delivery systems of various service providers (e.g., healthcare, education, electricity, water). This integration aims to organize the provision of online public services at levels 3 and 4 without being restricted by time or administrative boundaries.

- From 2020 to the Present

Resolution No. 76/NQ-CP, issued on July 15, 2021, replacing Resolution 30c/NQ-CP on the comprehensive administrative reform program for the period 2021-2030, emphasizes the application of information technology to reduce travel time, societal costs, and create convenience for citizens and businesses. According to this resolution: At least 80% of administrative procedure resolution documents are circulated electronically within relevant competent authorities or related agencies; At least 80% of administrative procedures that involve financial obligations should be implemented through online payment methods. Among these, the proportion of online payment transactions should reach a minimum of 30%. In 2021, the digitization of administrative procedure resolution results still in effect at the central, provincial, district, and commune levels should achieve a minimum respective percentage of 40%, 30%, 20%, and 15%. This will continue in the period from 2022 to 2025, with a yearly minimum increase of 20% for each administrative level until reaching a 100% rate. This is to ensure data connectivity and sharing in the resolution of administrative procedures in the electronic environment.

At least 80% of administrative procedures should be provided online at levels 3 and 4. Among these, at least 80% of administrative procedures should be integrated and provided through the National Public Service Portal. The ratio of online resolution of administrative procedures at levels 3 and 4 to the total number of cases should reach a minimum of 50%. The satisfaction level of citizens regarding the resolution of administrative procedures should be at least 90%. Within this, the satisfaction level for resolving issues related to land, construction, and investment should reach a minimum of 85%. 90% of internal administrative procedures among state administrative agencies should be promptly announced, publicized, and updated. Eighty percent of citizens and businesses, when performing administrative procedures, should not be required to provide the same information, documents, or papers that were accepted during the successful completion of previous administrative procedures. Instead, competent state agencies should manage or share this information, documents, or papers electronically.

This strategy also sets the following targets for 2030: One hundred percent of administrative procedures, that involve financial obligations, should be implemented through online payment methods, with the proportion of online payment transactions reaching at least 50%. At least 90% of administrative procedures of ministries, sectors, and localities that meet the conditions should provide online services at levels 3 and 4, and these should be integrated and provided through the National Public Service Portal. The ratio of online resolution of administrative procedures at levels 3 and 4 to the total number of cases should reach a minimum of 80%. 90% of citizens and businesses participating in the e-government system should have a unified and seamless electronic identity verification across all information systems of all government levels, from central to local.

Decision No. 942/QD-TTg dated June 15 towards the Digital Government for the period 2021-2025, with a vision to 2030. The key points of this strategy include 100% Level 4 Online Public Services: All administrative procedures should be provided as online public services at Level 4; User-Centric Redesign: All online public services should be designed or redesigned to optimize user experience, allowing users to pre-fill data that they have previously provided under the agreement, and should comply with service quality standards; Unified Identification and Authentication: All citizens and businesses using online public services should have unified and seamless identification and authentication across all government systems, from central to local levels; End-to-End Online Processing: At least 80% of administrative procedure dossiers should be fully processed online, with citizens only needing to enter data once; Convenient Online Interaction: All provincial-level and ministerial-level public service portals should support convenient and online interaction between citizens, businesses, and government agencies in state management activities and service provision based on digital platforms; 24/7 Service Availability: All government agencies should provide 24/7 online services, ready to serve citizens and businesses whenever they need assistance. All civil servants should be identified with unique numbers in their job performance; Electronic Document Exchange: 100% of document exchanges between government agencies should be conducted electronically and digitally signed with specialized digital signatures, except for classified documents as regulated by law; Percentage of Digital Processing: 90% of job-related records at the provincial and ministerial levels, 80% at the district level, and 60% at the commune level should be processed online; Reporting on National Information System: All reporting activities should be carried out on the national information reporting system; Electronic Data Management: 100% of records should be created, stored, and data shared electronically by regulations. Following this decision, the Prime Minister issued Directive No. 02/CT-TTg on the development of the e-government, aiming to promote the digital transformation of the national government.

Decree No. 42/2022/ND-CP, dated June 24, 2022, replaces Decree No. 43/2011/ND-CP regarding the provision of online public services by state agencies. In this new Decree, there are several important provisions: Compliance with Legal Regulations: Administrative procedures, online public services, and the workflow of state agencies must adhere to legal regulations, ensuring uniformity and integration with the National Public Service Portal and provincial-level public service portals; Financial Reporting Online: The Decree introduces provisions regarding the online publication of annual financial reports by state agencies on the Internet; Accessibility Across Multiple Platforms: The Decree specifies that the information provided must be easily accessible through various devices, including mobile devices. It ensures that organizations and individuals can evaluate their satisfaction with the provided information online; Data Privacy: State agencies are required to ensure the confidentiality and privacy of organizations and individuals providing online evaluations; Domain Names at the Commune and Ward Levels: The Decree includes provisions for domain names at the commune and ward levels; Common Tools for Development: It establishes a common set of tools that state agencies must use for the development of their electronic information portals; Two Levels of Online Public Service Provision: The Decree clearly defines two levels of online public service provision by state agencies: “Full-process online public services” and “Partial online public services. These provisions in Decree No. 42/2022/ND-CP are aimed at enhancing the accessibility, quality, and integration of online public services provided by state agencies in Vietnam, aligning them with legal requirements and modernizing the government’s online presence.

Thus, Vietnam’s legal and policy framework for the provision of e-administration services is fairly comprehensive, yet it lacks synchronization. Resolution No. 76/NQ-CP, issued on July 15, 2021, replacing Resolution No. 30c/NQ-CP regarding the comprehensive administrative reform program for the 2021-2030 period, provides a clear direction for the development of online public administrative services in the foreseeable future. Decree No. 42/2022/ND-CP, with its simplified classification of e-administrative services, aligns well with global trends in e-administration service classification. Furthermore, the unification of service delivery channels is designed to assist citizens in easily locating the relevant platform for their specific e-administrative needs. Decree No. 45/2020/ND-CP introduced a unified set of regulations for conducting administrative procedures in the online environment. This measure has made it easier for both government agencies and citizens to understand how administrative procedures are carried out online. However, a current drawback is the lack of uniformity in legal documents across different online administrative services, as exemplified in the specific case mentioned below.

Case Study: Integrated 3-in-1 Administrative Procedures

The “Integrated 3-in-1 Administrative Procedures” is an online public administrative service with the expectation of reducing the time required for citizens to complete birth registration, permanent residency registration, and health insurance card issuance for children under 6 years old. However, the practical implementation has revealed certain shortcomings, particularly in the issuance of birth certificates for children under 6 years old, stemming from the process of obtaining personal identification numbers for these children.

In this process, the Justice-Residency officials are responsible for receiving citizens’ applications and retrieving personal identification numbers from the personal identification database through software provided by either the Ministry of Justice or the Ministry of Public Security. Nevertheless, due to unstable technical infrastructure, accessing and retrieving personal identification numbers from these two sources is sometimes hampered, leading to system crashes, slow processing speeds, or even complete unavailability. This forces citizens to endure lengthy waiting periods. When the Justice-Residency officials are unable to obtain personal identification numbers from these databases due to technical errors or access restrictions, they must invest additional time and effort. This involves physically transporting all relevant documents to meet directly with local police authorities at the commune level to request personal identification numbers for the child. Only after this step can they proceed with the remaining procedures for birth certificate issuance. This process not only places added difficulty and pressure on the officials but also incurs additional travel costs. Unfortunately, these costs are not reimbursed or supported by the government, adding further challenges for the Justice-Residency officials.

Another issue in this administrative procedure is the redundant entry of the same information in the Declaration Form by the one-stop-shop officials. Whether citizens manually write the required information on the Declaration Form themselves or have the officials assist in filling it out, these officials are still required to re-enter this data into the local residency database on the Electronic Information Portal of the commune/ward, integrated with the Provincial Public Service Portal. This additional data entry task is necessary to generate the Receipt for Document Submission and appointment notices. However, the information on the Declaration Form and the fields on the Portal are not significantly different, making this re-entry process seem unnecessary. If citizens choose to complete the procedure online, officials are relieved from performing these repetitive tasks, and there's no need for the issuance of appointment notices. The workload of the one-stop-shop officials in charge of handling this procedure has significantly increased. This doesn't take into account the additional tasks these officials are responsible for, resulting in the wastage of office supplies. In reality, this could be avoided as electronic files or screenshots could serve as electronic verification if the process is completed online.

According to regulations, the birth information of a child must be recorded in the Birth Registration Book and bear the signature of the responsible official along with the signature of the applicant. This requirement poses significant challenges when implementing online public administrative services for this procedure. Information in the Declaration Form for birth registration, the Birth Registration Book, the Participation Form, and the social insurance and health insurance adjustment form share many identical fields. However, officials must manually enter this data multiple times due to the lack of integration and data sharing across the common database system. This leads to an excessive workload for officials.

Case Study: Driver's License Renewal

The renewal of a driver's license is conducted through the National Public Service Portal at level 4. Citizens can apply for this service from the comfort of their homes, submitting their documents online to the relevant administrative agency and receiving results through the postal service. Nevertheless, many citizens remain dissatisfied with this service due to various drawbacks: Electronic Health Check Requirement: The regulations mandate an electronic health check certificate. To obtain this certificate, citizens must undergo electronic authentication for their health check certificate at the commune/ward People's Committee, which requires additional time and expenses for electronic authentication. Meanwhile, the healthcare sector has not expanded the number of facilities providing electronic health check certificates on the National Public Service Portal, making it difficult for citizens to fulfill this requirement; Payment and Refund Process: Citizens are required to make payments to the treasury. In cases where their application is unsuccessful due to incomplete documents, the refund process consumes a significant amount of time; Incomplete Driver's License Data: Driver's license data is not fully accessible by the Traffic Police Department. It lacks integration, requiring traffic police officers to consult multiple software applications when verifying driver's license records. This has resulted in a low number of online driver's license renewal applications, as the existing regulations and database systems have not incentivized citizens to opt for online driver's license renewal.

These challenges highlight the need for improvements in the efficiency and user-friendliness of online administrative procedures in Vietnam.

** Building the infrastructure for the provision of online public administrative services in Vietnam*

Infrastructure plays a critical role in enhancing the quality of online public administrative services, particularly in developing countries where financial resources for infrastructure investment can be limited. In recent years, Vietnam has issued various state management documents to develop infrastructure for the delivery of online public administrative services. Decision 1605/QD-TTg dated August 27, 2010, to apply information technology in the activities of state agencies during the 2011-2015 period. Decision 1605/QD-TTg emphasized the development of dedicated data transmission networks for State agencies, maximizing the use of existing telecommunications infrastructure provided by telecommunications companies, connecting to units under ministries, cross-agency offices, and other state agencies within the political system, down to commune and ward levels nationwide. This was intended to ensure information security, develop the Government's electronic data center, and enhance electronic data management. In the period from 2011 to 2016, to ensure that the implementation of infrastructure and information technology applications is synchronized and that there is connectivity and interoperability between systems, the Ministry of Information and Communications issued Circular No. 01/2011/TT-BTTTT on January 4, 2011. This circular defined the technical standards that applied as a basis for surveying, designing, and implementing investments in IT application projects using state budget funds.

In 2012, the Central Party Executive Committee issued Resolution No. 13-NQ/TW on building a synchronized infrastructure system to fundamentally transform Vietnam into a modern and industrialized country by 2020. The resolution identified the promotion of the development and application of information technology as a top priority task in the industrialization and modernization process in each sector and field. This includes enhancing the ability to master technology and efficiently manage information infrastructure systems, providing information content for the leadership and management of the Party and State, meeting the requirements for information exchange in society, promoting socio-economic development, ensuring national defense and security, and safeguarding national sovereignty in cyberspace.

Subsequently, Decision No. 1293/QD-BTTTT emphasized the need to focus on providing high-level online public services widely to citizens and businesses to make the operations of state agencies more transparent and better serve citizens and businesses. It also highlighted the need to effectively implement information technology applications at one-stop departments and departments with inter-agency links. There was a continuous effort to enhance the effectiveness of the online public opinion reception channel for citizens and businesses in the online environment to increase their participation in the activities of state agencies.

In 2015, the Ministry of Information and Communications issued Document No. 1178/BTTTT-THH, which introduced the Vietnam Government Electronic Architecture Framework Version 1.0. This framework aimed to define and unify the overall structure of the National Government Electronic Architecture Framework. By 2019, the Vietnam Government Electronic Architecture

Framework was upgraded to Version 2.0 in Document No. 11757/VPCP-KSTT dated December 26, 2019. This provided a basis for state agencies at all levels to determine their responsibilities and positions in the synchronized development of the National Government Electronic Architecture Framework. It also served as a basis for ministries, sectors, and localities to develop their detailed Government Electronic Architecture Frameworks, saving time and resources while ensuring consistency and synchronization among ministries, sectors, and localities.

The integration and data-sharing platform play a crucial role in connecting and disseminating information among state agencies, facilitating the acceleration of administrative procedures. By the end of 2020, a nationwide system of integrated data-sharing platforms had been established according to the Vietnam Government Electronic Architecture Framework. As of December 2020, all 22 ministries and cross-agency offices and all 63 provinces and centrally governed cities had their integrated data sharing platforms (LGSP) in place and were connected to the national integrated data sharing platform (NDXP), achieving a 100% implementation rate.

November 24, 2020, the total number of transactions carried out through NDXP in November 2021 was 33,538,067, a 1.5-fold increase compared to October 2021. The total number of transactions carried out through DNXP in 2021 was 102,298,870. On average, approximately 270,000 transactions were conducted daily through NDXP (Ministry of Information and Communications, 2021). The computer adoption rate among officials and civil servants in Vietnamese ministries and cross-agency offices is relatively high, with the majority of them having access to computers. Nearly all civil servants were provided with email accounts (99.7% in 2020). However, there are still some civil servants who do not use email for work purposes, with an adoption rate of 94.2% in 2020 Ministry of Information and Communications, 2021).

According to the report by the Ministry of Information and Communications (2022), Provision of Online Public Services: A total of 3,812 online public services at levels 3 and 4 have been provided. User Registrations: There are over 2.8 million registered user accounts, marking a significant increase of more than 2.8 times compared to the same period in 2021. Access to Information and Services: The online platforms have witnessed over 736 million access instances for information lookup and service inquiries, showing a substantial increase of more than 2.69 times compared to the same period in 2021. Online Transactions: More than 4.93 million online records have been processed through the online portal, reflecting an increase of over 2.59 times compared to the same period in 2021. Additionally, there have been more than 2.72 million online payment transactions, totaling over VND 2,828 billion, which is more than 9.6 times higher than the same period in 2021. Hotline Calls: There have been over 192 thousand calls received by the advisory hotline. Regarding the technical infrastructure, there has been some improvement, but it is not yet significantly pronounced. The statistics related to mobile subscriptions, internet usage, and broadband connections are as follows: The mobile subscription rate per 100 inhabitants increased from 113.4 subscriptions in 2016 to 114.6 subscriptions in 2017, rising further to 117.8 subscriptions in 2019. By 2020, the number of mobile subscriptions reached 120 per 100 inhabitants. The rate of internet users per 100 inhabitants has also seen improvement. In 2016, it was 40 users per 100 inhabitants, increasing to 48.8 users in 2017, and further rising to 62.8 users in 2019. By 2020, the rate reached 72 users per 100 inhabitants. The percentage of households with broadband internet connections doubled from 30.1% in 2016 to 64.8% in 2020. However, the rate of businesses with internet connections did not achieve a high result. It decreased from 91.4% in 2016 to 84.2% in 2020.

** The oversight and monitoring of online public administrative services in Vietnam*

During the implementation of online public administration services, the Ministry of Information and Communications frequently engages in monitoring and inspecting the situation regarding the provision of these services by various government bodies, including ministries, their subordinate agencies, and provinces and cities directly under central government administration. Annually, these entities are obliged to submit reports detailing the status of their deployment of online public administration services. This proactive approach allows for the identification and timely resolution of difficulties and challenges encountered during the implementation of online public services. It also serves to address cases of inadequate application of information technology in administrative reform, administrative procedure handling, and any disruptive activities that may hinder citizens and businesses in their administrative procedures.

Citizen supervision also plays a pivotal role in the delivery of online public administration services by government agencies. Systems for receiving and processing feedback and recommendations from citizens, businesses, and various governmental departments have been relatively well-established by administrative regulations. Furthermore, the system for receiving and responding to recommendations from businesses and citizens through the Government Electronic Information Portal at the following addresses: http://doanhnghiep.chinhphu.vn and http://nguoidan.chinhphu.vn; http://pakn.dichvucong.gov.vn on the National Public Service Portal, has been operational. This system enables the government, under the guidance of the Prime Minister, to promptly address and resolve issues arising from citizens and the business community, thereby expeditiously addressing difficulties and challenges and enhancing discipline and administrative rigor. Alongside this, considerable emphasis has been placed on organizing inspections, evaluations, monitoring, and ensuring cybersecurity for information systems. This is essential to support the delivery of online public services within government agencies.

As reported by the Ministry of Information and Communications in 2022, in September 2022, the National Cyberspace Security Monitoring Center under the Ministry of Information and Communications recorded, alerted, and provided guidance on the handling of 988 cyberattacks that caused incidents in information systems in Vietnam. This marked an 8.9% increase compared to August 2022 and a 19.9% increase compared to September 2021. During the third quarter of 2022, 2,878 cyberattacks causing incidents in information systems in Vietnam were recorded, alerted, and guided for resolution. This marked a 15.5% increase compared to the third quarter of 2021.

4. POLICY IMPLICATIONS FOR PROMOTING E-GOVERNMENT SERVICES IN VIETNAM

The Government of Vietnam has issued numerous policies, programs, and plans related to online public services, yet it has not achieved significant outcomes. Legal documents and policy mechanisms related to online public services still exhibit certain limitations, which have not effectively encouraged citizens and businesses to utilize online public services. One of the reasons that businesses are less inclined to communicate with government agencies via the Internet is the absence of government policies promoting its usage. Besides, The usage of digital signatures in document issuance within government agencies is still limited. This is due to the cost of obtaining digital signatures and concerns about its security. Some services encounter difficulties in verifying information. For instance, the public service related to population data faces issues where entered information cannot be saved due to a message indicating a mismatch with the database. When contacting local authorities, it is revealed that the database matches the provided personal information, leaving users uncertain about the specific error location. Additionally, certain uploaded files are flagged as corrupted, but the exact nature of the issue is not specified. Moreover, some procedures that require adjustments or deletions cannot be processed. Therefore, in the coming period, the government of Vietnam needs to implement several following measures:

There is a need to establish mechanisms to encourage citizens and businesses to use online public administrative services through policies such as reducing or exempting fees for service implementation or providing digital signatures and certificates for free. Furthermore, there should be mechanisms in place to incentivize Vietnamese technology conglomerates, business communities, and data research experts to develop data models tailored to specific issues and sectors in Vietnam. These products will be applied to various systems contributing to improving the quality and efficiency of public services.

Regarding the improvement of administrative procedures, it is essential to continue simplifying procedures. This can be achieved by utilizing electronic identity accounts to verify information in the digital environment. Optimizing the operation of the e-government service portal for receiving applications and procedures, is crucial for ensuring convenience. Focus on streamlining and enhancing the quality of administrative procedures across all areas of state management, particularly those related to citizens and businesses. Implement administrative procedure reforms continuously to improve the business environment, mobilize all social resources, and enhance national competitiveness. Simplify administrative procedures between state administrative agencies, sectors, and levels, as well as within each state administrative agency. Significantly reduce existing administrative procedures, publicly disclose standards and administrative regulations, and allow individuals and organizations to supervise their implementation. Receive and handle feedback and suggestions from individuals and organizations regarding administrative regulations to support the improvement of the quality of administrative regulations and monitor the implementation of administrative procedures by state administrative agencies at all levels.

These measures will contribute to the continued improvement of the business environment, fostering rapid and sustainable economic development and ensuring favorable conditions for the country's economic growth.

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DETERMINATION OF MATERIALITY IN GROUP AUDIT CONDUCTED BY AUDIT FIRMS IN VIETNAM

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Abstract: *Materiality is an important issue because it directly affects how much of audit evidence is enough as a basis to form audit opinion. In group audit, auditing standards require group auditor to determine appropriate component materiality, but those standards do not mention the way to do this, and practice of auditor varies widely. Prior academic regarding materiality problem in group audit is also quite limited in providing broad evidence on the factors that influence the determination of materiality. This paper examines the current practice of Vietnamese audit firms in determining materiality in group audit. The results showed that Vietnamese audit firms quite closely followed the current auditing standards on materiality. There is a consistency in using benchmark for overall group materiality and percentage of determining group performance materiality, clearly trivial thresholds at group level. We also find that that the percentage of 60% to 90% of overall materiality is normal range applied to determine component materiality and agreed across the firms. However, there are some misunderstandings from certain auditors when using the benchmark of parent company instead of consolidated figures to determine the overall group materiality. In addition, there is a difference in the method for determination of component materiality among audit firms. The explanation, and documentation to support the auditor judgements are also limited. The results of this study showed a practical aspect of implementing auditing standards on materiality and provide direction for further research.*

Keywords: *materiality, group audit, auditing firms, VSA600, ISA600.*

1. INTRODUCTION

The final objective of an audit is to obtain reasonable assurance as to whether the financial statement contains material misstatement or not. This require the auditor to plan the audit and perform the audit procedures to detect errors, individually or in aggregated, which could result in material misstatement in the financial statement [1]. Therefore, the determination of materiality is important because it will affect the audit scope and the auditor's decision on which misstatement is material and therefore should be adjusted. The determination of materiality will be considered in both quantitative aspects and qualitative aspects.

Materiality is not a new term in audit. The related auditing standards has provided guidance for auditor on how to apply materiality in planning audit, gathering audit evidence and completion of the audit, including: (i) establish overall materiality for financial as a whole (is also known as planning materiality); (ii) determine the performance materiality which is lower than overall materiality, this materiality level is used to design audit procedures for account balance and disclosure to ensure that the total uncorrected misstatement and undetected misstatement will not exceed the overall materiality (aggregated risk at the acceptable level); (iii) use this materiality level to evaluate the audit findings [2].

In a group audit, materiality affects auditor's conclusion on whether the consolidated financial statement contain material misstatement or not. The application of materiality in three processes of an audit is an important matter. Materiality is significant basis in group audit, because it is the key factor to (i) determine the scope of the audit work (for example, which account balances or

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assertion need to be audited in aspect of consolidated financial statement), and (ii) determine the types of work performed at different components of group [3].

ISA 600 [4]including when component auditors are involved. The standard includes new and revised requirements and application material that better aligns the standard with recently revised standards, such as International Standard on Quality Management 1 and International Standards on Auditing 220 (Revised requires a group auditor to determine overall materiality for consolidated financial statement as a whole (refer as group materiality) and component materiality which is applicable for component that auditor will perform full scope audit for group audit purpose. The standard also mentions that component materiality should be lower than group materiality to reduce the risk that total uncorrected misstatement and undetected misstatement exceeds overall group materiality. However, the ISA gives no detailed guidance on how to determine the materiality level. Due to the lack of academic research and auditing standards, auditors need to use a lot of judgment in determining component materiality. Review report of IAASB (2015) stated that, there is evidence of "big gap in practice of determining component materiality" [5]. The professionals of US standards regulators also agreed that there is a need for guidance on component materiality and other aspects of materiality in group audit [6].

In Vietnam, group audit follow VSA 600 [7] which inherits from ISA 600. There has been no detailed guidance other than VSA 600 and require auditors to use professional judgments in making decision relating materiality. This gives rise to some difference approach in application of materiality in group audit conducted by Vietnamese auditing firms. Some audit firms use guidance of global network, some refer to guidance from current academic research, and some have no detailed approach for component materiality. This practice showed that there is a need for further guidance on materiality for group audit.

Therefore, the topic "*Determination of materiality in group audit conducted by audit firms in Vietnam*" will focus on the current practice of audit firms in Vietnam regarding using materiality in performing group audit.

2. BACKGROUND AND RESEARCH QUESTION

2.1. Overview on materiality in group audit

In general, based on the current regulation, when performing an group audit (or audit of consolidated financial statement), auditors need to determine and apply the following materiality thresholds [4], [7]including when component auditors are involved. The standard includes new and revised requirements and application material that better aligns the standard with recently revised standards, such as International Standard on Quality Management 1 and International Standards on Auditing 220 (Revised:

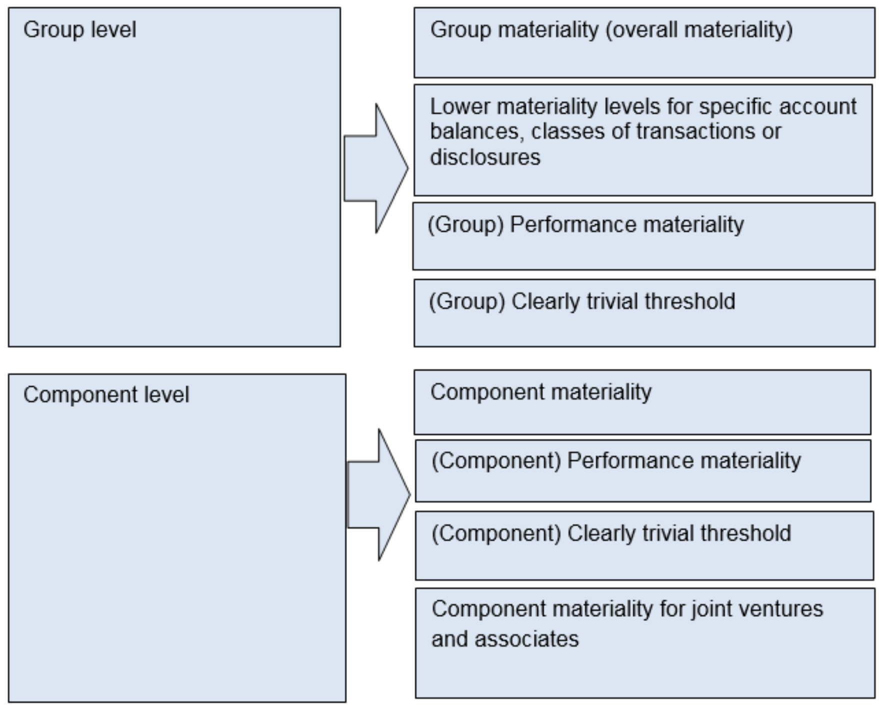


Table 1: Materiality in group audit

The determination of materiality at group level is the same as a statutory financial statement audit, when the group is considered as a single (stand-alone) audited entity. The main difference in determining materiality in group audit is at component level, *including component materiality, component performance materiality, and component materiality for joint ventures and associates*.

Component materiality

In a group audit, how much of the audit work performed at component is enough? This is a big question for all group auditors and component auditors. There is a need for materiality level which gives basis to determine the audit work performed at component, this level is called component materiality. Component materiality is used by the component auditor to perform the full scope audit at component level. The too high component materiality will lead to the under-performed audit work to achieve audit objective and then will give risk to financial statement users; in contrary, the too low component materiality will lead to overwork done and unnecessarily increase audit cost and the audit is not efficient. Therefore, the important issue for group audit is how to determine the optimal component materiality.

ISA 600 also suggests that the component materiality should be lower than group materiality to reduce the aggregated risk to an acceptable level. Aggregated risk is the risk that undetected and uncorrected misstatement, when aggregated, could lead to material misstatement. This risk will increase in the case of a group with a rising number of components. Because the auditor cannot perform full scope audit for all components of the group. Therefore, the determination of component materiality involves a lot of professional judgement, including the quantitative and qualitative aspects (such as number of components, nature of components, and characteristic of component). Generally, the different component materiality will be established for different components of the group.

In the current situation, there is no guidance from regulators on how to determine component materiality. The following is some suggestion from academic research:

- Kinney (1993) suggests component materiality is equal to 50% group materiality. And this level is consistently applied for all components of the group. This method is known as "HALF" method [8] .
- Zuber et al. (1983) and Kinney (1993) recommend the method in which component materiality equal group materiality multiplied by the square root of the proportions by size among components. This method is known as "SQRT probability method" [9].
- Then, in 2008, Glover et al. presented research on a more complex probabilistic method for determining the component materiality. This method defines a "aggregated" component materiality (this is the maximum value that total individual component materiality could exceeds the group materiality, which is called as "Maximum aggregate component materiality", MACM) by using the benchmark multiples (BM). BM has the value ranges from 1.5 to 9.0 depending on the number of components. Auditor will multiply the group materiality with this BM to determine the MACM. Then, the auditor allocates the MACM to component based on the proportion of the square root of revenue (or an equivalent measure of the component size). This method is known as "MACM" method [8].
- Inherits from research findings, in the audit guidance, AICPA also rely on MACM method of Glover (2008) to suggest auditor about how to determine component materiality. In addition, guidance of AICPA is more flexible at step allocating MACM to components, the allocation rate can be proportion of the square root of the revenue (similar to Glover 2008) or just solely the proportion of revenue (or asset, or equivalent value to measure the size of the component) of component in total group revenue (which means that the square root is not taken) [11].
- Stewart and Kinney (2013) study have built a model to determine component materiality using input data collected from auditing standards, audit risk models, factors from previous academic research, and Bayesian probability theory. This model is known as the General unified assurance and materiality (GUAM), in the study of Stewart and Kinney (2013) [12]which ultimately affect group audit scope, reliability, and value. However, standards are silent about how these amounts should be determined and methods being used in practice vary widely, lack theoretical support, and may either fail to meet the audit objective or do so at excessive cost. We develop a Bayesian group audit model that generalizes and extends the singlecomponent audit risk model to aggregate assurance across multiple components. The model formally incorporates group auditor knowledge of group-level structure, controls, and context as well as component-level constraints imposed by statutory audit or other requirements. Application of the model yields component materiality amounts that achieve the group auditor's overall assurance objective by finding the optimal solution on an efficient materiality frontier. Numerical results suggest group-level controls and structured subgroups of components are central to efficient group audits.","container-title": (Crossref. This model also integrates the following factors: number of components, probability distribution of potential errors, and internal controls throughout the group. Stewart and Kinney advise that this approach is innovative and has integrated elements from component-level assurance to group-level assurance into a unified Bayesian model, aimed at using in the decision-making process at the audit planning stage as well as supporting decisions during performing group au-

dit. However, GUAM is relatively complex and cannot be applied in practice without supporting software. Developing suitable software is considered an important step in the project of applying GUAM in audit firms.

In general, guidance from auditing standards and prior academic research on determining component materiality is quite limited and not detailed, which can give rise to distance in practice when mostly involved by auditor's judgements.

Component performance materiality

Component performance materiality is established when scope of work is audit of component financial statements. This is necessary to reduce to an acceptable level the risk that undetected and uncorrected material misstatements can exceed component materiality. The method to determine component performance materiality is the same as component materiality at group level. This work can be performed by a component auditor then reviewed by a group auditor.

Clearly trivial threshold

The clearly trivial threshold or tolerable error threshold is a threshold that is used by the component auditor to report the errors to the group auditor. During the audit process, if the component auditor discovers errors greater than this threshold, they will notify the group auditor. The clearly trivial threshold can be determined for each component which is usually based on a percentage (for example 5%) of the component materiality. However, the auditor can also define a single threshold that applies to all components to require that component auditors will use this threshold to report uncorrected misstatements.

2.2. Research question

Given the limitation on current professional guidance on determination of materiality in group audit. It is quite a big concern that how audit firms understood and implemented auditing standards on materiality in practice. Therefore, in our study, we investigate the following research questions (RQ):

RQ1: What benchmarks and percentages do audit firms use for determining overall materiality in a group audit?

RQ2: How is component materiality determined in group audits?

RQ3: Do audit firms need to determine component performance materiality in group audit?

RQ4: What amounts are used to determine clearly trivial threshold applied at component level?

RQ5: How do audit firms determine component materiality for associates and joint ventures?

3. RESEARCH METHOD

The paper focus on different aspects of materiality in group audit. To obtain practical information to describe the current practice of group audit conducted by audit firms in Vietnam, the researcher used the following techniques:

- Sending the survey questionnaire and collecting survey results (Appendix A): The researcher sent the survey questionnaire to auditors of audit firms that have experiences in group audit. Sending survey questionnaires and collecting survey results are carried out by meeting in person or sending via email. The survey ensures respondents' anonymity and asks respondents to be as specific as possible without including information that could identify auditing companies, audit client or individuals.

- In-depth interviews (Appendix B): The researcher conducted in-depth interviews with experience auditors by: meeting in person, conversing by phone and exchanging by email about issues that need to be learned about the current situation. See Appendix B for the author's interview questions, note that these are basic initial questions, subsequent questions are spontaneous and therefore may not be consistent between respondents. The researcher has approached auditors of five audit firms, comprised of two Big Four firms and three Non-Big Four firms.

The survey/interview questionnaires clearly state the motivation of the research paper, research questions and research products. The author states that the author will keep it confidential, and related discussions will not reveal information on auditing firm or individual auditor.

4. RESULTS AND DISCUSSION

4.1. Results

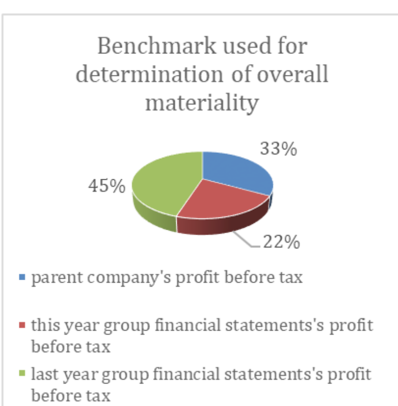
RQ1: What benchmarks and percentages do audit firms use for determining overall materiality in a group audit?

Overall (group) materiality (consolidated financial statements level)

The survey results show that there is consistency in using benchmark and percentage to determine overall materiality in group audit. Through interviews (Appendix B), audit firms all have priority for using consolidated profit before tax criteria to determine the overall materiality. According to the interview results, the auditor responded that "For most of enterprises, especially the listed companies or those operate in the high regulation environment, users of financial statement focus the most on the performance of the group, which reflect in the consolidated profit before tax.". The percentage is determined consistently at 5% of profit before tax. The results of in-depth interviews also show that a threshold at 5% of profit before tax is considered as material. In the case of a group that has a small profit, or gets loss, or unstable in business results, other benchmarks can be use, i.e., 0.5% of revenue or 1% of total assets.

Regarding the source of benchmark used, the survey (Appendix A) results show that 33% of auditors believe that their firm use the parent company's profit before tax data in calculating the overall materiality, 22% use profit before tax of this year's group financial statements (unaudited), 45% use profit before tax of the previous year's group financial statements (audited figure, with adjustments for changes to this year).

In addition, 45% of auditors believe that the overall materiality should be determined based on the level of audit risk, 83% believe that it is based on the information needs of users, and 100% believes that it should be based on professional judgment of the group auditor.



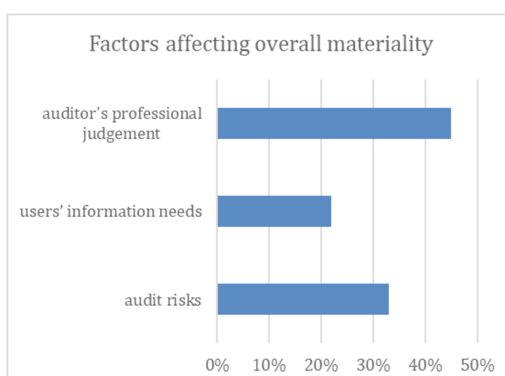


Table 2: Benchmark and consideration used for determination of overall materiality

Performance materiality (consolidated financial statements level)

Survey (Appendix A) and interview results (Appendix B) show that: most audit firms determine the performance materiality at a percentage of 50%-75% of the overall materiality, a few audit firms use higher rate up to 90%, but it all depends on the level of audit risk to determine the appropriate rate. It is noted that 6% of respondents stated that their audit firms did not use the performance materiality at consolidated financial statements level. Besides, the survey shows that most audit firms have not used the materiality for specific class of transactions and account balance but use a performance materiality for all balances.

Clearly trivial threshold

All audit firms have set a clearly trivial threshold at 3%-5% of the overall materiality. Normally, this threshold will be used to apply consistently to all components for reporting uncorrected errors. In in-depth interviews (Appendix B), auditors stated that they did consider the history of misstatement when determining percentage of 3% or up to 5% and this is quite consistent between audit firms.

RQ2: How is component materiality determined in group audits?

The survey results show that only 68% of auditors responded that their audit firm did use the component materiality in group audit. Accordingly, a certain proportion of group audits (i.e., 32%) did not allocate overall materiality to components.

In addition, when reviewing audit files and in-depth interviews with auditors, it is noted that the audit firms have different ways to calculate component materiality.

Table 3: Determining Component materiality in group audit

Firm	Audit practice
1	Component materiality can be set at 60% to 95% of overall materiality, depending on the auditor's judgments. The firm has no statistical method to calculate this threshold. In case of group structure with one parent and one subsidiary, Parent's total asset account for 99% the Group total asset, the firm can apply component materiality at 90% to 95% of overall materiality. In case of group structure with multiple equal-size components, the firm will reduce the component materiality to lower level, i.e., 60% to 70% overall materiality.
2	Calculate component materiality using the method from firm guidance. This is a Probabilistic method based on the model in AICPA (2013) guidance. This model is to ensure that component materiality is lower than overall materiality and factors are considered in this model are: Number of components in group Level of inherent risk and control risk of material misstatements
3	Generally, the percentage of 60% to 90% overall materiality is acceptable depending on the scale of component in the group. For example, if the total asset of the component accounts for 50% of the group's total asset, then the percentage of 90% can be applied.
4	Minimum level is 50% and maximum level is 90% overall materiality. If the component total asset accounts for 25% of the group total asset, then the percentage of 60% can be applied. Then this percentage can be increased to ensure the efficiency of the audit or decreased to reduce the aggregation risk.
5	Component materiality cannot exceed 90% overall materiality. The benchmark used for determination of overall materiality will be used for consideration of component materiality. Factors are provided for decreasing the component materiality. For example, if the number of components in the group is multiple or the scale of components in group are similar.

First, it can be seen that most of audit firms have no specific quantitative guidance and let it up to the group auditor's judgment in determining the value of the component materiality. Generally, those audit firms use component materiality at percentage of 60% up to 90% of overall materiality.

Second, regarding one audit firm using Probabilistic (statistical) model as designed in AICPA guidance (2013), we performed further discussion to understand the approach. They use a calculation method based on a maximum amount that the sum of the individual component materiality amounts may exceed group overall materiality, this amount is called a maximum aggregate component materiality (abbreviated as MACM). By discussion, we noted that this method is similar to the approach suggested by Glover, Prawitt, Liljegren, and Messier (2008). This actual practice of one firm is summarized as follows:

+ Step 1: determine "overall materiality"

+ Step 2: determine "standard multiple value", which varies according to the number of significant components by using table in AICPA guidance.

+ Step 3: determine the "Maximum aggregate component materiality,": equal to overall materiality multiplied by the standard multiple value.

+ Step 4: determine the component materiality by allocating the MACM to each component based on component scale (measured by revenue or total assets)

+ Step 5: determine the "risk co-efficient" of each component (based on the auditor's assessment of inherent risk and control risk with three levels "high, medium or low"). The risk coefficient is built by each audit firm and stated in the audit manual.

+ Step 6: determine the component materiality by multiplying the allocated component materiality (in step 4) with risk co-efficient in step 5.

Third, in addition, auditors of Big Four firms have clearly demonstrated their understanding of method and data sources, even the framework for benchmark multiples and risk co-efficient in the audit manual of the audit firm. The auditor of Non-Big Four firms has not shown this understanding and stated that the firms do not provide specific guidance.

Fourth, in case of an individual statutory audit of the component, the appropriate component materiality will be the lower between the component materiality allocated by group auditor and the materiality for statutory audit determined by component auditors. Even if the components are audited by other auditors, the group auditor still requires a lower level to be applied to reduce the aggregation risk to an acceptable level. This practice is agreed to and consistently applied in all firms.

Fifth, all firms responded that component materiality not only be evaluated quantitatively, but that qualitative factors are also considered. For example, one firm stated that "If there are multiple components in the group, the components materiality should be reduced". The factors shown in Table 4 are taken from ICAEW guidance on materiality (2017). Some firms also make reference to qualitative factors in determining performance materiality for group financial statements as guidance in current VSA.

Table 4: Qualitative factors included in consideration of component materiality

Qualitative factors	Firm 1	Firm 2	Firm 3	Firm 4	Firm 5
The size of the component (its individual financial significance to the group);	X	X	X	X	X
Whether the component has a statutory audit, in which case the level of materiality for statutory audit purposes (which is likely to be lower) may be used;	X	X	X	X	X
The characteristics or circumstances that make the component significant;	X	X	X	X	X
The strength of the component's control environment;	X	X	X	X	X
Whether the component is new to the group and so the group auditors have less understanding of its operations;	X	X	X	X	X
Whether the component's operations are similar to the rest of the group;	X	X	X	X	X
The likely incidence of misstatements, taking account of risk assessment and previous experience.	X	X	X	X	X

RQ3: Do audit firms need to determine component performance materiality in group audit?

The survey showed that in all group audits, component performance materiality was determined by component auditor when perform audit work at component. There has been no review of group auditor for this threshold. The interviewees also stated that there was no communication between group auditor and component auditor regarding this threshold. The reason given was that VSA600 and ISA600 do not mention to this threshold, therefore, it was up to component auditor in determination and application this one.

RQ4: What amounts are used to determine clearly trivial threshold applied at component level?

Both survey and interview showed that there is no need to determine the clearly trivial threshold at component level for group audit purpose. Group auditors stated that they only use the group clearly trivial threshold and inform this threshold to component auditor. All misstatements at components which exceed this threshold need to be reported to the group auditor for further consideration.

RQ5: How do audit firms determine materiality for associates and joint ventures?

Only 10% of respondents of survey showed the consideration on materiality applied for associates and joint venture. The reason (resulted from interview) is that the group did not own control over those entities, and their financial statements are audited by another audit firms. Therefore, the group auditor only performs analytical procedures to those components, or if the component is significant to the consolidated financial statements as a whole, group auditor will communicate with current auditor to discuss the main issues and review the audit file if necessary.

4.2. Discussion

In general, audit firms use the profit before tax as benchmark to determine overall materiality for the group financial statements. This benchmark is appropriate because this is the criteria that users of financial statements are interested in most. In addition, the firms show the consistency of determining performance materiality and clearly trivial thresholds at group level. The percentage applied showed that the firm's practices quite closely followed existing auditing standards.

The group auditor determined different levels of materiality to different components. Component materiality does not exceed the overall materiality to ensure that aggregation risk can be reduced to an acceptable level. Each audit firm has different guidelines in determining component materiality. All firms agreed that the percentage of 60% to 90% of overall materiality is suitable for component materiality. All firms have also considered the requirement for statutory audit of component financial statements and other qualitative factors in determining and applying component materiality. There is a consistent clearly trivial threshold which is determined at group level and applied to all components for reporting uncorrected misstatements.

However, there are some **limitations** in practical application of materiality in group audit:

Firstly, some auditors do not have a full understanding of the suitable benchmarks used for overall materiality. This threshold should be calculated based on the profit before tax of the consolidated financial statements, but some firms use the profit before tax of parent company to determine this threshold. This is not appropriate benchmark because the group financial statements should be consolidated from parent and subsidiary financial statements, then need taking into account a series of consolidation entries, therefore, these figures will be changed totally compared to parent's figures.

In addition, it is not appropriate if overall group materiality is based on the level of audit risk. The level of audit risks should only affect the performance materiality but not the overall group materiality. The higher audit risk, the lower performance materiality, and auditor should perform additional work, to ensure that no misstatements exist in the group financial statements that, individually or accumulated together, exceed the overall group materiality threshold.

Secondly, there is no clear explanation in method or model used to determine the component materiality. Most of respondents stated that it depends on auditor's judgment and only provide a range of percentages for component materiality. Moreover, there are some certain auditors who do not have full understanding of component materiality, and therefore did not perform allocating materiality to component. The survey and interview showed the consideration of qualitative factors in determining materiality, but the documentation is limited in audit files.

Thirdly, most group auditors were not concerned with component performance materiality. However, there is a risk that if the performance materiality account for a high percentage of overall group materiality (for example, 80%), and Component A has component materiality at 90% of overall group materiality, component performance materiality account for 90% of component materiality, then the component performance materiality exceeds the group performance materiality, this can increase the aggregation risk.

Fourthly, there was a little concern about the materiality applied to associates and joint ventures. However, in case of complicated group structure, with multiple associates and joint venture, or if the associates or join venture account for significant portion in consolidated profit, then the appropriate work done should be performed for those components.

5. RECOMMENDATION

First, overall group materiality should be determined based on users' information needs, not on how risky a particular balance might be to audit. In another words, auditors should not reduce the overall materiality level based on high audit risks. The appropriate benchmark for overall group materiality is normally group profit before tax (in case of listed company, this is the most items that users of financial statement interested in). The other benchmarks that could be considered are group revenue or group total assets. The benchmarks should be this year unaudited consolidated figures, or last year's audited figures with consideration of changes for the current year.

Second, when there is a limited instruction from regulators in determining the component materiality, audit firms should refer to guidance from international professional bodies, academic research to consider the appropriate method. The following are three methods that audit firms could consider: (i) Component materiality could be a percentage of group materiality, depending on the size of component to the group and the auditor's professional judgments regarding circumstances of group and components. For example, if the component accounts for 60% of the group, then the component materiality should be at 60% to 90% overall group materiality. (ii) Determine an aggregated maximum component materiality, then allocate this amount to component based on the revenue or assets. This aggregated maximum component materiality will increase if the number of components in group increase. (iii) In case of the fact that there is a statutory audit for separate financial statement of component, the auditor can choose the lower threshold between the materiality for statutory audit purpose and the allocated component materiality for group audit purpose. The group auditor should clearly communicate with component auditor to ensure the appropriateness of components materiality is applied.

Third, the additional qualitative factors that auditor should take into account that could lead to decision of lower component materiality threshold include: (i) the less similarity of risk of material misstatement between components in group; (ii) the higher complexity of components; (iii) the higher variety of business products or business lines in group; (iv) the less effective of group wide controls; (v) the more decentralized accounting system in group for group reporting purpose; (vi) the more difference of legislation.

Forth, component performance materiality could be set by component auditor, but group auditor should communicate and review to ensure that this threshold is lower than group performance materiality and is consistent with method of determining group performance materiality (for example, same percentage 75% of overall materiality, if not, the rationale should be properly documented in audit file). This communication should be done at the planning phase to ensure that the audit program and volume of audit work at component is appropriate. Avoiding the situation that, after the completing the audit work at component, the group auditor review and request to lower the component performance materiality, this could lead to addition audit procedures need to be performed and subsequently increase the audit costs and time.

Fifth, component materiality for associates and joint ventures can be determined in same method as for subsidiaries, in which, auditor also should consider the qualitative characteristics and existence of a statutory audit for separate financial statement of the associates and joint ventures. In another way, group auditor could use the materiality of statutory audit then multiplied by ownership percentage to determine component materiality for associate and joint venture since those components are consolidated in group financial statements using equity accounting method. This materiality threshold should be communicated with component auditors of associates and joint ventures and request them to report all misstatements exceeding this threshold for purpose of group audit.

Finally, the method and professional judgements involved in determining materiality thresholds in group audit should be fully documented in audit files, including rationales, appropriateness, related guidance, information, and reference sources, etc. It would be logical if the method should be consistently applied over the years.

6. CONCLUSION

Determination of materiality in group audit involves the exercise of professional judgment. Research results showed that audit firms in Vietnam did closely follow the VSA600 and related auditing standards in determining materiality in group audit. However, the existing auditing standards (both national and international) are limited in guidance of component materiality, component performance materiality and materiality for associates and joint ventures, which led to some different approach in group audit conducted by audit firm in Vietnam and over the worlds. These practices need to be improved by further guidance from auditing standards in future, learning experience from global networks and other professional bodies. Appropriate training should be conducted for all auditors of audit firms so that they can fully understand the requirement of auditing standards, the firm's policy, and properly apply it in group audit.

In addition, there are several areas that can be further studied. Future research should focus more on building models to determine the component materiality. The models should be built up in a way that is easy to understand and feasible to apply to practice. For example, the research can compare the theoretical model which is suggested in some current research (such as model of Stewart and Kinney (2013) [12]which ultimately affect group audit scope, reliability, and value. However, standards are silent about how these amounts should be determined and methods being used in practice vary widely, lack theoretical support, and may either fail to meet the audit objective or do so at excessive cost. We develop a Bayesian group audit model that generalizes and extends the singlecomponent audit risk model to aggregate assurance across multiple components. The model formally incorporates group auditor knowledge of group-level structure, controls, and context as well as component-level constraints imposed by statutory audit or other requirements. Application of the model yields component materiality amounts that achieve the group auditor's overall assurance objective by finding the optimal solution on an efficient materiality frontier. Numerical results suggest group-level controls and structured subgroups of components are central to efficient group audits". DOI.org (Crossref) with practice of Vietnamese audit firms to consider the appropriateness and challenges of application. Or further research can perform by direct access to the audit firm's working papers in Vietnam to verify more on the actual audit to make appropriate recommendation.

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APPENDIX A: SURVEY QUESTIONNAIRES

Part 1: Demographic information

Please provide the following information:

Name:

Firm:

Mailing Address:

Phone:

Position:

Years in Position:

Total Years of Professional Auditing Experience:

Part 2: Discussion question

For these questions, please focus your responses collectively on the group audits that you have participate in recent years:

Question	Yes	No
1. Which of the following do your audit firms use in group audit?		
☐ overall group materiality		
☐ group performance materiality		
☐ materiality for specific account balances and transaction		
☐ clearly trivial threshold at group level		

☐ component materiality		
☐ component performance materiality		
☐ clearly trivial threshold at component level		
☐ materiality for associates, joint ventures		
2. Benchmark used for determining group overall materiality:		
☐ Profit before tax		
☐ Profit after tax		
☐ Revenue		
☐ Total asset		
☐ Others, [please specific …………]		
3. Benchmark used for determining group overall materiality is derived from:		
☐ this year consolidated financial statement (unaudited)		
☐ previous year consolidated financial statement (audited), adjusted for significant changes of this year.		
☐ this year parent financial statement (unaudited)		
4. Group overall materiality should be based on:		
☐ Information needs of users of financial statement		
☐ Audit risks		
☐ Auditor's professional judgement		
☐ Others, [please specific …………]		
5. Group performance materiality is based on:		
☐ Always 75% group overall materiality		
☐ 50%-75% group overall materiality, depending on audit risk		
☐ 50% - 90% group overall materiality, depending on audit risk		
☐ not applicable		
6. Clearly trivial threshold at group level is:		
☐ 3% - 5% group overall materiality		
☐ 5% - 8% group overall materiality		
☐ not applicable		
7. How do you determine component materiality:		
☐ using the aggregated maximum component materiality (follow AICPA guidance 2013)		
☐ Percentage of 50-90% on group overall materiality		
☐ Depending on auditor judgement (no specific guidance), just ensure that component materiality is lower than group overall materiality		
☐ Other, [please specific …………]		
8. Performance materiality at component level is:		
☐ 75% component materiality		
☐ 50% - 90% component materiality		
☐ No consideration. Depending on component auditor judgement		
☐ Depending on component auditor judgement, but not exceed the group performance materiality		
9. Clearly trivial threshold is:		

☐ 3-5% component materiality, used for consideration at component level, not reporting to the group		
☐ Do not use the clearly trivial threshold at component level. Just use this threshold at group level for purpose of reporting misstatement to group auditor.		
☐ Not applicable		
10. Assessment of audit risk will have influence on:		
☐ group overall materiality		
☐ group performance materiality		
☐ component materiality		
☐ Other, [please specific …………]		
11.Do you consider the following qualitative factors when determining component materiality		
☐ The size of the component (its individual financial significance to the group);		
☐ Whether the component has a statutory audit, in which case the level of materiality for statutory audit purposes (which is likely to be lower) may be used;		
☐ The characteristics or circumstances that make the component significant;		
☐ The strength of the component's control environment;		
☐ Whether the component is new to the group and so the group auditors have less of an understanding of its operations;		
☐ Whether the component's operations are similar to the rest of the group;		
☐ The likely incidence of misstatements, taking account of risk assessment and previous experience.		

APPENDIX B: INTERVIEW QUESTIONS

For these questions, please focus your responses collectively on the group audits that you have participate in recent years:

Discussion Questions	Response
a) How do your firm determine materiality at group financial statement level (overall materiality, performance materiality, materiality for specific account and transaction, clearly trivial threshold) b) How do your firm determine materiality at component level (component materiality, performance materiality, clearly trivial threshold, materiality for associates and joint venture) c) How do your firm apply the above materiality thresholds? d) How does risk assessment impact the materiality determination? e) How do your firms consider the qualitative factors when determining component materiality?	

RECORD TELECOMMUNICATION SERVICES REVENUE WHEN APPLYING IFRS 15 - CURRENT SITUATION AND SOLUTIONS

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Abstract: Vietnam is gradually perfecting and applying international general regulations on accounting. Applying the international financial reporting standards system (IFRS) to Vietnamese businesses is necessary to help the financial system be more stable. more public, transparent and healthy, but when applying IFRS there will be inevitable difficulties when starting implementation and conversion. The telecommunications industry is one of the industries most affected by the application of IFRS in Vietnam - especially IFRS 15 Revenue from contracts with customers. There has been a lot of research on this issue and there have been appropriate solutions, but it is only limited to a certain scope, so it is not possible to see all the problems or effective solutions for telecommunication unit . From the actual difficulties and problems occurring at some telecommunications corporations, the study used a number of traditional research methods such as: qualitative, empirical, analytical methods... to implement based on regulations and practical experiences present at telecommunications enterprises to provide a number of solutions to help recognize revenue according to IFRS 15 conveniently, appropriately and consistently according to regulations between telecommunications business units.

Keywords: Accounting for telecommunications service revenue; Apply IFRS 15, Apply IFRS 15 to telecommunications services

JEL: M41

I. SETTING THE PROBLEM

Telecommunications is the sending, transmitting, receiving and processing of symbols, signals, data, writing, images, sounds or other forms of information by cables, radio waves, optical media and media. other electromagnetic. voice calls, text messages (SMS) as well as Data (considered "basic" telecommunications) and a range of online messaging and information services and data retrieval and processing (considered value-added telecommunications).

In 2009, the National Assembly of Vietnam passed the Telecommunications Law with the concept: "Telecommunication services are the services of sending, transmitting, receiving and processing information between two or one group of users of telecommunications services, including basic services and value-added services. Telecommunications application service is a service that uses telecommunications transmission lines or telecommunications networks to provide services applicable in the fields of information technology, radio, television, commerce, finance, banking, culture, information, health, education and others ." When using telecommunications services, users and businesses must pay telecommunications fees to the telecommunications service provider.

According to the roadmap, VFRS is still in the construction and promulgation phase (2020 to 2024) and will begin implementation from 2025. With the purpose: " Issuing and organizing the new implementation of a reporting standards system Vietnam Finance Corporation (VFRS) which follows the principle of maximum absorption of international

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practices, in accordance with the characteristics of the Vietnamese economy and the needs of businesses, ensuring feasibility in the implementation process" - Date March 16, 2020, the Ministry of Finance issued Decision No. 345/QD-BTC on approving the project to apply financial reporting standards in Vietnam.

Applying IFRS to the Vietnamese accounting system is a challenge in terms of the level of market development, level of professional capacity, and foreign language for accountants, auditors, investors, and investors. manage. The application of IFRS will contribute to opening a new era, changing the way of recording, measuring and presenting factors on financial statements of enterprises, creating a common language with the industry. accounting, creating opportunities for the development of the capital market, increasing the transparency of financial statements, protecting the interests of shareholders, beside that also requiring efforts from businesses and accountants. . One of the industries most affected by the change when applying IFRS is telecommunications businesses when applying IFRS 15 (replacing IAS 18).

In fact, telecommunications companies around the world that have adopted IFRS 15 say it will have a negative impact on financial statement users' understanding of the company's transactions, and the companies report inconsistent across similar transactions. (Notably, after applying IFRS 15, on the stock market, the stock price of a telecommunications company may change because the revenue information on the financial statements changes and decreases when compared to the past, causing investors to reconsider their expectations.

II. ACCOUNTING FOR TELECOMMUNICATIONS SERVICE REVENUE IN VIETNAM WHEN CONVERTING AND APPLYING IFRS.

1. Changes in IFRS 15 compared to IAS 18 and VAS 14.

According to IAS 18, revenue is: "the sum of economic benefits for the period arising in the usual course of the entity's activities where they result in increases in equity, other than increases in connection with contributions from equity participants. From IAS 18, Vietnam has applied and released VAS 14 with the concept of revenue as follows: "Revenue is the total value of economic benefits obtained by an enterprise during the accounting period, arising from usual production and business activities of the enterprise, contributing to increasing equity capital.

But when switching to IFRS 15, revenue has become more about the nature of contracts with customers. IFRS 15 takes the view that: "revenue is recognized when the obligation is fulfilled by transferring goods or services promised to the customer (that is when the customer obtains control of the goods or services there).

Objective of IFRS 15 (IFRS15.1): The objective of this Standard is to regulate the principles that an entity must apply to report useful information to users of financial statements in terms of the nature , value , timing and uncertainty of revenue and cash flows arising from contracts with customers. [6] IFRS 15 has developed a 5-step approach to determine revenue that IAS18 and VAS have not yet built. The 5-step process is shown in the following diagram (***Diagram 1 and diagram 2)***:

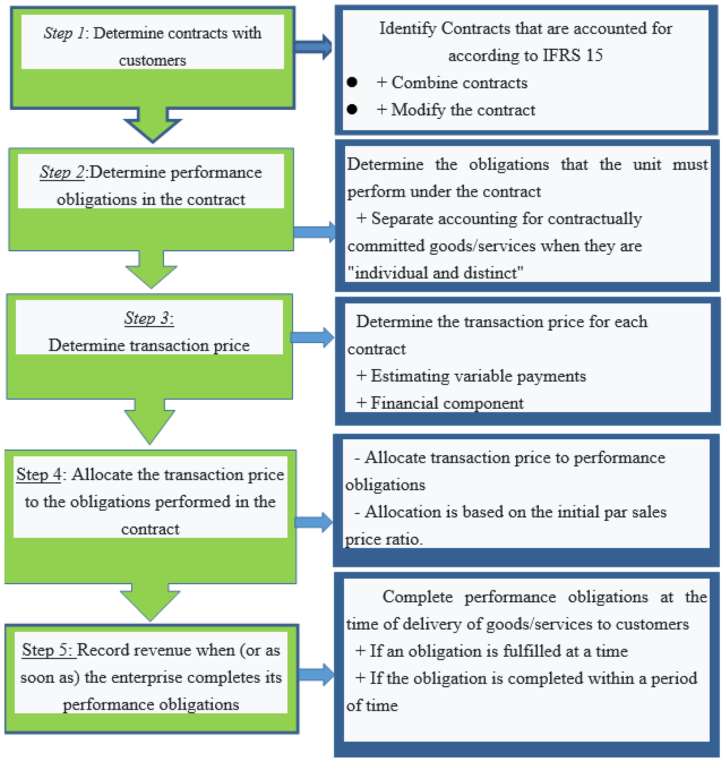
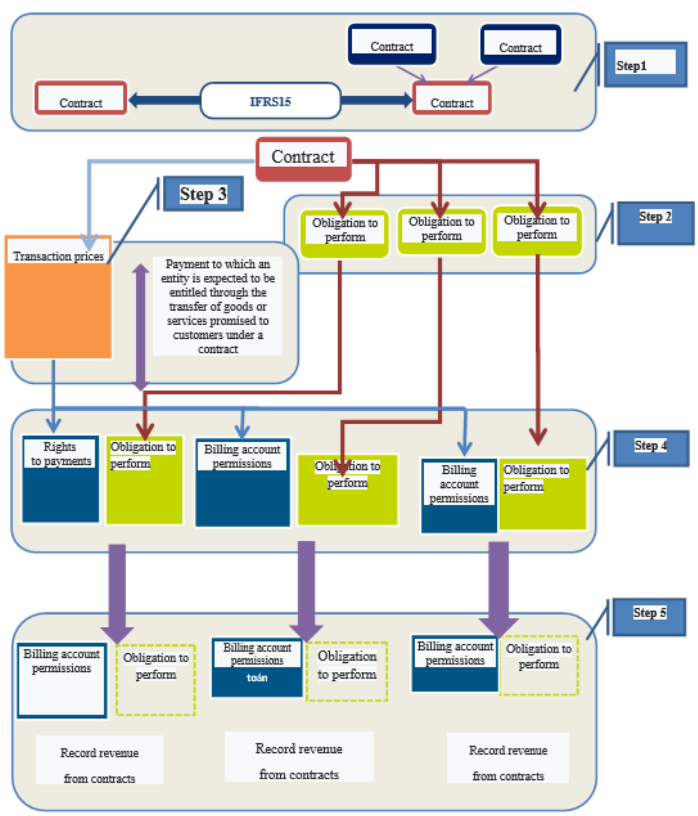


Diagram 1: 5 steps to determine revenue (according to IFRS 15)

The 5 specific steps are summarized in diagram 2 below:



(JICA training materials source)

Diagram 2: 5-step process model for revenue recognition according to IFRS 15

- The introduction of IFRS 15 replaces the standards: International Accounting Standards - IAS (International Accounting Standards) 18 Revenue; IAS 11 construction contracts; Guidelines of the International Financial Reporting Standards Committee - IFRICs (International Financial Reporting Interpretations Committee) 13 Customer loyalty program; IFRIC 15 Real Estate Construction Agreements and IFRIC 18 Transfer of Assets from Customers; SIC 31 DT - Exchange of goods related to advertising services.

2. Telecommunications revenue and the current status of telecommunications revenue recognition in Vietnam.

Telecommunication service revenue can be understood in a simple way as revenue from services (voice, SMS, data, other VAT services) provided by telecommunications carriers to final customers.

Currently in Vietnam, prepaid mobile telecommunications revenue is recorded when customers pay prepayments in many different forms such as buying telecommunications cards, depositing money into main accounts, signing contracts to buy long term packages ... This does not reflect the actual nature of customers' use of the service. Specifically:

If recognition is determined according to the concept of revenue:

According to VAS 14, the Ministry of Finance has issued official dispatch 18494/BTC-CDKT allowing the three largest telecommunications service providers in Vietnam today, VNPT Group, Viettel and Mobiphone, to record revenue at the time of completing the obligation of sales of telecommunications cards to customers. For postpaid mobile services and other value-added services (television, security, etc.) Revenue is determined according to the amount of service usage by customers during the month and recorded periodically (usually closed at the 24h on the last day of the month, regardless of when the service is first provided to customers during the month).

When applying IFRS 15, telecommunications businesses will have to re-determine the true value of the service provision. According to IFRS 15, the sale of telecommunications cards to customers is essentially a prepayment by the customer for the use of the service. Only the portion of the service that the customer subsequently uses is recorded as revenue

For example: When a customer buys a telecommunications card worth 200,000 VND from the network and buys a package worth 120,000 VND.

According to VAS 14's recognition point of view, the telecommunications unit's accountant records customer revenue right at the time of card sale as 200,000 VND.

But according to IFRS 15, in reality, at the time of purchasing a telecommunications card, the customer has not used any basic telecommunications services or other added value, so businesses are only allowed to record the face value 200,000 VND card to the customer's prepayment. Only when a customer purchases a package worth 120,000 VND will the telecommunications service revenue worth 120,000 VND be recorded, the remaining 80,000 VND is still prepaid revenue of the customer.

From an economic contract perspective:

Telecommunications services are increasingly changing and diversifying services to suit the needs of customers. Therefore, the components that make up a service to provide to customers are also more diverse. One of them can be mentioned as providing phones with telecommunications packages and security packages. Then there will be a difference when distributing revenue according to IFRS 15 and VAS 14.

For example: Customer A signs a contract with a telecommunications enterprise starting from July 1/N to June 30/N+1 lasting 12 months with VAS 14 not giving any instructions on how to do this , to determine these components and how to allocate the selling price and as a result, different principles have been applied. So according to VAS 14, the revenue that will be recorded for fiscal year N will be as follows:

Table 1: Example of revenue determination when applying VAS 14

Name of goods and services	Unit price (VND) At day 1/7/N	Determine the value of revenue recorded in fiscal year N at July 1, 2019 (according to VAS 14)
Total fixed monthly package price	600.000	600.000
Phone price	2.400.000	2.400.000
Total price of included security package	120.000	120.000
Total	3.120.000	3.120.000

Under IFRS 15 telecommunications entities will have to determine the following steps:

+ Step 1: Contract to provide services within 12 months.

+ Step 2: Determine the obligations that need to be fulfilled with customer A:

Provide 1 phone

Provides a 1-year subscription package

Provides a security package included for 1 year

+ Step 3: Transaction value:

Equal to the total value of goods and services that customers must pay:

600,000 + 2,400,000 + 120,000 = 3,120,000 VND

+ Step 4: Allocate the transaction price of 3,120,000 VND according to individual obligations for each period of 12 months:

Revenue recorded for 1 month = 3,120,000 / 12 = 260,000 VND

+ Step 5: Record revenue when the enterprise completes its obligations

Revenue in July/N will be recorded as 260,000 VND. The remaining amount of 2,860,000 VND will be recorded as a prepayment from the customer and evenly distributed to the following periods:

- If considered in terms of year N financial statements:

Table 2: Comparison of revenue when applying VAS 14 and IFRS 15

VND

Targets	According to VAS 14	According to IFRS 15
Revenue from package provision activities	600.000	600.000/12*6 = 300.000
Revenue from mobile phone sales	2.400.000	2.400.000/12*6= 1.200.000
Revenue provides security services	120.000	120.000/12*6 = 60.000
Total	3.120.000	1.560.000

(Source: Author's own data assumed based on reality from telecommunications businesses)

When recording revenue according to VAS 14, the profit of the telecommunications unit will be stable because the recognition of 100% of the revenue value corresponds to the payment of 100% of the cost value. But when recorded according to IFRS 15, at the beginning of the period the telecommunications unit will report a loss and then a stable profit. This is because the cost price is 100% paid at the time of supply to the customer, but revenue is recorded according to allocation.

3. Difficulties and problems exist when applying IFRS 15 to revenue recognition of telecommunications businesses.

To apply IFRS 15 to a telecommunications entity is a big change and it requires a large amount of work not only from accounting, but also from IT, tax, people and possibly other departments in the company. To manage the large number of calculations required under IFRS 15, telecom financial regulators will need a fast tool to handle the large number of calculations required while requiring access and transparency for all contractual data. This includes the ability to connect accounting results and financial systems used by business units across different geographies and verticals.

How will the revenue previously recognized when converting to IFRS 15 be handled? (If a decrease in revenue is recorded and converted back to actual revenue, it will cause the adjusted revenue in the fiscal year of the 3 carriers will seriously decline, directly affecting the benefits and competitiveness of telecommunications businesses, and also affecting State agencies such as taxes or data receiving agencies to analyzed and used by the Ministry of Finance and the Ministry of Information and Communications.

- For customers' long-term prepaid revenue, the story also involves whether to re-evaluate the revenue when money will depreciate over time - Especially for a developing country with a fairly high inflation rate like Vietnam. IFRS 15 also requires that financing costs for long-term contracts be settled 12 months after the contract date. As a result, telecommunications companies will need to review customer contracts and account for the effect of the time value of money. Moreover, the recognition of revenue takes place in many periods but the cost price still has to be paid in one period for some services will not accurately reflect the service business on the financial statements of that period.

Most telecommunications operators have systems that are interconnected along with user intervention. At this time, the billing system is directly connected to the accounting system so that income and receivables from customers are automatically recorded when invoicing has occurred. Because under IFRS 15, recognition of revenue from handheld devices may be earlier than monthly billing, invoices may no longer reflect the amount of service revenue that must be recognized during the month. Therefore, manual adjustments must be made or significant changes to the information technology systems will be made to automatically calculate receivables each month.

- Contract modifications: Increasingly diverse customer service needs require telecommunications companies to allow a certain degree of flexibility for subscribers to choose the contract that best suits their needs . They now offer additional services billed on top of monthly fees or allow shortening of contract periods.

IFRS 15 requires entities to evaluate whether an amendment is a valid separate contract or part of an existing contract, depending on whether it results in additional goods or services. promised and whether it increases consideration.In the absence of a new contract, entities need to evaluate the nature of the modification, whether the change requires retroactive adjustments to previously recognized revenues or future revenue to adjust the future sales and income .

Managing the impact of contract modifications on billing and accounting systems may not be easy for telcos with huge subscriber base and variety of contracts offered to each customer. There is no denying the fact that IFRS 15 will change companies' policies and procedures for recognizing revenue. These changes will involve significant efforts across multiple departments, placing a burden not only on accountants and auditors but also on employees running IT, billing, marketing, product development and other related functions within the organization.

III. SOME SOLUTIONS AND RECOMMENDATIONS WHEN APPLYING IFRS 15 AT VIETNAMESE TELECOMMUNICATIONS CORPORATIONS

Some solutions to help telecommunications corporations perform well in the process of processing and recording revenue according to IFRS 15.

To meet the requirements of IFRS 15, previously, Telecom companies had to ensure that the company's sales department, product development department, and solutions consulting staff understood its impact on all terms contained in customer contracts that the company offers. This is the basis for creating a business plan defined in 5 beneficial steps.

It is essential to establish the best management accounting system for targets related to revenue, along with a database system to ensure reasonable management can collect and save all information necessary to implement IFRS 15 and the information is linked to the company's accounting system, to benefit the recognition, measurement and disclosure of revenue and to meet audit requirements for internal investigation.

During the transition to IFRS, there will be information gaps that affect the interests of investors, and businesses need to have convincing explanations in the notes to their financial statements. Pre-recognized revenue needs to be adjusted to pre-received revenue of amounts incurred in the converted fiscal year.

In addition, the company's leadership should also review and adjust key performance indicators (KPIs) related to the sales department, focusing on linking responsibility for collecting money with sales targets, due to IFRS 15 introducing collectibility as a criterion for revenue recognition.

Telecommunications companies need to carefully analyze the current accounting information system, identify issues that need to be changed, and upgrade the system.

Recommendations to State agencies:

There needs to be consensus from state agencies to create an environment for telecommunications units to apply IFRS 15. The policies proposed need to be unified such as: The Ministry of Information and Communications has issued Circular 21/ 2019 regulates the recognition of customer revenue according to actual use, but there is no guidance from the Ministry of Finance to replace Official Dispatch 18494/BTC-CDKTN on recording revenue from selling telecommunications cards.

DISCUSSION AND CONCLUSION.

In summary, the new standards provide a systematic approach that includes many detailed guidelines and principles, solving difficulties caused by the old standard's too high-level approach to general principles. This results in a reduction in inconsistent interpretations, increasing the comparability of revenue figures across companies. However, the accompanying consequence of the change is that it significantly affects the revenue recognition mechanism and presentation on financial statements, which can cause a relatively large decrease in revenue during the application period. Accompanying that are the costs of professional training and changing computing infrastructure to record telecommunications service revenue. Hopefully, after this transition period, businesses belonging to telecommunications groups in particular and businesses in general will implement the new regulations well.

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SOCIAL RESPONSIBILITY ACCOUNTING – INTERNATIONAL EXPERIENCE AND LESSONS FOR VIETNAM

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Abstract: *Currently, social responsibility accounting in Vietnam has been being implemented by many enterprises. However, due to the lack of legal regulations in this field, enterprises are facing many difficulties in practicing social responsibility accounting. This paper will discuss on social responsibility accounting and tools managing corporate social responsibility activities. Also, this paper will give an overview on global experience on social responsibility accounting practices and lessons for Vietnam.*

Keywords: *Social responsibility accounting, experience, lessons for Vietnam*

1. INTRODUCTION

Vietnamese businesses are currently implementing social responsibility activities along with profit goals, in accordance with the government's general policy of sustainable development. However, the use of social economics tools to support corporate governance and publish social responsibility reports has not been effectively applied by interested businesses. Most businesses only carry out social responsibility activities without independently recording these accounting objects, but only publish non-financial reports on social responsibility integrated in the annual report or sustainability report. Meanwhile, implementing social accounting helps businesses record social responsibility assets and liabilities, income and social responsibility expenses. Thus, it helps managers proactively build business plans, identify and allocate appropriate resources to balance profit goals and social responsibility. At the same time, social economic information provided to relevant parties will contribute to enhancing the brand reputation of the enterprise and promoting the development of the enterprise. Therefore, solutions are needed to promote the implementation of social economics in enterprises in the coming time, to improve the efficiency of corporate governance. The paper will provide an overview on social responsibility accounting, thereby summarizing the experiences of some countries on social responsibility accounting practices and lessons for Vietnam.

2. CONCEPT OF SOCIAL RESPONSIBILITY ACCOUNTING

The terms Social Responsibility Accounting (SRA), Sustainable Development Accounting (SA) and Social and Environmental Accounting (SEA) basically have the same content, nature and goals, which are: Providing information about the society, the environment, the situation and business results of the enterprise for administrators and other related subjects. For these subjects, businesses have legally binding responsibilities, or voluntary responsibilities. The use of these different terms depends on the development of the theory of corporate social responsibility, depends on the economic, political, social and environmental situation of each country and world, depends on the views

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of researchers, on the views of international organizations, etc. Specifically, in the early stages of development, social responsibility accounting is concerned and focuses on environmental aspects, so the term often used by researchers and administrators is social and environmental accounting, and environmental accounting is a part of social responsibility accounting. In the current period, businesses, countries and the whole world are interested and focused on sustainable development and achieving sustainable development goals, the commonly used term is sustainable accounting.

According to Mathews (1993), social responsibility accounting is the disclosure of financial information and non-financial information, qualitative information and quantitative information about the activities of an organization, which affects many people and related subjects. Accordingly, social responsibility accounting will provide information for employees, administrators, owners, customers, suppliers, sponsors, communities, government agencies, trade associations, etc. Social responsibility accounting includes both financial accounting and management accounting, which emphasizes the impact of non-financial information on social, environmental and economic factors (Tilt, 2009).

Social responsibility accounting is a science of observing, measuring, calculating, recording, reflecting, organizing, processing and analyzing information about the social responsibilities of businesses committed to such as: responsibility to protect environmental protection, responsibility to contribute to the social community, responsibility to suppliers, responsibility to employees, responsibility to ensure benefits and safety for consumers... in relation to the efficiency and effectiveness of production and business activities of enterprises, in order to provide information to business administrators, to governmental agencies, environmental management agencies, and to relevant parties such as employees, customers, suppliers, associations, local communities, etc.

Social responsibility accounting recognizes that the resources of a business to create wealth and added value depend not only on productive capital and financial capital, but also on human, social and natural capital. This means that payments to employees, environmental protection payments and community program expenditures can be reinvested in the assets of the business and thus can contribute to generating positive wealth.

Thus, social responsibility accounting basically reflects and quantifies information about the economy, society, and environment of an enterprise to provide administrators and other subjects related to the enterprise. Social responsibility accounting includes both financial accounting and management accounting for social responsibility.

According to the guidance of the UK SIGMA project in 2003, social responsibility accounting was implemented according to John Elkington's Trible Bottom Line (TBL) model, with the basic content of accounting for assets and capital, accounting for revenue, costs and operating results, cash flow accounting related to the economy, environment and society, within the scope of impact inside and outside the enterprise. Social responsibility accounting gives treatments for internal and external costs and benefits related to economic, environmental and social aspects.

Social costs include health care costs, employee training and development, expenses for taking care of the cultural and spiritual life of employees, expenses contributed to community development, charitable activities expenses, fines for violations of the State's social insurance regime, costs arising from civil and criminal liability lawsuits due to social disputes, costs arising from strikes and political instability, costs that businesses must pay to minimize damage or voluntarily compensate for damage to individuals, organizations, businesses and other entities due to activities that affect the environment and society that the business causes, etc.

Income and social benefits include income increases due to the reputation of the business contributing to community development, due to customer care, due to concern for employee benefits, due to clean production, due to the production of green products and environmentally friendly products; increased income from insurance cost savings due to improved health and safety for workers, income from avoiding fines due to violating laws, income from Government awards and subsidies government on community and social development achievements, etc. Social responsibility accounting provides techniques to record, reflect and present information about assets, capital, revenue, costs and operating results related to economics, environment and society on the financial statements of enterprises.

3. LITERATURE REVIEW

According to Dr. Akbar Sadeghzadeh (1995) of Wollongong University, Australia, in the 1970s, the world was facing environmental problems, climate change, epidemics and public health, human rights, inequality, etc. The main culprit is the economic activities caused by large corporations. Therefore, corporate social responsibility again takes center stage in social debates.

In the early years of the period (1970-1980), environmental issues were concerned as part of social responsibility accounting but were still in a primitive state. By the years 1980-1995, social responsibility accounting had completely shifted its research attention to environmental management, minimizing environmental damage caused by businesses. During this period, environmental accounting was considered an important management tool, as shown in the document "Environmental Costs and Liabilities: Accounting and Financial Reporting Issues" of the Canadian Association of Certified Public Accountants (1993) and research works of Gray (1993), Rusbinstein (1994). In the early 1990s, government agencies on environmental protection of several countries such as the United States, Japan, the Federal Republic of Germany, and the European Community (EC) provided regulations and instructions on some costs related to environmental issues and environmental protection in accounting and presentation of environmental information in accounting reports. Farooq Al Ani & M. Firdouse Rahman Khan (2015) concluded that the term "social responsibility accounting" was born and developed in the UK in the 1970s, when the Public Interest Research Group established the Social Auditing Company.

During this period, social responsibility accounting was established and was one of the hot topics of discussion among researchers, universities, political, economic, and social organizations, etc. Many articles and scientific conferences at the national and international levels discuss social responsibility accounting. Many research organizations, political and social agencies have been established to research different aspects of corporate social responsibility and social responsibility accounting. Social responsibility accounting courses are offered at different levels at universities around the world. Typical authors for research on social responsibility accounting are Gambling (1977, UK), Gaffikin (1978, New Zealand), Bremser (1982, USA), Booth, McCallum and Greenwell (1982-1983, Australia), Mathews (1983, USA);Bremser, Schwartz and Huang (1983, USA) and Mathews (1984, New Zealand).

From 1997 to present, corporate social responsibility has been affirmed and recognized through its contribution to sustainable development and social responsibility accounting is concerned, focused and oriented towards the development of sustainable development. Sustainable development of businesses, countries and the world not only for today's generation but also for future generations. And typical authors of research on social responsibility accounting in this period are Robert Hugh Gray (2002, 2011), J. Bebbington (2010), John Elkington (1997), Orlitsky et al (2003), Jensen (2002), Labelle (2006), Gendrol (2006)

4. MANAGEMENT TOOLS FOR CORPORATE SOCIAL RESPONSIBILITY ACTIVITIES AND CURRENT GUIDELINES ON IMPLEMENTING SOCIAL RESPONSIBILITY ACCOUNTING

It can be said that there are currently many management tools for corporate social responsibility activities and many guidelines on implementing social responsibility accounting as followed:

- Sustainable development accounting guidelines of the Commission on Environment and Development UN at the World Summit on Sustainable Development in 2002.

- Sustainable development accounting guidelines of the UK SIGMA project, 2003.

- Canadian Accounting Association's Sustainable Development Accounting Reporting Guide, 2005

- Sustainability Accounting Standards of the United States Sustainability Accounting Standards Board issued in July 2011

- Trible Bottom Line tool: People, Plannet, Profit (TBL, or 3P) by John Elkington, a world-famous British consultant on corporate social responsibility and sustainable development, was announced. published in 1997. Trible bottom line tool helps businesses incorporate sustainable development goals into business strategies, considering social and human results (People), ecological results (Plannet) , in a close relationship and interactive impact with the financial results (Profit) of the business.

- Sustainable development reporting guidelines of the Global Reporting Initiative (GRI).

- Set of standards and management tools for corporate social responsibility, ISO 26000 of the International Organization for Standardization (ISO), developed in 2005, officially announced in 2008.

In the current period, the development of social responsibility accounting focuses on management accounting, to help administrators implement and achieve sustainable development goals. The content of social responsibility management accounting includes the content of environmental management accounting, social cost and income management accounting, in addition it also has content that reflects specific accounting principles. Social responsibility accounting is assessing corporate social responsibility, applying the balanced scorecard (BSC) in evaluating corporate social responsibility. To evaluate the social responsibility of businesses, researchers, managers, consultants... use indicators that reflect the combined effectiveness of all economic, environmental and social aspects of the business. enterprise.

Some opinions say that, with current knowledge and experience, determining those indicators is unthinkable. In fact, businesses and international organizations (GRI, ISO...) set indicators that reflect the results and effectiveness of each aspect of economic, environmental and social activities of businesses and orientations to The development of indicators reflecting the overall overall efficiency if practical conditions at the enterprise allow. Regarding the application of the Balanced Scorecard (BSC) in assessing corporate social responsibility, some authors suggest expanding and adjusting the BSC to manage and monitor the implementation of responsibility strategies. corporate society, called the Sustainability Balanced Scorecard. There are two basic ways to apply the balance sheet to implement the vision, goals, and strategies of corporate social responsibility:

- Adding social and environmental goals, measures and indicators to financial aspects, customer aspects, internal business aspects, learning, experience and development aspects, in unified relationship, consistent with the common vision and strategy of sustainable development of the enterprise.

- Build a fifth operational aspect, the social and environmental aspect, linked to four aspects: Finance, customers, internal business, learning, experience and development. (Capron and Quairel Laoizelee, 2006).

5. INTERNATIONAL EXPERIENCE IN SOCIAL RESPONSIBILITY ACCOUNTING PRACTICES AND LESSONS FOR VIETNAM

5.1. Social responsibility accounting practices in the UK

Social accounting for small community organizations as well as large and medium-sized social enterprises is based on 3 steps: (i) Planning - designing, determining processes and goals; (ii) Accounting - decide on the scope and establish a social accounting system; (iii) Reporting and feedback - Report back to company stakeholders and respond to comments.

Assessing the impact of corporate social responsibility includes, evaluating relationships with all stakeholders and reporting specific instructions. Indicators may include establishing personal relationships with key decision makers or positive feedback from stakeholders. Changes in stakeholder relationships can be monitored using dialogues or surveys. This will help businesses decide on the scope of social accounting activities: Values and goals, activities (or programs), stakeholders and relationships between these factors.

Next, companies develop and measure KPIs that show the improvement in a company's competitiveness determined by CSR. In the CSR impact model, KPIs focus on customers and employees. For example, in a 2012 survey of 500 top managers in the UK, responsibility to customers, employees and shareholders ranked highest. Companies define quantitative indicators to measure KPIs depending on specific CSR strategies and activities.

Although KPIs should be evaluated individually, they are all interrelated. According to Tuppen (2002), CSR affects the level of customer satisfaction. Besides, CSR value can also be measured. Accordingly, businesses will have to calculate the costs and monetary benefits that CSR can bring. Wherein, CSR monetary benefits include increased revenue or reduced costs due to CSR participation. It can be additional revenue when businesses apply CSR, CSR subsidies. Savings range from cost reductions brought about by CSR, internal cost savings due to improved efficiency or from specific CSR collaborations. When evaluating CSR benefits, managers need to carefully consider the time horizon. Because the benefits of CSR often occur after a lag, the review focuses on longer time periods.

CSR costs include donations to support trademark or patent license fees. In addition, CSR costs also include recurring costs such as staff, materials, costs for managers to coordinate projects or material costs for the production of promotional materials for marketing campaigns. Cost accounting typically assigns costs to products based on volume indicators such as production volume. Risk-related costs of CSR can include reduced revenue or increased costs relative to expected revenue and expenses without CSR.

Currently, most businesses in the UK integrate social responsibility accounting reports into sustainable development reports for external publication. The process of preparing a sustainable development report is carried out according to the guidelines for sustainable development reporting and the International Integrated Report.

5.2. Social responsibility accounting practices in the US

The social responsibility accounting system in the US is recognized by the sustainable balanced scorecard. Unlike the conventional balanced scorecard, which only includes 4 groups: Finance, internal processes, customers, and people. The sustainable balanced scorecard in the US is supplemented with a fifth dimension, environment and society, linked to the remaining four dimensions.

During the process of recording social responsibility accounting, the costs incurred and the income of each of the above groups of subjects are recorded. Making a social responsibility report is done through the following steps:

Step 1: Plan your corporate reporting process including: Identifying a list of sustainability topics that are potentially relevant and that senior decision makers within the company want to act on and report on Report based on the company's business goals and development context.

Step 2: Collect input from key stakeholders on the above topics. A list of sustainable development topics that stakeholders value is established. This is the basis for making recommendations on reported topics.

Step 3: Identify key areas for the report. These are areas that reflect the organization's significant economic, environmental, or social impact or fundamentally influence the assessments and decisions of stakeholders. It is linked to the company's development goals, meets the needs of stakeholders and impacts the economy, environment and society.

Step 4: Supervise the preparation of social responsibility accounting reports. In particular, record each type of revenue and cost incurred according to each criterion, and provide explanations about those sources of costs or revenue.

Step 5: Check and exchange. The necessary information for each item of data required to comply with the disclosure of information to the outside must ensure accuracy.

The report must be comprehensive and targeted to specific stakeholder groups. The preparation of social responsibility accounting reports requires the application of reporting principles, especially the principles of clarity, timeliness and balance. Accurate and specific accounting data accompanied by illustrative examples.

For production and business enterprises, environmental factors are often considered the most important issues and are often given the most attention in reports. Meanwhile, for service and financial companies, other issues such as human resources or community are invested more. Businesses express their desire to implement CSR in parallel with sustainable development, making efforts to communicate their ability to meet the needs of stakeholders and the overall impact of business activities on the environment.

Performance indicators published in sustainability reports include materials (the total volume of raw materials used to produce and package the organization's products and services during the year and the percentage of raw materials used to produce and package the organization's products and services during the year). materials are recycled to produce the organization's products and services); energy (energy consumption, savings and initiatives); water (water supply and usage, savings and initiatives); compliance (number of fines and total fine).

5.3. Social responsibility accounting practices in Australia

Businesses operating in Australia use accounting tools with three parts: social, environmental and financial (Triple bottom line) to incorporate sustainable development goals into business strategies. The introduction of the Global Reporting Initiative (GRI) Sustainability Reporting guidelines, the Guidelines for Reporting Environmental Indicators and the Guidelines for Reporting Social Indicators (both Australian initiatives) is Reference documents for accounting work as well as preparing social responsibility accounting reports. Australian businesses record social responsibility accounting according to the stakeholder approach.

Besides, social responsibility accounting adheres to the overall principle and principles: Multi-dimensional, comprehensive, regular, comparative, verifying and ensuring and publishing. Social accounting reports of Australian businesses are mainly published in the form of sustainable development reports. More than 80% of sustainability reports in Australia are prepared in accordance with the guidelines of the global reporting initiative.

5.4. Lessons for Vietnam

Through studying the experiences of implementing social responsibility accounting in businesses of other countries, some contents can be suggested for Vietnam in applying social responsibility accounting, including:

Firstly, raise awareness of businesses. In fact, currently, no country requires businesses to implement social responsibility accounting. However, as the economy develops along with the increasingly strong globalization process, corporate social responsibility is increasingly emphasized. Businesses need to be encouraged to apply responsibility accounting and learn from each other to come up with a highly consistent way of implementing social responsibility accounting.

Secondly, the Government considers issuing documents to apply to social responsibility accounting such as Sustainable Development Accounting Standards of the United States Sustainable Development Accounting Standards Council, accounting guidelines. Sustainable development accounting of the UK's SIGMA project, the Australian Environmental Indicators Reporting Guide and the Australian Social Indicators Reporting Guide.

Thirdly, encourage businesses to apply sustainable development reporting guidelines of the Global Reporting Initiative and report templates of the International Integrated Reporting Council.

Fourthly, use Trible bottom line tools to incorporate sustainable development goals into business strategies, considering social and human outcomes, and ecological environmental outcomes in a close relationship. and the interaction with the financial results of the business.

6. CONCLUSION

For businesses to develop sustainably, providing information on social responsibility accounting to stakeholders is considered an important part of current business accounting reports. This will help enhance the public image of businesses, effectively promote product consumption, and demonstrate businesses' responsibility to society. Through this, businesses also show concern for the community, customers and other relevant subjects. Therefore, social responsibility accounting plays an important role in helping businesses develop sustainably. From the experiences of some countries in social responsibility accounting, the article has drawn some lessons for Vietnam.

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PROMOTING SUSTAINABLE GROWTH OF ENTERPRISES ENERGY INDUSTRY IN VIETNAM

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Abstract: Natural resources and energy are basic resources to meet the economic development needs of each country. In recent years, the fluctuations in fuel and energy have been quite complicated. To meet the needs of economic development in the coming years, Vietnam has had economic growth scenarios and energy demand forecasts, set in the context of fierce competition and effective implementation of the strategy. green growth strategy. On the other hand, each country's economic growth is always associated with the growth of businesses, especially private businesses. Therefore, the article's main research method is analysis based on quantifying and synthesizing data from businesses; includes the following main contents: (1) Overview of studies on sustainable growth of businesses; (2) Some theoretical and practical issues about sustainable growth; (3) Solutions to promote sustainable growth of energy sector enterprises in Vietnam, will provide scientific exchanges to clarify issues of sustainable growth of enterprises.

Keywords: Energy, finance, business, growth, sustainable growth

1. INTRODUCE THE RESEARCH PROBLEM

In the face of strong competition and the current context of deep international integration, the top goal of businesses is growth. Growth is considered a vital factor for businesses, affirming their ability to adapt to the times and the rapid fluctuations of the market; It also demonstrates capacity and competitiveness in the economy. Growth in key aspects such as capital flow, income flow, and cash flow will create corporate financial strength, ensuring development and optimization of business opportunities. In particular, with the impact and influence of global financial crises or pandemics like the recent one, growth will help businesses be more resilient to the enormous pressures of the economy. Promoting sustainable growth of businesses, especially energy businesses towards the long-term development of the national economy, is always an urgent requirement in the current integration context.

Recently, especially in the current period , energy is an industry with a leading position in ensuring security and international integration trends. Vietnam's energy in general and sub- sectors : Coal, electricity, and oil and gas in particular have had rapid, relatively synchronous developments; closely follow the direction and achieve many positive results, basically ensuring national energy security. Renewable energy and green and circular trends are given attention to development, creating breakthroughs in ensuring national energy security, contributing to preserving energy resources, minimizing negative impacts on the environment and the environment. climate change in electricity production as well as other sub-sectors. Vietnam's energy industry enterprises are on the path to integration and strong development. Research and assessment of the current situation and growth potential, and propose solutions to promote sustainable growth for energy businesses is a very necessary requirement today.

2. OVERVIEW OF RESEARCH SITUATION

Recently, a number of domestic and international authors have mentioned and researched issues of growth and sustainable growth of businesses, issues related to the energy industry and

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businesses. energy. Regarding research topics and scientific articles, we can mention author Pham Thi Van Anh (Academy of Finance) with the topic: *Sustainable growth of construction industry enterprises listed on the stock market Vietnam (2016), has researched and discussed issues of sustainable growth and evaluated the growth status of listed construction enterprises in Vietnam based on industry-specific issues such as scale. Large assets, slow capital turnover, long construction period. Author Tran Duc Trung (Academy of Finance) with the topic: Sustainable growth analysis of energy sector enterprises in Vietnam (2022) has compiled, analyzed and provided discussions on speed analysis sustainable growth of businesses in both theoretical and practical aspects, associated with the basic characteristics of the energy industry and practice in Vietnam.* Author group Nguyen Huu Dong (Ho Chi Minh National Academy of Politics) and Nguyen Thanh Trung (Central Inspection Committee of the Communist Party of Vietnam) with the article *" Perception of the concept of growth, economic development and public investment restructuring policy in Vietnam* ", Industry and Trade Magazine; Authors Pham Thi Van Anh and Nguyen Thi Bao Hien with the article *"The impact of financial capacity on sustainable growth in businesses" ,* Finance Magazine, period 2, November 2020... has researched and addressed growth issues with different and quite comprehensive perspectives.

In addition to books, topics, and articles, there have actually been scientific discussions and seminars at all levels addressing this topic. Specifically, Business Forum Magazine coordinated with the Vietnam Institute of Board Members to organize the forum " *Breakthrough solutions to improve the competitiveness of businesses for recovery and sustainable development* ", in August. year 2022; The Department of Electricity & Renewable Energy and the Danish Energy Agency with " *Vietnam Energy Outlook Report 2021* ". Or the International Conference *"Strengthening cooperation with Investment Funds to mobilize green finance for sustainable growth and restructuring of state-owned enterprises" organized* by The Ministry of Foreign Affairs, the State Capital Management Committee at Enterprises and the State Capital Investment and Trading Corporation (SCIC) jointly organized the event, November 25, 2022. The content and proceedings of the forums and seminars emphasize the requirements and necessity of sustainable development of businesses and important sectors in the economy.

In particular, *"New initiative: Promoting the practice of Environment - Society - Governance method in the private sector towards sustainable growth"* (November 22, 2022) by the US Diplomatic Mission in Vietnam Nam, through the United States Agency for International Development (USAID), and the Ministry of Planning and Investment announced, to promote sustainable and inclusive growth led by the private economic sector in Vietnam. The initiative aims to promote socially responsible business practices, known as Environmental, Social and Governance (ESG) standards. *This is a set of standards* often used by investors to measure how a business protects the environment, manages relationships with the community, and applies transparent and responsible corporate governance. Faced with the impact of climate change and partner requirements, the market towards sustainable production and consumption is going strong; Vietnam's commitments when participating in the United Nations Framework Convention on Climate Change (COP26), priorities in the ASEAN and APEC international cooperation frameworks on sustainable business, green production, issues Carbon tax... is posing challenges that need to be innovated for Vietnamese businesses, to keep up with new trends, otherwise they will lose competitiveness and lose the opportunity to participate and advance deeply into the global value chain.

In general, groups of authors of works and proceedings of conferences and seminars have discussed, evaluated and proposed initiatives and solutions to promote sustainable growth and development for businesses in all sectors. economic sectors, including the energy sector. The issue of mobilizing financial resources as well as other resources has shown the necessity for sustainable growth of businesses today.

3. RESEARCH CONTENT AND RESULTS

3.1. Some theories on sustainable growth of businesses

3.1.1. Sustainable growth of the business

Business *growth* can be called expanding the scale *of* that business. Successful businesses are always looking for ways to improve and expand the scale of their inputs and outputs, while enhancing the experience of their partners, especially customers, the main objects that create sales and revenue. benefits for businesses. *According to the author of the article,* Growth is understood as an increase with a balance between quantity and quality of a certain object. A growth business is one The business is growing faster than its peers or the economy as a whole.

There are many models and The strategy is for the growth goals of the business, but in general it is aimed at sustainability. *Sustainability, according to the author of the article, is an important state of growth* . This state is also a condition and goal for the long-term development of the business in the future. Therefore, it is very important to consider *sustainable growth rates* and impact factors, from which to propose and implement solutions. Businesses often have two growth methods: internal growth or external growth. Internal growth takes place within the enterprise, by investing to expand production capacity (buying machinery, equipment or building new factories), trade (opening more stores or strengthening distribution networks). distribution) and improving research capabilities (increasing costs for the research and development department). In contrast, external growth is accomplished by acquisitions, mergers or developing cooperative agreements between businesses. However, in the context of finite production resources, long-term business growth is no longer simply a matter of increasing scale. *Sustainable growth* is the highest growth rate that a business can achieve without needing to increase the level of financial leverage. Thus, the sustainable growth rate depends on the endogenous financial capacity of the owner and the efficiency of using equity capital of the enterprise. Since the late 20th century, the concept of sustainable growth has been developed for both countries and businesses. Sustainable business growth is about increasing value by applying effective production and business activities and focusing on social and environmental responsibility.

The business's growth perspective now needs to be placed within the framework of sustainable development with specific requirements and goals. The three basic pillars of sustainable business growth are economic, social, and ecological. An efficient business with high profit margins but whose production process pollutes the environment cannot be considered to be growing sustainably. A business that operates efficiently and has high profit margins but does not ensure safety requirements for workers or food hygiene for consumers cannot be considered to be growing sustainably. On the contrary, a business that focuses on social and environmental responsibility but incurs losses for a long time is unlikely to have enough resources to grow. In conditions where businesses often seek to maximize profits, the stability of financial indicators and business results only ensures growth from an economic perspective of the business. Sustainable business growth requires greater emphasis on social and environmental responsibility.

3.1.2. Evaluate the sustainable growth rate of the business

To achieve sustainable growth, evaluating and controlling business financial issues is considered one of the important principles. Therefore, analyzing and managing growth is a necessary issue that requires special attention when reviewing and evaluating the corporate financial situation, with the purpose of advising management entities. *For small and medium enterprises (SMEs),* growth creates opportunities to increase accumulation and increase competitiveness, however, to ensure stability, attention must be paid to limiting too fast a growth rate. Because SMEs often do not have enough internal resources to finance growth, they must mobilize more from outside, so uncontrolled growth leading to insolvency will push the business to the brink of bankruptcy. product. *For large businesses:* Can rely on both internal and external sources of funding to ensure growth. These businesses need to ensure stability and balance between financial resources to reduce financial risks and create long-term business advantages. Analyzing the growth situation allows managers to see the basic factors affecting growth, the causes of hot growth, no growth or recession of the business in each period, and opportunities for sustainable growth. sustainability of the unit, evaluate the quality of the enterprise's financial policies and business strategies, and propose consulting solutions for each management group. On that basis, it can be said that sustainable growth is the expected growth rate that any business wishes to achieve, when the business has reached the saturation level of asset profitability.

Determining the sustainable growth rate (ratio) should be based on the following assumptions: the enterprise has determined the target capital structure, and does not want to change that capital source. Additional equity is increased only by using retained profits, the business does not want to mobilize additional equity from outside; Asset utilization efficiency has reached its maximum level, so to increase revenue, it is necessary to correspondingly increase assets. Therefore, the limited rate at which a business can increase its total net turnover is its sustainable growth rate (Tbv). Sustainable growth rate is based on the expected growth rate of net revenue. Net revenue growth rate = Asset growth rate = Capital growth rate = Liabilities growth rate = Equity growth rate (maintain target capital structure) = Ratio of retained earnings to net profit.

Simply, sustainable growth rate (SGR) is the maximum growth rate that a company or social enterprise can maintain without having to finance growth. growth by adding external equity or raising more debt. Sustainable growth rates involve maximizing sales and revenue growth without increasing financial leverage. Achieving a sustainable growth rate can help a company avoid excessive leverage and financial difficulties. General formula: SGR = ROE x (1 – Dividend payment ratio). Specifically, Sustainable growth rate is determined as follows:

In which: Tbv: Sustainable growth rate; Lgl: Retained earnings; NP: Profit after tax; LCT: Total net turnover; Sd: Assets at the beginning of the period; C: beginning of period; Hgl: Retained profit ratio; ROS: Net operating profit ratio; SVkd: Number of business capital turnover cycles; Htc: Asset coefficient on owner equity.

Some main observations: *First,* Hgl and Htc reflect the financial policies of enterprises. Hgl is the business results distribution policy. Htc is the policy of mobilizing and structuring capital resources. When the Hgl coefficient increases, the Htc coefficient tends to decrease because equity increases faster than total assets and vice versa. *Second,* the ROS and SVkd factors reflect the situation and performance of the enterprise. In which ROS reflects the effectiveness of business management through the relationship of costs and profits. SVkd reflects the speed of business capital turnover, both depending on the characteristics of each industry and the level of management of the enterprise. In fact, the higher the ROS coefficient, the lower the SVkd and vice versa. If a business has an optimal cost structure, it will be able to take advantage of business leverage. In general, the sustainable growth rate of a business depends mainly on the above factors. If one of the four factors above changes, Tbv will also change. Therefore, if you want to have sustainable growth, managers need to flexibly influence the four factors and always pay attention to the interactions between the factors.

3.2. Practices of sustainable growth for businesses energy in Vietnam

3.2.1. Overview of Vietnam's energy industry

Energy industry is The phrase refers to a variety of different industries, from exploiting forms of energy such as coal, oil, gas... to producing electricity. The energy industry is one of the basic economic sectors especially important for a country. Modern production can only develop thanks to the existence of the energy industry. Through the average energy consumption index per capita, it is possible to judge the level of economic, technical and cultural development of a country. The modern energy industry is a complex system including many industries, necessary for all production and life activities.

In general, Vietnam's energy industry includes two main sectors : raw material and fuel exploitation industry and electricity industry. However, in the raw material and fuel exploitation industry, there are two main industries: coal mining industry and oil exploitation industry. Therefore, it can be said that the energy industry includes the following industries: Coal mining industry (coal industry); Electricity industry (electricity industry); Oil and gas exploitation industry (oil and gas industry). In particular, the coal mining industry in our country has existed for a long time with two main forms of mining: open pit method and underground method. In Vietnam, the most popular is anthracite coal (anthracite coal), concentrated in Quang Ninh with reserves of more than 3 billion tons, accounting for about 90% of the country's coal reserves. In addition to anthracite coal, in our country there is also brown coal distributed in the Red River Delta and peat concentrated in the Mekong Delta region.

The oil and gas industry has basically completed its set strategic goals, becoming an important economic-technical industry with the continued exploitation of existing fields, development of new oil and gas fields, and stable operation of new oil and gas fields. In the process of transporting and processing oil and gas, the oil and gas industry has completed the value chain from oil and gas search, exploration and exploitation, oil and gas processing and high-quality oil and gas services. More resources have been mobilized to develop the oil and gas industry from foreign and private enterprises, etc. through restructuring and equitization (in recent years, the oil and gas industry has mobilized investment capital of about 90 trillion VND, of which commercial loans are about 65-70%; direct capital contributions from domestic enterprises and foreign investments are about 30-35%). Oil and gas enterprises have initially improved their competitiveness and proactively integrated internationally. However, the financial potential of oil and gas enterprises is still modest, not enough to compete with large oil and gas corporations in the world.

Regarding electricity, due to the sharp increase in electricity demand while the supply cannot meet it, there is a risk of serious electricity shortage. In the context that the hydroelectric power supply is exhausted and unstable, and domestic sources of coal and gas for thermal power plants are not guaranteed, importing electricity is a mandatory solution to the current serious electricity shortage situation. eye. The amount of electricity purchased will double from 2020 compared to 2018. Electricity shortage also opens up great opportunities to invest in the construction of large capacity power plants with short construction times (gas power, wind power, solar power) to meet the electricity consumption needs in Vietnam, especially the southern provinces. Total energy consumption in Vietnam has continued to increase rapidly in recent years to serve the country's economic development. This growth is consistent with industrialization and economic integration. Energy is an important issue, having a direct impact on social security, national security and economic development. Therefore, it is necessary to have the right and appropriate direction to develop sustainable energy. The development of the energy industry will lead to the development of a series of other industries such as mechanical engineering, transportation, and construction. .. Therefore, the energy industry has the ability to create a very large area if it is located in a favorable geographical location and is exploited and regenerated effectively.

3.2.2. Practices of sustainable growth of energy enterprises in Vietnam

Up to now, Vietnam's energy industry system, with a focus on energy businesses, has always been based on three main pillars: oil and gas, coal and electricity. Vietnam's energy industry enterprises have developed rapidly and relatively synchronously in all sub-sectors and fields, closely following directions and achieving many remarkable goals: Providing energy, especially providing basic electricity to meet the requirements of socio-economic development with increasingly improved quality, the electricity access index ranks 27/190 countries/territories; The oil and gas exploitation and petrochemical refining industries have strongly developed, with increased commercial coal mining output; Hydropower is developing rapidly; recently, wind power and solar power have begun to develop at high speed; Mobilizing large resources for development investment with the participation of many economic sectors, the energy industry has become a very important contributor to promoting socio-economic development, ensuring national defense, security in many localities and countries. However, due to many reasons, our country's energy sector enterprises still have certain limitations. Domestic supplies are not enough to meet requirements, forcing increasingly large energy imports; Some indicators to ensure energy security are fluctuating in an unfavorable direction; Energy sector infrastructure is lacking and inconsistent; Technology levels in some areas of the energy industry are slowly improving, localization and market support from projects in the energy industry for domestically produced mechanical goods is still limited. Therefore, it is necessary to analyze and evaluate the current state of sustainable growth of businesses in order to have a basis for proposing solutions.

In the article, the author selected a representative sample of energy enterprises belonging to three groups of coal, electricity, and oil and gas industries to research over the three-year period from 2019-2020. Specifically, the sample includes businesses (with listed stock codes) as follows: (1) Vang Danh Coal Joint Stock Company - Vinacomin (TVD); (2) Nui Beo Coal Joint Stock Company - Vinacomin (NBC); (3) Pha Lai Thermal Power Joint Stock Company (PPC); (4) A Vuong Hydropower Joint Stock Company (AVC); (5) An Pha Petroleum Group Joint Stock Company (ASP); (6) Nam Song Hau Petroleum Trading and Investment Joint Stock Company (PSH).

Figure 4. Growth situation of the group of energy enterprises (%)

Targets	TVD		NBC		PPC	
	2021	2020	2021	2020	2021	2020
total assets	-11.68	6.37	-2.54	-1.14	-24.68	-0.30
Equity	6.95	1.00	1.20	3.52	-25,13	8.70
Net revenue	18.81	-1.13	21.57	-9.90	-51,22	-3.10
Total net turnover	18.72	-1.15	21.46	-9.88	-46.58	-3.27
Profit after corporate income tax	54.47	8.37	-3.47	36.81	-78.62	-19.81
Net cash flow from operating activities	39.73	-13,24	-2756.17	-106.00	-41.29	238.33
Net cash flow during the period	12.48	-133.76	-273.73	353.00	672.45	-66.29
Targets	**AVC**		**ASP**		**PSH**	
	2021	**2020**	**2021**	**2020**	**2021**	**2020**
total assets	6.69	6.59	18.42	22,20	3.56	0.67
Equity	7.88	8.50	3.32	-0.10	19.06	-1.74
Net revenue	29.65	73.98	34.13	36.52	-6,12	-33.21
Total net turnover	29.87	69.57	33.40	36.08	-5.86	-33.42
Profit after corporate income tax	78.05	523.03	89.87	-47.22	1034.68	-77.30
Net cash flow from operating activities	955.34	33.33	-772.49	-420.52	-93.81	887.49
Net cash flow during the period	-134.72	-9.03	1455.08	-156.69	-121.42	236.73

Source: Financial statements of businesses and author's calculations

In general, energy businesses have grown in basic aspects such as assets, capital, revenue, profits and cash flow. Notably, the increase in assets in hydropower and oil and gas enterprises (2021: AVC increased by 6.69%, ASP increased by 18.42%). To have an increase in assets, businesses' equity also increases correspondingly (in 2021: AVC increases 7.88%, ASP increases 3.32%, PSH increases 19.06%...). Net turnover of some electricity and oil and gas enterprises increased quite rapidly (AVC increased by nearly 70%, ASP increased by over 30%...). The profit growth and cash flow of businesses also have notable fluctuations over the years. Regarding profits, in 2020 TVD, NBC, AVC and especially PSH companies all increased rapidly. The cash flow of businesses all has large fluctuations, because the business field of businesses is quite specific, especially depending heavily on nature, weather and Government policies such as electricity. and international markets such as oil and gas.

Figure 5 . Summary and assessment of the sustainable growth rate of Vang Danh Coal Joint Stock Company and A Vuong Hydropower Joint Stock Company

Unit: million dong

Targets	2021	2020	2019	2021-2020		2020-2019	
(TVD)				Amount of money	Ratio	Amount of money	Ratio
Sustainable growth rate (Tbv)	0.1779	0.1055	0.1067	0.0724	68,66	-0.0012	-1.12
Influence of factors							

5. Tbv (Hts/vc)	0.0056	-0.0078					
6. Tbv (HSkd)	0.0129	0.0069					
7. Tbv (ROS)	0.0373	0.0102					
8. Tbv (Hgl)	0.0166	-0.0105					
Synthetic	0.0724	-0.0012					

Targets	**2021**	**2020**	**2019**	**2021-2020**		**2020-2019**	
(AVC)				**Amount of money**	**Ratio**	**Amount of money**	**Ratio**
Sustainable growth rate (Tbv)	0.1582	0.1296	0.0164	0.0286	22.06	0.1132	691.69
Influence of factors							
5. Tbv (Hts/vc)	-0.0023	-0.0017					
6. Tbv (HSkd)	0.0278	0.0152					
7. Tbv (ROS)	0.0576	0.0798					
8. Tbv (Hgl)	-0.0545	0.0199					
Synthetic	0.0286	0.1132					

Source: Financial statements of businesses and author's calculations

Regarding sustainable growth, the author studied samples of two companies with stock codes TVD and AVC. Sustainable growth depends on the influence of factors that reflect business policies. For TVD, in 2020, the sustainable growth rate will reach about 10%, down slightly compared to 2019. The growth rate is not high, because scale indicators are tending to decrease. This is not a good sign in the context that the coal industry is meeting increasing market demand. The basic reason is that in 2020, equity and retained profit targets both decreased slightly (down 0.33% and 1.44%). In the decrease in growth rate, capital mobilization policy expressed through the asset/equity ratio has the most important impact. The shrinking capital scale has reduced the level of sustainability. In 2021, the sustainable growth rate has reached nearly 18%, increasing 68% faster than the previous year. This increase is due to the fact that businesses have adjusted their financial and business policies, from which the indicators showing capital mobilization policies, profit distribution, performance and business efficiency have had positive impacts. positively impacted growth, with corresponding effects (0.0056; 0.0129; 0.0373; 0.0166 times), in which increased ROS of over 30% contributed mainly to growth. The rapidly increasing domestic and international coal demand is also having a positive impact on the business efficiency and sustainable growth rate of coal industry enterprises.

For AVC, the 3-year sustainable growth rate from 2019 to 2021 is 0.1582; 0.1296; 0.0164. Thus, it can be seen that in 2021, the sustainable growth rate is very high compared to 2029, reaching nearly 700%. The main reason is the very high profit growth, over 156 billion and the retention rate is over 80%. AVC's retained profit ratio is always high, due to the company's investment policy to meet the demand for electricity supply to the market. In the context that electricity is an essential need and prices always tend to increase, revenue and profits of businesses grow rapidly. This is both a positive signal, but also shows that the electricity market has the potential for great competition in the near future. Understanding that, AVC as well as electricity industry enterprises will have appropriate strategies and implementation roadmaps. Among the factors affecting AVC's sustainable growth, the ROS coefficient has the most significant impact at 0.0576; 0.0798 times.

Revenue and especially profit growth have shown that AVC's direction is suitable for the current electricity market context, in line with the goals in Power Plan 8. With the goal of ensuring energy security National electricity planning 8 aims to ensure adequate supply of electricity demand, meeting growth requirements of about 7%/year in the period 2021-2030, about 6.5 - 7.5%/year in the period 2031-2030. 2050. Notably, electricity planning 8 prioritizes the strong development of renewable energy sources for electricity production. This power source will reach a ratio of about 30.9 - 39.2% by 2030.

Overall assessment, the sustainable growth of energy sector enterprises in Vietnam over the past time has been at a level consistent with the field and the industry's development trend. Some businesses have grown quite rapidly, but there has been no uniformity over the years. Growth is affected by many factors, including both positive factors and limitations. Objective factors have a great influence on energy businesses such as weather, markets, state management issues... To develop the energy industry and contribute to the economic development process, it is necessary Effectively implement solutions to promote sustainable growth of energy sector enterprises.

3.3. Solutions to promote sustainable growth of energy sector enterprises in Vietnam

Firstly, diversifying forms of capital mobilization, ensuring financial resources, focusing on endogenous equity capital.

For businesses in the energy industry, capital and capital scale are always the first requirements and conditions for growth goals . Meanwhile, businesses are doing business in a changing and unstable environment, with many other challenges such as international terrorism, water security, food security, cyber security... leading to the need for capital. The medium and long term are currently very large. For example, with the electricity industry, in the recent period, Vietnam has made certain changes in the directions for future electric energy investment, instead of focusing on investing in traditional sources such as hydropower, coal power. However, the biggest difficulty is that to achieve the same output as with traditional coal and gas power sources, investment in wind and solar power sources requires higher investment. double or triple that, not to mention the transmission system requirements. The level of investment is also larger due to the dispersed nature of these investments. Forms of capital mobilization through banks, stock markets, bonds and through non-traditional channels are the trend of accessing capital for many businesses. However , weaknesses in capital sources Businesses today are too dependent on bank loans. Meanwhile, the credit market is sometimes overloaded due to both having to worry about providing short-term capital sources and providing medium and long-term capital sources for the economy and businesses. Therefore, energy industry enterprises need to diversify financial resources, but pay special attention to endogenous equity capital. Because this is a long-term capital source, a financial foundation for growth. This capital source, if used effectively, will contribute to increasing the sustainability of the business.

Second, improve business efficiency in a modern way, closely following the needs of the economy.

Improving business efficiency is a premise and a decisive factor for listed energy companies to grow sustainably. To improve business efficiency, energy companies need to focus on key measures such as: Investing in a closed production process, proactively sourcing raw materials for production. The ability to close production processes plays an important role for energy businesses.

Increase investment in modernizing technology lines. To leapfrog, energy businesses should import technology and develop technology by learning creatively like other countries have done. To do this, businesses in the energy industry need to solve some of the following issues: Businesses in the industry must find out information about the technology market, compare production technologies being applied to Ensuring the quality of imported technology. In addition, to apply and improve technology, instead of full investment, energy enterprises should also consider choosing joint ventures and partnerships with foreign businesses to transfer. technology. When linking, it is necessary to learn about technology transfer procedures such as signing contracts, transferring, and installing to avoid having unfavorable conditions imposed on the business.

Third, proactively approach new energy markets and products following the world's energy transition trend.

The dominant technologies in the world's energy industry, which were developed in the 19th century and aimed at using carbon-containing fuels, will generally be unsuitable by the end of the 21st century due to their energy-saving effects. low as well as ecological impact. The increased use of organic fuels has led to a situation where most of the easily exploitable fuels have been exhausted, while a significant portion of the proven sources are difficult to exploit, because they have to exploit small deposits. , located deep underground and difficult to reach geographically. Therefore, continuing to exploit requires skyrocketing costs, and the closer we get to exhaustion, the more costs increase. To ensure energy sources, in the coming time, businesses need to aim to invest in new energy technologies such as bioenergy, hydrogen energy, ocean thermal energy...

Fourth, financial management, risk control and good use of the leverage system.

cash flow checks and do so regularly and continuously through analysis of financial indicators. Specifically, those groups of indicators are: indicators on financial structure, indicators on solvency, specific indicators on operations and use of financial resources; Specific indicators of profitability. Deciding whether a business should borrow or not must come from the process of evaluating the effectiveness of an investment project or business plan. Specifically, only when the economic return on assets created is greater than the expected capital mobilization interest rate, businesses should choose the option of using borrowed capital to make investments.

Fifth, implement digital transformation and corporate financial restructuring.

Digital transformation helps businesses improve performance and increase productivity by optimizing operational processes. Automation is applied, eliminating inefficient manual processes and minimizing errors. This helps enhance performance and work quality. Digital transformation allows businesses to apply automation and artificial intelligence in their work, helping to optimize processes, reduce manual effort and significantly increase productivity. Enterprise restructuring strategies need to be designed based on the specific characteristics of each enterprise and the actual situation. For businesses in the energy industry, the restructuring model can be implemented according to business groups as follows: For businesses with long-term losses, on the one hand, it requires businesses to reorganize production and business, and on the other hand, they must restructure their finances to improve their financial situation... For open businesses Excessive expansion: need to reassess financial scale, businesses are forced to increase capital mobilization from outside such as borrowing through the commercial banking system, issuing bonds and using commercial credit from investors. provide. For small-scale enterprises: determine business strategies, strengthen operational restructuring, and possibly consider merger plans to improve efficiency as well as focus on accumulation and increase capital size and capacity. competitive force.

4. CONCLUSION

Sustainable growth of businesses is an important topic and a relatively difficult content, both theoretically and practically. In fact, this is both a goal, a driving force, and also an objective requirement of businesses in the new context. For energy businesses, promoting sustainable growth becomes more urgent as the world's energy industry is undergoing major changes. The trend of shifting from fossil energy to renewable energy sources is taking place very strongly among countries, aiming for sustainable development in the future. There is also the impact of the millennium goals, greening trends, circular economy and other factors. Promoting sustainable growth of energy sector businesses will make an important contribution to Vietnam's competitiveness in this field. These are also key factors towards the country's economic growth and sustainable development goals.

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FACTORS INFLUENCING ENTREPRENEURIAL INTENTIONS AMONG VIETNAMESE STUDENTS: AN EMPIRICAL STUDY

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Abstract: This study explores factors influencing entrepreneurial intentions among Vietnamese students, drawing from The Entrepreneurial Event Model (Shapero & Shokol, 1982) and the Theory of Planned Behavior (Ajzen, 1991). Data from 144 Hanoi students were collected through offline and online methods and analyzed using SPSS 20. The analysis reveals that Entrepreneurial Desire, Confidence, and Gender are the primary influencers of entrepreneurial intent. Interestingly, University Support, Parental Self-Employment History, and Family Support do not significantly impact entrepreneurial intentions among Vietnamese students. These findings provide insights into fostering entrepreneurial mindsets among students in Vietnam's educational institutions and their implications for the nation's economic growth.

Keywords: Entrepreneurship, Entrepreneurship Intention, Student, Vietnam.Top of Form

1. INTRODUCTION

Entrepreneurship has emerged as a dynamic and transformative force, contributing significantly to economic growth, job creation, and innovation on a global scale Baumol (1993) and Audretsch and Keilbach (2005). In the specific context of Vietnam, a rapidly evolving and vibrant economy in Southeast Asia, entrepreneurship takes on distinct significance. The country's economic landscape has experienced profound shifts, transitioning from a centrally planned economy to a socialist-oriented market economy by World Bank (2021). This transformation has not only led to sustained economic growth but has also sparked a growing interest in entrepreneurship among Vietnamese students—an influential demographic essential to the nation's future by Nguyen & Pham (2018). The government has recognized entrepreneurship's importance, introducing policies to support startups and SMEs (Asian Development Bank, 2019). Vietnamese students' entrepreneurial decisions are influenced by personal motivations, family expectations, educational experiences, and resource access (Tran, 2020). Cultural norms and attitudes towards risk-taking and business ownership also shape their intentions (Nguyen & Pham, 2018). This research aims to understand these influences. Entrepreneurship's role in transforming economies has been recognized globally (Baumol, 1993; Audretsch & Keilbach, 2005; Kamua, 2013). However, Vietnam needs to increase entrepreneurial activity to drive economic growth and address unemployment. Changing attitudes and behaviors is a challenging task but essential for future economic development. While most research on entrepreneurial intention focuses on developed countries, cultural differences make further investigation in the Vietnamese context necessary. Promoting entrepreneurship is crucial for Vietnam's future economic development.

2. LITERATURE REVIEW

2.1. Related Definitions And Previous Researches of Start-Business Intention

Start-business intention, a critical precursor to entrepreneurial action, has been extensively studied in entrepreneurship research. It refers to an individual's mindset and determination to

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initiate and operate a new business venture (Bird & Jelinek, 1988). Scholars have hypothesized that stronger intentions are positively correlated with a higher likelihood of taking entrepreneurial actions (Ajzen & Fishbein, 1977). This relationship between intention and behavior has been substantiated in various studies, emphasizing the predictive power of intention in entrepreneurial contexts (Ajzen & Madden, 1985).

Entrepreneurship involves creating and managing a business with the aim of providing products or services that address perceived market demand. Entrepreneurs, individuals who initiate and manage these businesses, are central to this process (Gale, 2008). The act of starting and managing a business is often referred to as entrepreneurship (Drucker, 2011). Cole (1968) defined entrepreneurship as a purposeful endeavor to initiate, sustain, and develop a business for financial or other gains. Shapero and Sokol (1982) highlighted that entrepreneurship encompasses the willingness to explore attractive and feasible business opportunities.

Early research in entrepreneurship examined the personality traits and characteristics of established entrepreneurs (Hornaday & Aboud, 1971). While such studies identified distinctive traits, they couldn't reliably predict entrepreneurial behavior. This led to a shift in focus towards identifying antecedents that lead to entrepreneurial behavior (Fawwaaz, 2017). The Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1977) gained prominence as a comprehensive predictor of intention, sparking interest in researching entrepreneurial intention (Bird & Jelinek, 1988). Entrepreneurial Intention (EI), synonymous with the intention to start a business, reflects an individual's inclination to establish new ventures. Research has indicated that factors influencing EI include attitudes, subjective norms, education, and social support (Ajzen & Fishbein, 1977).

Numerous studies have supported these findings. Tkachev and Kolvereid (1999) suggested that universities offering entrepreneurship education and opportunities for practical business experience can increase students' inclination to start businesses. Luthje & Frank (2003) proposed that curriculum programs altering entrepreneurial attitudes and perceptions of self-reliance viability are beneficial in enhancing students' entrepreneurial intention. Vietnam has also seen research on factors affecting entrepreneurial intention. Notable studies include Le Quan's (2007) research on young Vietnamese entrepreneurs' startup processes and Phan Anh Tu and Giang Thi Cam Tien's (2015) study on factors influencing start-business intention among students at Can Tho University's Faculty of Economics and Business Administration.

2.2. Theoretical Background

Various theories have been used in the past to predict Entrepreneurial Intention, including Theory of Planned Behaviour developed by Ajzen (1991) and The Entrepreneur Event Model proposed by (Pauceanu, 2018). Theory of Planned Behavior (TPB) widely used framework, based on Ajzen's work, is the go-to choice for entrepreneurial research due to its effectiveness in predicting Entrepreneurial Intention. TPB posits that an individual's intention to engage in entrepreneurship can be predicted by three core factors: attitude toward entrepreneurship, subjective norms, and perceived behavioral control. These factors are shaped by an individual's beliefs, and collectively they influence the intention to pursue entrepreneurship (Schlaegel & Koenig, 2013). For instance, an individual's attitude towards entrepreneurship and their perception of the support from friends and family can significantly impact their intention to start a business (Ajzen, 1991).

Developed by Shapero and Sokol, the Entrepreneur Event Model (EEM) offers a comprehensive perspective on predicting Entrepreneurial Intention. It comprises three crucial antecedents: perceived desirability, perceived feasibility, and propensity to act. Perceived desirability relates to seeing entrepreneurship as an attractive career choice, while perceived feasibility concerns an individual's assessment of their skills and abilities to start a business. Propensity to act is closely associated with an internal locus of control, determining an individual's ability to independently execute entrepreneurial plans (Krueger, 1993). Successful entrepreneurs often inspire others through their positive experiences and knowledge sharing, influencing perceived desirability (Wilson, Marlino & Kickul, 2004).

Both of these theories provide valuable insights into the factors that influence entrepreneurial intention and behavior among individuals. By combining these frameworks, the research aims to uncover the specific factors affecting Vietnamese students' intentions to start their own businesses, contributing to a better understanding of entrepreneurship in the Vietnamese context.

3. CONCEPTUAL FRAMEWORK AND HYPOTHESES FORMULATION

3.1. Conceptual Framework

Figure 3 depicts the proposed framework created from hypotheses based on TPB and EMM as they consider the influence of attitudes, subjective norms, perceived behavioral control, external factors, and cultural elements on entrepreneurial intention among Vietnamese students.

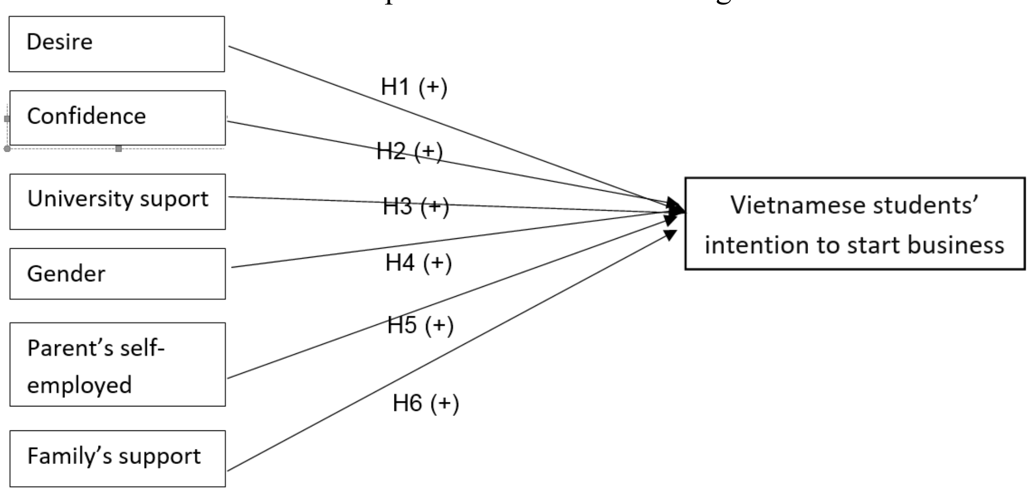

Figure 3: Conceptual Framework of the Research

3.2. Students' Entrepreneurial Desire

Entrepreneurial desire, a strong passion and inclination towards entrepreneurship, strongly predicts individuals' intentions to start a business (Krueger, 2007). This desire is marked by eagerness to create and manage a successful venture, closely linked to aspirations for entrepreneurial success (Cardon et al., 2013). In Vietnam, particularly among students, this desire is crucial due to the growing interest in entrepreneurship, given the country's developmental opportunities (Wang et al., 2021).

Wang, Luong, and Van's (2021) research in Vietnam, focusing on university students, found a positive connection between entrepreneurial desire and intentions to start a business. This aligns with the Theory of Planned Behavior (Ajzen, 1991), which suggests that a positive attitude towards entrepreneurship enhances the intention to engage in it (Ajzen, 1991). Furthermore, entrepreneurial desire not only fosters a positive attitude towards entrepreneurship but also enhances self-efficacy beliefs (Krueger, 2007). Individuals with high entrepreneurial desire tend to have greater confidence in their ability to succeed as entrepreneurs, further reinforcing their intention to start a business. In the context of Vietnamese students, entrepreneurial desire emerges as a critical motivating factor positively shaping their entrepreneurial intentions.

H1. Students' entrepreneutial desire has a positive influence on Vietnamese student's intention to start a business.

3.3. Student's Entrepreneurial Confidence

Entrepreneurial confidence, defined as an individual's belief in their ability to succeed in entrepreneurial activities, significantly influences entrepreneurial intentions (Liñán & Chen, 2009). It encompasses self-assurance in recognizing opportunities, managing risks, and overcoming challenges in business (Liñán & Fayolle, 2015). In Vietnam, a rapidly developing economy with a thriving startup ecosystem, entrepreneurial confidence plays a crucial role in understanding Vietnamese students' intentions for entrepreneurship.

Research by Nguyen and Huynh (2021) in Vietnam, focusing on university students, confirms the positive impact of entrepreneurial confidence on intentions to start a business. This aligns with the Theory of Planned Behavior (Ajzen, 1991), emphasizing the significance of self-confidence in forming intentions (Ajzen, 1991). Moreover, entrepreneurial confidence is closely linked to self-efficacy, a key element in entrepreneurial psychology (Liñán & Fayolle, 2015). Those with higher entrepreneurial confidence tend to have greater entrepreneurial self-efficacy, believing in their ability to perform entrepreneurial tasks (Liñán & Chen, 2009). In the context of Vietnam, where entrepreneurship is increasingly viable, students with high entrepreneurial confidence are more likely to view entrepreneurship as an achievable goal, reinforcing their intention to become entrepreneurs. Therefore, it can be hypothesized that entrepreneurial confidence positively influences Vietnamese students' intentions to start a business.

H2: Students' entrepreneutial confidence has a positive influence on Vietnamese student's intention to start a business.

3.4. University Support For Entrepreneurship

Universities globally, including those in Vietnam, play a vital role in promoting entrepreneurship by offering support through education, training, mentorship, and resource access (Fayolle et al., 2016). This support shapes students' views on entrepreneurship and their confidence in pursuing it. In Vietnam, a study by Le et al. (2020) explored the impact of university support on students' entrepreneurial intentions, including entrepreneurship education, startup incubators, mentorship, and networking opportunities. The findings revealed a positive relationship between university support and students' intentions to start a business. These results align with the Entrepreneur Event Model (Pauceanu, 2018), emphasizing external factors like university support in influencing entrepreneurial intentions.

Vietnamese universities are adapting their efforts to align with the country's economic development goals, transitioning towards a knowledge-based economy with a focus on innovation and entrepreneurship (Nguyen, 2019). This strategic shift recognizes the role of fostering entrepreneurial intentions among students in contributing to economic growth and job creation.

H3. University support for entrepreneurship has a positive influence on Vietnamese student's intention to start a business.

3.5. Gender

A recent study conducted by Vuorio et al. (2021) in Vietnam explored gender differences in entrepreneurial intentions among university students. The findings of this study indicated that male students reported higher entrepreneurial intentions compared to their female counterparts. This gender disparity can be attributed to various factors, including social norms, role expectations, and access to resources. The study suggests that societal expectations and cultural norms may influence women's perceptions of entrepreneurship, leading to lower entrepreneurial intentions. Moreover, the Global Entrepreneurship Monitor (GEM) report for Vietnam in 2020 highlighted gender disparities in entrepreneurial activities. The report revealed that the early-stage entrepreneurial activity rate for men in Vietnam was higher than that for women. This gender gap in entrepreneurial activity indicates that male students might indeed be more inclined to start businesses, aligning with the hypothesis.

H4. Male students are more inclined to start business than female students.

3.6. Students having parents with self-employment history

Family background significantly influences entrepreneurial intentions. Research by Kolvereid and Isaksen (2018) in Norway found that students with parents experienced in self-employment were more inclined toward entrepreneurship. Parental role modeling and exposure to entrepreneurial environments were key factors. In Vietnam, family plays a central role in young adults' lives. A study by Nguyen and Vu (2019) emphasized parental encouragement and support, influenced by their entrepreneurial experiences, in shaping students' intentions to start a business.

A study in Ho Chi Minh City by Truong et al. (2020) highlighted that students with parents having self-employment experience were more likely to consider entrepreneurship. This study also explored gender-specific influences on entrepreneurial intentions.

H5. Students having parents with self-employment history are more inclined to start a business than those having parents with no such history.

3.7. Family's Support For Student

The influence of family support on entrepreneurial intentions among Vietnamese students is a critical aspect of entrepreneurship research. A study by Nguyen and Le (2021) found that students perceiving higher family support, including emotional encouragement, financial assistance, and advice, were more likely to intend to start a business. In Vietnamese culture, family cohesion and interdependence are strong. A study by Le and Nguyen (2020) highlighted the importance of family values in shaping entrepreneurial intentions. Students feeling a sense of duty and responsibility toward their families were more motivated to explore entrepreneurship to support them financially.

Research by Phan and Dinh (2019) in Ho Chi Minh City revealed that students perceiving family support were more likely to have a positive attitude towards entrepreneurship and express a stronger intention to engage in entrepreneurial activities. This indicates that family support not only offers practical assistance but also shapes students' attitudes and beliefs related to entrepreneurship.

H6. Family's support has a positive influence on Vietnamese student's intention to start a business

4. RESEARCH METHODOLOGY

Data collection for this study on factors influencing Vietnamese students' entrepreneurial intentions involved distributing 95 online questionnaires in Hanoi via Google Docs and 49 in-person questionnaires at the International School of Vietnam National University. Convenience sampling was employed due to time and cost limitations, with Hanoi chosen due to its concentration of major universities. Respondents represented seven universities: Hanoi National University, Foreign Trade University, National Economics University, Financial Academy, Hanoi University, Hanoi University of Technology, and Hanoi Pedagogical University.

The study assessed Vietnamese students' entrepreneurial intentions with a 24-item questionnaire covering various factors. Questionnaire items were adapted from previous research, initially designed in English, and then translated into Vietnamese. The questionnaire included an introduction section and a main section with measurement items. Gender and parents' self-employment status used categorical scales (Yes/No), while other variables employed a 5-point Likert Scale. Data analysis was conducted using SPSS 20 to test moderation effects.

5. DATA PRESENTATIONS AND FINDINGS

5.1. Data description

A summary of the descriptive statistics are presented in table above. For each item the minimum, maximum, mean and standard deviation are taken into consideration. Among 150 copies of the survey were distributedand collected both online and offline. The received answered are screened to find out the invalid, then among 150 questionnaires, the research received 144 valid answer papers and 1 invalid answer paper. The research has 5 constructions. Variables EI1, EI2, EI3, EI4, EI5 are belong to construction Entrepreneurship (EI) . Variables of ED1, ED2, ED3, ED4 are group of construction Entrepreneurship Desỉe (ED). EC1, EC2, EC3 are group of construction Entrepreneurship Confidence (EC). US1, US2, US3, US4, US5, US are University Support (US). GD1 are belong to Gender. PS1 is Parent support. And FS1, FS2, FS3, FS4 are Financial Support

Cronbach's alpha coefficient is used to measure the reliability of the scale. If Cronbach's alpha coefficient is less than 0.6, the scale is considered unreliable. If it is between 0.6 and 0.8, it is accepted, and if the factor is 0.8 or close to 1, it is considered good. Furthermore, if a measurement variable has a Corrected Item - Total Correlation greater than or equal to 0.3, the variable is satisfactory (Hoang and Chu, 2008). The analysis has been presented in the following tables:

Table 3: Cronbach's Alpha

Dependent Variable	Cronbach's Alpha
Entrepreneurial Intention (EI)	0.888
Independent Variables	Cronbach's Alpha
Entrepreneurial Desire (ED)	0.762
Entrepreneurial Confidence (EC)	0.874
University support (US)	0.873
Family's support (FS)	0.611

There are 24 measuring items originally, now remain 24 with 18 items belong to independent variable (ED, EC, US and FS), 4 items belong to dependent variable EI, and final 2 items about GD and PS. All items in each variables are accepted.

The KMO and Bartlett's test were used to assess model fitness. In the initial exploratory factor analysis (EFA), the KMO for dependent variables was 0.832 (meeting the criterion of >0.5 and <1), and the significance level (Sig.) was <0.05, indicating data suitability. Similarly, for independent variables, the KMO was 0.838 (>0.5) with Sig. = 0.000, confirming data validity for EFA. However, FS1's factor loading did not meet the standard and was removed from the Rotated Component Matrix table. Following the exclusion of FS1, both KMO and Sig. results met the criteria, as shown in Table 18. All remaining items used to measure independent variables also met the requirements, as presented in Table 4.

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.832
Bartlett's Test of Sphericity	Approx. Chi-Square	430.236
	Df	10
	Sig.	0.000

Source: By author

In KMO and Bartlett's Test, KMO value measuring the sampling adequacy equals to 0.826 (greater than 0.5) with Sig. is 0.000. These numbers confirm the validity of data for exploratory factor analysis.

Table 5: Rotated Component Matrix[a]

	Component			
	1	2	3	4
US6	.830			
US2	.786			
US3	.773			
US1	.717			
US5	.702			
US4	.671			
EC1		.854		
EC2		.846		
EC3		.833		
ED2			.768	
ED3			.763	
ED1			.691	
ED4			.653	
FS3				.876
FS4				.812
FS2				.699

Source: By author

From Table 5, the exploratory factor analysis extracted four factors. The first factor comprises six items from the US scale, the second factor consists of three items from the EC scale, the third factor includes all four items from the ED scale, and the fourth factor comprises all three items from the FS scale. In summary, these observed variables contribute to the formation of the scale variables and are suitable for subsequent regression analysis.

Based on the data, Pearson Correlation between the EI variable and the four independent variables: ED, EC, US, and FS. All correlations are positive. The results indicate that ED, EC, and US have a significant relationship with EI, with high Pearson correlation values (0.658, 0.567, and 0.357, respectively) and low significance levels ($p < 0.05$). This suggests a positive linear relationship between the dependent variable and these three independent variables. Additionally, the result shows strong correlations among these three components, warranting a check for multicollinearity through Variance Inflation Factor (VIF) values.

On the other hand, the correlation between FS and EI is relatively small, with an observed Pearson correlation of 0.027 (below 0.3). Consequently, there is no substantial linear relationship between EI and FS, leading to the elimination of FS from the model. Hypothesis H6 is not supported.

Table 7: Collinearity Statistics

Component	Variance inflation factor VIF
ED	1.348
EC	1.401
US	1.342

Source: By author

Table 7 displays the Variance Inflation Factor (VIF) values for the three components. All three VIF values are very small (VIF < 2), indicating the absence of multicollinearity issues and affirming the suitability of regression analysis for the observed variables. In the initial Model Summary table, the Adjusted R-square value suggests that 53.8% of the variance in Entrepreneurial Intention (EI) can be explained by the four variables: Entrepreneurial Desire (ED), Entrepreneurial Confidence (EC), University's Support (US), and Gender (GD).

Upon examining the coefficients presented in the table, it becomes evident that University's Support (US) has the smallest coefficient value, at 0.037, with a significance level (Sig) of 0.575, which is greater than 0.05. Therefore, H3 is not supported, indicating that University's Support does not reliably explain Entrepreneurial Intention (EI). Consequently, US is removed from the model.

Table 8: Regression analysis summary (2rd time)

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.741[a]	.550	.540	.66312	1.953
a. Predictors: (Constant), GD, ED, EC					
b. Dependent Variable: EI					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.100	3	25.033	56.929	.000[b]
	Residual	61.562	140	.440		
	Total	136.662	143			
a. Dependent Variable: EI						
b. Predictors: (Constant), GD, ED, EC						

Coefficients[a]						
Model B		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	-.149	.297		-.503	.616
	ED	.667	.080	.522	8.281	.000
	EC	.306	.062	.318	4.950	.000
	GD	.291	.126	.134	2.309	.022
a. Dependent Variable: EI		Source: By author				

Table Model Summary reveals that Adjusted R-square indicates 54% of the variance in Entrepreneurial Intention (EI) is explained by Entrepreneurial Desire (ED), Entrepreneurial Confidence (EC), and Gender (GD). A Sig. value of .000 confirms the reliability of these variables in determining EI. As a result, Hypotheses H1, H2, and H4 are supported. The relationships among the constructs of entrepreneurial intention can be expressed as follows:

EI = 0.522ED + 0.318EC + 0.134*GD

Based on this analysis, the theoretical model has been examined and reconfigured, featuring one dependent variable (Entrepreneurial Intention) and three independent variables (Entrepreneurial Desire, Entrepreneurial Confidence, and Gender)

H1. Students' entrepreneutial desire has a positive influence on Vietnamese student's intention to start a business => **Supported**

H2. Students' entrepreneutial confidence has a positive influence on Vietnamese student's intention to start a business => **Supported**

H3. University support for entrepreneurship has a positive influence on Vietnamese student's intention to start a business =>**Not Supported**

H4. Men students are more inclined to start business than women => **Supported**

H5. Vietnamese students having parents with self-employment history are more inclined to start a business than those having parents with no such history. => **Not Supported**

H6. Family's support has a positive influence on Vietnamese student's intention to start a business => **Not Supported**

6. DISCUSSION, IMPLICATIONS AND CONTRIBUTION

6.1. Discussion and implications

This study aimed to explore predictors influencing Vietnamese students' entrepreneurial intentions, combining the Entrepreneurial Event Model and Ajzen's Theory of Planned Behavior to offer a comprehensive understanding. Results revealed that among the variables considered, Entrepreneurial Desire, Entrepreneurial Confidence, and Gender significantly predicted entrepreneurial intention. Entrepreneurial Desire emerged as the most influential factor, highlighting its pivotal role.

Entrepreneurial Confidence was the second most significant factor, emphasizing the importance of self-belief. Surprisingly, Gender also played a significant role, with males showing stronger intentions. However, University's Support, Parent's Self-Employment History, and

Family's Support had no direct influence on entrepreneurial intention. This suggests the need for universities to revamp their curricula and adopt problem-solving approaches. Motivational programs for entrepreneurship should be prioritized. Family support, while not directly impactful, could indirectly influence Entrepreneurial Desire and Confidence. Encouraging independent thinking and risk-taking in families is essential.

6.2. Contributions of the research

➢ *Theoretical contributions*

This research combines the Theory of Planned Behavior and the Entrepreneurial Event Model to create a unique research model. While this combination has been used in entrepreneurship studies before, it's the first time it's been applied to analyze the entrepreneurial intention of Vietnamese students in the specific context of Vietnam. The study offers fresh insights and approaches tailored to the evolving Vietnamese environment, providing updated results that reflect the current situation.

➢ *Practical contribution*

Entrepreneurship is vital for Vietnam's economic development and youth employment. However, much of the existing research on entrepreneurial intention is conducted abroad, and cultural differences can limit the applicability of those findings to Vietnam. This research addresses this gap by focusing on Vietnamese students' entrepreneurial intention, with a diverse sample from seven universities. Consequently, the results hold broader implications and can better inform strategies to promote entrepreneurship among Vietnamese youth.

6.3. Limitations and future research direction

First off, because this study was limited to one Vietnamese city, not all of the country's diversity may be represented in the findings. As a result, future studies on the subject should broaden the scope of the survey to include important Vietnamese cities including Ho Chi Minh City, Da Nang, and Hai Phong.

Second, even though there were 7 distinct universities represented in the study's student survey, the distribution of students among them was unbalanced. Since more than 70% of the students attend economic and business schools, their perspectives and backgrounds might not be typical of all Vietnamese students as a whole. If they make sure there is a balance of numbers in future research on the same subject, the results will be more representative.

Thirdly, because relatively few male students took part in the survey, the findings about how different genders affect students' intentions to launch a business are not really persuasive. Future studies on this subject should make sure that an equal number of male and female students participate in the survey in order to increase the accuracy of this variable. Last but not least, the number of respondents for this research is just slightly above the minimum acceptable level due to time and resource constraints. It is advised to employ a larger range of respondents if future studies wish to use the same model.

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SUSTAINABLE DEVELOPMENT OF VIETNAMESE SMALL AND MEDIUM ENTERPRISES IN THE POST COVID-19 PERIOD

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Abstract: This paper aims to analyze the need for new solutions to support small and medium enterprises (SMEs) to overcome challenges for sustainable development after being heavily affected by the Covid-19 pandemic. By using the statistical, comparative and analytical methods, the authors have identified 4 groups of difficulties and challenges for SMEs after the COVID-19 pandemic including: (i) Demand in many markets declines, (ii) SMEs are not disbursed, lack cash flow; (iii) Logistics and input material costs increase, (iv) Labor shortages are at a worrying level. Based on the research results, the author has given solutions to support SMEs for 3 sides of the Government, SMEs and business associations.

Keywords: SMEs, solutions, sustainable development.

1. INTRODUCTION

In recent years in Vietnam, the development of SMEs has contributed significantly to growth goals as well as to the budget, job creation and personal income increase. Of the existing total number of enterprises in Vietnam, SMEs account for around 96%, of which 97% are private enterprises. It is estimated that SMEs contribute about 45% of gross social product (GDP), addressing over 50% of the country's workforce.

Vietnam experienced the COVID-19 pandemic from 2020 to 2022. Now the pandemic has been controlled, the socio-economic fields have also gradually recovered and developed again, achieving some positive results. However, after the COVID-19 pandemic, Vietnamese small and medium enterprises still face many difficulties, requiring comprehensive solutions to support their recovery and development.

The year 2023 has passed 2/3 of the way, we can see the Government's efforts and decisions in operating the economy to overcome the consequences of the world economic crisis over 2 years of Covid-19 pandemic. Our country still manages to achieve a decent growth rate compared to others; the package of solutions to support economic recovery has been considered one of the suitable salvations for businesses.

Although the world economy has been forecast to recover, it is still quite fragile. Many countries are still faced with a choice between stimulus-easing policies and narrower policies. Protectionism is on the rise, in different forms. Tightening monetary policies of the US and many development countries may cause disturbances to commodity prices, imports and exports and investment of relevant countries, especially economies with large openness, which are in the process of integration like Vietnam.

In the situation that the world economy is not forecasted to be bright, Vietnam's path to GDP growth target in 2023 must be considered more carefully. Vietnam's monetary policy and financial system still have shortcomings that need to be adjusted. The main actors and balances

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of the economy remain uncertain, especially if you place them in trends that are more likely to occur in the post-crisis period. After the COVID-19 pandemic, Vietnamese SMEs still face many difficulties, requiring solutions to recover and develop.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

Businesses as well as SMEs around the world have been severely affected by the Covid-19 pandemic. According to the OECD (2020), global trade fell by 10.2% in 2020 and foreign direct investment fell by 40%, causing major disruptions in supply chains. Large cuts in private consumption led to an increase in corporate defaults in 2021, especially in sectors hit hard by new lockdowns. SMEs' revenues plummeted during the first wave of the pandemic in most countries. Financial markets have also been affected by the Covid-19 pandemic. The uncertain environment and declining confidence could lead to reduced credit and investment, exacerbating liquidity shortages.

Also follow OECD's research, the world is facing an unprecedented multidimensional crisis that demands coherent policy responses. The COVID-19 crisis has further highlighted the vulnerability of several of our basic systems, including healthcare, social protection, education, value chains, production networks, financial markets, mass transit systems and ecosystems. As such, sustainable recovery requires cross-sectoral actions and mechanisms to manage unavoidable trade-offs between short and long-term priorities, and between economic, social and environmental policy goals.

United Nations (2021) adviced Governments must walk a fine line between taking actions to save existing industrial firms and putting in place longer-term measures that build back better with more resilient industries, more able to resist shocks such as pandemics. Key policies that could drive the inclusive and sustainable industrial development necessary to achieve greater resilience are: Using already existing registries and platforms to channel aid to businesses on the verge of collapse. Improving access to finance for small firms and – even more difficult – those in the informal sector to help them maintain economic activities, retain jobs and maintain links to local and global supply chains. Refocusing policies on helping businesses including SMEs to develop higher value, and more sustainably produced goods that can be marketed with fewer risks to less volatile nearby markets. This calls for a renewed push towards diversification, using reshoring and nearshoring to shorten supply chains and moving towards greater regionalisation.

3. METHODOLOGY

From scientific researches and articles, regulatory documents, the author uses classification methods to divide types of content, time of issuance, legal validity etc. Through the information collected from reports on socio-economic development, on the development of enterprises in ministries and sectors, the data of the General Statistics Office, the author uses statistical methods and comparative methods to process data and information to compare the periods before and after covid -19. The author has applied the analytical method and the synthetic method to explain many dimensions, criterias and aspects to find out the limitations and difficulties of SMEs in the post-covid-19 period, thereby to propose appropriate solutions.

4. RESEARCH RESULTS

4.1 Assessment of SMEs development in the post-covid-19 period

According to survey data of the General Statistics Office, as of December 31, 2021, the whole country had 718,697 operating enterprises with production and business results, an increase of 5% compared to December 31, 2020, in which micro-sized enterprises account for the highest proportion. The number of micro-sized enterprises is 498,233, accounting for 69.3% of the country's enterprises, an increase of 4.1% compared to the same period in 2020; small-scale enterprises are 176,217 enterprises, accounting for 24.5%, an increase of 7.6% over the same period; The number of medium-sized enterprises is 25,402, accounting for 3.5%, an increase of 6.3% over the same period. Compared to the average period 2016-2020, the number of micro enterprises increased by 22.1%, small enterprises increased by 10.2%, and medium enterprises increased by 20.4%. In 2021, the rate of profitable businesses is 39.5%, 10% of break-even businesses, and 50.5% of loss-making businesses. The number of enterprises dissolved and ceasing to exist is also concentrated mainly in enterprises with capital scale from 0-10 billion VND and the data gradually decreases with the increase in capital scale.

In 2022, Vietnam has 148.5 thousand newly registered enterprises, with a total registered capital of VND 1,590.9 trillion, increased 27.1% in the number of enterprises, reduced 1.3% in registered capital compared with the previous year. The average registered capital of a newly established enterprise in 2022 reached VND 10.7 billion, reduced 22.3% compared with the previous year. The number of enterprises conducted suspending business for a definite period is 73.8 thousand, an increase of 34.3% compared to 2021; nearly 50.8 thousand enterprises stopped operation to conduct pending dissolution procedures, increased 5.5%; 18.6 thousand enterprises completed dissolution procedures, an increase of 11.2%. On average, 11.9 thousand enterprises withdraw from the market a month.

According to the Vietnamese Business White Paper, in 2021-2022, in the situation of our country experiencing many changes and difficulties affecting all socio-economic aspects, but overcoming the severe crises from the Covid-19 epidemic, Vietnamese enterprises continue to increase in number of enterprises and number of employees working in enterprises, but the growth rate is still low compared to the period before the Covid-19 epidemic; while the scale of enterprises based on labor tends to shrink, the scale based on capital tends to expand rapidly.

The scale of Vietnamese enterprises is still mainly micro, small and medium enterprises (accounting for 97.4%), and this sector tends to account for an increasing proportion in number in the period 2016-2021. Micro and small-scale enterprises are mainly non-state enterprises and are concentrated in the service sector, which is also an area with poor resilience and is sensitive to external impacts.

In general, the operating efficiency of a business increases gradually with scale; the larger scale, the more effectively business operates (shown by capital turnover indicators, ROA, ROE, ROS). Businesses' capability to access loans also increases with size. The smaller business, the more difficulties it faces due to lack of collateral, limited financial capacity and management skills.

4.2. Difficulties and challenges for SMEs after the COVID-19 pandemic

Demand in many markets declines

Small and medium-sized enterprises in most industries generally face difficulties in the post-covid-19 period. Despite being flexible in production, SMEs still face many difficulties when customers tend to tighten spending. Up to this time, although the first month of the third quarter has ended, but recorded in many businesses, the number of new orders has not shown positive signs, not meeting expectations as previously forecast.

According to the General Statistics Office, the index of industrial production in the first 6 months of 2023 compared to the same period last year increased in 48 provinces and cities and decreased in 15 localities across the country. The consumption index of the whole processing and manufacturing industry in the first 6 months of 2023 decreased by 2.2% over the same period in 2022 (the same period in 2022 will increase by 9.4%). The inventory index of the whole processing and manufacturing industry is estimated at June 30, 2023 to increase by 19.9% compared to the same time last year (the same time last year increased by 14.1%). The average inventory rate of the whole processing and manufacturing industry in the first 6 months of 2023 is 83.1% (the average of the first 6 months of 2022 is 78%).

In addition, the world economy recovered slowly with tightening monetary policies in many countries, reducing the consumer demand of major trading partners, thus affecting Vietnam's export and import turnover. According to the General Statistics Office, the total export and import turnover of goods in the first quater of 2023 is estimated at 154.27 billion USD, down 13.3% over the same period last year, of which exports decreased by 11.9%; imports fell 14.7%.

Consumer demand from Vietnam's major trading partners decreased sharply compared to the same period in 2022, causing the export turnover of goods in June 2023 to be estimated at 29.3 billion USD and down 11.4% over the same period last year. In the first 6 months of 2023, goods export turnover is estimated at 164.45 billion USD, down 12.1% over the same period last year.

SMEs are not disbursed, lack cash flow, must narrow production and business scale

SMEs face counless difficulties and challanges due to lack of capital. Many companies cannot access loans, therefore they are not disbursed or transferred bad debts. From mid-2022 until now, businesses have not invested and tend to resell, losing their brands.

According to the Ministry of Planning and Investment (2023), in a survey of more than 200 SMEs, more than 50% of surveyed businesses in the Textile and Garment sector had a revenue decrease of more than 50%. And up to 100% of businesses in the footwear sector showed a decrease in revenue of less than 50% . In which, the three fields of agricultural product processing, automation equipment manufacturing and metal fabrication have an almost equal rate of businesses with revenue decline and the rate of businesses maintaining or growing revenue. The field with the largest number of businesses decreasing in scale is footwear with 100% of businesses reducing their scale by less than 50%, followed by the textile and garment sector with 67% of businesses having to narrow their operations. Agricultural product processing and needle manufacturing are two sectors with a smaller percentage of enterprises reducing their scale than the remaining sectors (with the percentage of enterprises having a reduced labor size of 37% and 30%, respectively).

SMEs' revenue and profits have both decreased, leading to a serious impact on cash resources, so most businesses face many financial difficulties, especially short-term cash sources to pay for operating expenses. Besides, commercial banks still have many shortcomings in credit policies with lending conditions being too tight. Interest rates have tended to decrease but are still at a high level, causing many difficulties in business and production. The current lending interest rates will cause business costs to increase greatly.

In the situation of low market confidence, exhaustion of working capital and investment flows, assets of enterprises are at risk of being sold off. Information from businesses associations shows that there may be a wave of selling factories/production facilities of Vietnamese enterprises to foreign investors. This is a challenge not only for Vietnamese SMEs but also seriously affects the macroeconomy.

Logistics and input material costs increase

Logistics costs increased due to the sharp increase in gasoline prices, domestic transportation costs are forecasted to increase by about 10%, sea transportation costs increase by about 10-30% depending on each route. In addition, the increased congestion at seaports due to the increased demand for transportation after the COVID-19 period and the lack of operating capacity has significantly affected the finances of enterprises. Disruptions to global and regional supply chains have caused input shortages and increased commodity prices. The Russia-Ukraine conflict, which has led to disruptions to trade, rising fuel prices, and rising inflation, has prompted the Federal Reserve and other major central banks to raise interest rates, driving borrowing costs higher.

SMEs face difficulties in transporting goods, especially exported goods, with increased transportation and warehousing costs; Mobilizing and arranging production labor in conditions that ensure disease safety leads to additional costs incurred.

Labor shortages are at a worrying level

The shortage of labor leads to many SMEs having to recruit new employees to recover production and business, incurring recruiting and training costs for new human resources, taking more time to increase the quality and skill of the workforce.

The poor quality of labor due to low skills and lack of soft skills has greatly affected the production and business of enterprises. At the same time, the poor adaptability of workers to new working methods and models makes it difficult for workers to catch up with the speed of enterprise's innovation, which has slowed down the recovery process of enterprises. In addition, the impact of the COVID-19 pandemic on the physical and mental health of employees, affect to labor productivity and business efficiency.

5. DISCUSSION AND CONCLUSION

In order to restore and develop production and business activities of SMEs after COVID-19, it is necessary to implement the following solutions:

5.1. For the Goverment and authorities

In the situation of global economic integration, the role of the State in supporting businesses becomes even more important, especially for private enterprises. Indirect support measures, in line with the principles and spirit of WTO and AFTA, are essential to help SMEs grow in scale and competitiveness to be able to cooperate and compete with large enterprises, especially in the post-covid-19 recovery period. Some of the key solutions need to be implemented as follows.

Improve the legal environment to facilitate the establishment and operation of enterprises

- The Government and authorities at all levels should continue to make more efforts to support enterprises to overcome difficulties in production and business. In order to support the recovery of enterprises, especially domestic private enterprises facing great difficulties in cash flow, it is necessary to extend a number of policies that have brought into play practical effects during the recent COVID-19 pandemic to support enterprises until the end of 2023. The Government needs to continue the implementation of solutions to support interest rate reduction, tax exemption, and extension of tax payment time and land rent for SMEs. These supports will help SMEs have more financial resources to increase their resilience against the risks of supply chain disruption, instability or reduced market purchasing power.

- It is necessary to deploy separate credit policies aimed at target groups. There is a Law to support SMEs, so there needs to be a specific credit policy for SMEs to synchronize with the strategy to support SMEs in general, and some specific industries in particular such as science and technology, agriculture...

- Simplify and transparency regulations related to business conditions and market entry of enterprises in order to reduce barriers in the operation process of enterprises; to strictly and substantially implement the process of consultation and collecting opinions of enterprises when elaborating and promulgating relevant legal documents.

Improving access to capital and credit sources for private enterprises

- *C*onducting solutions to support and solve capital difficulties of enterprises in the process of recovery and start-up, lowering lending interest rates; banks should expand lending conditions and mortgage rates of borrowed assets. Simplify lending procedures, loosen lending conditions for SMEs; expand lending using assets formed from loan capital and unsecured loans to the private economic sector; Simplify property mortgage procedures, reduce property valuation time. There needs to be a specific solution to solve the problem of collateral for SMEs when accessing financial resources from financial institutions. In the current context, business assets are very undervalued, so businesses are not eligible for loans. Financial institutions can lend along the supply chain based on the reputation and risk level of a central business (large and traditional bank customers); diversify lending methods focusing on analyzing business cash flows to evaluate potential; Promote lending through unsecured loans, evaluate the effectiveness and profitability of investment projects to finance businesses.

- Enhance the operational efficiency of financial support funds and SME-supporting financial institutions such as credit guarantee funds, SME development funds, venture capital funds, financial lease-purchase programs, trade credits and fiscal incentives in the form of tax exemptions and reductions or microfinance programs for micro and small businesses. Financial support funds for SMEs need to have an operating mechanism to ensure fairness and objectivity and avoid the establishment of business support funds to increase the power of state management agencies. In addition to financial support funds, financial support in the form of lease and purchase is also a form of long- and medium-term capital settlement for SMEs. This form is very suitable for businesses that do not have collateral but have effective business plans, helping SMEs minimize risks in business.

And then, study the model of Small and Medium Enterprise Bank to support the demand for loans with preferential interest rates for small and medium enterprises; accelerate the restructuring of state-owned commercial banks in order to make the provision of banking services more efficient for enterprises, with emphasis on small and medium-sized enterprises.

-*S*implify lending procedures, relax lending conditions for private enterprises; expanding the area of lending with assets formed from loans and unsecured loans to the private sector; Simplify property mortgage procedures, reduce asset valuation time; further develop microfinance activities to provide capital to enterprises, especially small and medium enterprises.

Capacity building and competitiveness improvement of enterprises

- Accelerate the implementation of the program to support human resource training for small and medium-sized enterprises as stipulated in the Law on Support for the Development of Small and Medium Enterprises.

- To encourage SMEs to produce new products, implement advanced technologies, production methods, modern equipment and machinery in accordance with the needs of the growing and rapidly expanding market in the process of international economic integration.

- Strengthen the linkage between small and medium enterprises and large enterprises, globalc corporations investing in Vietnam to cooperate in manufacturing products, components, accessories, spare parts, receiving construction contracts.

- Establish an e-portal to provide information on government policies, public services, government financial support funds, solutions for business management and answers to business management issues to support businesses from the beginning of establishment to development progress.

5.2 For SMEs

The period of growth based on small and short-term investment and the business opportunities gained through relationships will become less and less as Vietnam officially integrates with an increasingly transparent environment and increasingly fierce competition. In order to cooperate and compete with foreign enterprises with economic potential, good management team and advanced management methods, Vietnamese enterprises must invest methodically in management to survive and develop sustainably; business opportunities will come more for businesses with competitiveness and good management systems. Here are some specific solutions that need to be thoroughly applied at each business:

- *Restructuring enterprises:* SMEs need to upgrade management mechanisms, finances, technology investments, and improve management skills to increase product competitiveness; design an effective business plan focusing on main production and business areas with advantages, capable of generating sustainable cash flow, avoiding scattered and risky investments. Especially during the Covid-19 period, it is necessary to urgently re-evaluate business items to have the most reasonable and effective capital restructuring measures.

- *Information transparency:* SMEs need to strictly comply with legal regulations on information disclosure, financial regulations, information transparency and audit annual financial statements. At the same time, businesses need to use loan capital for the right purpose and comply with the contents of the credit contract to enhance credibility.

- *Use of modern enterprise management tools, implement digital transformation:*

It is necessary to change the perception that investing in management systems is not urgent or just one thing is enough. Management tools will quickly become outdated compared to the requirements of the environment and the development process of the business. Enterprises need to regularly update and effectively apply modern management tools to improve productivity and increase the competitiveness of enterprises.

- *Find new directions, change marketing and sales methods*: When the pandemic occurs, customers will not go shopping directly at the store, at this time, enterprises need to change their business methods from serving at the store to serving at home, switching from direct sales to online sales.

- *Reduce production and business costs*: Accordingly, SMEs need to review all costs and reduce and cut costs to the maximum such as office rental costs, administrative costs, advertising costs ...

- *Training and retraining of the labor force*: In addition to implementing labor policies, SMEs need to train and retrain workers to better meet the requirements of enterprise development in the present and future. Businesses need to increase investment in internal training, develop management teams, increase the use of expert opinions, constantly learn and apply appropriate management toolkits and always innovate the approach and use of management tools in accordance with the development roadmap.

5.3. For business associations

It is necessary to encourage the establishment and operation of socio-professional organizations such as clubs or associations of large business executives with a rich program of activities aimed at sharing knowledge and experience using modern management tools, such as organizing seminars, etc. organize training, publish monthly newsletters on management tools.

Establish a network of small and medium-sized enterprises so that enterprises can regularly exchange experiences and knowledge and establish cooperative relationships;

Establish a network linking large enterprises with small and medium enterprises, in which large enterprises will train suppliers who are small and medium enterprises on skills to manage businesses, ensure quality and services.

In order for managers to have easy access to management tools, it is necessary to build a database of advanced management tools on the internet. In this database, there will be an introduction to the types of management tools, the application process, methods of evaluating the effectiveness of application, the implementation of these tools in enterprises in different industries in the world and the region, applicable lessons of businesses and forms related to each tool where appropriate. This database may also include a list of training organizations, consultants and software related to management tools, including reviews of businesses that have used the services of training organizations, consultants or used the software so that business managers can easily choose the tools and service providers that best suit your organization.

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FINANCIAL DEVELOPMENT AND ITS IMPACT ON FINANCIAL INCLUSION – THE CASE OF VIETNAM

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Abstract: The objective of this study is to evaluate the impact of financial development on financial inclusion in Vietnam. Using data from the General Statistics Office and the World Bank, and through quantitative analysis, research results show that attracting FDI capital flows has a positive impact on financial inclusion. Furthermore, economic growth helps comprehensive financial development. However, financial development does not have a clear relationship with financial inclusion. In some cases, international trade can have an adverse effect on financial inclusion.

Keywords: financial inclusion, FDI, GDP, trade.

1. INTRODUCTION

The role of the financial market is to mobilize idle capital in the economy and allocate this capital to effective investment projects, and thus develop banks, businesses and the economy. In countries with developed financial markets, businesses and investors have the ability to access capital in the market at low costs and therefore businesses have the ability to increase business benefits. Furthermore, a developed financial market creates opportunities for consumers to have access to financial services and products in the market, and thus the economy is capable of providing financial inclusion to everyone and share the benefits of economic development to all levels of society.

Normally, countries with high levels of economic development often have developed financial markets. The financial market has the ability to provide many low-cost financial services and products to different needs of society. Or consumers and investors have more access to financial services and products. Basically, vulnerable people and low-income people have access to financial products and services, they have more opportunities to improve their income and participate in business and economic development.

Vietnam is known as a country with rapid economic development over the past 20 years. Since the economic reform, Vietnam has continuously opened its capital market and developed its financial market. The banking system has been expanded with the participation of private capital and foreign investment flows. The banking network has expanded widely in most provinces and cities, towns and many towns across the country, increasing access to financial products and services. Commercial banks also develop payment channels, digital banking and electronic banking, so they can serve customers in many different places. Therefore, the goal of this study is to evaluate the impact of financial development on financial inclusion. The research results aim to provide some solutions for comprehensive financial development in Vietnam in the near future. In addition, the study also evaluates the impact of GDP, international trade and per capita income on comprehensive financial development.

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In addition to the introduction, the rest of the study includes: the next section discusses previous studies, data and research methodology, then the study discusses the results and discusses the results. Finally, study depicts the general conclusion.

2. LITERATURE REVIEW

Financial inclusion is the ability to provide financial products and services at optimal costs to consumers in society. Comprehensive financial development cannot lack the participation of the financial system, especially the commercial banking system. With their mission, commercial banks are responsible for providing financial products and services to all subjects, and comprehensive financial development is one of the ways to help banks fulfill their mission.

The study of Akande et al. (2023) argues that financial inclusion is among the priority programs of policymakers to eradicate poverty, especially in developing countries. When vulnerable people do not have access to formal financial products and services such as bank accounts, credit cards or insurance contracts, or educational loans, financial inclusion is the appropriate solution to increase access to financial products and services. Therefore, comprehensive finance is a factor in promoting sustainable development, especially for people in rural areas who are in dire need of financial access to develop private businesses. Akande et al. (2023) conducted a survey in South Africa on 283 farmers and subsistence businesses in the region and found that financial literacy affects financial inclusion and helps achieve sustainable livelihoods, including financial inclusion mediates the impact of financial literacy on livelihoods. This aims to inform structured intervention to improve financial literacy to support target groups in accessing financial resources to help them live better lives.

Research by Coffie&Hongjiang (2023) in Ghana suggests that the country has achieved significant progress between information communication technology and financial development. However, there have been no impact assessments on the development of the financial technology and financial inclusion market in Ghana to reassess the process of comprehensive financial development in the country. Coffie & Hongjiang (2023) have identified and argued that developing the financial technology market in terms of taking advantage of technology infrastructure to develop Fintech has the ability to improve financial inclusion. Governments, mobile phones, telecommunications companies, service customers and banks are the actors that influence inclusive financial development. However, access to finance across entities is not uniform, which hinders the sustainable development of financial inclusion in Ghana.

After the global financial crisis, many countries have sought to strengthen financial inclusion, including improving institutional quality to improve financial access in countries. Zeqiraj et al. (2022) argued that institutional quality is an important factor that determines whether individuals and businesses participate in financial institutions, because poor institutional quality does not encourage people to participate in the financial sector. In addition, institutional quality comes from corruption control, government effectiveness, political stability, regulatory quality, rule of law, voice and accountability. Zeqiraj et al. (2022) also argued that institutional quality promotes access to and use of formal financial services in developing countries. Based on this study, Zeqiraj et al. (2022) used three components for financial inclusions such as: automated teller machines per 100.000 adults, commerial bank branches per 100.000 adults, and depositors at commercial banks per 100.000 adults. The results of this study show that factors that are likely to impact financial inclusion are: economic growth, human development index, credit, financial depth and remittances. From there, it is confirmed that human capital plays a very important role in improving comprehensive financial access. The process of raising people's awareness helps them increase their financial understanding and access to financial products and services.

Hua et al. (2023) affirmed the superiority of financial inclusion due to its ability to provide effective financial services to all segments of society at affordable costs. Therefore, financial inclusion is achieved by establishing a comprehensive financial service system across a wide range of services. Informal financial institutions are also involved in financial inclusion through microcredit companies, loans to rural people, small and micro enterprises, other groups, along with The participation of commercial banks has helped people and businesses have comprehensive financial access. Hua et al. (2023) also affirmed that financial inclusion has a positive impact on financial stability, which has important implications for policymakers and state financial management agencies in making related decisions to financial inclusion and financial stability.

3. DATA AND METHODOLOGY

3.1. Data sources

In this study, we use Vietnamese data collected from the General Statistics Office and the World Bank. The data are processed for errors, then used in statistical analysis.

3.2. Methodology

Based on the previous study of Zeqiraj et al. (2022), in this study, Zeqiraj et al. (2022) investigated the relationship between financial development and financial inclusion in East Asian and Pacific, Europe and central Asia, Latin America and Carribian in the period of 2000 – 2018, the estimated equation can be shown as below:

Where,

is financial inclusion of Vietnam, this indicator is measured by the number of ATMs per 100,000 inhabitants. This indicator is supported by Zeqiraj et al. (2022) and Maity and Sahu (2023).

is financial development of Vietnam, this indicator is measured by the broad money as of GDP (%). This indicator is supported by Zeqiraj et al. (2022);

is net FDI attraction of Vietnam, is calculated as % GDP;

is the per capita income (USD/person/year);

is the trade openness of the economy, is calculated total export and import as of % GDP;

The study uses OLS regression to evaluate the influence of variables. Additionally, use GLM regression to compare the regression results.

4. RESULTS

4.1. Descriptive statistics

Table 1. Descriptive statistics

Indicator	FI	FD	FDI	GDP	TO
Mean	17.79889	79.33066	5.573087	6.796025	123.0628
Median	21.26500	82.02007	4.821075	6.744930	125.2606

Maximum	27.05000	146.2925	11.93948	8.334115	186.4682
Minimum	1.410000	19.56649	3.390404	4.946139	66.21227
Std. Dev.	8.725433	40.72248	2.199619	1.082787	31.98699
Skewness	-0.789467	-0.072489	1.323360	-0.098314	-0.165725
Kurtosis	2.163250	1.792080	3.776534	1.633800	2.227949
Jarque-Bera	2.394886	1.850113	9.827169	2.540222	0.911816
Probability	0.301965	0.396509	0.007346	0.280800	0.633872
Sum	320.3800	2379.920	172.7657	217.4728	3814.947
Sum Sq. Dev.	1294.264	48091.28	145.1497	36.34525	30695.03

Source: Authors' analysis

Research results show that: financial inclusion is increasingly expanding in Vietnam, increasing access to financial services for Vietnamese people. The number of ATMs installed is increasing, helping people access banking services through the ATM system. The study also confirms Vietnam's financial development in the past year. Specifically, the banking system provides increasing credit to the economy and businesses, investors, and consumers have the ability to access banking services. Regarding FDI inflows, Vietnam has also achieved certain success in attracting FDI, the FDI rate reached an average of 5.57% and at times reached 11.93% of GDP, showing that FDI inflows are a source of additional finance for Vietnam's economic development of the country. Regarding trade openness (TO), this index is quite high and shows that Vietnam has a relatively deep integration into the global economy. Foreign trade activities are expanding and Vietnam has trade relationships with many countries.

4.2. Regression results

Table 2. Least Squares regression

Dependent Variable: FI
Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FD	0.025439	0.031188	0.815649	0.4294
FDI	0.317101	0.143877	2.203981	0.0462
GDP	14.29130	0.794734	17.98249	0.0000
TO	-0.058730	0.025626	-2.291820	0.0392
C	-85.35918	5.835770	-14.62689	0.0000
R-squared	0.991339	Mean dependent var		17.79889
Adjusted R-squared	0.988674	S.D. dependent var		8.725433
S.E. of regression	0.928603	Akaike info criterion		2.919863
Sum squared resid	11.20995	Schwarz criterion		3.167188
Log likelihood	-21.27877	Hannan-Quinn criter.		2.953966
F-statistic	371.9843	Durbin-Watson stat		1.979033
Prob(F-statistic)	0.000000			

Source: Authors' analysis

Table 3. Generalized Linear Model

Dependent Variable: FI
Method: Generalized Linear Model (Newton-Raphson / Marquardt steps)
Family: Normal
Link: Identity
Dispersion computed using Pearson Chi-Square
Convergence achieved after 1 iteration
Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
FD	0.025439	0.031188	0.815649	0.4147
FDI	0.317101	0.143877	2.203981	0.0275
GDP	14.29130	0.794734	17.98249	0.0000
TO	-0.058730	0.025626	-2.291820	0.0219
C	-85.35918	5.835770	-14.62689	0.0000
Mean dependent var	17.79889	S.D. dependent var		8.725433
Sum squared resid	11.20995	Log likelihood		-21.70757
Akaike info criterion	2.967508	Schwarz criterion		3.214833
Hannan-Quinn criter.	3.001610	Deviance		11.20995
Deviance statistic	0.862304	Restr. deviance		1294.264
LR statistic	1487.937	Prob(LR statistic)		0.000000
Pearson SSR	11.20995	Pearson statistic		0.862304
Dispersion	0.862304			

Source: Authors' analysis

The study tested diagnostics that could affect the results such as heteroscedasticity and autocorrelation and showed that the model results did not encounter these phenomena. In addition, regression using two different methods can make the results more reliable and robust, and thus increase the credibility of this study.

Results Table 2 and Table 3 show:

The regression coefficient of FDI has a positive sign and is statistically significant. This shows that foreign direct investment has a positive impact on financial inclusion in Vietnam. Indeed, the Vietnamese banking system has always attracted the attention of foreign investors, and many foreign investors have invested and become strategic shareholders of large banks such as BIDV, Vietinbank, Vietcombank, or VPBank. The participation of foreign investors can support domestic banks invest in technology and develop financial service products and thereby promote comprehensive financial development. However, there has been no impact from financial development on comprehensive finance in Vietnam.

The study also confirms the positive impact of per capita income on financial inclusion. This reflects that as income levels increase, access to financial inclusion increases. Indeed, as income levels increase, demand for financial products and services often increases, forcing banks to improve the quality of services and products to be able to meet these financial needs of the country.

Research suggests that over-reliance on international trade may not have positive benefits for inclusive financial development. International trade does not always bring positive effects to the economy, especially when the internal strength of the economy is weak, international trade can bring more benefits to FDI enterprises than to domestic enterprises. Therefore, Vietnam needs to improve the operations of domestic enterprises to help them produce to meet international requirements and exploit the benefits of international trade.

5. CONCLUSION

Inclusive financial development is an opportunity to help consumers and businesses have access to financial products and services at reasonable costs. Inclusive finance helps develop the national economy more harmoniously, reducing the impact of inequality and disparities in socio-economic development between regions and localities towards sustainable development. To develop comprehensive finance, the influence of the banking system on its ability to provide comprehensive finance is indispensable. Researching the impact of financial development on comprehensive finance in Vietnam in recent times, through quantitative analysis, the research results confirm that: there is no clear evidence of the impact of financial development. to comprehensive finance in Vietnam. However, the study confirms the positive relationship of foreign direct investment and per capita income to financial inclusion, thereby confirming the benefits of attracting international capital flows and economic development. social economy to the development of comprehensive finance. The study confirms that international trade has not had a positive impact on financial inclusion, and in some cases international trade can have a negative impact on the development of comprehensive finance.

Through this research, there are a number of comprehensive financial development solutions for Vietnam proposed as follows: Firstly, Vietnam continues to improve investment quality, attracting quality FDI capital flows into the banking and finance sector and thereby promote investment in banking technology and comprehensive financial development. Secondly, Vietnam continues to pursue a policy of sustainable economic growth, and generate per capital income, and that is an important driving force promoting the development of comprehensive finance.

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INTERNATIONAL EXPERIENCE IN APPLYING SOCIAL RESPONSIBILITY ACCOUNTING AND POLICY IMPLICATIONS FOR VIETNAM

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Abstract: Social responsibility accounting is a relatively new term in Vietnam, but around the world, social responsibility accounting has been researched since the 1970s and put into practice since the 2000s. Vietnamese enterprises during the integration period are clearly aware of the social responsibility associated with production and business activities. Large corporations have begun to carry out social responsibility activities and use social responsibility accounting tools for measurement. The article presents experiences in applying social responsibility accounting in some countries such as the US, Japan, and Australia, thereby drawing some implications for Vietnam. Research results show that through different tools such as the sustainable balanced scorecard, businesses in these countries have integrated social responsibility accounting reports into sustainable development reports for external publication with the trend of standardization of behavior and professionalization of organization

Keywords: enterprises, policy implications, social responsibility accounting, experience

1. INTRODUCTION

In the context of international economic integration, State management agencies and businesses are increasingly paying attention to social responsibility activities, aiming at the goal of sustainable development. Accordingly, the application of social responsibility accounting is gradually becoming an inevitable trend to help businesses minimize social and environmental risks and responsibilities that may cause damage to business operations, and will be mandatory to comply with international practices. Social responsibility accounting increasingly plays a key role in the production and business strategies of enterprises. It is an effective management tool that helps administrators proactively build production and business plans, identify and allocate appropriate resources to balance profit - people - society goals. At the same time, effective implementation of social responsibility accounting also contributes to improving community trust in businesses. However, up to now, the application of social responsibility accounting in Vietnamese enterprises still has many limitations. Many businesses have not been proactive in accessing social responsibility accounting content, because they are not clearly aware of the importance of transparency of relevant information to achieve sustainable development goals. This requires businesses and related parties to promote research on the implementation of social responsibility accounting in businesses in other countries. The article presents experiences in applying social responsibility accounting in some countries such as the US, Japan, and Australia, thereby drawing some implications for Vietnam. Research results show that through different tools such as the sustainable balanced scorecard, businesses in these countries have integrated social responsibility accounting reports into sustainable development reports for external publication with the trend of standardization of behavior and professionalization of organization.

2. LITERATURE REVIEW

Along with the development of corporate social responsibility, concepts and research on social responsibility accounting also change and develop over time. According to Anderson

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(1977), social responsibility accounting is accounting that reports on individual items related to anti-pollution, safety measures and health protection, largely done on an ad hoc basis. Social responsibility accounting is considered a management tool, supporting the establishment of an organization's social goals by considering business needs and public expectations.

Gray et.al (1987) defined social responsibility accounting as the process of conveying the social and environmental impacts caused by an organization's economic activities to specific interest groups. Therefore, social responsibility accounting involves expanding the responsibilities of organizations beyond their traditional role of providing financial information to capital owners, especially shareholders. Part of such expanded responsibility is predicated on the assumption that businesses have broader responsibilities than simply making money for their shareholders. However, this definition is then further supplemented with details for environmental accounting, which is considered part of social responsibility accounting, and to include all areas of accounting that may be affected by businesses' responses to environmental issues including the new field of ecological accounting (Gray et.al, 1993).

Meanwhile, from the perspective of Mathews (1993), social responsibility accounting involves the voluntary disclosure of information made by organizations to inform, both qualitatively and quantitatively. Quantitative disclosures can be financial or non-financial.

Mathews and Perera (1995) insist that at the very least, social responsibility accounting means expanding information disclosure into non-traditional areas such as providing information about employees, products, and community services, and preventing or reducing pollution. However, the term social responsibility accounting is also used to describe a comprehensive form of accounting that takes into account external impacts... Public sector organizations can also be evaluated in this way, although most scholars studying the topic of social responsibility accounting seem to be more concerned with private organizations.

According to Schaltegger and Burritt (2005), leading corporations are realizing that adopting social responsibility accounting makes business sense, and engagement with stakeholders can actually help improve business performance.

Perrini, F. (2005) survey on SRA in European enterprises shows that among the 90 selected medium and large-sized listed enterprises (referred to as surveyed enterprises), 25% of enterprises belong to the financial sector, 20% belong to the consumer goods sector, 24% belong to the service sector, 10% belong to the basic industry sector and 21% belong to other sectors.

3. RESEARCH METHODS

Data collection method

The article collected data on the basis of researching existing documents and using logical thinking to draw the necessary scientific conclusions related to the content of social responsibility accounting. The article has drawn important conclusions on issues related to international experience in implementing social responsibility accounting by reviewing scientific literature from various authoritative sources around the world as well as practicing a theoretical and historical systematization method

Data analysis method

This article applies the method of synthesizing, analyzing and comparing secondary data on the content and issues related to international experience in implementing social responsibility accounting. From there, it recommends some policy implications for Vietnamese businesses in implementing social responsibility accounting for the coming period.

4. RESEARCH RESULTS

4.1. Overview of social responsibility accounting

Social responsibility accounting is a science of observing, measuring, calculating, recording, reflecting, organizing, processing and analyzing information about corporate social responsibility as committed: environmental Protection commitments; commitment to employees and suppliers; Committed to ensuring benefits and safety for consumers,... Social responsibility accounting recognizes that the resources of an enterprise that creates added value depend not only on production capital and financial capital, but also on human, social and natural capital. This means, payments to workers, environmental protection expenses and community program expenses can be reinvested in assets and create wealth for businesses.

Social responsibility accounting reflects and quantifies economic, social and environmental information of an enterprise to provide administrators and other subjects related to the enterprise, such as workers, administrators, owners, customers, suppliers, donors, communities, government agencies, political organizations and trade associations. Social responsibility accounting includes both financial accounting and management accounting, which emphasizes the impact of non-financial information on social, environmental and economic factors.

The role of social responsibility accounting for businesses and related units is shown as follows:

Providing non-financial information

Non-financial social responsibility information is qualitative, descriptive information intended to inform external stakeholders about policies, goals, and management systems for social responsibility. Social responsibility policy includes contents such as official policies and programs approved by the enterprise, and measures, levels of environmental protection, or responsibilities to employees have been implemented according to legal requirements. In the absence of such policies and programs, businesses should also clearly state the main improvements that have been made over the years. However, non-financial information cannot provide accurate, complete information about the interaction between business and social responsibility.

Providing financial information

Firstly, providing information about assets for social responsibility activities.

Enterprises can record assets serving social responsibility activities for the purpose of (i) waste treatment and control to ensure compliance with environmental regulations such as wastewater treatment system and dust collection system; (ii) environmental prevention and management such as environmentally friendly equipment and technology; (iii) environmental research and development, such as laboratories used for the purpose of researching solutions to better manage environmental problems and reduce environmental pollution; (iv) intangible assets such as emission permits and emission reduction certificates; and (v) assets serving employees such as cafeterias, rest rooms, changing rooms, gyms, etc.

Secondly, providing information about social responsibility liabilities.

Social responsibility liabilities are the current obligations that an enterprise must carry out to pay arising amounts related to social responsibility and meet the criteria for recognition as liabilities. For each type of liability and social responsibility, it is necessary to briefly describe the nature (e.g., environmental damage, environmental restoration regulations, reasonably expected changes to existing laws or technology), time, and payment regulations of the liability and the approach used to measure environmental liabilities. In addition, businesses need to disclose potential social responsibility debt with content such as a brief description of the nature of the potential debt, estimating the financial effectiveness of potential debts, and identifying uncertain factors related to not recording potential debt and the company's ability to compensate.

Thirdly, providing information about income/incentives for socially responsible activities

Income related to social responsibility activities can arise from the sale of scrap and waste or income arising from insurance reimbursements for environmental, consumer and worker-related complaints. Businesses can also evaluate the increased profits from environmentally friendly products, saving materials used, improving work efficiency... During operations, businesses can receive incentives from the Government related to social responsibility activities such as grants or tax incentives. Income information from socially responsible activities helps information users evaluate the social responsibility of businesses in environmental protection, worker protection, and other social activities

Finally, providing information about social responsibility costs.

Social responsibility costs are amounts that reduce economic benefits in the accounting period and are implemented to manage impacts on the environment, employees, and the community... to serves corporate social responsibility requirements. Enterprises need to disclose content on social responsibility costs such as a list of costs for social responsibility activities, costs for employees, and costs incurred due to fines for non-compliance with environmental regulations or compensation to third parties due to environmental pollution...

Social responsibility reports

Corporate social responsibility reports present and regularly publish economic, environmental and social information about the business. This information can be reflected and integrated in the enterprise's financial reports, and reflected in separate reports in the annual report system and disseminated in the media such as management letters, videos, CD Rom, business website. Corporate social responsibility reports are called by another name, Sustainability Report. Sustainability report first appeared in the late 1980s, under the name Environmental Reporting in companies in the chemical industry of industrialized countries, whose activities seriously affect the ecological environment and public health. (Schaltegger, S.; Bennett, M. & Burritt, R.,2006).

4.2. Experience in implementing social responsibility accounting in some countries and Implications for Vietnam

4.2.1. Japan

Japan is a country with many of the world's leading businesses in corporate social responsibility (CSR) activities. Throughout the process of formation and development, Japanese businesses have paid attention to and implemented CSR in many different aspects, not only limited to issues related to the ecological environment and charity activities as before, but also covering many fields inside and outside the enterprise, domestic and international, material and immaterial, profit and non-profit. The framework of CSR activities of Japanese businesses shows the complexity, diversity, scale and influence of this activity. Because CSR has a wide scope and interacts with many stakeholders, to implement it effectively, all necessary conditions must be met, from the capacity of businesses to the general awareness of the whole society about CSR.

To have the concept and effectiveness in the process of implementing CSR in Japanese businesses today is a change in perception and method of implementation. In the early days, many Japanese businesses believed that the implementation of CSR had no connection with the business because the business was an organization carrying out business activities, so it could ensure the goals of "revenue and profit"; that is, being responsible to society. The next step in the perception of CSR is that "CSR là sự tuân thủ pháp luật và thực hiện tốt các quy định của pháp luật có liên quan". In addition to generating revenue and profits, businesses need to comply well with relevant regulations, not at all costs to achieve this goal.

Along with growth and development, a number of Japanese social enterprises were born to carry out special missions according to society's requirements; Since then, a stream of thought has argued that "implementing CSR is the task and role of social enterprises" rather than the task of normal business enterprises, until new problems arise on a global scale that pose new urgent needs. For example, globalization of business and the emergence of social problems, the emergence of business scandals, requirements for existence and stability in society, the severity of environmental pollution, unemployment and the limitations of governments, issues of rights of shareholders, customers, and partners, expansion of activities of non-governmental organizations (NGOs), the diversification of financial instruments, and the issue of information technology development. All of the above issues have left Japanese businesses in both perception and practice with questions that need to be answered; and the most satisfactory answer to meet these requirements is to implement social responsibility.

Also from that awareness, CSR is increasingly becoming the most important activity of Japanese businesses with the trend of standardizing behavior and professionalizing organization, having clear strategies, plans and action programs, and being considered, monitored, and evaluated using a system of specific criteria and widely recognized standards. The application of a quality management system on CSR (ISO 26000, GRI G4, EU...), international and Japanese codes of conduct, and the development and publication of annual reports on CSR show the role and level of professionalism and standardization of CSR in this country.

4.2.2. Australia

Global Reporting Initiative (GRI)'s Sustainability Reporting Guidelines, the Guide to Reporting Environmental Directives and the Guide to Reporting Social Indicators (both Australian initiatives) are reference documents for accounting and social responsibility accounting reporting. Australian businesses record social responsibility accounting according to the stakeholder approach.

Besides, social responsibility accounting adheres to the overall principle and principles, which are multidimensional, comprehensive, regular, comparative, verification and assurance, and disclosure. Social accounting reports of Australian businesses are mainly published in the form of sustainable development reports. More than 80% of sustainability reports in Australia are prepared in accordance with the guidelines of the global reporting initiative.

4.2.3. America

The social responsibility accounting system in the US is recognized by the sustainable balanced scorecard. Unlike the conventional balanced scorecard, which only includes four perspectives:

finance, internal processes, customers, and innovation and learning. The sustainable balanced scorecard in the US is supplemented with a fifth perspective, environment and society, linked to the remaining four perspectives.

During the process of recording social responsibility accounting, the costs incurred and the income of each of the above groups of subjects are recorded. Making a social responsibility report is done through the following steps:

Step 1: Planning the company's reporting process, including: Identify a list of sustainability topics that are potentially relevant and that senior decision makers in the company want to act on, and report on the basis of the company's business objectives and development context.

Step 2: Collect input from key stakeholders on the above topics. A list of sustainable development topics that stakeholders value is established. This is the basis for making recommendations on reported topics.

Step 3: Identify key areas for the report. These are areas that reflect the organization's significant economic, environmental, or social impact or fundamentally influence the assessments and decisions of stakeholders. It is linked to the company's development goals, meets the needs of stakeholders and impacts the economy, environment and society.

Step 4: Supervise the preparation of social responsibility accounting reports. In particular, record each type of revenue and cost incurred according to each criterion, and provide explanations about those sources of costs or revenue.

Step 5: Check and exchange. The necessary information for each item of data required to comply with the disclosure of information to the outside must ensure accuracy.

The report must be comprehensive and targeted to specific stakeholder groups. The preparation of social responsibility accounting reports requires the application of reporting principles, especially the principles of clarity, timeliness and balance. Accurate and specific accounting data accompanied by illustrative examples.

For production and business enterprises, environmental factors are often considered the most important issues and often receive the most attention in reports. Meanwhile, for service and financial companies, other issues such as human resources or community are invested more. Businesses express their desire to implement CSR in parallel with sustainable development, making efforts to communicate their ability to meet the needs of stakeholders and the overall impact of business activities on the environment. Performance indicators published in the sustainable development report include materials (total volume of raw materials used to produce and package the organization's products and services during the year and the percentage of materials recycled to produce the organization's products and services); energy (energy consumption, savings and initiatives); water (water supply and usage, savings and initiatives); compliance (number of fines and total fine).

4.2.4. Implications for Vietnam

Through studying the experiences of implementing social responsibility accounting in businesses of other countries, some contents can be suggested for Vietnam in applying social responsibility accounting, including:

Firstly, raising awareness of businesses. In fact, currently, no country requires businesses to implement social responsibility accounting. However, as the economy develops along with the increasingly strong globalization process, corporate social responsibility is increasingly emphasized. Businesses need to be encouraged to apply responsibility accounting and learn from each other to come up with a highly consistent way of implementing social responsibility accounting.

Secondly, the Government considers issuing documents to apply to social responsibility accounting such as the Sustainable Development Accounting Standards of the US Sustainable Development Accounting Standards Council, Sustainable development accounting guidelines of the British SIGMA project, and Australian Environmental Indicators Reporting Guide and Social Indicators Reporting Guide.

Thirdly, encouraging businesses to apply sustainable development reporting guidelines of the Global Reporting Initiative and report templates of the International Integrated Reporting Council.

Finally, using Trible bottom line tools to incorporate sustainable development goals into business strategies, and considering social and human outcomes and ecological environmental outcomes in close relationship and interaction with the financial results of enterprises.

5. CONCLUSION

For businesses to develop sustainably, applying social responsibility accounting is considered an important part of today's business accounting reports. This will help enhance the public image of businesses, effectively promote product consumption, and demonstrate businesses' responsibility to society. Through this, businesses also show concern for the community, customers and other relevant subjects. In the context of an increasingly deeply integrated economy, with the need to respect and comply with international law in competition, Vietnam needs to pay more attention to the issue of corporate social responsibility. On that basis, the study of international experience on applying social responsibility accounting in businesses needs to be further promoted to build an empirical foundation for Vietnamese businesses to implement social responsibility accounting in the near future.

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THE IMPACT OF FINANCIAL INCLUSION ON THE PROFITABILITY OF VIETNAMESE MSMES

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Abstract: Using the EFA, CFA, and SEM analysis methods with data from 50 Vietnamese MSMEs, this study explored the impact of the factors Financial intermediation, Financial Inclusion, and Access to Capital on the Profitability of Vietnamese MSMEs. The research findings indicate that Financial intermediation, Financial Inclusion, and Access to Capital have a significant impact on MSMEs' profitability. However, the study reveals that Financial Inclusion does not affect Financial intermediation and Access to Capital. The reasons for this result include the presence of systemic barriers, the creditworthiness of businesses, the priorities of financial institutions, and geographical disparities. The article emphasizes the importance of comprehensive finance and access to capital for MSMEs in Vietnam. While comprehensive finance can create favorable conditions, it does not always guarantee easy access to capital for these businesses. Systemic barriers, business credit factors, financial institution priorities, and local conditions can create disparities in capital access for MSMEs. The article provides recommendations for government and relevant agencies to improve this situation and create a more favorable environment for MSMEs.

Key words: Financial Inclusion, Financial intermediation MSMEs' profitability Access to Capital

1. INTRODUCTION

Financial inclusion plays a crucial role in the MSME sector, as it offers broad accessibility to financial services while eliminating barriers, as emphasized by Herispon (2017). Krishna (2016) asserts that financial inclusion not only strengthens the existing financial institutions but also extends the reach of faster and more extensive financial services. Fahmy *et al*. (2016) affirm that its impact on MSMEs is profound, as it aids in addressing the financial challenges they commonly face. Several earlier studies, including those conducted by Abdmoulah & Jelili (2013), Chauvet & Jacolin (2017), Lee *et al*. (2019), Khan (2011), and Morgan & Pontines (2014), have investigated the influence of financial inclusion on growth. The findings of Abdmoulah & Jelili (2013), Chauvet & Jacolin (2017), and Lee *et al*. (2019) consistently demonstrate that financial inclusion significantly and positively contributes to the growth and performance of companies. According to Khan (2011) and Morgan & Pontines (2014), it mitigates liquidity constraints and encourages investment, subsequently boosting output and employment opportunities. Effective implementation of financial inclusion measures has the potential to stimulate economic activities among MSMEs, as evidenced by the research of Egbetunde (2012), Martinez (2011), Mbotor & Uba (2013), Okafor (2012), Onaolapo (2015), and Yaron *et al*. (2013). However, recent research by Ejiofor *et al*. (2020) and Awoyemi *et al*. (2015) has explicitly concluded that financial inclusion exerts no discernible influence on the growth of MSMEs. This highlights the inconsistency in findings regarding the impact of financial inclusion on the performance of MSMEs. Conversely, some scholars have contended that financial inclusion does affect financial intermediation, and numerous studies have shown that financial intermediation does influence the performance of MSMEs. Prasad (2010) has argued that financial inclusion can enhance the efficiency of financial intermediation by increasing domestic savings and investment. Mishkin (2007) has also concluded

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that financial intermediation, facilitated by the expansion of bank branches and the entry of new financial service providers into the financial market, can lead to the provision of a diverse array of financial products and services tailored to the needs of MSMEs. Furthermore, Fafchamps & Schündeln (2013) have identified a significant relationship between financial intermediation and the growth of MSMEs. Therefore, it is plausible that financial inclusion can influence the performance of MSMEs through the mechanism of enhanced financial intermediation, although the direct role of financial intermediation itself in this context has not yet been thoroughly explored. Other researchers have also delved into the relationship between financial inclusion and improved access to capital. Okafor (2012) and Nurjannah (2017) have both provided evidence to support the notion that financial inclusion can expedite the flow of credit to MSMEs.

In a different vein, Donati (2016) conducted an examination of the impact of access to capital on the performance of MSMEs and arrived at the conclusion that MSMEs lacking access to affordable credit encounter difficulties in enhancing their performance and expanding their business operations. These findings collectively underscore the idea that financial inclusion can indeed augment MSMEs' access to capital, and this increased access, in turn, holds the potential to significantly influence the performance of MSMEs. Despite efforts, MSMEs continue to grapple with access to capital challenges, as highlighted by Beck *et al*. (2004). Banerjee & Duflo (2014) and Muhajir (2015) have empirically demonstrated the hurdles faced by MSMEs when seeking loans from formal financial institutions. These challenges often originate from various factors, such as geographical distance, social factors, and personal circumstances, which have the potential to evolve into significant barriers to financial access within the community, as discussed by Shankar (2013) and Cnaan *et al*. (2012). According to Rifai (2017), MSMEs frequently encounter difficulties in accessing capital from formal financial institutions because their business profiles may not align with conventional banking standards, categorizing them as "unbankable." The infusion of capital can greatly bolster the growth and output of MSMEs, enabling them to expand their operations and foster job creation, as noted by Sohilauw (2018), Haltiwanger (2013), and Yudaruddin (2020). Access to diverse financing sources plays a pivotal role in ensuring the survival and performance of companies, enabling them to secure adequate funds for crucial aspects such as working capital, investments in fixed assets, recruitment of skilled personnel, and expansion into new markets, as emphasized by GPFI (2013). Primus (2015) underscores the immense potential inherent in MSMEs, highlighting the imperative need for both capital support and guidance to facilitate the pursuit of growth opportunities in MSMEs' performance, as articulated by Ahmad & Arif (2015).

In Vietnam, micro and small-scale enterprises constitute the highest proportion of businesses. As of December 31, 2020, there were 478,601 micro-scale enterprises, accounting for 69.9% of the total number of businesses, an increase of 6.6% compared to the same period in 2019. There were 163,760 small-scale enterprises, making up 23.9%, which decreased by 8.7%. Additionally, there were 23,895 medium-scale enterprises, accounting for 3.5%, an increase of 4.9% compared to 2019.

The primary objective of this study is to investigate the impact of financial inclusion on the performance of MSMEs and to analyze the mediating roles played by both financial intermediation and access to capital. What sets this study apart from previous research is its innovative approach in addressing existing gaps in the literature by incorporating specific variables. Additionally, this study employs more sophisticated performance indicators compared to earlier investigations.

While prior studies, such as those conducted by Abdmoulah & Jelili (2013), Chauvet & Jacolin (2017), and Lee *et al.* (2019), have primarily relied on the sales growth indicator, this research extends the measurement framework by encompassing four distinct indicators: sales growth, profit growth, workforce expansion, and market share growth. This broader set of performance metrics provides a more comprehensive understanding of the impact of financial inclusion on MSMEs' overall performance, adding depth and nuance to the analysis.

2. LITERATURE REVIEW

MSMEs' profitability

Profitability is the ability to earn a profit for a business (Pandey, 1980). Profitability interprets the relationship between various factors. It is one of the most important metrics and objectives in corporate financial management (Malik, 2011). The goal of financial management is to maximize the wealth of the owners, and profitability is a crucial determinant of performance. Profitability is closely related to profit but has a key distinction: while profit is an absolute amount, profitability is a relative figure. To assess a business's profitability, various indicators of profit rates are commonly used because they express the relationship between profit and actual production costs, demonstrating the business acumen of entrepreneurs in utilizing those factors. According to Lesakova (2007), profit rate indicators are a measure of a company's financial health and how efficiently it manages its assets. There are two commonly used profitability ratios: Return on Assets (ROA) and Return on Equity (ROE). Many studies employ ROA to measure a business's profitability, such as the research conducted by Goddard et al. (2005), Malik (2011), Odusanya et al. (2018), and Yazdanfar (2013). Return on Assets (ROA) is an indicator that measures a business's profit generation relative to its own assets. The ROA metric reflects the efficiency of the organization and management of a company's production and business activities. The results of this indicator reveal how much profit is generated for every dollar of assets utilized in the production and business process. So, this indicator will show how effectively a business uses its assets to generate profits. Additionally, ROE is also a commonly used measure to assess a business's profitability (Alarussi & Alhaderi, 2018; Chander & Aggarwal, 2008). ROE reflects the ability to generate profits using shareholder equity during the business operations. Analyzing the profitability of shareholder equity clearly illustrates how much profit after-tax income a single unit of shareholder equity generates. Examining this indicator is of significant importance as it helps determine the business leaders' objective of either maximizing profit or maximizing scale.

Financial Inclusion

Financial inclusion represents an economic state wherein both individuals and businesses enjoy unhindered access to financial services, as highlighted by Amidžić *et al*. (2014). Financial inclusion serves as an intervention strategy designed to overcome market frictions that impede financial markets from reaching the poor or disadvantaged, as pointed out by Julie (2016). This strategic intervention strives to attract the unbanked population into the formal financial system, offering them the opportunity to access formal financial services, fostering a culture of savings, expanding access to credit, and introducing efficient payment mechanisms, as highlighted by Chakravarty & Pal (2013). To effectively promote financial inclusion, policymakers must create conducive opportunities that facilitate the adoption of innovative technologies, enact regulatory reforms, and invest in infrastructure improvements. These measures aim to reduce transaction costs and enable the swifter, more efficient, and convenient delivery of financial services, as articulated by Neaime & Gaysset (2018). However, it is important to note that the impact of financial inclusion may not necessarily be positive in all instances, as indicated by Mehrotra *et al.* (2015). The foundation of financial intermediation theory was laid by Goldsmith (1969), Shaw (1973), and McKinnon (1973). Financial intermediation constitutes a multifaceted process. It involves financial institutions accumulating deposits and providing vital loan-related information to support investments in the economy, as expounded by Gorton & Winton (2002). Additionally, it encompasses the acquisition of surplus funds from various economic units, including businesses, governmental institutions, and individual households, with the primary objective of supplying funds to those economic units facing deficits, as elucidated by Rivai (2007) and Mathews & Thompson (2008). According to Mishkin (2007), Kendall *et al.* (2010), Demirguc-kunt and Klapper (2012), financial intermediation, achieved through the expansion of bank branches and the entry of new financial service providers into the financial market, can facilitate the provision of a diverse array of financial products and services that cater to the economic needs of lower-income groups, thus enhancing access to financial services (Chandan & Mishra, 2010). Furthermore, Gurley & Shaw (1960) and Diamond & Dybvig (1983) asserted that intermediaries like banks play a pivotal role in enhancing economic efficiency. They achieve this by streamlining transactions, enabling the creation of diversified investment portfolios, mitigating household liquidity constraints, spreading risk over time, and ameliorating issues related to asymmetric information in financial markets.

Based on these findings, the researcher assumes that financial inclusion will allow MSMEs to access more financial services at affordable costs, so it can improve MSMEs' profitability. Thus, the first hypothesis that is proposed is:

H1: Financial inclusion positively and significantly influences MSMEs' profitability.

Financial intermediation

The foundation of financial intermediation theory was laid by Goldsmith (1969), Shaw (1973), and McKinnon (1973). Financial intermediation constitutes a multifaceted process. It involves financial institutions accumulating deposits and providing vital loan-related information to support investments in the economy, as expounded by Gorton and Winton (2002). Additionally, it encompasses the acquisition of surplus funds from various economic units, including businesses, governmental institutions, and individual households, with the primary objective of supplying funds to those economic units facing deficits, as elucidated by Rivai (2007) and Mathews & Thompson (2008).

According to Mishkin (2007), Kendall *et al.* (2010), and Demirguc-kunt & Klapper (2012), financial intermediation, achieved through the expansion of bank branches and the entry of new financial service providers into the financial market, can facilitate the provision of a diverse array of financial products and services that cater to the economic needs of lower-income groups, thus enhancing access to financial services (Chandan & Mishra, 2010). Furthermore, Gurley & Shaw (1960), Diamond & Dybvig (1983) assert that intermediaries like banks play a pivotal role in enhancing economic efficiency. They achieve this by streamlining transactions, enabling the creation of diversified investment portfolios, mitigating household liquidity constraints, spreading risk over time, and ameliorating issues related to asymmetric information in financial markets. Various scholars, including Chandan & Mishra (2010), Ergungor (2006), Kempson *et al.* (2004), DeGennaro (2005), Mathew & Thompson (2008), Rau (2004), Nissanke & Stein (2003), Stiglitz & Greenwald (2003), Menkhoff (2000), and Mishkin (1998) have conducted extensive research into the relationship between financial inclusion and financial intermediation in developing countries. Drawing from their collective findings, it is reasonable to posit that financial inclusion has the potential to bolster financial intermediation.

Hence, the second hypothesis posited is as follows:

H2: Financial inclusion has a positive and significant impact on financial intermediation.

Ongore & Kusa (2013) and Chibba (2009) have contended that banks, through their intermediary role, play a pivotal part in efficiently allocating resources mobilized for productive endeavors. Merton & Bodie (2004) have also demonstrated that financial intermediaries possess the capability to allocate scarce resources effectively, even in uncertain environments. Banks heavily rely on the information they acquire to assess and identify new clients, including individuals from low-income backgrounds, as noted by Rau (2004), Nissanke & Stein (2003), and Mishkin & Eakins (2009). However, it's essential to acknowledge that due to information asymmetry and the presence of high transactional costs, financial intermediaries tend to be cautious and may not extend loans to individuals or entities lacking sufficient collateral, as highlighted by Rosengard & Prasetyantoko (2011). Fafchamps & Schündeln's (2013) delved into the impact of local financial development on company performance, revealing a noteworthy correlation between the availability of local banks and the accelerated growth of SMEs. Similarly, Nurjannah's (2017) established that access to financial institutions has a discernible effect on the development of MSMEs. Okello's investigation (2017) scrutinized the nexus between access to finance and the growth of MSMEs, concluding that access to finance has a significant and favorable influence on the growth of these enterprises.

Consequently, it can be deduced that financial intermediation holds the potential to augment the performance of MSMEs. In light of these findings, the third hypothesis can be formulated as follows:

H3: Financial intermediation has a positive and significant impact on MSMEs' profitability.

Access to Capital

Capital stands as one of the cornerstone factors essential for conducting business operations. Adequate capital not only propels the growth of MSMEs but also elevates their production output, enabling these enterprises to expand their operations and foster job creation, as underscored by Sohilauw (2018), Haltiwanger (2013), and Yudaruddin (2020). According to Xuan (2020), investment capital is imperative for businesses to invest in their development, enhance competitiveness, bolster productivity, and improve efficiency. The significance of access to capital cannot be overstated, as it ranks among the most pivotal factors determining the growth and survival of MSMEs, as acknowledged by IFC (2010) and OECD (2006). Access to financial resources empowers MSMEs to make prudent investments in expanding their operations, adopting cutting-edge technologies to maintain competitiveness, fostering innovation, fortifying macroeconomic resilience, and contributing to GDP growth, as highlighted by Beck & Demirguc-Kunt (2006). Furthermore, access to capital and financial resources serves as indispensable tools for pursuing growth opportunities that enhance the performance of MSMEs, as articulated by Ahmad & Arif (2015). Fahmy *et al*. (2016) have asserted that financial inclusion can serve as a solution to surmount financial challenges. They've also noted a positive and significant relationship between banking access and the extension of credit to the MSME sector. The greater the presence of bank branch networks, the more credit is absorbed within this sector. Drawing upon the findings of previous studies, it is reasonable to hypothesize that financial inclusion and financial intermediation contribute to enhanced access to capital for MSMEs. Consequently, the researcher has formulated the following hypothesis:

Hypothesis: Financial inclusion and financial intermediation positively and significantly influence access to capital for MSMEs.

H4: Financial inclusion has a positive and significant impact on access to capital.

H5: Financial intermediation has a positive and significant impact on access to capital.

Kevane & Wydick (2001) have also asserted that extending credit to MSMEs plays a pivotal role in fostering economic growth by increasing business capitalization, generating job opportunities, and fostering long-term income growth. Increased credit availability correlates with a higher number of businesses being formed, leading to economic growth, as elucidated by Aghion & Bolton (1997). Conversely, Brown *et al.* (2005) and Chauvet & Ehrhart (2018) have found that access to external credit substantially augments sales growth and company expansion, a viewpoint reinforced by Banarjee (2014). Dimitrov & Tice (2006) have unveiled that credit constraints, whether stemming from poor creditworthiness or economic downturns, can lead to lower rates of sales growth for businesses. A study conducted by the World Bank (2013) has demonstrated that access to finance enhances company performance and growth by streamlining market entry, mitigating risks, stimulating innovation, and fostering entrepreneurial activity, particularly in developing countries. Furthermore, according to the author's perspective, access to capital influences a business's profitability. Access to capital can enable a business to invest in infrastructure, purchase new equipment, expand its operations, or develop new products and services. This can help increase sales volume and profitability. Capital can also be used for the day-to-day financial management of the business, including payments to suppliers, employee salaries, and other debts. Therefore, if there is good access to capital, it ensures stability in the business's operations. Additionally, businesses with access to capital can easily undertake research and development projects, improve their products or services, and maintain competitiveness in the market. Ultimately, capital can also help businesses cope with adverse situations, such as financial crises or economic downturns. Having readily available capital can mitigate risks and sustain business operations during challenging times.

Therefore, in this study, the author proposes to supplement the impact of financial access on the profitability of MSMEs. From this perspective, the hypothesis is as follows:

H6: Access to finance positively and significantly influences MSMEs' *profitability***.**

3. RESEARCH METHOD

The research was conducted with MSMEs in Lao Cai, Bac Giang and Thai Nguyen province. Data was collected using a simple random sampling method, and questionnaires were distributed via Google Forms. The questionnaire was designed using the Likert scale 5 levels. The software used in this research includes SPSS (for EFA analysis) and AMOS (for CFA and SEM analysis). The variables in the model are encoded as shown in the table below:

Variable	Definition	Indicator	Item	
Financial Inclusion (FI)	Every endeavor aims to enhance the accessibility, availability, and advantages of the formal financial system for every participant in the economy (Amidžić et al., 2014, Global Financial Development Report, 2014, Hannig & Jansen, 2010, Sarma, 2012, Agrawal, 2008)	Benefits for well-being (FI1)	FI11	The financial services offered by banks/cooperatives increase the need for financing
			FI12	The financial services offered by banks/cooperatives increase access to financial services
			FI13	The financial services offered by banks/cooperatives add to the financing of employee capacity building
		Access to financial financing (FI2)	FI21	Financial services/ products provided by banks/ cooperatives are appropriate
			F22	Financial services/ products provided by banks/ cooperatives are secure
			FI23	Financial services/ products provided by banks/ cooperatives are available
		Quality of financial services (FI3)	FI31	The initial account opening fee charged by the banks/ cooperatives is affordable
			FI32	The account maintenance fees and service charges are affordable
			FI33	Chi phí di chuyển đến các điểm giao dịch của ngân hàng phù hợp
Financial intermediation (FM)	A process that establishes a connection between those who lend and those who borrow (Gorton & Winton, 2002, Rivai, 2007; Mathews & Thompson, 2008).	Market penetration (FM1)	FM11	Banks/cooperatives have the idea of increasing customer satisfaction
			FM12	Banks/cooperatives have the idea of increasing customer satisfaction
			FM13	Banks/cooperatives are trying to increase the frequency and volume of services
			FM14	Banks/cooperatives try to have product and price advantages over competitors
			FM15	Banks/cooperatives collaborate with communities and MSMEs organizations
		Infrastructure (FM2)	FM21	Banks/cooperatives have a clean and comfortable lounge area
			FM22	Banks/cooperatives have a well-maintained physical infrastructure
			FM23	The location of the banks/cooperatives is easy to reach
		Service quality (FM3)	FM31	Banks/cooperatives provide services appropriately and accurately
			FM32	Banks/cooperatives provide services appropriately and accurately
			FM33	Banks/cooperatives employees have good knowledge to answer customer questions
			FM35	Banks/cooperatives ensure the security of customer deposits
			FM35	Banks/cooperatives employees always listen to customer complaints and convey them to management

Access to capital (AC)	MSMEs do not perceive any hindrances associated with administrative expenses or procedures in capital provider institutions (Beck & Demirguc-Kunt, 2006, Ahmad & Arif, 2015, Ramadhan, 2018; Lusimbo & Muturi, 2016)	Formal credit procedures (AC1)	AC11	Banks/cooperatives employees always listen to customer complaints and convey them to management
			AC12	Banks/cooperatives employees always listen to customer complaints and convey them to management
			AC14	The loan amount received meets the companys credit needs
			AC14	The company find it easy to access credit from banks/cooperatives
		MSMEs costs in accessing capital (AC2)	AC21	The interest rates charged by banks/cooperatives are usually lower than those of other financial institutions
			AC22	The interest rates charged by banks/cooperatives are usually lower than those of other financial institutions
			AC23	The company believes that the interest rates charged by banks/cooperatives are reasonable
MSMEs' profitability (EP)	Profitability is the ability of a business to earn a profit, indicating the financial health of the business and how it can effectively manage its assets (Pandey, 1980, Malik, 2011, Lesakova, 2007, Goddard et al., 2005, Malik, 2011, Odusanya et al., 2018, Yazdanfar, 2013, Alarussi & Alhaderi, 2018; Chander & Aggarwal, 2008).	Profitability	EP1	The company anticipates an increase in business sales growth
			EP2	The Return on Assets (ROA) ratio increases
			EP3	The Return on Equity (ROE) ratio increases.

The research model of this study is presented in Figure 1:

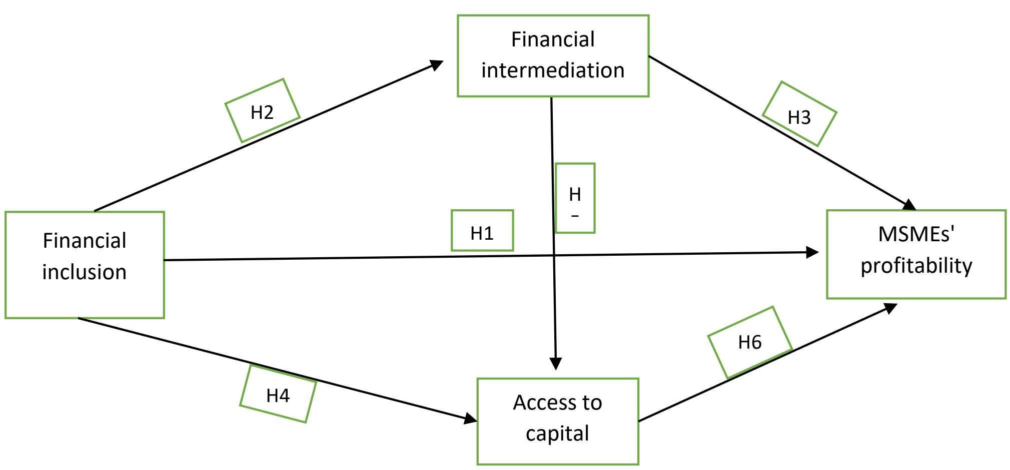

Figure 1. Research Model

4. RESEARCH RESULTS

To assess the appropriateness of the scale in the research model, the author conducted a reliability test for the scale. The results obtained are as follows:

Table 1. Scale Reliability Test

Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
AC21	0.846	0.955	0.947
AC22	0.904	0.910	
AC23	0.916	0.901	
EP1	0.803	0.886	0.91
EP2	0.815	0.876	
EP3	0.843	0.853	
FI23	0.778	0.923	0.927
FI24	0.791	0.918	
FI22	0.878	0.889	
FI21	0.876	0.890	
FI31	0.684	0.753	0.823
FI32	0.653	0.782	
FI33	0.702	0.734	
FM21	0.873	0.926	0.944
FM22	0.893	0.911	
FM23	0.883	0.918	
FM31	0.679	0.868	0.87
FM32	0.800	0.819	
FM33	0.705	0.856	
FM34	0.789	0.830	
AC11	0.838	0.833	0.892
AC12	0.762	0.862	
AC13	0.705	0.886	
AC14	0.759	0.864	
FM11	0.742	0.807	0.855
FM12	0.637	0.835	
FM13	0.695	0.819	
FM14	0.622	0.837	
FM15	0.658	0.828	
FI11	0.720	0.883	0.883
FI12	0.858	0.758	
FI13	0.746	0.857	

Based on the results in Table 1, all factor groups influencing profitability have Cronbach's Alpha coefficients that meet the requirements, with a standard Cronbach's Alpha not less than 0.6. However, variable EP4 has Cronbach's Alpha If Item Deleted of 0.955, which is lower than the corresponding Cronbach's Alpha of 0.91. Additionally, the intercorrelation coefficient of these variables is less than 0.3, indicating that these variables do not ensure reliability. Therefore, the author removed these variables from the study. After removing the unreliable scales, the measurement components of the scale were applied to the study sample for further EFA analysis.

The research employs Principal Components analysis with Varimax rotation in the exploratory factor analysis to determine the number of factors in a set of questions representing the factors under investigation. The total extracted variance is >=50%, and the Kaiser-Meyer-Olkin (KMO) measure >=0.5, while the Bartlett's test is statistically significant (Sig<0.05) (Gerbing & Anderson, 1988). Additionally, the factor loading of observed variables is >=0.5 (Hair *et al.*, 1998). The results of the EFA analysis are as Table 2 and Appendix 1:

Table 2. Exploratory Factor Analysis (EFA)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.828
Bartlett's Test of Sphericity	Approx. Chi-Square	7032.953
	df	496
	Sig.	0.000

After rotation and removing variables with factor loadings less than 0.5, the factor rotation matrix is obtained in Appendix 2.

After conducting the CFA following the EFA analysis, the results in Table 3 indicate that the CFA model fits the data well. Specifically, all fit indices meet the criteria: The model has 398 degrees of freedom, the chi-square statistic is 551.355, Chi-square/df = 1.385 (< 3); CFI = 0.845 (≥ 0.8); RMSEA = 0.037 (≤ 0.08); P-close = 0.000 (> 0.05), TLI = 0.818 (≥ 0.8) according to Hair et al. (2010) and Hu & Bentler (1999). Only the GFI index with a value of 0.877 falls below the 0.9 threshold, but according to the perspective of Baumgartner and Homburg (1995) and Doll, Xia, and Torkzadeh (1994), a minimum GFI value of 0.8 is still acceptable.

Table 3. Fit Indices of the Model after CFA Analysis

Indices	Value calculated from the model	Required value
Chi-square/df	1.385	≤ 3
CFI	0.845	≥ 0.8
RMSEA	0.037	< 0.08
GFI	0.877	≥ 0.8
Pclose	0.999	>0.05
TLI	0.903	≥ 0.9

The method of analyzing a second-order linear structural model was used to test the research model, resulting in the findings shown in the figure.

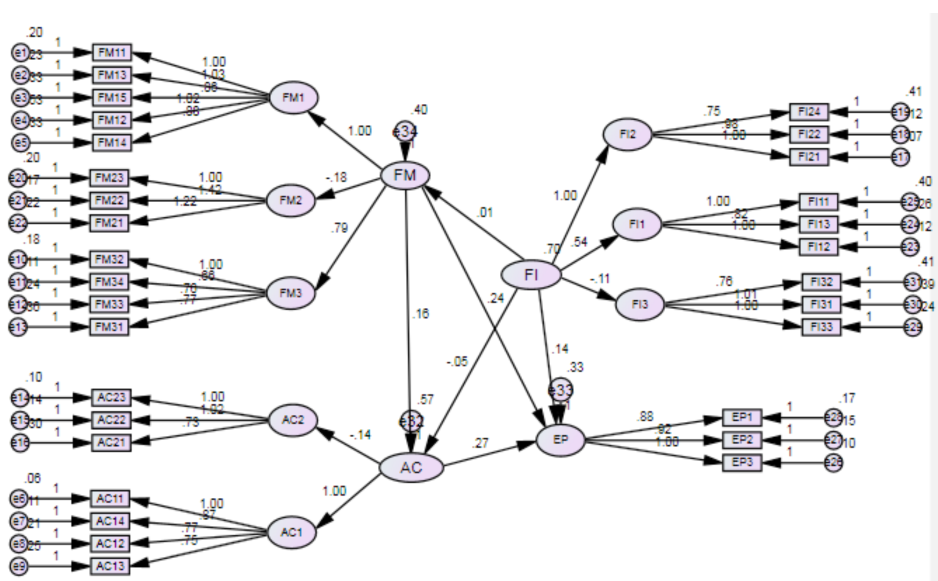

Figure 3. SEM Model Results at level 2

			Estimate	Standardized Coefficient	S.E.	C.R.	P
FM	<---	FI	0.012		0.056	0.211	0.833
AC	<---	FM	0.156		0.081	1.936	0.053
AC	<---	FI	-0.055		0.062	-0.885	0.376
EP	<---	FM	0.239	0.236	0.069	3.443	***
EP	<---	FI	0.142	0.185	0.054	2.653	0.008
EP	<---	AC	0.271	0.323	0.055	4.951	***

5. DISCUSSION

According to the research model results, FM, FI, and AC have an impact on EP, and FM has an impact on AC. Hypotheses H1, H3, H5, and H6 are accepted and are consistent with previous research findings. Conversely, FI does not have an impact on FM, and FI does not affect AC, leading to the rejection of hypotheses H2 and H4. The finding that FI does not influence FM contradicts the results of previous research by Chandan & Mishra (2010), Ergungor (2006), Kempson et al. (2004), DeGennaro (2005), Mathew & Thompson (2008), Rau (2004), Nissanke & Stein (2003), Stiglitz & Greenwald (2003), Menkhoff (2000), and Mishkin (1998).

Financial inclusion and financial intermediation are two interconnected concepts within the broader field of finance, but they don't always directly impact each other. Let's break down these concepts and explore why they may not always have a direct impact on each other.

Financial inclusion primarily focuses on expanding access to financial services to underserved populations. While this can indirectly contribute to financial intermediation by increasing the pool of potential borrowers and lenders, the primary objective of financial inclusion is social and economic inclusion, not necessarily enhancing the efficiency of financial intermediation. Financial intermediation is influenced by various regulatory and market factors, including interest rates, banking regulations, credit risk, and investor preferences. The existence of financial inclusion policies or initiatives alone may not alter these factors significantly. Besides, access to financial services doesn't guarantee that individuals or businesses will actively engage in financial intermediation activities. The willingness and ability of people and businesses to borrow or invest in the formal financial sector depend on various factors, including financial literacy, trust in the system, and economic conditions. And in some cases, financial inclusion efforts may target regions or communities where the financial sector is less developed. In such situations, financial intermediation may take time to evolve as the market infrastructure and financial literacy levels catch up with the goal of inclusion.

In summary, while financial inclusion is an important objective in its own right, it may not always directly impact financial intermediation because these two concepts have different goals and are influenced by a wide range of factors. However, an inclusive financial ecosystem can create opportunities for financial intermediaries to expand their customer base and improve financial intermediation over the long term.

FI does not affect AC. This result contradicts the findings of FC (2010) and OECD (2006), Beck & Demirguc-Kunt (2006), Ahmad & Arif (2015), Fahmy *et al.* (2016). To provide a clearer explanation for the research findings, the author conducted interviews with some business leaders to understand the reasons behind the results. From the interview results, the following explanations can be provided:

While comprehensive financial inclusion may create favorable conditions for mainstream financial institutions to provide financial products and services, systemic barriers may still exist. Large banks and financial institutions often have strict processes and requirements when lending to small and medium-sized enterprises (MSMEs). This can make it difficult for small businesses to access capital.

MSMEs may not have a high enough creditworthiness to meet the credit requirements of mainstream financial institutions. Banks often require good credit guarantees and credit histories from businesses before granting loans. If businesses do not meet these standards, they may have difficulty accessing capital.

Financial institutions may prioritize providing financial services to larger-scale customers because they have the potential for larger profits. Very small, small, and medium-sized enterprises may not be their priority. Therefore, the amount disbursed to MSMEs may not meet the businesses' requirements and expectations, or the interest rates may be higher compared to larger businesses, making them less flexible.

Comprehensive financial inclusion may have a more positive impact on businesses in developed areas with a better business environment. Meanwhile, in rural or less developed areas, businesses may face more difficulties in accessing capital.

Therefore, it can be seen that although comprehensive financial inclusion can improve the access to capital for some businesses, it does not always guarantee that very small, small, and medium-sized enterprises will be able to access capital easily. Systemic barriers, business credit factors, financial institution priorities, and local factors can create disparities in access to capital for these businesses.

Recommendations to the Government: To harness the benefits of comprehensive financial inclusion while addressing the issue of its lack of impact on the financial market and access to capital for MSMEs, the government and relevant agencies can create favorable conditions for MSMEs by improving the business environment, reducing inappropriate regulations, and fostering the development of small businesses. Encouraging MSMEs to engage in innovative business activities and develop new products or services can help them generate profits and improve their profitability. The government may consider implementing specific financial policies for MSMEs, including subsidy programs, guarantee programs, or interest rate reduction programs, to create more favorable conditions for accessing capital.

Solutions for MSMEs:

To optimize profitability (ROA, ROE, and revenue growth) through interaction with the financial market:

- Ensure that the business does not rely solely on a single source of funding. Actively search for and build relationships with various sources of funding, such as banks, private investors, and government-sponsored financing programs (if available).

- Develop a financial risk management strategy to ensure financial stability. This may include careful debt management, the use of financial insurance tools, and close monitoring of potential financial risks.

- Improve the efficiency of financial management by optimizing capital structure, managing cash flows effectively, and optimizing the use of both foreign and domestic financing.

- Build long-term relationships with banks and financial institutions, and meet with them regularly to build trust and promote financing opportunities.

- Establish key performance indicators and monitoring systems to assess financial performance and measure the impact of financial management strategies. Be flexible in adjusting business and financial strategies based on changes in the financial market and access to capital. Develop contingency plans to cope with unexpected financial difficulties and ensure the sustainability of the business.

These strategies can help MSMEs enhance their financial performance and navigate the challenges of accessing capital in a comprehensive financial environment.

To optimize access to capital for MSMEs through interaction with the financial market, consider the following solutions:

- Build and maintain long-term relationships with banks and financial institutions. Meet with them regularly to discuss financing needs and establish trust in the relationship.

- Avoid relying too heavily on a single source of funding. Explore various sources of funding, such as borrowing from banks, raising capital from private investors, participating in government-sponsored financing programs, or issuing bonds.

- Implement effective financial management to improve profitability and debt repayment capabilities. This includes optimizing capital structure, managing cash flow, and minimizing financial risks.

- Develop a detailed and specific business plan to convince investors and banks of the profit potential of the business. Consider opportunities for collaboration with business partners or other organizations to share financial risks or jointly raise capital for larger projects.

- Train staff and management in financial literacy so that they understand the lending process, financial management, and how to cope with challenging financial situations.

- Be flexible in adjusting your business and financial strategies to reflect changes in the financial market.

These management solutions can help small and medium-sized enterprises optimize their access to capital through proactive interaction with the financial market, creating more favorable conditions for securing financing.

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STRENGTHEN STATE MANAGEMENT OF VIETNAM'S MONEY MARKET

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Abstract: *In this article, the author systematizes the theoretical basis of the money market and the State's management of the money market. At the same time, through studying actual data for the period 2018 - 2022 to analyze and evaluate in detail the current state of State management of the Vietnamese currency market, clearly pointing out successes, limitations, and causes. core. From there, we propose a few solutions to strengthen state management of Vietnam's currency market until 2030.*

Keywords*: Money market, state management, state management of the money market.*

1. INTRODUCTION

1.1. Reasons for choosing research topic:

The money market is an important part of the financial market, playing an important role in effectively allocating financial resources, but the money market always contains inherent shortcomings in it. ownership and high risk. Specifically expressed in the following issues: information asymmetry; high transaction costs; systemic uncertainties; risks related to financial liberalization and financial - monetary crisis.

In recent years, the currency market in Vietnam has made remarkable developments in both breadth and depth, especially the application of information technology, contributing to improving efficiency and increasing convenience, convenient, fast, accurate and secure. However, before the covid -19 pandemic, the Vietnamese and world economies faced many difficulties and declined sharply in many aspects, requiring effective policies to restore the economy...

In the context of digital transformation following the 4.0 Industrial Revolution with rapid changes in market constituents, requirements have been placed on state management of monetary market development and banking activities. Banks in Vietnam must be regularly cared for and innovated in terms of content and management methods with the goal of ensuring the full, healthy and modern development of Vietnam's financial market.

1.2. Overview of related research works:

There have been many research projects on state management of financial markets, state management of monetary markets in different specific periods such as research by: John Hawkins, Philip Turner, BIS paper 1999, "Banking restructuring in practice". WB Group, 2020, "Capital market development: A primer for remaining". Andrew Sheng, WB Institute for Economic Development "Issues and techniques in restructuring the banking system" Bui Van Thach (2022) State management

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of Vietnam's financial market in the context of the first industrial revolution Wednesday, State level project - Party Central Office. Scientific research project "Restructuring Vietnam's stock market" by Nguyen Thanh Long and colleagues at the State Securities Commission (2013)

2. RESEARCH CONTENT:

2.1. Theoretical basis:

The money market is where short-term capital transactions take place between capital supply and demand. In particular, short-term capital is determined with a maturity of less than 1 year and has some characteristics such as: low risk level, high liquidity.

Some specific activities taking place in the currency market include: Bank loans, securities trading, certificates of deposit... This is where all of us (individuals, organizations) can Perform buy and sell transactions.

The structure of the money market includes 5 small markets: (i) Deposit market; (ii) Credit market; (iii) Open market; (iv) Interbank market; (v) Treasury bond market.

The currency market can be classified in two ways:

Based on organization: Primary money market (where bonds are issued, where capital is mobilized for bond issuers) and secondary money market (where bonds are bought and sold). operating in the primary market).

Based on operating tools: Short-term loan market (Transactions between organizations under the supervision of the central bank) and short-term bond market and other valuable papers (t-bills, promissory notes, etc.) vouchers, contracts...)

Entities participating in the currency market include: (i) Government, (ii) Central Bank, (iii) Commercial banks or financial institutions, (iv) Enterprises/economic organizations

State management is the exercise of state power by state agencies to establish a stable order and develop society according to the goals pursued by the ruling class.

State management is understood in a broad sense to include all activities of the entire state apparatus from the legislature, executive to judiciary operating as a unified entity. In the narrow sense, it is the guidance on law enforcement, administration, and administrative management performed by the executive agency guaranteed by the coercive power of the State.

The state management agency for the currency market is the Central Bank. The central bank performs the function of state management of credit currency, banking, and foreign exchange. With the basic task of implementing national monetary policy to stabilize the currency, manage and control the activities of commercial banks and credit institutions in accordance with the provisions of law, in order to develop Developing a banking system as well as financial intermediaries that are the largest distribution centers of capital flows in the economy, with enough competitiveness in integration conditions, the Central Bank is considered a key factor. The most important factor ensuring the sustainable development of the currency market.

The goal of State management of the currency market is to stabilize the currency; Manage and control the activities of commercial banks and credit institutions in accordance with the provisions of law, in order to develop a system of commercial banks as well as financial intermediaries that are the largest distribution centers of capital flows in the economy. economic, with enough competitiveness in integration conditions.

Contents of the State's management of the currency market: (1) Building and perfecting the legal and institutional system to ensure a developed commodity economy and a stable currency with controllable inflation controllable; (2) Organize the management and supervision of monetary market activities; (3) Support for the development of the currency market; (4) Command the entire banking system and ensure banks avoid systemic breakdown.

The state manages the currency market both directly through administrative law and indirectly through market mechanisms. The Central Bank is the agency representing the State that manages the monetary market mainly through monetary policies. These include: money supply policy, credit policy, foreign exchange policy... To ensure good implementation of policies, central banks of countries often use monetary policy tools, including monetary policy tools. Direct and indirect management such as: Credit limit, selective credit control, legal cash supply, mandatory reserves, open market operations, rediscount policy...

In most countries, the Central Bank is the sole state agency responsible for managing the money market. The Central Bank is an important and special management agency of currency. In the world, each market has its own types of tools and different levels of central bank participation, but the currency market is all under the management of the central bank. The Central Bank regularly introduces monetary policies and institutions to stabilize the currency, stabilize the value of the currency and ensure the currency market operates dynamically, effectively and in an organized manner. The Central Bank manages market activities by intervening in the money creation process of credit institutions and changing market interest rates by influencing money supply and demand through direct management tools and Indirect.

In addition, the Central Bank also acts as an intermediary broker in the currency market, helping intermediary banks in clearing debts with each other without having to move money by setting up exchange rooms. at the headquarters of the Central Bank. This role benefits the Central Bank and saves a lot of costs for banks in the market.

2.2. Situation in Vietnam

2.2.1. Status of state management of Vietnam's currency market

Based on the application platform of the 4.0 Industrial Revolution such as Internet of Things (IoT), Big Data, artificial intelligence (AI)... many new financial products have appeared on the financial market such as: Banks Digital currency, digital currency, fintech, peer-to-peer lending (P2P Lending)... The change in subjects of management in the financial market has made state management of the financial market complicated. more, requiring management agencies to change market management methods to adapt to new conditions. It is possible to draw some basic characteristics of state management of information technology and banking activities in the context of the 4.0 industrial revolution. These are: (i) Management content gradually changes, shifting from compliance monitoring to risk monitoring; (ii) Management methods have changed, from direct on-site monitoring to gradually shifting to remote monitoring based on a digital platform; (iii) Manage requirements for modern information technology infrastructure and high-quality technological and financial human resources; (iv) Management is carried out in a complex and volatile environment.

Recognizing the importance and strong impact of Industrial Revolution 4.0, the Party, Government and State Bank have proactively implemented many solutions and actions to improve the ability of subjects in the market to access Industrial Revolution 4.0. currency market.

In Decision 749/QD-TTg dated June 3, 2020 of the Prime Minister approving the Program "National digital transformation to 2005, orientation to 2030", banks and monetary markets are defined. This is an area that has a social impact, is related to people every day, changes awareness the fastest, brings efficiency, and helps save costs, so digital transformation should be prioritized first. Since then, the State Bank has been assigned the task of digital transformation in the banking sector towards providing digital banking services, building a banking and financial service ecosystem to promote national financial universalization; Issue mechanisms and policies so that businesses implementing digital transformation can access credit conveniently; Build and develop e-Government, moving towards digital Government.

The State Bank of Vietnam has researched and developed mechanisms, policies, strategies and projects to promote innovation and technology application of the 4.0 Industrial Revolution in banking operations, specifically:

In recent times, the State Bank has researched and developed regulations to prevent risks, fraud, and abuse of payment services and payment intermediaries for illegal activities; Issue a document directing banks and payment intermediaries to strengthen risk management measures for opening and using payment accounts, strengthen prevention measures, and minimize the risk of abuse. e-Wallet service for black credit activities; Establishing delegations to inspect and inspect a number of banks and payment intermediaries. To complete the legal framework for digital transformation in banking activities in the context of Industry 4.0, the State Bank of Vietnam has: (i) issued a Research Plan to prepare a proposal to develop a Law on Payment Systems (Decision No. 190 /QD-NHNN dated February 10, 2023); (ii) complete and submit to the Government a new Decree on non-cash payments and a Decree on a controlled testing mechanism for financial technology (Fintech) activities in the banking sector; (iii) develop a draft Strategy for developing payment systems to 2025, with a vision to 2030.

The State Bank of Vietnam continues to direct units throughout the industry to actively implement the Plan for implementing the Non-cash payment development project for the period 2021-2025 and the Plan for digital transformation of the banking industry until 2025, determining direction for 2030.

On March 2, 2023, the State Bank of Vietnam issued the 2023 Plan of the Banking Industry implementing Decision No. 06/QD-TTg dated January 6, 2022 of the Prime Minister approving the Data Application Development Project. on population, electronic identification and authentication to serve the national digital transformation in the period 2022 - 2025, with a vision to 2030. Accordingly, the Plan includes the following main contents: building and perfecting the institutional; Connecting the national population database, electronic identification and authentication system to serve public services and operations of the State Bank; connect and exploit the national database on population related to credit information operations, on civil servants in state agencies...; Application to authenticate people through chip-embedded citizen identification cards and electronic identification accounts when providing banking services...

Management through monitoring, supervising and operating the monetary market: Proactive, flexible and prudent management of monetary policy tools contributes to controlling inflation, stabilizing the macroeconomy, effectively supporting the economy. economic response to the adverse impacts of the Covid-19 pandemic. The management of the monetary market by the State

Bank in recent times has been demonstrated in operating monetary policy tools such as: Operating open market operations (OMO); Managing interest rates; Managing the mandatory reserve ratio; Administer the refinancing facility; Managing foreign currency market exchange rates.

Closely coordinate monetary policy with fiscal policy and other policies: The finance industry operates flexible fiscal policy, well managing revenues, especially revenues from e-commerce business activities death, anti-transfer pricing, tax evasion from real estate. Promoting the application and analysis of data from electronic invoices to properly manage budget revenues is also a key task of the financial industry in the near future. In parallel with that, continue to implement economical and effective spending policies; Strengthen strict control of expenses, limit transfer of expenses; proactively review and arrange expenses in order of priority; Review and balance resources for social security policies, supporting people to stabilize after the COVID-19 pandemic; Promote disbursement of public investment capital, create motivation for recovery and promote economic growth, create conditions to promote the demand for bank credit capital to participate in projects due to the loan needs of winning bidders. project construction, as well as businesses providing materials and raw materials for project implementation to facilitate capital flow from credit institutions.

The State Bank of Vietnam has developed projects to restructure the system of credit institutions associated with handling bad debts in stages (currently Project 689). The State Bank of Vietnam has directed credit institutions to actively improve asset quality, control credit quality, and limit new bad debts; self-handling bad debts by urging customers to repay their debts; sell or trade the security assets of the debt; selling debt according to market mechanisms; Use risk provisions...

Promote the application of IT to inspection and supervision of activities of members of the monetary market, especially commercial banks, to ensure system safety: Project "Building an information system to support operations "Remote Monitoring" has officially been put into operation since 2021, meeting the requirements of storing, updating, and developing a centralized database to serve the licensing, inspection, and supervision of the system of credit institutions.

Building digital technology infrastructure, modern banking services, ensuring safety and security in banking operations and the monetary market: The State Bank has directed construction and operation (from July/ 2020) Electronic clearing system serving retail transactions (ACH) with real-time payment capabilities, 24/7 continuous operation, multi-channel transaction processing capable of integrating and connecting with other industries and fields to provide banking products and services on digital platforms. The interbank electronic payment system has been innovated in terms of model and increased new payment and settlement services; Financial switching and electronic clearing systems continue to grow strongly; Payment via mobile phone, Internet is developing strongly...

In the first quarter of 2023, the State Bank will continue to flexibly and synchronously operate monetary policy tools. Specifically:

The State Bank of Vietnam continues to closely monitor developments in the monetary market and the available capital situation of credit institutions to stabilize the monetary market and meet the payment and settlement needs of credit institutions. Accordingly, the State Bank maintains daily valuable paper purchase sessions to support capital needs for credit institutions, contributing to stabilizing the monetary market.

In addition, the State Bank offers and sells State Bank bills to coordinate synchronously in operating monetary policy tools.

From the beginning of the year to March 15, 2023, the State Bank of Vietnam kept operating interest rates unchanged to stabilize market interest rates in the context of world interest rates continuing to increase and domestic inflation pressure increasing. Encourage credit institutions to reduce costs to stabilize lending interest rates to support businesses in recovering and developing production and business; Accordingly, commercial banks have reduced deposit interest rates from 0.2 - 0.5%/year for 6 to 12 month term deposits from March 6, 2023.

The period 2018 - 2020 was strongly impacted by the 4.0 Industrial Revolution, the world economy experienced complex fluctuations, and the Covid-19 pandemic occurred. Protectionism escalates, leading to fierce tensions and trade divisions between major countries (US - China, Korea - Japan, Australia - China, US - EU), negatively impacting confidence. news, trade, and investment, hindering the fragile recovery of the global economy; The consequences became even more serious when the Covid-19 pandemic broke out and spread worldwide since the beginning of 2020, causing a deep recession for the global economy - 4.4% (according to IMF, October 2020). The international financial and monetary market is full of instability, the monetary policies of major countries have reversed from "normalization", increasing interest rates to sharply reducing interest rates and easing in an "unprecedented" way. Capital flows into emerging and developing markets fluctuate complicatedly due to investors' fear of risk and in the context of many countries' domestic currencies depreciating against the USD. During this period, the State Bank of Vietnam has operated very flexible monetary market policies, suitable for each stage. In order to ensure that the Monetary Market is safe, healthy and transparent in information under the conditions of Industrial Revolution 4.0, the State Bank of Vietnam always monitors, supervises and operates the Monetary Market with tools. , policies in accordance with Industry 4.0 and set goals.

2.2.2. Assessing the current state of State management of Vietnam's currency market

The impact of the 4.0 Industrial Revolution has significantly changed the State Bank of Vietnam's management method for the currency market in recent years. However, with flexibility and quick adaptation, the State Bank of Vietnam has had a positive impact on the currency market, efficiency shown in the following aspects:

Achievements: (1) Institutional improvement continues to be focused, creating a full legal corridor, ensuring the safe operation of the banking system and monetary market, promoting non-cash payments face and digital transformation in banking operations; (2) the domestic currency market develops quite stably, average inflation is stably controlled at less than 4%/year (in line with the annual goals set by the National Assembly and the Government); (3) the foreign currency market and gold market are effectively managed and operate stably, contributing to converting capital sources into production and business activities; (4) interest rates are stable and tend to decrease; (5) credit growth in the period 2016 - 2021 is consistent with the economy's absorption rate, associated with improving credit quality; (6) has managed well and improved the capacity of market members, especially the commercial banking system; (7) IT infrastructure based on digital technology serving transactions on the currency market has basically been gradually formed and has made great progress; (8) payment activities in the economy take place safely, effectively and smoothly, non-cash payment indicators grow strongly; (9) revenue from service activities grew well, with the main reason being that people and businesses tend to use more digital banking services.

Limitations: (1) the system of legal documents for the operation of the currency market is not synchronized and there are still many shortcomings. There are still many legal gaps in the policy development process of the State Bank of Vietnam in Industrial Revolution 4.0; (2) commodities traded on the currency market are still quite monotonous; (3) monetary market operating tools are outdated and heavily administrative; (4) market participants lack diversity. The new members participating in the Vietnamese currency market are mainly commercial banks whose main purpose is to ensure liquidity, not currency trading; (5) The State Bank of Vietnam has not established a proactive interest rate control mechanism in accordance with international practices; (6) the implementation of Basel II application at some commercial banks is still limited, requiring banks to improve their financial capacity, risk management capacity, governance and operating mechanisms; (7) restructuring state-owned commercial banks faces difficulties in improving financial capacity through increasing charter capital while maintaining their role as a key force. in terms of scale, market share, and ability to regulate the market.

Causes of the limitations: (1) Vietnam's economy develops at a low level, growth is not sustainable, and is in the process of transition, so there are always potential risks that are difficult to predict; (2) the excessive "blooming" of the number of banks and other financial institutions in a narrow market; (3) the competitiveness of commercial banks is still weak; (4) the connection between parts of the currency market and between the currency market and the capital market is still lacking, causing many operating policies to be ineffective when implemented; (5) lack of early warning system and reliable information collection.

3. PROPOSE SOLUTIONS

To strengthen State management of the money market in current conditions in Vietnam, it is necessary to implement the following system of solutions:

The first. Completing the legal framework of the currency market: Continue to improve the legal framework of the currency market in a direction consistent with Vietnam's financial and monetary strategy until 2030 and major policies of the Party and State. on policies to proactively participate in the 4.0 Industrial Revolution

Currently, the legal environment for Vietnam's monetary activities has been fundamentally formed, but to meet development requirements in the context of Industrial Revolution 4.0 and international integration, the legal framework for the money market Currency is still lacking and not synchronized. Therefore, it is necessary to take measures to improve the legal system related to the operations of commercial banks and the money market in a way that is consistent with Vietnam's financial and monetary strategy until 2030 (according to Decision No. Decision No. 368/QD-TTg, dated March 21, 2022 of the Prime Minister) and the Party and State's policy on proactively participating in the 4.0 Industrial Revolution according to Resolution No. 52- NQ/TW September 27 2014 of the Politburo and Resolution No. 50/NQ-CP dated April 17, 2020 of the Government). It should focus on:

- Soon promulgate the Law on Financial Supervision to improve the safety of credit activities of banks; Promote research to establish independent financial supervision institutions to carry out unified supervision of the entire market.

- Issue a Code of Conduct on the Money Market according to standard practices and general standards for transactions (standard interest rates, standard transaction amounts, rounding rules,...) to serve as a basis for members when participating in market transactions.

- Amending Circular No. 01/2013/TT-NHNN dated January 7, 2013 and Circular No. 21/2012/ TTNHNN dated June 18, 2012 of the State Bank of Vietnam regulating lending and borrowing activities get a loan; buying and selling valuable papers with term between credit institutions and foreign bank branches in the direction of: supplementing instructions for loan and deposit transactions between credit institutions outside the Vietnamese territory Male; standard contract regulations apply to lending and deposit transactions, so currently each bank applies a separate contract, stipulating that credit institutions are not allowed to use capital mobilized on the interbank market to Long-term loans...

- Continue to improve the legal framework in the banking sector to adapt to the 4.0 Industrial Revolution to support digital transformation through facilitating and promoting business models and governance in the direction of breakthroughs and innovation. . Building a legal framework (including a Sandbox mechanism) for Fintech activities, digital banking, peer-to-peer lending, and cooperation between banks - Fintech and Bigtech in data sharing (Open banking ecosystem). -banking) ..., creating conditions for credit institutions to deploy digital banking, promoting successful non-cash payments. Continue to improve institutions and regulations so that non-bank credit institutions (including Fintech) participate in safe and healthy consumer lending; contribute to stimulating healthy consumption; Proposing a method to legislate bad debt handling when Resolution No. 42/2017/QH14 of the National Assembly expires in August 2022... At the same time, the State Bank of Vietnam is researching and preparing a draft Amend the Law on the State Bank, the Law on Credit Institutions and the Law on Deposit Insurance in accordance with the new situation.

- It is necessary to eliminate barriers due to scattered data, create large databases thanks to a high level of service integration in the financial ecosystem, and implement data migration to the cloud to help accelerate transition. At the same time, it is necessary to develop unified standards for QR codes for the market, build a system for sharing LNH information, perfect technologies related to the use of electronic documents instead of paper documents, and promote electronic signature application... Issue programs and action plans to encourage the development of online payment, policies related to human resources, protect user safety, and improve security. network security.

Second: Perfect and develop monetary market tools:

To develop our country's monetary market, it is necessary to consolidate and perfect existing market tools such as: Treasury bills, State Bank bills, bank promissory notes, and at the same time create additional instruments. New tools suitable to the level of development of the money market.

a) Treasury bills

Treasury bills are the main tool used in the currency market today because of their low risk, so they are very popular, and are also a tool to create sources to offset the State Budget deficit. However, this tool still has limitations and needs improvement measures:

- Organize bidding more frequently to help commercial banks, credit institutions, and businesses proactively plan and invest, and at the same time ensure the supply of a large enough amount of bills to the market, as a basis for Buying and selling development facility. resale transaction. However, the issuance scale must be placed in the correlation between the needs of the State Budget and the overall economic efficiency between borrowing on the domestic market and borrowing from abroad. This requires close coordination between the State Bank of Vietnam and the Ministry of Finance to decide the amount of Treasury bills issued.

- Treasury bills should be issued with many different terms such as 3 months, 6 months, 1 year to meet the needs of investors.

- Interest rates on treasury bills should be calculated according to fluctuations in capital supply and demand in the market. There needs to be coordination between the Ministry of Finance and the State Bank of Vietnam in providing a basis for determining interest rates on bills. To achieve this goal, it is necessary to reduce the use of guided interest rates in trading sessions of the Treasury bill bidding market as well as in open market operations.

- Limit the issuance of registered Treasury bills, expand the issuance of transferable bearer Treasury bills to increase the liquidity of this instrument.

b) State Bank bills

After Treasury bills, State Bank of Vietnam bills are low-risk instruments. However, the issuance of treasury bills from the State Bank of Vietnam should only be applied in high inflation conditions, or to support other tools, because it is often mandatory for commercial banks. . To be effective in operating monetary policy, the State Bank of Vietnam needs to:

- Issuing treasury bills recorded by the State Bank of Vietnam to facilitate the transfer.

- Improve and implement favorable repurchase methods through short-term refinancing and rediscount methods to encourage banks to buy T-bills instead of the mandatory form.

c) Short-term valuable papers issued by credit institutions

- Short-term valuable papers here include promissory notes, bank bills, certificates of deposit... are highly liquid instruments, freely transferable on the market, but in foreign countries. However, this transfer tool is not yet strong. Therefore, measures are needed to improve this tool in accordance with international standards to make transfer easier.

- It is necessary to standardize regulations on form, content, terms, and interest rates of these papers to facilitate issuance, transactions and payments in the market, allowing their owners to sell before maturity to increase liquidity for this instrument.

- Diversify types of deposit certificates such as fixed interest rate, floating interest rate, discount interest rate, foreign currency deposit certificates to create richness and diversity of tools for

Money market and increase the ability to attract capital for banks. At the same time, strengthen inspection and supervision of the issuance of short-term valuable papers to ensure safety for holders.

d) Love adventure

Negotiable instruments are a very popular tool in the world but are still hardly used in Vietnam. In order to promote commercial paper transfer activities in the money market, it is necessary to:

- Promote the implementation of the Law on Negotiable Instruments to soon apply negotiable instruments in the market, guide the issuance and circulation of negotiable instruments as well as regulate the legal effect of negotiable instruments, the levels Specific penalties and agencies handle disputes for violations of commercial instruments to ensure the safety of commercial instrument holders. These documents must be synchronized and consistent.

- Quickly conduct credit ratings for businesses so that banks have a basis to guarantee by letters of credit, creating conditions for issuers to participate in the commercial paper market.

e) Repurchase contract

Repurchase contracts are the most used and most effective tools in the world currency market. In our country, this tool has only just been put into use, so its scope of use is narrow. To develop this tool in the future, it is necessary to develop regulations on repurchase contracts:

- The term of the repurchase contract and the price of the repurchase contract are mutually agreed upon by both parties. In Vietnam, the maximum duration should only be 30 days.

- Regarding the rights of the transferee, the transferee has full ownership rights to the securities within the term stated in the contract. During the validity period of the contract, the transferor may not use, transfer or mortgage it to a third person.

- The interest rate of the purchase contract should be according to the agreement between the participating parties. In addition to the above tools, it is also necessary to research and take measures to add other tools and transactions to create diversity for trading tools such as types of options contracts, futures contracts, Bank mortgages... are very popular tools in the international currency market.

Third, enhance the role of the State Bank of Vietnam in regulating and guiding the market based on the application of technology of Industrial Revolution 4.0.

The State Bank of Vietnam is a special member of the monetary market, through the currency market to implement the goals of monetary policy in each period. As the organizer and operator of the currency market, the State Bank of Vietnam's ability to regulate and supervise market activities is an important factor determining the development of the market. currency. Therefore, under the conditions of Industrial Revolution 4.0, the State Bank of Vietnam needs a solution to enhance management effectiveness and lead the market on the basis of applying 4.0 technology, which are: (1) State Bank Vietnam must ensure to be the last interventionist in the currency market, (2) Strictly monitor trading and mining activities of Bitcoin and other digital currencies, (3) The State Bank of Vietnam Vietnam needs to establish proactive coordination and supervision institutions, (4) The State Bank of Vietnam needs to strengthen training of human resources to master 4.0 technology, (5) Continue to enhance the role of regulation and guidance market of the State Bank on the basis of applying the technology of Industrial Revolution 4.0

4. CONCLUSION

Based on the presented theory, the analyzed situation, based on the actual developments and the State's management orientation for the Vietnamese currency market until 2030. The article has proposed a system The solutions are quite consistent and feasible. Hopefully these opinions will contribute to improving the effectiveness and efficiency to strengthen state management of Vietnam's currency market until 2030.

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RESEARCH ON MACRO FACTORS AFFECTING BANKRUPTCY RISK OF REAL ESTATE BUSINESSES LISTED ON THE VIETNAMESE STOCK EXCHANGE

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Abstract: This article studies the influence of macro factors on bankruptcy risk of real estate businesses listed on the Vietnamese stock exchange. By using the Logistic regression model with 53 real estate businesses listed on the Vietnam stock exchange in the period 2012 - 2022, it shows that high GDP growth of the economy reduces the risk of bankruptcy of real estate businesses. Meanwhile, the higher the interest rate, the greater the risk of bankruptcy that real estate businesses face.

Key words: Bankruptcy risk, Real- estate businesses, Logit Model, Z-score.

1. INTRODUCTION

The real estate market is one of the important markets of the national economy, playing an essential role in attracting resources, creating fixed assets for the economy, and promoting economic sectors. other economies to develop together (financial markets, construction, production of construction materials, furniture, labor...), meeting people's needs for accommodation, urban development, tourism... From half at the end of 2022, when the real estate market has many "negative" signals, real estate businesses face many difficulties, the market stagnates, and a series of businesses have had to narrow the scale of operations and cut staff problems, salary reduction, loss of liquidity, inability to pay bank debt... even bankruptcy. According to a report from the Ministry of Construction, in the first quarter of 2023, the number of real estate businesses dissolved or discontinued for a certain period of time was 341 businesses (up 30.2%) and 1,816 businesses (up 60.7%), compared to the same period last year.

Therefore, identifying and measuring factors that affect the bankruptcy risk of real estate businesses is an extremely necessary issue, a concern not only of the business itself but also of State management agencies, investors and analysts. In the world and in Vietnam, there have been many studies analyzing and evaluating the impact of factors on the bankruptcy risk of businesses. However, research mainly focuses on internal factors - the financial variables of the enterprise. This study was carried out on the basis of inheriting previous studies, focusing on analyzing macro factors affecting the bankruptcy risk of real estate enterprises listed on the Vietnamese stock market in the current period. The authors' research results can help managers identify and minimize bankruptcy risks, contributing to the stable development of the real estate market in particular and the Vietnamese economy in general.

2. THEORETICAL BASIS AND RESEARCH HYPOTHESES

Research on factors affecting businesses bankruptcy risk was developed very early with the first studies by *Beaver (1966) and Atman (1968).* These studies provide forecasting models using discriminant analysis or non-linear logistics regression methods with predictive factors from the financial indicators of enterprises. Based on that premise, many domestic and foreign authors have previously conducted empirical research or improved the model and forecast the possibility of

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corporate bankruptcy within a group of companies, an industry or a country. In general, the studies all have the same variables: the group of financial indicators of enterprises and the group of macroeconomic factors.

Wadhwani (1986) analysed the factors that explain corporate failures focusing on the hypothesis of the significant role for inflation. The author regressed the liquidation rate of companies on two macroeconomic variables and found that real wages, real prices, capital gearing, the level of interest rate (nominal and real) are statistically significant in UK for the period 1964–1981. A conclusion of this research is that credit markets do not allow firms to adjust their debt levels for inflation, as the nominal interest rate is found to be significant.

Harada and Kageyama (2011) analysed in the same mood the case of Japan finding that the overall macroeconomic situation (measured by GDP), as well as interest rates, are determinants of firms' failures as well as some financial variables.

Tinoco & Wilson (2013) pointed out that interest rates, inflation and the ability to develop the economy are three macroeconomic factors that have a certain influence on business performance as well as contribute to determine the possibility of corporate bankruptcy risk.

Phan et al (2022) in their study also showed that interest rates have a positive impact on the bankruptcy risk of businesses, while the growth rate of the economy (GDP) has a negative impact.

Therefore, the following hypotheses are proposed:

H1: The growth rate of the economy (GDP) has a negative impact on the bankruptcy risk of real estate businesses.

H2: Interest rates has a positive impact on the bankruptcy risk of real estate businesses.

H3: Inflation has a positive impact on the bankruptcy risk of real estate businesses.

3. RESEARCH MODEL AND DATA

3.1. Research model

Based on an overview of the research situation in the world and in the country, the study focuses on studying macro factors affecting bankruptcy risk of businesses in the real estate sector including GDPG - GDP growth, IR - Interest rate, INF – Inflation. The bankruptcy risk of businesses is identified by one of the following signs: Net working capital (NWC) smaller 0, Return on total assets (ROA) negative and Book value of total assets are less than total debt. The dependent variable (RR) is a binary variable (equal 0 means business has no risk of bankruptcy; equal 1 means business has risk of bankruptcy). The symbol pit is the probability that a business is at risk of bankruptcy, with i is representing the real estate business and t being time (years) and is the noise variable, the research model will have the following form:

Table 1: Describe variables

Code	Explanation	Calculation	Expectation
Dependent variable			
RR	bankruptcy risk of businesses	RR = 1: Enterprise has risk of bankruptcy; RR = 0: Enterprise has no risk of bankruptcy	
Variables			
GDPG	GDP growth	Source from ADB and WB	-

IR	Interest rate	Source from ADB and WB	+
INF	Inflation	Source from ADB and WB	+
Control variables			
FL	Financial leverage	(Short-term debt + long-term debt)/Total assets	+
WCT	Operating performance (Working capital turnover)	Net revenue/ (Average short-term assets - Average short-term debt)	-
CFA	Net cash flow from operating activities on total assets	Net cash flow from business activities/Average total assets	-
CR	Current ratio	Current assets/ Long-term assets	-

Source: Summarized by the authors

3.2. Data

The research sample includes 53 real estate companies listed on the Vietnamese stock market in the period 2012 - 2022. Data was collected from audited financial statements or unaudited fourth quarter financial statements of real estate businesses listed on the stock exchange. Securities from websites specializing in providing financial information of listed companies such as Fiinpro, cafef, vietstock...

Fluctuating situation of macro factors during the research period

The figure 1 shows that from 2012 to 2019, Vietnam maintained a fairly stable economic growth rate. In 2020 and 2021, due to the impact of the Covid 19 pandemic, GDP growth decreased significantly, from 7.36% in 2019 to 2.87% and 2.56% and began to recover in 2022 with growth of 8.02%. Meanwhile, lending interest rates during the research period tend to gradually decrease, from 13.47% in 2012 to 6.96% in 2016 and increase again to 8.01% in 2022. Inflation during this period has many dynamics, INF decreased sharply in 2015.

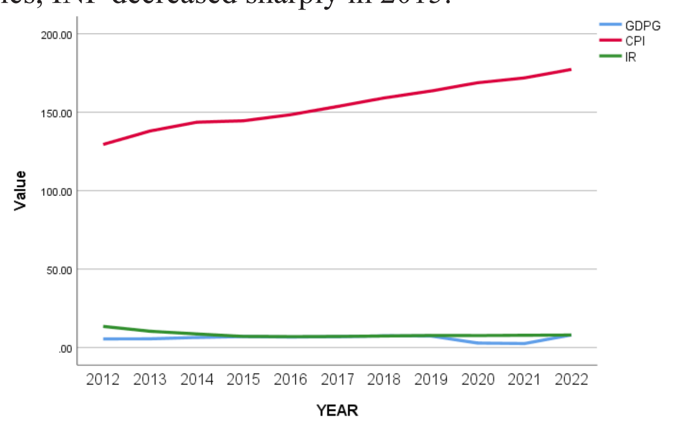

Figure 1: GDP growth, Interest Rate and CPI of Vietnam period 2012 – 2022

4. EMPIRICAL RESULTS AND DISCUSSIONS

We use the Logit model with panel data through fixed effects model (FEM), random effects model (REM). The study uses the *Levin Lin-Chu standard (LLC, 2002)* to test the stationarity of the variables in the model for panel data. The results show that the factors affecting bankruptcy risk are all stationary series with a significance level of 1% (P_value < 1%)

The research sample includes 583 observations; the average bankruptcy risk of real estate businesses is 16.639%. The average GDP growth during the research period is 6.0335%, of which the year with the highest GDP growth is 2022, the lowest in 2021 is 2.5615 due to the impact of the Covid 19 epidemic.

Correlation matrix shows that GDPG has a positive impact on bankruptcy risk, while IR and INF have a positive impact on bankruptcy risk of real estate businesses. The correlation coefficient between independent variables is quite small, showing that there are no signs of multicollinearity between variables in the model. The coefficient magnifies the variance of the independent variables in the model. The average VIF coefficient is 1.36, so the model does not have multicollinearity.

Estimate and test the model

First, we estimate the FEM model (model 1), REM model (model 2). Next, using the Hausman test to choose between the FEM or REM model. The estimation results show that the REM model is a more suitable FEM model.

Table 2: Logit REM and Logit FEM model estimation results

	(1)	**(2)**
	RR	**RR**
CR	-0.190	-0.456^{***}
	(0.144)	(0.170)
WCT	-0.0667^{**}	-0.0785^{**}
	(0.0310)	(0.0317)
CFA	1.341^{*}	0.757
	(0.699)	(0.655)
FL	0.195	0.609
	(0.805)	(0.731)
GDPG	-0.179^{**}	-0.160^{**}
	(0.0799)	(0.0790)
IR	0.239^{**}	0.210^{**}
	(0.0980)	(0.0966)
INF	0.0942	0.0982
	(0.131)	(0.128)
Constant		-3.968
		(2.891)
/		
lnsig2u		0.557
		(0.406)
Observations	374	583

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

From the results of model 2 in table 2, it can be seen that: GDPG, IR, CR, WCT affect RR with a significance level of 5%. The higher the GDP, CR, and WCT growth, the less the business faces bankruptcy risk, while the higher the interest rate, the greater the bankruptcy risk of real estate businesses listed on the stock exchange. Specifically:

➢ **GDP growth**

GDP growth has a negative impact on bankruptcy risk. This result is consistent with expectations and previous research by *Harada and Kageyama (2011).*

An increase in GDP is a sign that the economy is performing well and real estate businesses are confident to invest more. This is the foundation for future economic growth. On the contrary, when GDP growth is very low or the economy goes into recession, the opposite will happen: workers may be laid off, paid lower wages and real estate businesses have no intention of investing in further expansion.

➢ **Interest Rate**

Research results with real estate businesses show that interest rates are positively related to bankruptcy risk. This result is consistent with expectations and previous research by *Wadhwani (1986), Harada and Kageyama (2011), Tinoco & Wilson (2013) and Phan et al (2022).*

Most real estate businesses depend heavily on loans and sponsorship from banks. When interest rates increase, businesses face pressure on financial costs, which leads to reduced profits while real estate businesses invest for a long time. Besides, customers also have to borrow money to buy houses and invest. When interest rates increase, it will also affect investors' buying behavior. This causes businesses' profits to decline seriously, leading to a higher risk of bankruptcy.

➢ **Inflation**

Research results show that there is no clear relationship between inflation and bankruptcy risk of real estate businesses. In fact, Vietnam's inflation (CPI) during the research period tended to increase and did not fluctuate abnormally, so it did not really have much impact on the performance of businesses, especially real estate businesses.

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IMPROVING FINANCIAL MANAGEMENT CAPACITY FOR PRIVATE ENTERPRISES IN VIETNAM

Dr. Nguyen Thi Hong Yen[1]

Abstract: *Enhancing financial management capacity for private enterprises in Vietnam is an urgent and important issue in the context of the increasingly competitive and volatile global economy. Financial management is the process of planning, coordinating and controlling the financial activities of an enterprise, aiming to ensure efficiency and sustainability in business operations. Financial management includes areas such as: working capital management, capital source management, cost management, tax management, risk management, accounting and financial reporting. This article analyzes the current situation and proposes some solutions to improve the financial management capacity for private enterprises in Vietnam.*

Keywords: *capacity, financial management, private enterprise, Vietnam.*

1. INTRODUCTION

1.1. Overview of private enterprises

Private enterprise or private company is a type of business entity regulated by the Enterprise Law 2020. According to Article 188 of this Law, private enterprise is understood as follows: Private enterprise is a business owned by an individual who is responsible for all activities of the business with his/her own assets. The sole owner of a private enterprise is an individual. Private enterprise does not have legal status (Enterprise Law, 2020). Private enterprise has the following characteristics:

- The initial capital source of a private enterprise mainly comes from the personal assets of the owner. The owner will register this capital source by himself/herself. During the operation, the owner can increase or decrease the investment capital according to his/her will without having to declare to the business registration authority except when reducing the capital below the initial registered level.

- The owner has full authority to decide on all business activities of the enterprise, including the use of profits after paying taxes and fulfilling other financial obligations according to the law.

- The owner is the legal representative of the enterprise. However, he/she can also hire someone else as the director to manage and operate the business. However, in this case, the owner still has to be responsible for all activities of the enterprise. The limit of this responsibility between the owner and the hired person will be based on the contract signed (Tran Ngoc Diep, 2021).

The government has issued Resolution 45/NQ-CP (Resolution 45) dated March 31, 2023, promulgating the Government's Action Program to continue implementing Resolution No. 10-NQ/TW dated June 3, 2017 of the 5th Plenum of the XII Party Central Committee on developing the private economy (Resolution 10). Accordingly, the Government sets the target of having 1.5 million enterprises by 2025 and at least two million enterprises by 2030. In which, the private economic sector contributes 55% of GDP by 2025 and 60-65% of GDP by 2030. Labor productivity increases by about 5% per year; annually, about 35-40% of private enterprises have innovative and creative activities... (Government, 2023).

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1.2. Some issues on financial management in private enterprises

Financial management of enterprises includes the overall activities of managers in the process of researching, forecasting, analyzing, making financial decisions and organizing the implementation of those decisions to achieve the defined objectives. Financial management is one of the basic and most important management functions, playing a decisive role in the effectiveness and development of an enterprise. Financial management of enterprises is a fairly broad field, containing rich and specialized content of an important scientific discipline. These are issues related to the management of enterprise assets, mobilization and attraction of capital sources, allocation and investment decisions, financial reports and use of financial information in decision making (Pham Quang Trung & Le Thi Bich Ngoc, 2020).

Financial management is a component of business management, holding the most important position in enterprise management and having a close relationship with other business management activities. Mostly, other management decisions are based on the assessments drawn from financial management activities. Good financial management helps enterprises mobilize and use savings, effectively financial resources for business. Good financial management helps enterprises develop safely, sustainably, and proactively cope with financial shocks effectively. Through solving the financial relations of enterprises with the business environment, helping enterprises identify the demand for input factors, identify the supply capacity of output products; creating conditions for enterprises to actively mobilize sufficient and timely capital sources for business and flexibly use capital mobilization tools; accurately determining the value of enterprises, promoting enterprises to constantly improve business methods to achieve higher efficiency. Thus, the basic function of managing financial activities of enterprises is to mobilize and use effectively all financial resources suitable for the requirements of production and business activities of enterprises in each period. Through financial management, enterprises create regular balance between capital demand and financial capacity of enterprises; understand the characteristics of each capital source to choose competitive decisions to attract capital; exploit and use capital sources with the highest economic efficiency (Dao Thi Ho Huong, 2022).

In the context of the increasingly developing and competitive global economy, improving financial management capacity is a key factor for private enterprises in Vietnam to survive and develop sustainably. Improving financial management capacity has a great significance for private enterprises in Vietnam, for the following reasons:

- Improving financial management capacity helps private enterprises to identify the appropriate capital sources for their business activities, thereby reducing capital costs and financial risks, increasing solvency and profitability.

- Improving financial management capacity helps private enterprises to make effective financial plans, forecast cash inflows and outflows, balance budget and cash flow, thereby controlling the financial situation of the enterprise, making reasonable business decisions.

- Improving financial management capacity helps private enterprises to analyze the effectiveness of their business activities, evaluate financial indicators such as revenue, profit, return on investment, payback period, thereby grasping the strengths and weaknesses, opportunities and challenges of the enterprise, improving the quality of management and labor productivity.

- Improving financial management capacity helps private enterprises to comply with legal regulations on finance, tax, accounting, financial reporting, thereby avoiding legal risks, penalties and loss of reputation.

- Improving financial management capacity helps private enterprises to mobilize capital from banks, financial institutions, shareholders and other stakeholders, thereby expanding the scale of business activities, increasing competitiveness and market share.

Thus, improving financial management capacity is one of the important factors for private enterprises in Vietnam to develop sustainably in the increasingly harsh global economic environment. To do this, private enterprises need to invest in training and improving the level of financial management staff, applying modern financial management tools and methods, capturing market trends and changes, as well as cooperating with reputable financial organizations to get support and advice.

2. THE CURRENT SITUATION OF FINANCIAL MANAGEMENT FOR PRIVATE ENTERPRISES IN VIETNAM

According to the PCI 2022 survey results, the scale, growth rate and business efficiency of private enterprises are all low since the COVID-19 pandemic. In the PCI 2022 survey, an average enterprise has a capital size of about 15.6 billion VND and 21 employees; while in 2019, the capital and labor size of an average enterprise were 22.3 billion VND and 23 employees. In 2022, only 5.1% of enterprises increased their investment capital and 4.9% of enterprises increased their labor size, significantly lower than the corresponding levels of 2019 (with rates of 8.3% and 11.5%, respectively). Regarding business efficiency, in 2022 only 42.6% of private enterprises reported profits, significantly lower than the figure of 63% in 2019; the rate of loss-making enterprises in 2022 was 35.3% while in 2019 it was only 23.4%. Both figures of the profit or loss rate of the last three years are indicators showing that domestic private enterprises have gone through a difficult period in business operations (VCCI & USAID, 2023).

Thus, in recent years, Vietnamese private enterprises have faced many difficulties in production and business activities. In the new context, enterprises have to face many challenges in financial management. Some main challenges can be mentioned as follows:

- The difficult, volatile and highly competitive economic environment, affecting the business efficiency and solvency of enterprises.

- Lack of stable long-term capital sources, depending heavily on short-term capital sources with high interest rates and high risks.

- Lack of skills and experience in financial management, lack of transparency and control in financial reporting and accounting activities.

- Lack of support from state agencies, financial institutions and social organizations in providing information, advice and financial assistance for enterprises.

Although private businesses still face many difficulties and challenges, the new context also brings many opportunities for business financial management. The government has launched support programs to assist private firms in building sustainable business strategies and plans. These programs provide assistance in personnel training, technology access, digital transformation, capital resources access, communications, and trade promotion. With the rise of digital technologies, there are opportunities for private enterprises to leverage these technologies to improve their financial management processes… These opportunities can help private enterprises in Vietnam enhance their financial management capabilities and achieve sustainable development. Therefore, private enterprises need to grasp opportunities and proactively solve remaining problems to improve the efficiency of corporate financial management.

3. SOLUTIONS TO IMPROVE FINANCIAL MANAGEMENT CAPACITY FOR PRIVATE ENTERPRISES IN VIETNAM

In the context of the increasingly developing and competitive global economy, improving financial management capacity for private enterprises in Vietnam is an important factor to maintain and develop business activities. Some solutions to improve financial management capacity for private enterprises in Vietnam can be proposed as follows:

- Building a professional, transparent and international-standard accounting and auditing system. This helps enterprises to have an accurate, complete and timely financial database to support financial management decisions.

- Applying modern financial analysis tools and methods, such as: ratio analysis, cash flow analysis, present value analysis, discounted cash flow analysis, payback period analysis, risk and efficiency analysis. This helps enterprises to evaluate the effectiveness of their business activities, solvency, profitability and risk level of investment projects.

- Improving knowledge and skills on working capital management, including: inventory management, receivables and payables management, cash and cash equivalents management. This helps enterprises to maintain a balance between ensuring sufficient resources for business operations and minimizing capital costs.

- Searching and using effective capital mobilization sources, including: owner's equity, short-term and long-term loans, capital attraction from domestic and foreign investors. This helps enterprises to have a reasonable financial structure, reduce capital costs and increase dividend payment ability for shareholders.

- Establishing a scientific and effective cost management system, including: cost management by product, cost management by activity, cost management by responsibility, cost management by quality. This helps enterprises to save unnecessary costs, increase labor productivity and improve product and service quality.

- Establishing a comprehensive risk management system, including: identifying potential risks, assessing the impact and probability of risks, selecting and applying risk mitigation and transfer measures. This helps enterprises to minimize the negative impacts of risks on business and financial activities.

- Complying with legal regulations on tax and financial reporting, including: paying taxes fully and on time, preparing and submitting financial reports according to the standards and deadlines, conducting tax audits and inspections. This helps enterprises to avoid penalties, fines and disputes on tax and financial reporting.

4. CONCLUSION

Financial management is an important factor to ensure the survival and development of private enterprises in Vietnam. Improving financial management capacity for private enterprises is a necessary and meaningful task in the current economic situation. Enterprises need to have a high awareness of the role and importance of financial management, as well as strive to improve the current situation of financial management to enhance their competitiveness and create value for enterprises and society. To do this, enterprises need to have the attention, investment and continuous improvement on the aspects related to financial management. At the same time, enterprises also need to have the support from state agencies, financial institutions and experts in this field.

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FASPS 17-COMPLETING THE INSTITUTION TO PROMOTE INNOVATION IN THE CURRENT VIETNAMESE ECONOMY

Dr. Vu Thi Thu Huong[1]

Abstract: *Innovation is an indispensable requirement for the sustainable development of the economy. To realize innovation, it is necessary to create favourable conditions for it. One of the input factors that facilitate innovation is institutions. Institutions that encourage innovation need to create favourable conditions for subjects, especially businesses, to produce, apply, and spread new knowledge, new processes, new technologies, and create new products. By analyzing data from the Global Innovation Report, the paper discovered that Vietnam has made remarkable progress in both scores and rankings of institutions that encourage innovation from 2015 to 2022, has followed the rules of the market economy and still need to be improved. The paper has pointed out limitations and recommended some solutions to improve institutions to encourage innovation in Vietnam in the coming time.*

Keywords: *economic institutions, innovation, institutions that encourage innovation*

1. INTRODUCTION

Institutions are factors that have a great influence on innovation. Institutions can encourage innovation, but can also inhibit and even stifle innovation. Institutions that encourage innovation need to create friendly and favourable conditions for new factors to arise.

The subject of innovation in the market economy is the system of businesses. The driving force that drives businesses to innovate is the impact of competition. In a market economy, competition is increasingly fierce and to survive in competition, businesses must innovate technical and technological methods, improve quality and lower product prices. Therefore, competition is an environment that forces businesses to innovate. However, innovation activities require investment resources and are relatively high risk, so if there are simply competitive market relations, it will be difficult for businesses to innovate. To promote innovation, state intervention is needed to support, create favourable conditions, and minimize risks for businesses that wish and dare to innovate. Therefore, institutions that encourage innovation must, on the one hand, create competitive relations to push businesses to innovate, and on the other hand, need to create a friendly innovation environment in which businesses can easily access resources (capital, technology, human resources, market access...) to carry out innovation according to market principles.

In recent times, Vietnam has emerged as one of the countries with the fastest innovation rate. Vietnam is also the country that performs best in innovation among the group of low-middle income countries. Contributing to that success, in no small part, is perfecting the institution. Therefore, it is necessary to research the contribution of institutional reform to innovation in Vietnam in recent times, pointing out successes and limitations and solutions to improve institutions that is more favourable conditions for innovation in Vietnam in the coming time.

2. LITERATURE

According to Veblen (1994), institutions are the normativity of behaviour or the rules that determine behaviour in specific situations, which are essentially accepted by members of a social

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group and the compliance with the rules that is due to self-control or control by outside power. North (1990) considers institutions as the rules of the game in a society; Or to put it more formally, institutions are human-made constraints to shape relationships between people. Although there are certain differences, in general, institutional concepts include the three most basic aspects: "rules of the game" (formal and informal), "play" (mechanisms, enforcement competition), and "players" (people, organizations associated with the behaviour).

Acemoglu and Robison (2013) classified economic institutions into inclusive economic institutions and extractive economic institutions. Inclusive economic institutions are institutions that allow and encourage the mass participation of people in economic activities, thereby enhancing the talents, abilities and values of each person with best use. This institution is characterized by the guarantee of private property rights, a fair legal system and the equitable provision of public services so that people can participate and exchange with each other. Extractive economic institutions are institutions that do not have the above characteristics but are designed to deprive or exploit the income or wealth of one group to serve another group, or the majority to serve a small number of authorities and related people

Institutions have a close relationship with economic growth and innovation. Research by Barro (1991) shows that political instability has a negative impact on economic growth. The study by Alesina, Özler, Roubini, and Swagel (1996) also showed similar results. Kaufmann, Kraay, and Zoido (1999) studied the impact of public administration (governance) on per capita income. The results show that national governance has a strong and positive impact on per capita income, with better governance leading to higher per capita income. Besides, using indicators showing institutional quality, studies by Collins and Bosworth (2003); Easterly and Levine (1997); Glaeser, La Porta, Silanes, and Shleifer (2004); Tan (2010) also shows the positive impact of institutions on economic growth. Barro's (1996) research results in 100 countries during the period 1960 to 1990 show that the rule of law factor also positively affects economic growth. This result is also supported by studies by Dollar and Kraay (2003); Mehlum, Moene, and Torvik (2006); Rodrik and colleagues (2004) demonstrate that in countries where compliance with the rule of law or rule of law is higher, economic growth is better.

INSEAD has identified institutions as input factors for innovation since 2011 (GII, 2011). According to INSEAD, whether an institution encourages innovation or not will depend on whether that institution encourages private sector development and facilitates business startups. Based on that, INSEAD defines institutions for innovation as consisting of three elements: institutions for the political environment, institutions for the Regulatory environment and institutions for the business environment. These institutions need to create favourable conditions for the development of the private sector and encourage entrepreneurship and business. Specific indicators include:

POLITICAL ENVIROMENT

1.Political and operational stability: the likelihood and severity of political, legal, operational or security risks affecting business operations

2.Government efficiency: the government's effectiveness in providing public services that facilitate the operation of the private sector

REGULATORY ENVIROMENT

1. Regulatory quality: legal regulations need to be reasonable, creating favourable conditions for businesses to do business freely according to market mechanisms.

2. Rule of law: The legal system needs to be fully and seriously respected and enforced, especially the legal provisions on property rights, intellectual property rights, freedom of business, and enforcement. economic contracts, resolving economic disputes...

3.Cost of redundancy dismissal: legal provisions create favourable conditions that allow businesses to dismiss redundant workers at low cost.

BUSINES ENVIROMENT

1. Policies for doing business: the government needs to ensure a stable policy environment for business activities

2. Entrepreneurship policies and culture: policies need to create favourable conditions for startups and build a startup culture

There have been many research projects on innovation in Vietnam, but there has not been any projects that analysed the relationship between institutional reform and innovation in Vietnam in recent years. This is the space for the author to research and write this paper to clarifying the relationship between institutional reform and innovation in Vietnam from 2015 to 2022.

3. RESEARCH METHODOLOGY

The author uses WIPO's innovation data from 2015 to 2022 and uses methods of analysing, synthesizing, and comparing that data to clarify the relationship between institutional improvement and innovation in Vietnam.

4. RESEARCH RESULTS

During the period 2015-2022, the Communist Party of Vietnam and the State have made efforts to perfect institutions to encourage innovation in the following aspects:

- Perfecting socialist-oriented market economy institutions: perfecting a consistent economic and business legal system in the direction of creating a favourable legal framework for businesses to freely do business in areas that the government not prohibited under the conditions of a market economy. Fully and synchronously forming market elements, developing all types of markets to create a healthy competitive environment, using healthy competitive markets to effectively allocate resources and promote innovation.

- Innovating the management mechanism of state science and technology research units, using market principles to allocate and use state investments in science and technology such as: Transferring units scientific and technological research institute to operate on the principle of autonomy and self-accounting; Implementing and assigning regular operating funds to state research facilities; Narrowing in scope and increasing state investment in science and technology; Bidding for key national science and technology research projects; Combining state investment capital with business investment in projects implementing new technology application, high technology, technology transfer... These innovations aim to improve the quality of research, scientific and technological consulting to suit business needs.

- Building and perfecting a socialist rule of law state with the spirit of upholding the law, the people and civil servants must obey the law and civil servants are the subject to people's supervision. That will fight against abuses and harassment of state civil servants towards businesses

- Gradually building modern national governance: 2022 is determined by the Government as the year of national digital transformation and continued building of e-government. The government streamlines staffing and applies information technology to build a lean, transparent, clean and effective state apparatus. The State carries out administrative reforms to improve the business environment: cutting unnecessary and unreasonable administrative procedures, eliminating sub-licenses and burdensome administrative procedures that increase costs and fees for businesses

- Promoting the campaign against corruption: The campaign against corruption, against manifestations of political and ideological degradation, and the "burning the furnace" campaign have been carried out from the central to local levels. Strictly handling government officials associated with "backyard businesses" that is appointed to do state's contraction at high price. Strictly handling civil servants who harass businesses and demand unofficial expenses.

- Building a startup and innovation ecosystem through the formation of operating mechanisms for science and technology enterprises, technology transfer centres, startup and innovation centres, and various types of funds venture capital, startup funds, innovation funds. Forming high-tech zones and industrial parks with favourable infrastructure conditions, preferential policies, and simple and compact administrative procedures to attract businesses to invest in research, testing, training and transfer of science and technology.

Thanks to implementing those correct guidelines and policies, Vietnam has achieved outstanding results. According to WIPO's Innovation Report from 2015 to 2022, the institutional pillar and its sub-pillars have the following scores:

Table 1: Scores of Institutions pillar and sub-pillars in Vietnam, period 2015-2022

Pillar/sub-pillars	2015	2016	2017	2018	2019	2020	2021	2022
Institutions	51.8	51.7	52.8	56.2	58.6	58.5	58.8	60.6
Political environment	51.5	50	54.1	53.1	58.6	60.8	60.5	65.2
Regulatory environment	49.8	51	48.9	56.8	57.3	53.2	54.3	54.6
Business environment	54.2	54.2	55.4	58.6	59.9	61.6	61.6	62

Source: *WIPO-Global Innovation Index Report, from 2015 to 2022*

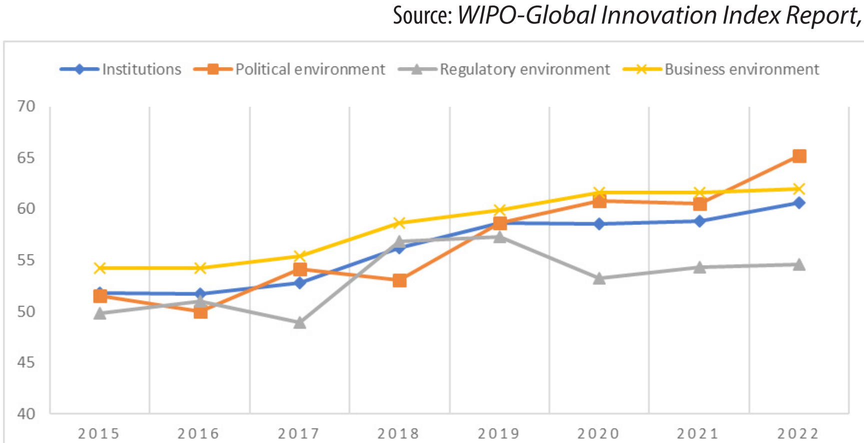

Figure 1: Scores of Institutions pillar and sub-pillars in Vietnam, period 2015-2022

In overall, the score of the Institutional pillar increased steadily over the years, from 51.8 to 60.6 scores, including 2 periods of increase. Strongly in 2017-2019, increased by 5.8 scores, from 52.6 to 58.6 and in 2021-2022, increased from 58.8 scores to 60.6 scores.

The sub-pillars of the Institutions pillar all increased in scores, in which the Political Environment sub- pillar increased the most, 13.7 scores, from 51.5 scores in 2015 to 65.2 scores in 2022 and is also the sub-pillar with the highest score. The Regulatory Environment sub-pillar also increased strongly, up 13.8 scores, from 49.8 scores in 2015 to 54.6 scores in 2022. The Business Environment sub-pillar increased from 54.2 scores in 2015 to 62 scores in 2022. All sub-pillar have increased scores, proving that Vietnam's institutions for innovation from 2015 to 2022 have been comprehensively improved, from the political environment, to regulatory environment and business environment

Table 2: Ranking of Institutions pillars and sub- pillars of Vietnam in the period 2015-2022

Pillar/sub-pillars	2015	2016	2017	2018	2019	2020	2021	2022
Institutions	101	93	87	78	81	83	83	51
Political environment	67	65	59	62	57	55	58	50
Regulatory environment	113	106	103	89	90	98	98	96
Business environment	121	116	113	103	106	101	101	30

Source: *WIPO-Global Innovation Index Report, from 2015 to 2022*

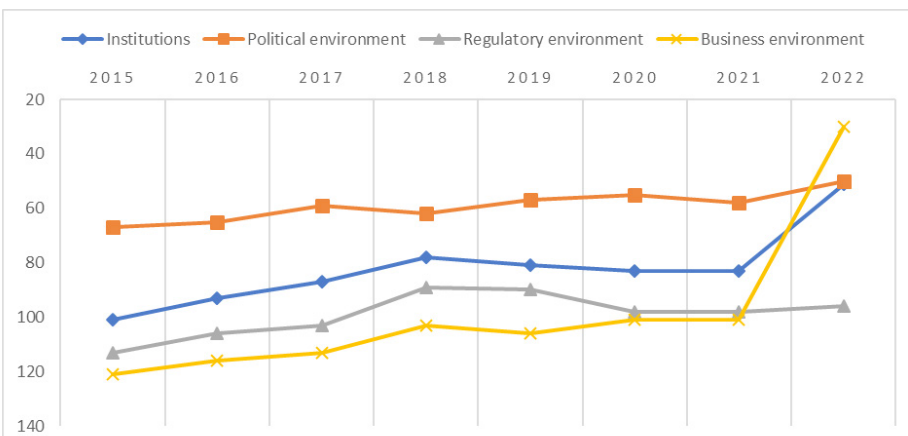

Figure 2: Ranking of Institutions pillars and sub- pillars of Vietnam in the period 2015-2022

Regarding rankings, the Institutional pillar has a jump in rankings, increasing 50 places on the rankings, from the 101st in 2015 to the 51st in 2022. The highest ranking jump occurred in 2021-2022 with an increase of 32 places. Contributing to the jump in the ranking of the Institutions pillar is the jump in the ranking of the Business Environment sub-pillar. The ranking of the sub-pillar Business Environment increased impressively, 89 places, from the 121st in 2015 to the 30th in 2022. The strongest increase in ranking position of the sub-pillar Business Environment also take place in 2021-2022 with an increase of 71 places, from the 101st to the 30th.

When regarding to the Political Environment sub-pillar, the Political Stability and Governance indicator achieved its highest score in 2019-2020 and also achieved its highest ranking during that period. By 2022, the score value and ranking will both decrease, to only 76.4 points and ranked the 37th/132 countries. Although there is a decrease in ranking compared to 2021, down 4 places, the score is quite high, higher than the overall Innovation index, showing that the international community highly appreciates stability of the political environment and consistency in economic development management policies of the Vietnamese government. This builds trust and prestige of Vietnam with the domestic and international business community. Analysing the Government Effectiveness indicator, in the period 2015-2017, this indicator achieved the highest score and ranking in 2022 with 54 points, ranked the 57th/132 countries. This was also the year that the Vietnamese government drastically reformed administrative procedures, cut payroll, and promoted decentralization in the direction of delegating more power to local governments; Promote digital transformation, build e-government, promote the application of information technology in management activities of governments at all levels...

Table 3: Scores and rankings of indicators of the Political Environment sub-pillar in Vietnam in the period 2015-2022

Indicators	2015	2016	2017	2018	2019	2020	2021	2022
Score of Political and operational stability	69.7	62.8	64.1	68.5	82.5	82.1	78.6	76.4
Ranking of Political and operational stability	53	66	59	57	32	29	34	37
Score of Government efficiency	33.3	37.3	44.1	45.4	46.6	50.1	51.5	54
Ranking of Government efficiency	86	72	68	71	71	72	71	57

Source: WIPO, Global Innovation Index, 2015-2022

Analysing the Regulatory Environment sub-pillar, the Regulatory Quality Indicator gradually increased in score and ranking over the years, from 30.4 points and ranked the 113rd/141 in 2015 to 41.2 points and ranked the 83rd/132, up 10.8 points and 40 places. This shows that the quality of Vietnam's business laws has been steadily and consistently improving in the direction of creating more and more favourable conditions for businesses to freely do business. The Rule of Law indicator achieved its highest score in 2019 with 48.2 points and highest ranking in 2018 with the 57th/126. By 2022, this index drops to 42.6 points and is at the 70th/132. The Cost of Redundancy dismissal indicator has a constant value, 24.6 points from 2015 to 2022 and ranks at a very low position, the 97th/126. This shows that Vietnamese businesses have to pay relatively high fees to dismiss redundancy.

Table 4: Scores and rankings of the indicators of the Regulatory Environment sub- pillar in Vietnam in the period 2015-2022

Indicators	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Score of Regulatory quality	30.4	30.1	29.4	32.5	31.3	31.6	36.6	41.2
Ranking of Regulatory quality	113	103	100	99	97	99	93	83
Score of Rule of law	34.7	39.4	31.6	45.2	48.2	46.6	46.3	42.6
Ranking of Rule of law	89	76	74	57	59	64	64	70
Score of Cost of redundancy dismissal	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
Ranking of Cost of redundancy dismissal	109	101	101	97	101	103	104	105

Source: WIPO, Global Innovation Index, 2015-2022

For the indicator of the Business Environment sub-pillar, Policies in doing Business achieved the highest score in 2020-2021 with 85.1 points and the highest rank was the 31st/132 in 2022. Especially, in 2022 the score of Policies in doing Business indicator drops, from 85.1 points in 2021 to 63.3 points in 2022, but the ranking skyrockets, from the 88th/132 to the 30th/132 at the same time. The reason for this is because WIPO changed the indicator, from Ease of starting business indicator in 2021 to Policies in doing business indicator in 2022, so the score value of each country has changed.

The Entrepreneurship policies and culture indicator has a strong increase in scores and rankings in 2021-2022, from 38 points and ranked the106th/132 in 2021 to 60.7 points and ranked the 21st/132 (increased 22.7 points and 85 places). This shows that Vietnam's policies have targeted the main subject of innovation, which is the business system. State's policies have created conditions for businesses to access new technological advances, with credit sources, venture capital funds, innovation funds... has created favourable conditions for businesses that invest in innovation (innovating technology, processes, organizational structure, training human resources, developing new products, penetrating new markets...)

Table 6: Scores and ranks of indicators of the Business Environment sub-pillar in Vietnam in the period 2015-2022

Indicators	2015	2016	2017	2018	2019	2020	2021	2022
Score of Policies for doing business	77.7	81.3	81.8	82	84.8	85.1	85.1	63.3
Ranking of Policies for doing business	102	88	92	95	80	88	88	31
Score of Entrepreneurship policies and culture **	41.3	35.8	35.1	35.2	34.9	38	38	60.7
Ranking of Entrepreneurship policies and culture **	92	103	105	107	110	106	106	21

Source: WIPO, Global Innovation Index, 2015-2022

** In 2021, Ease of starting a business*

*** in 2021, Ease of resolving insolvency*

5. ASSESSMENT

The process of perfecting institutions to encourage innovation in Vietnam in the period 2015-2022 has achieved the following successes:

First, Vietnam's innovation promotion institutions have had clear and synchronous improvements in all aspects: political environment, Regulatory environment and business environment. All aspects of the Institutions pillar have increased scores and rankings, especially the leap in improving institutions to encourage innovation in Vietnam in the context of other countries in the world that stagnated back or somewhat decreased. This demonstrates the determination of the Vietnamese Government to innovate and improve institutions, considering it as the main factor promoting Vietnam's economic growth and development in the coming time.

Second, Institutions are the largest contributing factor to the index of innovation in Vietnam from 2015 to 2022. The innovation index is determined by calculating the average of sub-index, Input and Output. The Institutions pillar currently has the largest score value among the Input and Output pillar of innovation, so Institutions are the pillar with the greatest contribution to the Innovation Index of Vietnam in the period 2015-2022

Third, The improvement of institutions for innovation in Vietnam in the period 2015-2022 is consistent with the objective development rules of the market economy: The improvement of economic institutions to encourage innovation has associated with perfecting market economic institutions towards using competitive market relations as a driving force for innovation. The state mechanism to support businesses in implementing innovation has also changed, minimizing implementation based on the granting and asking-giving mechanism, and shifting to support based on market principles through technology transfer support centres, innovation centres, startup centres, startup investment funds, venture capital funds … state-invested scientific and technological research units have autonomy to operate according to the principles of the market.

State's policies have targeted businesses in the direction of cutting costs for businesses through reform of administrative procedures, anti-corruption, investment in infrastructure construction... at the same time, creating favourable conditions for businesses to access capital for innovation through credit policies, interest rate support for high-tech application loan projects, venture capital funds, startup funds, innovation funds. The establishment and operation of the NIC National Innovation Centre is a testament to that

Fourth, Institutional improvement for innovation in Vietnam in the period 2015-2022 is consistent with the trend of political innovation and modern national governance: The current trend of political innovation is increasingly more democratic, more transparent and fairer. Therefore, citizen have an increasing need to participate in economic management and social management, and they also require the state to be public and transparent in its activities, ensuring fairness in terms of income between different classes in society. The state management apparatus has been reorganized in a more compact and effective direction, the qualifications of civil servants have been improved, and information technology has been increasingly applied to state and government management activities. Switching to operating in a digital environment, e-government, applying information technology to communicate and handle administrative procedures for people...

Besides the successes, perfecting institutions to encourage innovation in Vietnam today has the following limitations:

First, some indicators also have low scores and rankings. The Regulatory Environment sub-pillar has improved and increased in score but is still at a relatively low position in the ranking. In 2022, the Regulatory Environment sub-pillar stands at the $96^{th}/132$, the Regulatory Quality indicator the $83^{rd}/132$; Rule of Law indicator the $70^{th}/132$; Cost of dismissing redundant the $105^{th}/132$. Therefore, improving and enhancing the quality of regulations along with enhancing the enforcement effectiveness of state regulations is one of the important tasks of perfecting institutions to promote innovation

Second, the institution that promotes innovation still has the imprint of the ask-give mechanism. Institutions for businesses to access resources have not had a breakthrough development and have not decisively shifted to market principles. The sub-licenses is also common in most fields, industries and levels of state economic management. Adding to many other invisible barriers and hidden costs when Vietnamese businesses want to access resources, business do not want to make fundamental, long-term investments, reduce its innovation motivation.

Third, institutions to protect property rights and intellectual property rights lack synchronization between regulations and implementation. Transactions and transfers of people's property rights are being carried out in a complex and overlapping institutional environment. Institutions to promote the connection between research agencies and businesses have only stopped at the calling level, not doing in practise.

Fourth, the institutions that ensure transparency and promote coordination for the overall national development in governance are still weak. Because the institutions are not clear about responsibilities and is not transparent from the planning stage to the implementation, the situation of pushing responsibility and blaming between state management agencies and between levels of state management that are quite popular, especially in solving comprehensive and complex problems; lack of coordination or coordination but not often. Rigid, fragmented, uncreative thinking combined with organizational and implementation methods that are rarely considered, adjusted, or innovated are becoming barriers to the process of freeing up the economy's resources.

6. RECOMMENDATIONS

To continue implementing innovation, achieving sustainable growth and development, and perfecting institutions, the following solutions need to be implemented:

- Further improve the quality of business law: review business legal systems, eliminate unreasonable, contradictory, overlapping, unfeasible regulations, and regulations that increase implementation costs for businesses; Supplementing legal documents on missing fields, especially the fields of e-transactions, artificial intelligence, and testing mechanisms (sandbox); Develop guiding documents to implement and enforce legal regulations.

- Continue to perfect and fully develop all types of markets, especially the land market, capital market and science and technology market in a direction that allows many entities to participate in activities to create a competitive environment. competition, aimed at effective resource allocation; On the other hand, increase the supply of capital flows and technology in markets to increase the opportunity for businesses to access resources to innovate according to market principles. Specifically:

+ For the land market: recognizing land use rights as a commodity and freely traded on real estate exchanges

+ For the capital market: develop new forms of capital mobilization and lending based on digital technology application platforms such as fintech, peer-to-peer lending, venture capital funds, startup funds, investment funds for private sector.

+ For the science and technology market: encourage the establishment of science and technology enterprises, technology transfer centres, start-up and innovation centres to provide a better consulting and transfer services; State scientific research units are allowed to operate autonomously and self-account according to market principles to improve the quality of scientific and technological research.

- Improve national governance capacity through promoting digital transformation and administrative procedure reform: promoting the application of information technology in state management; Develop and implement a mechanism to share, publicize and transparent information on activities and projects of state management agencies; promote anti-corruption more effectively from central to local levels; Complete the national master plan on the basis of implementing decentralization, decentralization and linkage mechanisms between agencies, localities, ministries and branches to realize development goals.

- Improve the participation and supervision mechanism of the people, non-governmental organizations, and auditors in state activities in a more effective way: innovate the form of citizen reception in an open and friendly way; Resolve complaints, denunciations, and anonymous letters in a more timely and satisfactory manner; Implement a regime to protect those who denounce corruption and negative phenomena...

7. CONCLUSION

Using data published in the global innovation report from 2015 to 2022, the paper has pointed out the successes and limitations of the improvement of institutions to encourage innovation in Vietnam, from that proposes a number of solutions to promote innovation in Vietnam in the coming time.

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FACTORS AFFECTING THE BUSINESS PERFORMANCES: THE EVIDENCE OF TOURISM COMPANIES LISTED IN VIETNAMESE STOCK EXCHANGES

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Abstract: *This paper examines the factors affecting the business performances of tourism firms listed in Vietnamese stock exchanges by using a cross-sectional panel data during 8-year period from 2015 to 2022. The authors adopt different models including OLS, REM, FEM, FGLS to test the effects of 10 factors on the tourism firms' business performances which are measured by three financial indicators ROA, ROE and ROS. The factors examined in the models include tourism firm size (SIZE), average sale growth rate (SAGR), fixed assets ratio (FIXED), leverage ratio (LEV), assets turnover (TAT), account receivable days (DAR), payable outstanding days (DAP), tourism firm ages (AGE), ratio of costs of goods sold to sales (CFS) and Covid 19 (COVID). The empirical results show that all referred factors have impacts on the business performances of tourism firms at the different levels. Specifically, factors including SIZE, SARG, TAT affect positively to business performances, while the opposite is true for other factors including LEV, CFS, DAR, DAP, AGE and COVID. According to the empirical results, we propose some solutions as well as recommendations for tourism firms to enhance their business performances in the context of recovering after Covid 19 pandemic.*

Keywords: *Factors, Business Performances, Tourism Companies,…..*

1. INTRODUCTION

Vietnam's tourist business has exhibited parallel growth with the country's recent initiatives during the past three decades, resulting in significant advancements and notable accomplishments. In conjunction with the country's advancements in innovation, the tourist sector has experienced significant expansion in terms of both scale and quality, thereby solidifying its significant contribution to the national economy. The travel and tourism industry consistently leads in innovation and demonstrates an improved ability to cater to diverse needs. Currently, Vietnam is actively engaged in the global integration process.

The business environment is experiencing significant volatility and unpredictability, particularly due to the widespread COVID-19 epidemic. In order to navigate these challenges, both general travelers and tourism companies listed on the stock market must strive to enhance their profitability. The pursuit of profitability serves as the primary objective and foundation for the sustainability and expansion of a business. Due to COVID 19, travel demand has sharply declined, causing many tourism-related businesses, such as hotels and restaurants, to close or reduce operations, while airlines face flight cancellations and a drastic decrease in revenue, leading to a significant rise in unemployment rates and a substantial decline in business performance. The COVID-19 has also disrupted the stable hierarchical network structure and the entire supply-demand system of the tourism supply chain (TSC), inflicting heavy losses on the tourism industry. Drawing upon the theory and practical application of travel services business management, as well as the critical requirements met within the context of travel tourism companies operating in a market economy and international economic integration, the author asserts that the chosen topic, "Factors affecting business performance of listed tourism companies in Vietnam" holds

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both logical significance and pressing urgency. This research aims to assist tourism companies in enhancing their analytical capabilities and augmenting business performances

This study emphasizes examining the determinants of business performances for tourism companies listed in the Vietnamese stock market. The objective of this study is to use data from a representative sample of Vietnamese firms in the tourism sector listed on three largest stock exchanges in Vietnam including Ho Chi Minh Stock Exchange (HOSE), Hanoi Stock Exchange (HNX), and Unlisted Public Company Market (UPCOM) to investigate factors that influence profitability.

2. LITERATURE REVIEW

According to Theo Hult et al (2008), Onaolapo & Kajola (2010), Alimadar et al (2018), and Nghiem Thi Tha et al (2018), the most commonly used indicators for evaluating the financial performance of companies in empirical studies are: (1) Return on Assets (ROA), (2) Return on Equity (ROE), and (3) Return on Sales (ROS). ROA represents the net profits generated by total assets, ROE represents the net profit on the capital invested by shareholders, while ROS represents the net profit on total revenue.

Hypothesis 1: Firm size (SIZE) affects positively/negatively to the business performances

According to economies of scale theory, the larger firm size, the more expenses are saved, which helps to enhance the company profitability. However, the increase of firm size without control of board of directors can lead to waste of financial resources, then results to the decrease of the company's financial capability. There are various results of the effect between firm size and profitability. A. Vijayakumar, 2011; A. Stierwald, 2009; G. A. Ayele, 2012 found a positive influence between firm size and profitability. While A. K. Salman and D. Yazdanfar, 2012; B. Ramasamy, 2005 found that firm size has a negative impact on profitability. R. Dhawan, 2001 specifically added, companies that have a smaller size will result in higher profits but no longer competitive than larger companies.

Hypothesis 2: Sale growth rate (SAGR) affects positively to business performances

The empirical literature suggests that higher sales growth rates tend to have a positive impact on profitability. Li, et al. (2010) suggest that increased sales can lead to economies of scale, improved bargaining power with suppliers, and enhanced operational efficiency, all contributing to higher profitability. Mansi, et al. (2011) concludes that sales growth can lead to increased market share and improved firm value, ultimately positively impacting profitability.

Hypothesis 3: Fixed asset ratio (FIXED) affects positively to business performances

Companies with a higher proportion of fixed assets tend to have higher profitability. Ghosh and Maji (2010) found positive relationship between the proportion of fixed assets and profitability in the Indian manufacturing industry. Similarly, Hatzinikolaou and Mylonidis (2005) found positive relationship between the fixed asset ratio and profitability of Greek manufacturing firms.

Hypothesis 4: Leverage (LEV) affects positively/negatively to business performances

LEV can influence either positively or negatively to the business performances. There are various results of the effect between leverage and profitability. Akhtar, et al (2012), Murigu Jane Wanjugu (2014), Nawaf Ahmad Salem Alghusin (2015) concludes that leverage has positive effect on profitability. While other studys suggest that excessive leverage can increase financial risk and lead to higher interest expenses, thus reducing profitability including Rajan and Zingales (1995); Ferreira and Vilela (2004).

Hypothesis 5: Assets turnover (TAT) affects positively to business performances

Assets turnover is a measure of how efficiently a company utilizes its assets to generate revenue. The literature review suggests that there exists a positive and significant relationship between assets turnover and company profitability. Rina et al. (2018), Li and Gadhoum (2017), Kim and Yi (2016) revealed that a higher assets turnover ratio leads to increased profitability, indicating that efficient utilization of assets contributes to better financial performance. Companies that effectively manage their assets and generate more sales from them tend to achieve higher levels of profitability. However, it should be noted that the impact of assets turnover on profitability may vary across industries and regions, as different factors can influence the relationship.

Hypothesis 6: Receivable day (DAR) affects negatively to the business performances.

Receivable days represent the average number of days it takes for a company to collect its accounts receivable, which reflects the efficiency of a company's credit and collection policies. Lazaridis and Tryfonidis (2006) founds a negative relationship between receivable days and profitability, suggesting that companies with a higher number of days to collect on their receivables tend to have lower levels of profitability. Similarly, Appuhami and Bhuyan (2018) found a negative relationship between receivable days and profitability of listed companies in Sri Lanka. In general, the literature indicates that longer receivable days tend to have a negative impact on company profitability.

Hypothesis 7: Payable day (DAP) affects positively/negatively to the business performances.

Payable days represent the average number of days it takes for a company to pay its accounts payable, which reflects the company's management of trade credit received from suppliers. Uyar and Kilic (2012) found a negative relationship between payable days and business performances in Turkey. While Bethel et al. (1998) found a positive relationship between payable days and profitability of firms in the United States.

Hypothesis 8: The firm age (AGE) affects positively/negatively to the business performances.

Age is the length of time during which a being or thing has existed. We defined firm age as the number of years of incorporation of the company. Onaolapo & Kajola (2010), Nghiem Thi Tha et al (2018) identified the positive impact of Age on business performances, while Masulis et al (2011), Alimadar et al (2018) found the two-dimensional impact of age on company profitability. This trend is explained by the segmental characteristics of the growth cycle of the enterprise. During the maturity stage of an enterprise, there is an expectation of increased profitability. As companies advance in age, their capacity to innovate, adapt to evolving markets, and embrace new technology may be impeded, leading to a subsequent reduction in profitability.

Hypothesis 9: The ratio costs of goods sold to sales (CFS) affects negatively to the business performances

The ratio of costs of goods sold to sales is a financial metric that measures the expense management ability of a company's core operations by comparing the costs of goods sold to net sales revenue. Gombola and Liu (2010) found that a lower CFS is associated with higher profitability. Guerard and Markowitz (1994) found a positive relationship, indicating that companies with lower expense ratio tend to exhibit higher profitability. Similarly, Han (2014), Zardini and Audousset-Coulier (2016) suggest CFS affect negatively to the business performances.

3. RESEARCH DESIGN

3.1. Data

The paper studies factors affecting the business performances of tourism companies listed in Vietnamese stock exchange. The data used in the study comprises a panel of 30 tourism firms over the 9-year period from 2015 to 2022. The authors obtained the financial information from the financial statements and annual reports disclosed in the companies' website. We collected and eliminated all observations that have omissions of critical financial indicators. As a result, an analysis based on the sample of 224 observations.

3.2. Methodology

3.2.1. Empirical models

To test proposed hypotheses, analyzing data sample to the following models:

$$HQKD_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 SAGR_{it} + \beta_3 FIXED_{it} + \beta_4 LEV_{it} + \beta_5 DAR_{it} + \beta_6 DAP_{it} + \beta_7 AGE_{it} + \beta_8 CFS_{it} + \mu_{it}$$

In which: i and t denote the cross-sectional (firm) and time-series dimensions respectively.

Items	Definitions	Measurement	Expected Sign
Dependence variable			
ROA	Returns on assets	Net profit/Average total assets	
ROE	Returns on equity	Net profit/Average owners' equity	
ROS	Return on sales	Net profit/total sales	
Independence variable			
SIZE	Firm size	Natural Logarit of total assets	+
SAGR	Sale growth rate	Sales at year t/ Sales at year t-1 -1	+
FIXED	Fixed assets ratio	Fixed assets/ Total assets	+
LEV	Leverage	Total liability/owners' equity	+/-
TAT	Asset turnover	Total sales/average total assets	+
DAR	Account receivable days	365 x Average short-term account receivable/ Sales	-
DAP	Account payable days	365 x Average short-term account payable/ Cost of goods sold	+/-
AGE	Firm age	The number of operation years since establishment	+/-
CPS	Ratio of costs of goods sold to sales	Costs of goods sold/ Sales	-
COVID	Covid 19	Dummy variable: before 2020 = 0; 2020 and after 2020 = 1	-

Table 1: Variable definitions

3.2.2. Methodology

In order to test the factors affecting the business performances of 30 listed tourism firms in Vietnam during the period of 2014-2022, we conducted regression model in panel data by adopting various methods including Ordinary Least Square (OLS), Random-effect model (REM) and Fixed-effect model (FEM). The White, Breusch Pagan and Hausman tests indicated that the most appropriate regression model. Besides that, we also used Wal test and Wooldridge test to test the existences of heteroskedasticity and autocorrelation. To address these error problems, author continuously use feasible generalized least squares (FGLS). The results from FGLS model are final findings for factors affecting business performances' tourism firms.

4. EMPIRICAL RESULTS

According to the descriptive statistic in table 2, ROA over the period of analysis is 0.014 (~1.4%) on the annual basis, which represent relatively low returns on total assets. Over the period, ROA has low value of -0,49 and high value of 0.296 with standard deviation of 0.103. These results indicated that returns on assets of Vietnamese tourism firms have been varied significantly between different firms during the analysis period. During the analysis period, returns on equity of tourism firms have substantially fluctuated from lowest value of -6.452 to highest value of 36.521. Average ROE is 0.139 which means relatively sound returns on investors' equity, however standard deviation is greater (2.391). Besides that, average ROS of tourism firms is -0.131 ranging from -20.029 to 0.559 and standard deviation is 1.343. The results means that during the analysis period, tourism firms have been unprofitable, however there has been significant variety between different companies. Overall, descriptive results of ROA, ROE, ROS might indicate that Vietnamese tourism firms have low level of business performance and these levels have varied significantly between different firms. The tourism firm size is calculated as the natural logarithm of total assets, ranging from 23.161 (VND 11.452 billion) to 29.6 (VND 7.164.335 billion). A similarity between mean and median values at 26.38785 and 26.3204 respectively proved "well-behaved" distribution of this variable. However, the standard variable at 1.292 suggests this variable has variation relative to its mean. The sale growth rate of 30 listed tourism firms during period 2015-2022 is 80%, ranging from -100% to 11,190.9% and standard deviation at 7.673. These figures mean that almost the revenue growth rates of tourism firms have been varied significantly during the analysis period. This fluctuation could be explained by the effects of Covid-19 pandemic on tourism industry. The tourism firms in the analysis panel had an average fixed assets ratio of 0.345, which means they invested average 34,5% of total assets for fixed assets, however this ratio varied from lowest point of 0% to highest point of around 97%. This mean and standard deviation is quite similar, so fixed assets ratio of tourism firm distributed "well-behaved". Moreover, on average, leverage ratio is 0.935, which is relatively high compared to other industries. This means, on average, assets of tourism firms are funded mainly by external sources. The leverage ratio varied significantly from -405.676 to 256.876 with standard deviation of 32.589. This indicated the tourism firms' financing policies mainly depend on external sources and the financing policy varied significantly in different firms. Higher leverage ratio could lead to higher financial risk and lower financial independence of the business. Average account receivable days of tourism firms is 1,619.249 days, ranging from 5.938 days to 322.000 days with standard deviation of around 21,566 days. Therefore, it can be seen that tourism firms have relatively high days of account receivable compared to other industries. Average account payable days of tourism firm is 1,350.79 days, ranging from 16.163 days to 163,000 days with standard deviation of 11370 days. Therefore, average time that the Vietnamese tourism firms took to pay their liability is so high and varies significantly to different firms. Besides that, average ratio of costs of goods sold to sales is 0.743 with highest value of 1.631 and lowest value of 0, which means that operational efficiency of Vietnamese tourism firms is low and they are still struggling in management of expenses. Moreover, standard deviation (0.243) is relatively lower than CFS mean, so expense management ability has varied significantly in different firms. In addition, total asset turnover ranges from 0 to 7.264 with mean of 0.867 and standard deviation of 1.074. This shows that efficiency of tourism firms' assets in generating revenue is relative sound and slightly varies in different firms during the analysis period. The average age of insurance firms from 2015 to 2022 is 20.202 years, however this variable varied from 1 to 46 years with a high value standard deviation at 9.704. Thus, regarding to history of establishment and development, there could be the big gaps between tourism firms.

Pair-wise Pearson correlation coefficients are shown in Table 3. This table show a clearly signal for the potential of multicollinearity and autocorrelation problems. Therefore, the authors used many different methods to address errors in the models.

Because of the effects of Covid 19 on tourism firms' financial performance in recent years, there are some outliners in variables used in the models. Therefore, we winsorized 1% some variables containing significant outliners like Leverage ratio, return on sales, account receivable days, days of payable outstanding, gross profit margin.

Variables	Obs	Mean	Std. Dev.	Min	Max	p1	p99	Skew.	Kurt.
ROA	223	.011	.102	-.492	.296	-.373	.259	-1.381	8.78
ROE	224	.147	2.505	-6.452	36.521	-1.354	1.628	13.649	200.337
ROS	227	-.147	1.41	-20.029	.559	-3.089	.474	-12.653	176.513
SIZE	228	26.401	1.327	23.161	29.6	23.612	28.87	-.041	2.394
SAGR	224	.8	7.673	-1	111.909	-.883	6.766	13.768	198.37
FIXED	228	.345	.266	0	.97	.001	.958	.565	2.314
LEV	228	.935	32.589	-405.676	256.876	-3.471	15.426	-6.353	124.297
DAR	223	1619.249	21565.749	5.938	322000	6.034	1591.247	14.827	220.901
DAP	223	1350.789	11370.328	16.163	163000	19.115	11818.462	13.324	187.525
CFS	227	.743	.243	0	1.631	0	1.445	-.195	5.023
TAT	224	.867	1.074	0	7.264	.004	6.447	3.249	16.743
Age	228	20.290	9.704	1	46	2	44	.451	2.488

Table 2: Vietnamese tourism companies, 2015-2022: Descriptive statistics

Source: The table extracted from Stata 14

Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) SIZE	1.000								
(2) SAGR	0.089	1.000							
(3) LEV	0.253*	0.147	1.000						
(4) FIXED	-0.343*	-0.103	-0.250*	1.000					
(5) DAR	0.451*	-0.028	0.161	-0.302*	1.000				
(6) DAP	0.304*	0.006	0.327*	-0.132	0.649*	1.000			
(7) CFS	-0.318*	0.090	0.278*	0.093	-0.171	-0.037	1.000		
(8) TAT	-0.034	0.095	0.359*	-0.221*	-0.368*	-0.362*	0.356*	1.000	
(9) Age	-0.083	-0.134	-0.247*	-0.254*	-0.120	-0.277*	-0.073	0.155	1.000
*** p<0.01, ** p<0.05, * p<0.1									

Table 3: The pairwise Person correlation between variables

Source: Data extracted from Stata 14

Multivariate Results

	FGLS	FGLS	FGLS
	ROA	ROE	ROS
SIZE	.006**	.006	.013***

	(.002)	(.005)	(.005)
SAGR	.013***	.012**	.012**
	(.003)	(.005)	(.006)
FIXED	-.007	-.042	-.111***
	(.011)	(.026)	(.022)
LEV	-.01***	-.013	-.014**
	(.003)	(.011)	(.006)
DAR	-.0000751**	0.000025	-.000267***
	(0)	(0)	(0)
DAP	-.0000866***	-.0001295***	-.0002523***
	(0)	(0)	(0)
CFS	-.244***	-.34***	-.515***
	(.019)	(.03)	(.035)
TAT	.022***	.09***	.007
	(.003)	(.01)	(.005)
Age	0	-.001**	-.002***
	(0)	(.001)	(.001)
Covid	-.019***	-.022**	-.004
	(.005)	(.01)	(.01)
_cons	.057	.148	.236*
	(.069)	(.144)	(.134)
Observations	223	223	223
Pseudo R^2	.z	.z	.z
Standard errors are in parentheses			
*** p<.01, ** p<.05, * p<.1			

Table 4: Regression to analyse the factors affecting the tourism firms' business performance.

Source: The data extracted from Stata 14

Table 4 presents the results for examining the factors affecting the business performance of tourism firms listed in Vietnamese stock exchanges. We found consistently strong fit of models with Prob>F is 0.000. The results shows that SAGR have positive relations to all indicators presented for business performance of tourism firms while the opposite is true for DAP and CFS. Firm size affects positively to ROA and ROS, while total asset turnovers also have a positive impact on ROA and ROE. Other factor like DAR has a negative impact on ROA and ROS and AGE impacts negatively to ROE and ROS. Besides that, the results also proved a negative significant effect of Covid pandemic on the tourism firms' business performances. Based on the multivariate results above, we proposed the models of factors affecting the tourism firms' financial performances, as below:

Model 1: Factors affecting the Returns on assets (ROA)

$$ROA = 0.006\ x\ SIZE + 0.013\ x\ SAGR - 0.01\ x\ LEV - 0.0000751\ x\ DAR \\ - 0.0000866\ x\ DAP - 0.244\ x\ CFS + 0.022\ TAT \\ - 0.019\ x\ Covid\ Dummy + 0.057$$

Model 2: Factors affecting the Returns on equity (ROE)

$$ROE = 0.012\ x\ SAGR - 0.0001295\ x\ DAP - 0.34\ x\ CFS + 0.09\ TAT - 0.001\ x\ AGE - 0.022\ x\ Covid\ Dummy + 0.148$$

Model 3: Factors affecting the Returns on sales (ROS)

$$ROS = 0.013\ x\ SIZE + 0.012\ x\ SAGR - 0.111\ x\ FIXED - 0.014\ x\ LEV - 0.000267\ x\ DAR - 0.0002523\ x\ DAP - 0.515\ x\ CFS - 0.002\ x\ AGE + 0.236$$

According to the results from empirical tests above, we would like to propose some solutions to enhance the business performance of Vietnamese tourism firms in next years.

5. SOLUTIONS AND SUGGESTIONS TO ENHANCE THE BUSINESS PERFORMANCES OF TOURISM FIRMS LISTED IN VIETNAMESE STOCK EXCHANGES

Firstly, it is necessary for all Vietnamese tourism firms to expand their business scales. According to empirical results, firm size has a positive relationship to business performances of tourism firms: an increase 1% in firm size will lead to an increase 0.006% in ROE and an increase 0.013% in ROS with the significant level of 5% and 1% respectively. Each tourism firm need to have a specific and comprehensive road map for expanding business scales. They should carefully prepare the appropriate financing policies, determining appropriate financial sources – internal or external sources, determining the suitable investment policies, have appropriate capital and asset structures. In the digital era and recovering economy, it is good time for Vietnamese tourism firms to expanding their operational scales by investing more on integrating advantaged technologies into tourism business activities, which could help to enhance the competitive advances as well as efficiency in business operation.

Secondly, it is important for tourism firms to determine the optimal capital structure to minimize the cost of capital and utilize the financial leverage to maximize the firms' profitability. The empirical findings indicate a relatively high level of using leverage system in tourism industry and increasing 1% leverage ratio would lead to a decrease 0.01% in ROA and 0.014% in ROE with the significant level of 1% and 5% respectively. Therefore, the financing policies of tourism firms have significant impacts on financial performances. The more the tourism firms increasing the independence with external sources in terms of financing, the greater profitability the firms would gain and vice versa. In order to lower using leverage system, the companies could choose different ways to increase owners' equity, such as issuing additional stocks, M&A with foreign corporations or large groups who have strong business ecosystem, retaining earnings, having appropriate dividend payment policies, restructuring capital structure.

Thirdly, expanding different selling channels, enhancing quality of services to increase sale growth rate and then enhance the financial performances. The sale growth rate has the positive influences to all three measures of business performances. Sale growth rate increases 1%, which could lead ROA increases 0.013%, ROE increases 0.012% and ROS increases 0.012% with the significant level of 1%, 5%, 5% respectively. The results suggest that sale growth rate plays an important role in enhancing and fostering the tourism firms' financial performances. In the context of rapid recovery after pandemic of tourism industry, tourism firms should take into account the application of advanced technology into provided services to enhance quality of services, customers' experiences, lower the administrative and selling expenses, eventually increase the companies' profitability.

Fourthly, focusing on monitoring, controlling cost of goods sold. For tourism companies, increasing marketing campaign, expanding variety of selling channels, providing additional types of services, integrating high-edge technology into services could be useful to enhance sale growth rate, however these implements could expose a side effect to the expense, the CFS could increase and then lead to a reduction in profitability. Following the empirical results, CFS has significant negative relations to financial performances with the significant level of 1%. In more details, if CFS increases 1%, ROA, ROE, ROS will decrease 0.244%, 0.34% and 0.515% respectively. The results mean that the better saving operation expenses, the greater profitability the tourism firms can achieve. Tourism firms need to pay more considerations on cutting redundant, non-efficient expenses like advertisement, marketing campaign for offered services and simultaneously catching market trends like pushing marketing and advertising in social media platforms like Ticktok or Instagram,…, integrating new technology into services like online-booking, virtual assistants, automatic payments…., which enable tourism firms to cut down unnecessary costs.

Fifthly, account receivable and account payable management are also play essential roles to foster the tourism firms' performances. Vietnamese tourism firms currently have high level of days of account receivables and days of account payables, which means they are still struggling in controlling account receivables and account payables. This could lead to increase in cost of capital, then lower the companies' profits. The findings show the negative relation of DAP and all three business performance indicators with the p-value 0.000, while DAR affects negatively to ROA at significant level of 5% and ROS at significant level of 1%. Although the coefficients of DAR and DAP effects on ROA, ROE, ROS are relatively small, paying more attention on monitoring, controlling account receivable management and account payable management is necessary for tourism firms to save more cost of capital as well as relevant operational expenses, then increase the companies' profitability.

Finally, the results show that the tourism firms' age has negative influences on ROE and ROS with the significant level of 5% and 1% respectively, however the levels of impacts are relatively low. Therefore, the history of establishment and development is not an advantage and an important element for tourism firms to enhance business performance. On the contrast, the conservative, obsolete management mechanism, bureaucracy of long-standing tourism firms in Vietnam could be a factor to preventing the improvement in their business performances.

Besides that, the empirical models are also included a dummy variable "Covid" to present for the appearance of Covid pandemic in 2020. In align with the fact, the empirical results indicate the significant negative effects of Covid 19 to the tourism firms' ROA and ROE. It is clearly that the existence of Covid 19 terminated the operation of tourism industries, has caused the industry to expose many challenges and even the risks of bankruptcy. However, the business performance of recent years after Covid has indicated a signal of recovery. The solutions proposed above would be useful for the tourism companies to consider and implement to enhance the business performance and strongly rapidly recover.

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SUSTAINABLE PRIVATE ECONOMIC DEVELOPMENT IN VIETNAM IN CURRENT GLOBALIZATION

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Abstract: *The private economy has a particularly important position and role, being one of the basic components of the country's economy. Sustainable private economic development in Vietnam in the current context of globalization not only contributes to the country's economic growth but also contributes to political and social stability. In this article, the author focuses on clarifying some of the following contents: (1) Analyze and clarify theoretical issues about sustainable private economic development in the context of globalization (2) Survey the current situation Sustainable private economic development in Vietnam in the current globalization context (3) Propose some solutions for sustainable private economic development in Vietnam in the current globalization context.*

Keywords*: Sustainable private economic development; globalization context*

1. INTRODUCTION

Sustainable private economic development is one of the important elements to promote the country's economic development, especially in the context of globalization, which opens up strong development of the private economy and private enterprises. have opportunities to expand production and business, invest abroad and cooperate with foreign enterprises investing in the country. However, it also contains many challenges such as technological competition, geopolitics, ideological and cultural differences... Therefore, to develop a sustainable private economy, there must be feasible solutions.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

Manred B Steger "Globalization" [2011] (translated by Nguyen Hai Bang, edited by Tran Tien Cao Dang) Tri Thuc Publishing House: This book Manfred B. Steger presented his personal views on globalization and outlined the causes. impact of globalization on economic, cultural and social fields; while also debating whether globalization is, after all, a good or bad thing and whether we are truly living in a borderless world?

Nguyen Manh Hung (2021) "On international integration and participation in the globalization process of Vietnam". According to the author: in the country's development, Vietnam is promoting the process of globalization and deep integration with the region and the world. Currently, Vietnam's international integration process is being actively implemented. However, there are also many complex fluctuations. Private economic development is both an opportunity and a challenge.

Luu Hiep (2023) "Need policies to encourage private enterprises to be "leading"". The author thinks that it is necessary to filter 500 enterprises and survey to see what they need so that the State can provide a reasonable mechanism for businesses to develop. Businesses want to expand the market or scale, to have a solution.

Van Nguyen (2023) ""Family business" in Vietnam has many competitive advantages. According to the author, family businesses are aware that in the context of globalization, to gain a

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competitive advantage, trust is required, trust is a valuable asset, the foundation for the success of the business and This is an important difference that creates a competitive advantage today.

The works and articles of the above authors are valuable resources for the authors to inherit and develop their articles.

3. SOME THEORETICAL ISSUES ABOUT SUSTAINABLE PRIVATE ECONOMIC DEVELOPMENT IN THE CONTEXT OF GLOBALIZATION

3.1. Theory of Globalization

In a broad sense, globalization is a phenomenon; a process; a trend of expanding links in international relations to increase cooperation and interdependence in many aspects of social life (from economics, politics, security, culture to the environment, etc. …) between countries based on the principle of mutual benefit. In other words: Globalization is the process of promoting the increase in relationships, cooperation, influence, interaction, and interdependence of all regions, countries, and peoples in the world. world, to highlight a series of changes in economics, politics, culture, security, defense... based on the interests of all organizations and individuals participating in this field .

In this sense, globalization is not simply cooperation and interdependence in the economic field but also in the fields of culture, politics, security, defense... These cooperation issues include Bilateral and multilateral must ensure the principle of mutual benefit, respecting the individualities and characteristics of participating parties on the basis of international law.

In a narrow sense, globalization is a concept in the field of economics that refers to the process of forming a global market that increases interaction, cooperation and interdependence between national economies when Participate in the field of economic and international cooperation.

The manifestation of globalization can be in the form of regionalization - the linking of regions and regional institutions and organizations, or specifically, globalization is the process of forming and developing global markets. world and region, increasing interaction and interdependence, first of all economically, between countries through an increase in flows of goods and resources across borders between countries along with the Form international institutions and organizations to manage international economic activities and transactions.

However, Globalization is just a concept with a similar meaning. Currently, the concept of globalization is fiercely debated in all world forums. There are millions of extremely diverse frames of reference about globalization in printed books and newspapers, on the internet, and in literature. from both popular and academic documents (typically books: The Clash of Civilizations by Samule Huntington and The Lexus and the Olive Tree by Thomas Friedman...). However, up to now the concept of globalization makes people think of a flat world on a global scale.

According to Roland Robertson (Professor of Aberdeen University in Scotland), he said: "Globalization is a concept that refers both to the compression of the world and to the increase in the intensity of consciousness about the world as a whole." can"[1]

Approached from another angle, Fredric Jameson (Professor of Duke University) said: "Globalization reflects the sense of vast expansion of world communications as well as the horizon of a world market, both seemed much more tangible and immediate in the earlier stages of modernity."[2]

From the above analysis, it can be understood that globalization is understood as the wide-spread exchange of economics, politics, culture... between many countries and territories around the world that are mutually regulated. , to enhance mutual understanding and mutually beneficial cooperation.

The manifestation of globalization is the process of "internationalization" of all human values, including international division, international markets, cross-border circulation of goods, services, technology, and information. news, talent and resource distribution...

As globalization changes and leads to the transformation of society, this mutual bond is increasingly growing. Each change in the nature of globalization will lead to changes in other areas. For example, the explosive growth of transportation and communication technologies has led to the promotion of the development of the international economic system. Globalization is the formation of a global village in which participating members come together to accept common rules of the game for all participants.

Globalization is also the process of internationalizing global values, and those global values may originate from a remote country or people but have products that conquer humanity.

The process of globalization is a necessity of the times, taking place according to objective laws, regardless of the will of any organization or individual. To promote economic development, culture - society and other issues, each national organization itself does not "closed", "closed" without interacting with other countries. In the age of technology, if you don't open up exchanges with organizations, countries around the world are suffocating their own economies.

Globalization occurs concurrently with other processes both as its counterweight and as its supporting factor. It is the process of regionalization, localization and localization on a large scale of countries and continents. The trend of economic globalization has brought many advantages to the economic development of each country, especially economically underdeveloped countries.

3.2. Sustainable private economic development in the context of globalization

Vietnam is in a period of transition to socialism. This is a period of intertwining old and new production methods. The new production method is gradually forming and asserting itself, the old production method still exists. During this period, Vietnam inevitably implemented a multi-component commodity economy. "Does the current regime have components, parts, pieces of both capitalism and socialism? Everyone admits that there is" [3] in which the private economy stands out.

A private economy is an economy where private ownership of means of production and material wealth belongs to individuals or a small number of people.

4. CURRENT STATUS OF SUSTAINABLE PRIVATE ECONOMIC DEVELOPMENT IN VIETNAM IN THE CURRENT CONTEXT OF GLOBALIZATION.

4.1. Achievements of the private economy in the context of globalization.

On March 31, 2023, the Government issued Resolution No. 45/NQ-CP Action Program of the Government to continue implementing Resolution No. 10-NQ/TW dated June 3, 2017 The Fifth Conference of the Committee The XII Central Executive Committee on private economic development has become an important driving force of the socialist-oriented market economy. These are mechanisms that create favorable conditions to promote private economic development.

In the context of globalization, sustainable private economic development has greatly contributed to promoting industrialization and modernization of the country, thanks to the right policy mechanism that creates favorable conditions for the private economy. stopped increasing, the proportion of the private economy in the total investment capital of the whole society always exceeds the state economy and the FDI economy; The private economy has a relatively stable capital turnover index, and the increase in domestic and international private investment has contributed to stabilizing the domestic economy. The private economy not only makes a very important contribution not only to the economy, but also to society - that is, solving labor and employment.

Achievements of the private economy: after the covid -19 pandemic, the private economy in Vietnam has made remarkable progress. According to statistics as of December 31, 2021, Vietnam has 694.2 thousand domestic private enterprises (VPE), accounting for 96.6% of the total number of operating enterprises (DN), attracting 58,000 enterprises. 1% of the workforce accounts for 59.3% of the country's assets"[4]. Of the total 694.2 thousand businesses, there are about 500 large private enterprises, creating jobs for 10.4% of workers, 13% of assets, and 15.8% of revenue in the business sector. private industry nationwide.

Over the past two years, although the world has had many negative changes that have had a significant impact on the production and business activities of private enterprises in Vietnam, private enterprises in Vietnam have gradually taken steps to overcome challenges and affirm its position in the international market.

For direct manufacturing enterprises, they have constantly innovated technology, especially approaching the 4.0 industrial revolution effectively, applying the achievements of this revolution to production and business activities, making Labor productivity is constantly increasing, product quality is confirmed. Some branded products of Vietnamese private enterprises are already competing in the international market. According to a PwC survey, "Vietnamese family businesses have good business growth results in 2022. Of which, more than 53% of businesses reported growth in sales, 36% of businesses said they achieved achieved double-digit growth"[5].

For private enterprises operating in the service sector, due to technological innovation, service quality is constantly improving, and service products have become competitive in the international market. 2022, when the pandemic is under control, the service industry group will increase the highest among the three industry groups (reaching 9.99%)"[6].

Developing the private economy is the process of promoting modern and advanced means of production of non-state-owned organizations and individuals so that these economies have the ability to grow from low to high, from simple to complex, from incomplete to perfect, gaining a competitive advantage in the process of producing goods and services in the market.

Sustainable private economic development is to accelerate the growth process of this economy, helping it gradually move toward perfection with a stable, solid, and long-lasting nature.

Sustainable private economic development in the context of globalization is the process of creating favorable conditions to promote this economy's stable growth and competitiveness in the international market during the period of economic integration. international.

Investment fields: Vietnamese private enterprises focused on mining (31.8%); agriculture, forestry, fishery (15.7%)… In recent years, Vietnam has also invested in high technology abroad.

Expanding foreign investment: Globalization has expanded opportunities for Vietnamese private enterprises to integrate internationally, strengthening mutually beneficial cooperation in production and business activities. Areas receiving investment: Currently, Vietnam has invested in 140 countries around the world, including Laos, Cambodia, Venezuela, Singapore, Cuba.... In the field of agriculture and forestry, there is Hoang Anh Gia Lai International Agriculture Joint Stock Company (HAGL Agrico) investing in the Southeast Asian market; In the field of communications, FPT Group (FPT) has invested in 29 countries with a network of 290 headquarters and offices; Vingroup is one of the typical corporations investing abroad and has so far registered to invest in 4 projects in the US, Germany and some other countries.

The amount of money Vietnamese private enterprises invest abroad. According to statistics, “by March 20, 2023, Vietnam had 1,625 valid overseas investment projects with a total Vietnamese investment capital of nearly 21.9 billion USD”[7].

Globalization also opens up the connection between Vietnam’s private economy and foreign private economies: Private enterprises in Vietnam are linked with increasingly diverse large economic corporations in the world. The transfer of technology, exchange of science and technology, production and business experience is increasing. All these factors have created favorable conditions for the private economy in Vietnam to constantly develop

4.2. Current status of limitations of the private economy in the context of globalization

First, the private economy in Vietnam is mainly small-scale enterprises, with a lack of large and medium-sized enterprises; The technology level is not high, the ability to link business cooperation is limited, the capacity to participate in regional and global value chains is weak; Operational efficiency is still low and uneven

Second, the awareness of a large number of officials and civil servants about the private economy is not really correct. The situation of making it difficult for businesses regarding administrative procedures still occurs in many places. A part of civil servants also use private enterprises as their “backyard” to conduct illegal business activities.

Third, state management of the private economic sector still has many shortcomings, especially in implementing regulations and policies with low effectiveness and efficiency, without many incentive mechanisms and policies. Innovative businesses create high-quality products that compete in the international market.

Fourth, the business ethics of a part of private enterprises is not really perfect. The situation of tax evasion, insurance debt of workers, production of counterfeit, counterfeit, and poor quality goods is a problem that private enterprises need to overcome.

Fifth, the capacity of the private economy still has limitations: in the context of globalization, we are facing many challenges: Some businesses understand the culture and laws of the countries in which they invest. and international law is not really profound.

Sixth, the private sector is still slow in technological innovation. In the era of industrial revolution 4.0, technology is the decisive factor in competition. However, a part of private enterprises still uses old technology and is slow to innovate, leading to poor product quality, under great pressure on product prices, and not having enough capacity. compete with high-tech products in the international market.

Seventh, investment capital of the private economy is still low: Private enterprises are under great pressure on investment capital compared to foreign enterprises. In the context of globalization, some rich countries spend a lot of capital on private economic development to improve the competitiveness of businesses, especially businesses that produce high-tech products and invest in research. Research is huge, while Vietnamese businesses, due to their modest investment capital, rarely have breakthrough new products launched on the world market. This is also one of the most difficult "problems" to solve. private enterprises in Vietnam.

Eighth, the pressure of international governance issues has been and is an obstacle for the private economy in international integration. Economic superpowers seek to impose their lifestyles and cultures on other countries. The competition for influence of the superpowers, especially war-making, for the market. Some countries have strong developed economies, do not comply with international law, and have unfair competition; Not following the rules of the market economy properly, when Vietnamese goods of better quality enter their market, they seek to impose taxes, embargoes...

In fact, in the first 6 months of 2023, the world economy will suffer many negative impacts from the unresolved Russia-Ukraine conflict. Some countries around the world increased interest rates to curb inflation, and many private enterprises Vietnam's private sector growth rate is slowing down....in just the first 5 months of 2023, more than 88,000 businesses have withdrawn from the market, an increase of 22.6% over the same period in 2022. Businesses are operation, most also have to reduce the scale of production and business.

From the above analysis, it can be seen that in addition to the positive aspects of private economic development in the context of globalization, certain negative factors still exist. From the perspective of sustainable development, there are still many problems. Law violations, unfair competition, lack of business ethics are quite common; discharge of wastes that pollute the environment, destroy the ecosystem, fail to ensure food hygiene and safety; commercial fraud… takes place in unpredictable complexity.

5. SOME SOLUTIONS FOR PRIVATE ECONOMIC DEVELOPMENT IN VIETNAM IN THE CONTEXT OF GLOBALIZATION

Firstly, renewing awareness of the role and position of the private economy, promoting the strengths and potential of the private economy. The process of developing the private economic sector is associated with the thinking of developing a multi-sector economy. During the transition period to socialism, the private economy is indispensable. Great resources contribute to country building. Therefore, it is necessary to have a comprehensive view and a correct awareness of the position and role of the private economy to create the right mindset, and only then can we come up with the right measures to promote private economic development. in the current context of globalization.

Second, institutional reform and private economic development to create a favorable and equitable business environment among economic sectors. Determining private economic development to become an important driving force of the economy. Institutionalizing the Party's policies, the Government has issued many institutional programs, improving the business environment, eliminating prejudices against the private economy,... Accordingly, the private economic sector has developed strongly.

Third, it is necessary to reform administrative procedures to gradually convert administrative procedures to digital, creating favorable conditions for handling administrative procedures for private enterprises in a neat, compact and effective manner. , promote investment, upgrade technical infrastructure, deploy the construction of many software, databases, platforms, and application software so that businesses have the most favorable conditions to deploy production activities. business.

Fourth, promote the role of the private economy, encourage private enterprises to innovate creative business models, create new products capable of competing in domestic and international markets.

Fifth, build a mechanism to encourage private enterprises to invest in new technology and create new products: The State needs to build a mechanism to encourage private enterprises to invest in high technology and exploit new products. scientific research results, effective application of scientific achievements in production and business, providing the market with high-tech products; Provide financial support for private enterprises to purchase scientific research results in domestic and international markets, and create favorable conditions for self-invested technology research institutes and development by organizations and individuals. .

Sixth, diversify foreign currency sources: The state needs to have a mechanism to diversify the supply and reserve of foreign currency, and support private businesses when geopolitical events occur. Strengthen financial cooperation and linkages with developed countries to create a common currency to avoid financial risks for the private economy.

Seventh, promote international cooperation multilaterally and seek new markets. Strengthen foreign affairs, expand cooperation with all countries around the world based on the principle of "equality, mutual benefit", encourage private enterprises to invest and attract investment in all countries. countries in the world. Diversify the supply chain of raw materials and fuel with many countries. Develop contingency plans to prevent geopolitical issues from disrupting the supply chain.

Eighth, shifting capital flows and responding to geo-political risks. Create a competition to attract capital from many countries. Tenth, increase the work of inspection, examination and supervision.

6. CONCLUSION

Sustainable private economic development in the context of globalization is a complex problem. To do this well, there needs to be participation from all levels, branches and fields.

For the state: on the basis of researching international law, promulgating documents and building a legal system for private enterprises to implement effectively.

For private enterprises: Continuously learn, improve management knowledge, improve technology, research domestic and international legal systems, and do business according to the provisions of law.

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RESEARCH TOPIC: IMPACT OF MACROECONOMIC FACTORS ON THE VIETNAM'S STOCK MARKET

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Abstract: *This research study is an insight into the intricate relationship between macroeconomic factors and the performance of the Vietnam's stock market. Drawing on an extensive dataset covering the recent five-year period, the study employs a multifaceted methodology that combines data analysis, time-series modeling, and sector-specific analysis to comprehensively evaluate the dynamic interactions between key macroeconomic indicators and stock market returns. The research identifies the significant macroeconomic variables that exert a substantial influence on stock market movements, quantifies the magnitude of their impact, and provides insights into the directional correlations.*

Keywords: *Vietnam's stock market, macroeconomic factors, Government's policies, sector-specific analysis, market volatility*

1. INTRODUCTION

1. Rationale

The impact of macroeconomic factors on Vietnam's stock market is a relevant, practical, and academically interesting topic with significant implications for various stakeholders. Following are the reasons for the authors to choose the topic "The impact of macroeconomic factors on Vietnam's stock market":

Macroeconomic factors play a crucial role in shaping the performance of a country's stock market. Understanding how these factors impact the stock market can be highly relevant for investors, policymakers, and financial analysts, particularly in a rapidly developing economy such as Vietnam. Vietnam has experienced significant economic growth in recent years and has become an attractive destination for foreign investors. Investigating how macroeconomic factors influence the stock market can provide insights into the sustainability of this growth and its implications for investment opportunities.

In terms of macroeconomic policies such as monetary policy, fiscal policy, and trade policies, they can significantly affect a country's economic stability and growth. Studying their impact on the stock market can help policymakers make informed decisions and adjust policies as needed. Additionally for investors and portfolio managers, understanding how macroeconomic factors affect the stock market is essential for risk management and asset allocation. It helps them make relevant and timely investment decisions and reduce exposure to market volatility.

Moreover, this topic offers an opportunity for academic research and analysis. It allows scholars to contribute to the field of finance and economics by exploring the relationships between macroeconomic variables and stock market performance in the specific context of Vietnam. Studying the impact of macroeconomic factors on Vietnam's stock market can shed light on market behavior, including the reactions of investors to economic news and events. This can be valuable for understanding market dynamics and investor sentiment.

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Comparing the findings with other countries or regions can provide insights into the unique characteristics of Vietnam's stock market and its sensitivity to macroeconomic factors, helping investors make cross-border investment decisions. Vietnam has made strides in improving data transparency and availability, making it easier to collect and analyze data related to macroeconomic indicators and stock market performance.

Vietnam faces unique economic development challenges, and understanding how macroeconomic factors impact its stock market can contribute to addressing these challenges and promoting sustainable economic growth.

The research findings can have practical applications for investors, financial institutions, and government agencies seeking to enhance their understanding of the Vietnamese stock market's behavior and performance.

2. Research Objectives

The research objectives can be designed to investigate and analyze various aspects of this relationship. In this research, the authors identified some potential research objectives:

- Assess the relationship between six key macroeconomic indicators including inflation, interest, money supply, exchange rate VND/USD, industry GDP, and FDI and the performance of Vietnam's stock market.
- Address any policy implications and recommendations that emerge from the research findings, with the goal of improving the stability and efficiency of Vietnam's stock market.

These research objectives can guide a study that aims to deepen our understanding of how macroeconomic factors influence Vietnam's stock market and provide valuable insights for investors, policymakers, and other stakeholders in the financial and economic sectors.

3. Significance of the research

The study of how macroeconomic factors impact Vietnam's stock market is significant not only for investors but also for policymakers, businesses, and researchers. It provides valuable insights into the dynamics of the stock market and its role in the broader economy, aiding informed decision-making and contributing to economic growth and stability in Vietnam.

- Investor decision-making: Understanding how macroeconomic factors affect the stock market in Vietnam is critical for investors. It helps them make informed decisions about asset allocation, portfolio diversification, and risk management.
- Economic growth and stability: A well-functioning stock market is often indicative of a stable and growing economy. By studying this relationship, researchers can provide insights into the broader economic health and sustainability of Vietnam.
- Policy implications: Policymakers can use the findings to develop and adjust economic and financial policies, aiming to promote a stable and efficient stock market that encourages investment and economic growth.
- Risk mitigation: The study can assist financial institutions and market participants in developing risk mitigation strategies and hedging techniques to navigate the volatility of the stock market in Vietnam.
- International investment: For foreign investors and multinational corporations, understanding how macroeconomic factors impact the Vietnamese stock market is crucial for making cross-border investment decisions.

− Sector-specific insights: The research can provide insights into how specific sectors within Vietnam's economy are affected by macroeconomic factors, which is valuable for sector-specific investors and businesses.

− Academic contribution: The study contributes to the academic literature by adding empirical evidence to the field of finance and economics, specifically focusing on the unique dynamics of Vietnam's stock market.

− Global economic insights: Vietnam is part of the global economic landscape. Understanding how its stock market responds to global economic events and trends can provide insights into the interconnectedness of financial markets worldwide.

− Economic development challenges: Vietnam faces unique economic development challenges. By studying the impact of macroeconomic factors on its stock market, researchers can help identify potential roadblocks and propose solutions for sustainable growth.

− Data transparency: The research can help promote data transparency and integrity in Vietnam, potentially encouraging better reporting and data availability in the financial sector.

− Long-term investment: For long-term investors and retirement funds, knowledge about the relationship between macroeconomic factors and the stock market in Vietnam is crucial for crafting investment strategies that ensure financial security.

− Public awareness: The research can raise public awareness about the intricacies of stock market behavior and the role of macroeconomic factors in shaping economic outcomes.

II. OVERVIEW OF THE VIETNAM'S STOCK MARKET

1. History and Development of the Vietnamese Stock Market

The Vietnamese stock market, officially known as the Ho Chi Minh Stock Exchange (HOSE) in Ho Chi Minh City and the Hanoi Stock Exchange (HNX) in Hanoi, has undergone significant development and transformation since its inception. Here is a brief history and development of the Vietnamese stock market:

Early Development (1990s - 2000s): The foundation for Vietnam's stock market was laid in the early 1990s as the country began its economic reforms (Đổi Mới) to transition from a centrally planned economy to a socialist-oriented market economy. The stock market started with the Ho Chi Minh Securities Trading Center, established in 2000, which later became the Ho Chi Minh Stock Exchange (HOSE). Hanoi Stock Exchange (HNX) was founded in 2005. Initially, the market was small and mostly comprised of state-owned enterprises.

Foreign Investment and Liberalization (2007 - 2010s): Vietnam initiated various reforms to attract foreign investment and develop its financial markets. The government allowed foreign investors to participate in the stock market, and this led to increased foreign portfolio investment. Stock indices like the VN-Index (HOSE) and HNX-Index (HNX) were introduced to track the market's performance.

Market Expansion and Reforms (2010s - Present): The Vietnamese government continued to promote the development of the stock market as a key pillar of the country's financial system. Various reforms were introduced, including the equitization of state-owned enterprises and the introduction of new financial products like futures and options. The market also witnessed the emergence of various financial instruments and derivatives.

Market Capitalization and Listings: The market capitalization of both HOSE and HNX has grown significantly over the years. As of my last knowledge update in 2022, the Vietnamese stock market was among the top-performing markets in the world, with a rapidly expanding number of listed companies. Several major state-owned enterprises have been listed on the exchanges, attracting substantial attention from investors.

Integration with Global Markets: Vietnam made efforts to integrate its stock market with global financial markets. This was exemplified by its inclusion in the MSCI Emerging Markets Index, which attracted foreign institutional investors. Furthermore, the government sought to enhance transparency and improve the regulatory environment to align with international standards.

Challenges and Future Outlook: Despite its impressive growth, the Vietnamese stock market faced challenges related to liquidity, the dominance of state-owned enterprises, and market volatility. Ensuring stability and reducing market manipulation remained areas of concern. The COVID-19 pandemic also had a significant impact on market performance.

Technological Advancements: The stock market has embraced technological advancements, with electronic trading platforms and increased use of fintech in trading and settlement processes.

The Vietnamese stock market's development reflects the country's broader economic growth and transition to a more market-oriented economy. It has become an integral part of Vietnam's financial system and a source of investment opportunities for both domestic and international investors. Its future development will likely depend on continued economic growth, regulatory reforms, and efforts to enhance market efficiency and transparency. Please note that the information provided is based on my knowledge as of 2022, and there may have been further developments in the Vietnamese stock market since that time.

2. Current status and market size of the Vietnam's stock market in 2023

In the first six months of 2023, the Vietnamese stock market experienced various fluctuations in the backdrop of global economic and political instability. Worldwide, inflation surged in many places in 2022, leading to tighter monetary policies in many economies. In 2022, the US Federal Reserve (FED) increased the federal funds rate by 4.25 percentage points through seven consecutive adjustments. In the first five months of 2023, FED continued to adjust the interest rate three more times in February, March, and May, each time increasing it by 0.25 percentage points, bringing the US federal funds rate to its highest level in 15 years. On June 14, 2023, the Fed decided to maintain the interest rate at 5.0-5.25% during the June 2023 adjustment period. Similarly, the Bank of England adjusted its interest rate for the fourth time in the year on June 22, 2023, increasing it by 0.5 percentage points, bringing the base rate to 5%. The European Central Bank (ECB) also adjusted its interest rate for the fourth time, raising it by 0.25 percentage points on June 15, 2023, the highest level since 2001. These actions raised concerns about the "recession-inflation" risk in some countries.

Before the policy adjustments in the US, the US dollar strengthened significantly against many currencies, putting pressure on the exchange rates of many countries and leading to financial instability and increased debt. Although inflation has cooled off somewhat, it still remains high, causing difficulties in consumer demand and economic activities. Central banks in various countries continue to maintain tight monetary policies to bring inflation back to target levels. The consecutive collapses of some banks in the US and Switzerland in March and May 2023 raised concerns among investors about financial market stability. Meanwhile, the global political situation continued to be complex and unpredictable, with the ongoing Russia-Ukraine conflict escalating. Additionally, the slowing economic recovery in China in comparison to Q1/2023 was a cause for concern, especially since China remains a significant driver of global economic growth.

The global economic outlook is assessed as challenging, which has led to complex economic and political developments in global stock markets. Domestically, due to reduced global demand and currency market fluctuations, as well as slow growth among major trading partners such as the US, EU, Japan, and South Korea, Vietnam's import and export activities have been severely affected. Although Vietnam maintained a trade surplus in the first six months of 2023, import and export activities declined compared to the same period the previous year. In addition to the reduced import demand from foreign direct investment (FDI), this situation also indicates a decline in the activities of domestic enterprises. Furthermore, the total foreign direct investment (FDI) capital registered in Vietnam as of June 20, 2023, decreased by 4.3% compared to the same period in 2023. Even the advantages of cheap labor and taxes could be affected if global minimum tax issues are applied. These negative factors have a significant impact on the business performance for the second quarter and the remaining quarters of 2023.

However, there have been several positive aspects in the Vietnamese market in the first six months of 2023. The government issued Resolution No. 88/NQ-CP in the May 2023 regular government meeting, requiring ministries, agencies, and localities to proactively remove difficulties and obstacles, especially in terms of mechanisms and policies to support businesses and people. The resolution aims to promote economic growth drivers, including consumption, investment, and exports, and strive to reduce deposit and lending interest rates to support economic recovery, production, and business development. So far, the State Bank of Vietnam (SBV) has issued four decisions to reduce the operating interest rates. As a result, the deposit and lending interest rates of many commercial banks have continued to decrease in the second quarter of 2023.

Despite the challenges faced by businesses, according to the report on the economic and social situation in June 2023 and the first six months of the year by the General Statistics Office, several economic indicators, such as industrial production index, total retail sales of goods and services, and the proportion of capital investment from the state budget, have improved compared to the same period in 2022. The government's support policies in removing obstacles for businesses and people, along with the reduced interest rates, have improved market liquidity and encouraged domestic investors to return to the stock market.

In the face of the aforementioned factors, the Vietnamese stock market continued to experience a mix of ups and downs in the first six months of 2023. After making a recovery in January 2023, the Vietnamese stock market had some declining sessions in February. Moving into March, following news of instability in the banking systems in the US and Europe, the Vietnamese stock market had a few sessions with losses but later recovered in the following weeks. After several consecutive sessions of gains, the Vietnamese stock market saw an adjustment in April and then rebounded in the early weeks of May. Continuing into May, the Vietnamese stock market traded positively in June. As of June 30, 2023, the VN-Index reached 1,120.18 points, an 11.2% increase compared to the end of 2022. Meanwhile, the HNX-Index closed at 227.32 points, a 10.7% increase compared to the end of 2022. The total market capitalization of the HOSE, HNX, and UPCoM stock markets on June 30, 2023, reached 5,783 trillion VND, a 10.7% increase compared to the end of 2022, equivalent to 60.8% of the estimated GDP for 2022.

Market liquidity continued to be subdued in the first quarter of 2023, with the average trading value per session reaching approximately 11,300 billion VND, a 44% decrease compared to the 2022 average. Moving into the second quarter of 2023, market liquidity picked up, with the average trading value for the months of April, May, and June showing positive growth, reaching 13,374 billion VND per session, 14,495 billion VND per session, and 19,829 billion VND per session, respectively. In the first six months of 2023, the average trading value reached 13,729 billion VND per session, a 31.9% decrease compared to the 2022 average.

Regarding listing and trading registration (LTR) activities, as of the end of May 2023, there were 745 listed stocks and fund certificates on the two stock exchanges (HOSE and HNX), and 869 stocks listed on UPCoM, with a total market capitalization and LTR value of 1,993 trillion VND, a 0.5% increase compared to the end of 2022 (equivalent to 21% of the estimated GDP for 2022).

In the listed bond market, the average trading value for June reached 7,040 billion VND per session, a 6.2% increase compared to the previous month. However, over the first six months of 2023, the average trading value reached 5,871 billion VND per session, a 23.6% decrease compared to the 2022 average. In terms of the listed bond market scale, as of the end of May 2023, there were 451 listed bond issuances with a listed value exceeding 1,897 trillion VND, a 9% increase compared to 2022 (equivalent to 19.9% of the estimated GDP for 2022).

3. Issues and Challenges

In the early months of 2022, Vietnam's stock market had made significant progress due to the economic recovery after the COVID-19 pandemic, but still faced several issues and challenges. It's important to note that the situation may have evolved since then, but here are some of the key issues and challenges that were prevalent at that time:

- Lack of liquidity: One of the primary challenges was the relatively low liquidity of the stock market, especially for smaller-cap stocks. This made it more challenging for investors to enter or exit positions.
- State-owned enterprises (SOEs) Dominance: Many state-owned enterprises were listed on the stock market, and their performance significantly influenced market movements. The dominance of SOEs could lead to issues of corporate governance, transparency, and market volatility.
- Market manipulation: The market faced concerns about market manipulation, insider trading, and price manipulation. Ensuring fair and transparent trading was a priority.
- Limited derivative market: While derivatives, such as futures and options, were introduced to the market, their trading volumes remained relatively small compared to the equity market.
- Regulatory environment: The regulatory environment in Vietnam was evolving, but there was a need for further improvements in areas like investor protection, disclosure requirements, and trading rules.
- Foreign ownership limits: Restrictions on foreign ownership in certain industries and companies presented challenges for foreign investors and limited their ability to fully participate in the market.
- Market volatility: The Vietnamese stock market had experienced periods of high volatility, driven by a variety of factors, including global economic events and speculative trading.
- Infrastructure and technology: Developing and maintaining robust technological infrastructure to support electronic trading and settlement was an ongoing challenge.

− Global economic factors: The stock market was sensitive to global economic conditions and external factors, such as trade tensions, which could impact investor sentiment.

− - Currency risks: For foreign investors, currency risks were a consideration, especially in a market with exposure to the Vietnamese dong.

− Investor education: Improving financial literacy and investor education was important to ensure that investors made informed decisions and understood the risks associated with stock market investments.

− Corporate governance: Ensuring strong corporate governance practices among listed companies, including transparency and ethical behavior, was an ongoing concern.

− Long-term investment: Encouraging long-term investment and reducing speculative trading was a challenge in a market that sometimes saw short-term price fluctuations.

III. THE STOCK MARKET AND MACROECONOMIC FACTORS

1. Key macroeconomic factors

Several key macroeconomic factors can affect the performance of Vietnam's stock market. While the impact of these factors can vary over time, here are some of the critical macroeconomic factors that traditionally influence the Vietnamese stock market:

− Industry Gross Domestic Product (GDP) Growth: GDP growth is a fundamental indicator of economic health. A growing economy is often associated with rising corporate profits, which can positively impact stock market performance.

− Inflation rates: High and volatile inflation can erode the real value of investments and reduce investor confidence. Therefore, the inflation rate is a significant factor influencing stock market performance.

− Interest rates: The level and direction of interest rates set by the central bank can influence borrowing costs, corporate profitability, and investment decisions. Lower interest rates can stimulate economic activity and benefit the stock market.

− Exchange rates: Exchange rate fluctuations can impact companies involved in international trade. A depreciating currency can benefit exporters but may negatively affect companies with foreign debt.

− Money supply: Maxwell Ogbulu and Peter Chinyer conducted a study in 2011 to investigate the long-term impact of monetary policies, including money supply, interest rates, exchange rates, and inflation, on stock prices in Nigeria. Prior to their study, other authors had also identified the influence of money supply on stock prices, such as Chen Shaoping (2008), who argued that an increase in money supply in the market has a positive effect on stock prices, with stock prices rising correspondingly.

− Foreign Direct Investment (FDI): The flow of FDI into the country can have a positive impact on stock market performance as it can lead to increased economic activity and investment opportunities.

2. Mechanisms for transmitting macroeconomic effects to the stock market

The transmission mechanisms for macroeconomic effects to the current Vietnam's stock market can be complex and multifaceted. The interaction between macroeconomic factors and the stock market involves various channels through which economic developments influence stock prices. Here are some of the key mechanisms through which these effects are transmitted:

- Corporate profitability: Macroeconomic conditions, such as GDP growth and inflation, can impact corporate profitability. When the overall economy is growing, companies tend to generate higher revenues and profits, leading to an increase in stock prices. Conversely, high inflation can erode profit margins and negatively affect stock prices.

- Interest rates: Changes in interest rates, as determined by the central bank, affect borrowing costs for companies. Lower interest rates can reduce the cost of capital, making it more attractive for businesses to invest and expand. This can boost corporate earnings and subsequently stock prices.

- Currency exchange rates: Exchange rate fluctuations can impact companies that are exposed to international trade. A depreciating domestic currency can benefit export-oriented companies by making their goods and services more competitive in international markets. This can boost the stock prices of these companies.

- Foreign Direct Investment (FDI): Increased FDI can lead to economic growth, as foreign capital and expertise flow into the country. FDI can drive expansion and investment in Vietnamese companies, thereby positively influencing stock market performance.

- Trade balance: A positive trade balance (more exports than imports) can contribute to economic growth. Companies in export-driven sectors may experience increased demand for their products, which can lead to higher stock prices.

- Government policies and reforms: Changes in government policies, tax reforms, or regulations can have sector-specific effects. For example, tax incentives for certain industries may lead to higher profits and stock price increases within those sectors.

- Global economic factors: Vietnam's stock market is sensitive to global economic events and trends. Economic crises, trade tensions, and shifts in global demand can spill over into the domestic market, influencing investor sentiment and stock prices.

- Commodity prices: The prices of key commodities, such as rice, coffee, and oil, can affect the performance of companies involved in these industries. Changes in commodity prices can directly impact the revenue and profitability of related businesses, influencing stock prices.

- Domestic economic sentiment: Investor sentiment, consumer confidence, and business sentiment can have a significant impact on stock market behavior. Positive sentiment can encourage investment and drive stock prices higher, while negative sentiment can lead to sell-offs.

- Political stability: Political stability is crucial for investor confidence. A stable political environment can attract long-term investments in the stock market, while political instability can lead to uncertainty and market volatility.

- Market valuations: Valuation metrics, such as price-to-earnings (P/E) ratios, are key indicators of stock market performance. Overvalued markets may lead to concerns about a potential market correction, while undervalued markets may be seen as opportunities for investment.

- Regulatory changes: Changes in stock market regulations, trading rules, or listing requirements can influence investor sentiment and market behavior, especially if they affect market transparency and investor protection.

These mechanisms highlight the interplay between macroeconomic factors and the stock market in Vietnam. It's important to recognize that the stock market's response to macroeconomic developments can be influenced by a combination of these factors and can vary depending on market conditions, investor sentiment, and other contextual factors.

IV. RESEARCH METHODOLOGY

4.1. Qualitative analysis

In order to gain a comprehensive understanding of the intricate relationship between macroeconomic factors and Vietnam's stock market, a multi-faceted qualitative research approach was undertaken. The study commenced with an extensive literature review to draw insights from existing academic papers and reports, offering a foundational understanding of the topic and identifying research gaps. This was followed by in-depth expert analysis, wherein financial experts, economists, and scholars provided their invaluable insights into the current macroeconomic landscape in Vietnam, the key indicators influencing stock market dynamics, and predictions for the market's future. Furthermore, a series of structured interviews were conducted with various stakeholders, including investors, fund managers, and stock market analysts, yielding qualitative data on their perceptions, experiences, and decision-making processes in light of macroeconomic developments. The qualitative data was thematically analyzed to uncover recurring patterns and to synthesize emerging insights.

In this research, the authors conducted some activities to collect qualitative data to support the topic.

4.1.1. Literature review

The authors used selective and reliable sources of data such as Academic Journals to review academic articles from respected journals such as Journal of Vietnamese Studies, Emerging Markets Review, and The Vietnamese Economy; The Government Reports to explore reports from the State Securities Commission of Vietnam (SSC) and the Ministry of Finance, which provide valuable data on the stock market and macroeconomic conditions; World Bank and IMF Reports to consult reports from international financial institutions like the World Bank and International Monetary Fund (IMF) that provide macroeconomic analysis and assessments of Vietnam; and research papers by prominent scholars specializing in Vietnamese economics and financial markets.

1.1.2. Interviews

We also use the direct interviews of industry experts, investors, representatives from listed companies, fund managers and university professors from leading Vietnamese business corporations and universities who can offer academic insights into the subject matter. In addition, officials from Government and regulatory authorities such as the State Securities Commission were also interviewed to consult their perspectives on the regulatory environment and its impact on the stock market.

Besides conducting interviews of local individuals and organizations, we also attempted to conduct some interviews of industries experts from international financial institutions such as the WB, IMF, and ADB for their assessment of Vietnam's economical and financial situtation.

By using this wide range of research materials and interviews, we expected to ensure that to research was well-informed, comprehensive, and enriched with insights from various stakeholders and experts in the field, making it a robust and well-rounded study on the subject.

V. RESEARCH FINDINGS

5.1. Evaluation of the impact

5.1.1. Inflation

In the context of the stock market, when inflation increases, it leads to a rise in interest rates to ensure positive real interest rates. This makes the stock market less attractive compared to other investment channels, such as savings accounts. As a result, there is a higher supply of stocks compared to the demand, causing a decrease in stock prices. Additionally, an increase in inflation raises a company's input costs, indirectly affecting its profitability and leading to a decrease in stock prices.

In 1977, Fama and Schwert identified a relationship between inflation and the stock market. The authors used both expected and unexpected inflation to examine the impact of inflation on stock price indices. The results showed a negative impact of inflation on stock prices. Mohammed Omran and John Pointon (2001) also found a negative short-term and long-term impact of inflation on the Egyptian stock market. In 2011, Adel Al Sharkas and Marwan Alzoybi conducted a study on "Stock Prices and Inflation: Experimental Evidence from Countries like Jordan, Saudi Arabia, Kuwait, Morocco." Using a VAR model, the authors provided empirical support for the long-term relationship between inflation and stock prices.

5.1.2. Interest rates

Interest rates represent the cost incurred by borrowers for using capital provided by lenders. Interest rates are one of the crucial factors that influence the overall growth and development of an economy.

A decrease in interest rates has a positive impact on stock price indices. This is because when the cost of capital is lower, companies can more easily raise funds to carry out investment projects. It also reduces costs for companies that use financial leverage, ultimately improving a company's profitability and increasing its stock price. On the contrary, an increase in interest rates has a negative effect on the overall economy. Rising interest rates lead to higher borrowing costs for consumers, reducing their spending and consumption. This, in turn, affects production and business operations, a company's profitability, and makes stocks less attractive in the market.

Mahmudul and Salah Uddin (2009) conducted a study on the relationship between interest rates and stock prices in both developed and developing countries. The results of their research showed that interest rates had a negative impact on stock prices in 14 countries (Australia, Bangladesh, Canada, Chile, Colombia, Germany, Italy, Jamaica, Japan, Malaysia, Mexico, South Africa, Spain, and Venezuela), with the exception of the Philippines. Other studies have also reported similar findings regarding the adverse effect of interest rates on stock prices, such as those conducted by Fama (1981), Mohammad and colleagues (2009), Christopher Gan (2006), Rahman, Sidek, and Tafri (2009), and Nadeem Sohil and Zakir Hussain (2009).

5.1.3. Money supply

Money supply refers to the amount of money injected into the economy to meet various needs such as payment methods and the storage requirements of economic agents. Various measures of money supply include:

- M0: It consists of physical currency, which is the banknotes issued by the central bank that circulate outside the banking system.
- M1: It includes M0 and demand deposits, which are deposits that can be withdrawn at any time upon request, often held in checking or current accounts.
- M2: It encompasses M1 and time deposits at banks, such as savings accounts and certificates of deposit.
- M3: It includes M2 and various types of financial institution deposits outside traditional banks.
- L: The broadest measure, which includes M3 and other financial instruments like treasury bills, commercial paper, and bank acceptances.

Economic theories suggest that monetary policy has an impact on stock price indices. When an expansionary monetary policy is implemented, injecting more money into circulation, it tends to lower interest rates for borrowing and discount rates. This, in turn, increases the demand for financial assets, including stocks. On the other hand, when lending interest rates decrease, it can reduce the discount rate of stocks, thereby raising expectations and income for investors. Conversely, when a contractionary monetary policy is put in place, leading to higher interest rates due to a decrease in the money supply compared to previous conditions, it can increase the cost of capital, reducing investment in stocks and causing stock prices to fall.

Authors Maxwell Ogbulu and Peter Chinyer conducted a study in 2011 to investigate the long-term impact of monetary policy factors, including money supply, interest rates, exchange rates, and inflation, on stock prices in Nigeria. Prior to their study, other authors had also found the impact of money supply on stock prices, such as Chen Shaoping (2008), who argued that an increase in money supply in the market has a positive effect on stock prices, with stock prices rising correspondingly. The results of the Error Correction Model (ECM) showed that in the short term, the M1 money supply has the strongest impact on stock prices, M2 has some influence, and M0 money supply has less impact on stock prices.

5.1.4. Exchange rates

An exchange rate is the rate at which one currency can be exchanged for another, typically at a fixed ratio. There are two methods for quoting exchange rates: direct and indirect, and the choice of method depends on the country and the type of foreign currency involved.

According to economic theories, exchange rates can impact stock prices in two different directions. When the exchange rate increases through direct quoting, it means that the domestic currency has depreciated, and a stable investment environment can attract foreign capital seeking profit opportunities due to the currency differential. However, from another perspective, an increase in the exchange rate can have a negative effect on the stock market. An adjustment in the exchange rate can impact export activities and indirectly affect economic growth and corporate production, subsequently affecting a company's profitability and reducing stock prices.

Authors Noel Dilrukshan Richards and John Simpson conducted research on the interaction between stock prices and exchange rates in Australia. Through correlation tests and Granger modeling, the authors identified the level of interaction between exchange rates and stock prices. Their observations from the period 2003-2006 showed that, in the short term, an increase in exchange rates had a positive impact on the stock market in Australia. Furthermore, when testing for long-term relationships, the results also indicated a long-term impact of exchange rates on stock prices. However, in some other studies, the results were contradictory. For instance, Rahman and Uddin (2009) studied the impact of exchange rates on stock price indices in some developing countries like Bangladesh, India, and Pakistan. Their findings suggested no long-term relationship between exchange rates and stock prices in these countries.

5.1.5. Industrial GDP

The industrial GDP is a comprehensive indicator that reflects the results of production and business activities in the industrial sector over a specific period. It serves as the basis for evaluating the industrial development of a country.

When the industrial GDP experiences growth, it indicates that the economy is in a phase of development, with efficient and profitable companies contributing to increased earnings for shareholders. This makes company stocks more appealing, leading to an increase in stock prices and stock market indices.

Author George Filis (2009) conducted a study to explore the relationship between stock prices and the industrial GDP value. Through a VAR model, the author found that the industrial GDP value had a positive impact on stock prices, although the impact was relatively low. However, another study by author Ahmet (2009) yielded contrasting results. Ahmet analyzed the impact of various economic variables, including the industrial production index in Turkey, and found that the industrial production index had a negative impact on stock prices in the Turkish stock market.

5.1.6. Foreign Direct Investment

According to the Wikipedia encyclopedia, foreign direct investment (FDI) is a long-term investment form by individuals or companies from one country into another country by establishing production or business facilities. The capital for such direct investment can be in the form of money or other assets to carry out investment activities.

Research by author Sarbapriya Ray (2013) on the topic "The Impact of Foreign Direct Investment on Indian Stock Prices: A Granger Causality Approach" found the impact of foreign direct investment on stock prices. The author discovered a positive impact of foreign direct investment on stock prices in India, although this impact was relatively small. The reason for this is that the level of foreign direct investment into India is limited.

VI. CONCLUSION

In conclusion, the six macroeconomic factors, which are Industrial GDP, inflation rates, interest rates, exchange rates, money supply, and Foreign Direct Investment (FDI), play crucial roles in influencing Vietnam's stock market.

- Industrial GDP reflects the health of the manufacturing and industrial sectors, has a positive influence on stock prices. When industrial production is on the rise, it indicates economic growth and robust business activities, making stocks more appealing to investors.
- Inflation rates impacts the stock market in both positive and negative ways. While moderate inflation can be seen as a sign of a growing economy, high and unstable inflation can erode purchasing power and negatively affect stock prices.
- Interest rates have a profound effect on stock prices. Lower interest rates make stocks more attractive as they reduce the cost of capital, encouraging investment in stocks. Conversely, higher interest rates can deter investment and lead to lower stock prices.

- Exchange rates, when managed appropriately, can attract foreign investment, bolstering the stock market. However, rapid or unfavorable changes in exchange rates can hinder exports, potentially affecting the growth of the stock market.
- An increase in money supply, when managed in moderation, can stimulate economic activity and positively influence stock prices. However, an excessive money supply can lead to inflation and a potential devaluation of stocks.
- FDI can have a positive impact on the stock market, but its effect may be limited by the volume of investment. When foreign investors show confidence in the Vietnamese market, it can lead to higher stock prices and an influx of capital.

In summary, the performance of Vietnam's stock market is intricately linked to these macroeconomic factors. Investors, policymakers, and market participants need to monitor and manage these variables effectively to ensure a stable and prosperous stock market environment. Understanding the interplay between these factors is essential for making informed investment decisions and for promoting economic growth and stability in Vietnam's financial markets.

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PROMOTING INFORMATION CAPACITY TIN THE PRIVATE ECONOMIC SECTOR TO PROMOTE RAPID AND SUSTAINABLE DEVELOPMENT

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Abstract: From the summary of experience in developing information capacity in the private economic sector, identifying the nature and characteristics of the problem of developing information capacity, the article focuses on clearly analyzing the role of information capacity for the private economic sector, the current status of the information skills development process in this economic sector, thereby proposing solutions to create motivation for the development of information capacity in this economic sector. private economic sector in the coming period in a dynamic, creative and sustainable way.

Keywords: Information capacity, private economy, rapid development…

1. INTRODUCTION

"In all economies, regardless of the country's level of economic development, the private economy always exists. The difference is only the position and role of the private sector in the economy"[4]. Since the 12th Party Congress, it has been affirmed that the private economy is an important driving force of the socialist-oriented market economy. To develop the private economy quickly and sustainably, it is necessary to promote the innovation power of this sector. Improving information capacity and innovation is unlimited potential, so the private economic sector needs to consider this as the core driving force as a premise for development in new conditions.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES:

In the current strong development trend of the economy, we realize that promoting information capacity in the private economic sector is an important content to promote rapid and sustainable development, so , from the beginning we have determined the importance of information capacity in the private economic sector, advantages and things to keep in mind when developing information capacity in the private economic sector today. Therefore, there have been studies on this content by domestic and foreign researchers to most effectively resolve the relationship between information capacity and the private economic sector in current conditions.

In general, it can be divided into 3 main groups:

Regarding theory, we can mention the works: "Initially understanding the relationship between information knowledge and information technology", Proceedings of the 6th Scientific Conference of Information and Library Students of Hanoi National University by author Tran Bich Diep, Proceedings of the International Conference on Information Literacy: "Information Literacy with Higher Education" by Author Nghiem Xuan Huy... Presented articles Presenting the content of information capacity and clearly stating the role of information capacity in the current era.

Some scientific works have also discussed this issue such as: Master's thesis in library science: "Information knowledge of students at Thai Nguyen College of Education" by author Nguyen Thi Hang, article " Information knowledge with the training of human resources in the

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information and library industry" in the Proceedings of the scientific conference: Information - library industry in the information society by author Do Van Hung, article "The role of capacity information resources for university students" in the National Library Workshop "Information and communication technology platforms in information activities Libraries serve the innovation of university and college education in the integration period by author Tran Duong... The authors have focused on deeply analyzing the content of information competency with specific target audiences, students, and the learning and knowledge acquisition process of learners in the classroom. Market economic conditions are currently very volatile.

In addition, recently, Dr. Nguyen Dinh Cung - former Director of the Central Institute for Economic Management Research wrote an article "Focus on unlocking resources and promoting the endogenous capacity of the private economic sector." " and said that it is necessary to focus on unlocking resources and promoting the endogenous capacity of this economic sector, creating the majority of jobs for workers.

Regarding assessment of the current situation and research: the article "The content of information knowledge and its application at specialized library and information training institutions" by author Nguyen Thi Kim Thanh published on the Scientific Workshop Study: Information industry - librarianship in the information society; The article "Online information literacy training in university libraries in Vietnam" by author Ngo Thanh Thao and the article "The current state of information capacity of young people in today's market economy" by author Ngo Thanh Thao. Author Nguyen Huu Vien also published in Vietnam Library Magazine. Studies have carefully examined issues related to the practicality of information capacity as well as its impacts on the formation and development of each person's skills, keeping up with the need for labor selection. increasingly strict in businesses in general as well as in the currently developing private economy in particular.

Evaluation of solutions and recommendations in Promoting information capacity in the private economic sector to promote rapid and sustainable development has also been mentioned by many scientists at different levels. Notable examples include: the article "Some measures to ensure security and safety of military information networks in the new situation" by Hoang Dat Bao, the article "Information knowledge - the amount of necessary knowledge for people in the market economy in Vietnam today" by Tran Thi Quy, the article "Promoting research and dissemination of information knowledge in Vietnam" by Le Van Viet in the Journal of Information and Data. Based on a survey of the current state of information capacity of the entire society in the context of a developing country, the authors have proposed solutions on the one hand to stabilize and preserve information security, and on the other hand to promote and Propose necessary information knowledge as a tool to support people in today's increasingly developing social conditions.

Thus, the above studies all emphasize the importance of information capacity in current conditions. However, few studies focus on clarifying the role of information capacity in the private economic sector in Vietnam today.

3. METHODOLOGY AND PROPOSED MODEL

The data used in this study are mainly secondary data collected from reliable sources. Firstly, secondary data are articles and studies on information capacity and the current private economy collected from reputable sources, such as prestigious domestic specialized magazines in the list of specialized journals. section of the State Council for Professorships. Second, secondary data are data, policy documents, reports, and plans collected from international agencies, organizations, and official Vietnamese agencies and organizations, including Documents , Resolutions, Laws, plans, decrees, circulars, Decisions of the Prime Minister...

This article mainly uses secondary document research method; Text analysis methods; Compare and contrast method; and Method of analysis - synthesis... selectively, suitable for exploiting information of each content in the article.

4. INFORMATION CAPACITY AND ITS ROLE FOR THE PRIVATE ECONOMIC SECTOR

Information capacity is a concept that was first defined about 50 years ago by President of the American Information Industry Association - Paul Zurkowski in 1974. At that time, due to the rapid development of information as well as community's needs for using information resources, information capacity is seen as "techniques and skills in using various information tools as well as basic resources in establishing information solutions to user problems"[1]. However, since 1989, when the final report of the American Library Association was published, the concept of information literacy has received special attention from most educational agencies. They argue that information literacy is an understanding and a set of abilities that enable individuals to "recognize when information is needed and to be able to locate, evaluate, and use the needed information quickly and efficiently"[2].

According to UNESCO (2005): "Information capacity is the combination of knowledge, understanding, skills and attitudes that each member needs to fully integrate in the information society. Whenever individuals are competent, they develop the ability to select, evaluate, use and present information effectively". This means that information competent people must use information ethically. Access, use and dissemination of information must be in accordance with the law. According to the American Library Association ALA (2000): "Information competency is the ability to recognize one's own information needs, as well as the ability to locate, evaluate and effectively use the information found".

The Information Competency Institute of Australia and New Zealand believes that a person's information competency is the ability to identify one's own information needs; Determine the scope of information you need; appraise information and its sources actively and effectively; classify, store, manipulate and reproduce collected or created information sources; turn selected information sources into a knowledge base; Use information to effectively learn, create new knowledge, solve problems, and make decisions; Access and use legal and ethical sources of information; Use information and knowledge to exercise civil rights and social responsibilities; Experience information literacy as part of independent learning as well as lifelong self-study.

For Vietnamese people, information capacity is sometimes also called information skills; That is the ability to receive information, analyze information, evaluate information and disseminate information. In this article, we consider information competency to be more of a practical skill than a theoretical one. Based on the study of related documents, we can see that most authors have one thing in common: considering intellectual capacity as the ability to recognize information

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1 Spitzer, Eisenberg, và Lowe, 1998, tr.22

2 ACRL. Information Literacy Competency Standards for Higher Education, Chicago, Association of College and Research Libraries. – 2000. Quoted according to: https://nlv.gov.vn/nghiep-vu-thu-vien/vai-tro-cua-kien-thuc-thong-tin-doi-voi-can-bo-nghien-cuu-khoa-hoc.html#:~:text=Theo%20Hi%E1%BB%87p%20h%E1%BB%99i%20c%C3%A1c%20th%C6%B0,hi%E1%BB%87u%20qu%E1%BA%A3%E2%80%9D%20%5B1%5D.

needs, the ability to identify, search, and evaluate information, use of information as well as a willingness to share information with the community.

Today, with the rapid attack of the Internet communication network, a huge amount of information with a rapid growth rate is available anytime, anywhere, in diverse and rich forms. Information competency is a key skill, necessary in researching any field. The problem here is no longer whether information is provided sufficiently or not, but rather that information is currently provided too much, too massively and in a mixed manner. Testing the quality and reliability of information requires each person to have the ability to screen and respond appropriately to inappropriate, poor quality and unreliable sources of information. The ability to access and use information, referred to as information capacity, is the ability or skill of each person in meeting their own information needs. Information capacity is very important for improving professional qualifications and helping people develop independent and creative thinking capacity. That is the foundation and necessary capacity in all fields, working and learning environments for everyone.

The private economic sector in Vietnam is an economic sector, including enterprises, production and business establishments that are not based on state ownership of the factors of the production process, but are privately owned. , including private enterprises, limited liability companies, joint stock companies of different sizes and individual business households.

Training and developing information capacity in the private economic sector can originate from both internally and externally. Increasingly modern technology creates new supply challenges to meet the needs of previously traditional markets. The need to perceive new information for production and consumption, changing consumer expectations, requiring businesses to change production, sales, design, marketing and product distribution methods. Pressures stemming from the need to maintain and develop make the private economic sector need to innovate. The fourth industrial revolution (Industrial Revolution 4.0) has changed many traditional production methods, new labor tools and new production methods have been born. New business methods are also being formed to replace old-style business models (e-commerce, sharing economy, online management) that require people's information capacity on these issues. keep up with market developments.

In fact, Vietnam's private economic sector currently includes about 2 million individual business households and about 700,000 enterprises (98% are small and micro enterprises). The private economic sector is contributing 40% of gross domestic product (GDP), and is predicted to increase to about 70% in the next 10 years. However, to achieve this goal, the private economic sector must improve its competitiveness by updating its information, management, and market data analysis capabilities and constantly changing its capabilities. innovation, this will also help accelerate the process of industrialization and modernization of the country according to the Party's policies and guidelines. When the private economic sector develops, the socialist-oriented market economic dynamics are initiated and accelerated, creating the ability to increase scale and promote growth of the entire economy.

5. CURRENT STATUS OF INFORMATION CAPACITY IN THE PRIVATE ECONOMIC SECTOR

The expansion of the private economic sector in recent years has caused the structure of economic sectors to shift in a positive direction, increasing dynamism and using resources effectively. In the private economic sector, large businesses have been aware of the need to invest in improving information capacity to gain a better understanding, go deeper into the market, and create competitive advantages in the integration process. and develop. Large corporations and businesses have gradually linked up with universities and research institutes to promote the development of information skills in research and development activities. Some large corporations have established their own. Set up universities or research institutes to create a closed ecosystem within the system.

Small and medium-sized enterprises and micro-enterprises have begun to realize the role of information capacity and market analysis, which will bring competitive advantage to survive and develop. However, to effectively implement information capacity, small and medium-sized enterprises need human resources not only with good professional qualifications but also with financial information skills to carry out research activities. and development in the field of operation.

The private economic sector is determined to be in the early stages of development, production activities are still mainly processing and assembling. To be able to participate in the stages of creating greater added value, businesses in the private economic sector have gradually invested in depth in techniques and technology. According to data from the General Statistics Office, from 2018 to 20121, the proportion of investment spent on training, research, and experience activities to improve information capacity in Vietnamese businesses has increased, but only reached the threshold of 1% of total revenue, lower than the average level in developed countries in ASEAN (Singapore, Malaysia, Thailand...) of at least 6% of total revenue.

It can be seen that if information capacity in the private economic sector is promoted, it will promote economic growth and create a breakthrough for the country, ensuring harmony between economic growth and equity. society towards human development. Everyone is allowed to contribute equally and share benefits derived from economic growth in accordance with socialist orientation.

6. UNLEASH THE MOTIVATION TO DEVELOP INFORMATION CAPACITY IN THE PRIVATE ECONOMIC SECTOR

The viewpoint of creating motivation to promote information capacity, creating a premise for innovation to develop the private economic sector quickly and sustainably to contribute to building a socialist-oriented market economy has been Thoroughly grasped from the Resolution of the 5th Central Committee, Session XII. The private economic sector is allowed to invest and do business in areas that are not prohibited by law, meaning that the scope of activities of the private economic sector is relatively wide. The achievements of information capacity development in the private economic sector will be realized through private ownership, this is a sustainable pillar to promote private economic development. Therefore, it is necessary to focus on fulfilling the following requirements:

Firstly, promote the role of associations in exchanging information in each field of production and business. The combination of businesses with the same scope of information in the same field will overcome the problem of limited resources of the private economic sector. In the current period, industry associations should be a bridge between businesses in the industry to jointly conduct research and development activities. Results from information capacity development activities will serve research and development throughout the industry. Each association of each industry needs to promote information exchange according to the principle of “both convergence and dispersion”; Information, experience, and resources of businesses will be “converged” by the whole association to carry out research and development activities; Results from research and development will be distributed to businesses to conduct information analysis based on the unique characteristics of each business.

Second, the State's investment and support policies for information capacity development need to have a specific application address and need to be transferred to the private economic sector for application, appropriate to the scale and needs of this area, including individual business households. Organize short-term training to improve the quality of human resources in the private economic sector, update information and analyze the market. The achievements from the transfer results will create a stimulus for the private economic sector to have the motivation to focus resources and proactively carry out innovation activities in the next cycle.

Third, build creative public-private partnership (PPP) models in information exchange to connect the state economic sector, which plays a leading role, and the private economic sector, which is important driving force of the economy. The state economic sector currently has many advantages in terms of resources, which can be a platform to support the private economic sector in taking the first steps of gathering information and generating ideas. Creative achievements from the private economic sector may be transferred to the state economic sector. This process will create a bond between the two types of business, thereby creating important strength for the country's economic development.

Fourth, each individual participating in the private economic sector needs to self-advocate to improve their information capacity in many different ways. Self-motivation is the most important factor in the development process. That process is summarized in the process by which each individual in the private economic sector works, interacts with partners, and participates in domestic and foreign markets. Each working environment, each work situation will allow each person to learn basic information skills to enrich their own information capacity over time. Proactively exploiting information, connecting, learning and receiving new knowledge through different channels of the private economic sector with other economic sectors will be the key to ensuring the success of each individual. development ladder of the private economy.

Fifth, the private economic sector needs to actively access information sources about the achievements of the Industrial Revolution 4.0 and new trends. The Prime Minister has approved the Project to promote the sharing economic model. The focus of the Project is to encourage and prioritize strengthening the information capacity of businesses in general and the private economic sector in particular, placing businesses at the center of the information system. The disadvantages of the private economic sector such as small scale, limited resources, and low level of cohesion can be overcome if the achievements of the Industrial Revolution 4.0 are applied to develop new forms of economic development. new business suitable to the characteristics of the private economic sector.

CONCLUSION

Developing the private economic sector in conjunction with developing information capacity in today's era will not only ensure rapid and sustainable economic growth, but also create revenue for the state budget, in addition to It also participates in solving a series of social problems, such as creating high-quality human resources, increasing job opportunities, eliminating hunger and reducing poverty, and developing human resources.

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LOGISTICS ACTIVITIES OF VIETNAMESE ELECTRONICS SUPERMARKET CHAINS

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Abstract: Logistics activities in retail supermarkets encompass a wide range of operations. The logistics efficiency of electronics supermarket chains is influenced by various factors. Enterprises dealing in electrical goods of different sizes require different logistics activities. The intent of this article is to examine the present circumstances and offer potential remedies for enhancing the logistics activities of electronics supermarket chains in Hanoi, Vietnam. The article delves into three primary subjects: (1) The fundamental principles of logistics in the retail sector, (2) Logistics operations of Vietnam electronics supermarket chains, and (3) Proposals for optimizing logistics activities within Vietnamese electronics supermarket chains.

Keywords: Electronics supermarket, logistics activities

INTRODUCTION

In the era of globalization and digitalization, the phenomenon of e-commerce has emerged as a novel business trend and sales method that cannot be overlooked by traditional retailers. Retailers in the electronics sector, which deals with products that possess high demand and rapid innovation, are increasingly engaging in e-commerce endeavors in order to expand their market share and customer base. However, the success of e-commerce heavily depends on the quality of logistics activities. Improving logistics efficiency not only results in cost savings and revenue growth, but also serves as a vital tool for retail supermarkets to better meet customer demands. Hence, the effective optimization of logistics operations within retail supermarkets, particularly electric supermarket chains, is of utmost importance in the current circumstances.

1. THE FUNDAMENTAL PRINCIPLES OF LOGISTICS IN THE RETAIL SECTOR

1.1 Theoretical framework and significance of logistics in retail businesses

1.1.1 The conceptualization of logistics in retail enterprises

The term logistics is frequently mentioned in the realm of business, particularly in the context of the global market. When the economy is not developed, logistics activities encompassed the storage, warehousing, and transportation of goods from manufacturing firms to end consumers. In the present day, logistics has emerged as a prominent field of business and is increasingly demonstrating its indispensability to both manufacturing businesses and retail businesses. Consequently, the operational aspect of logistics is receiving attention not only from the Center for Studies in Trade and Business Logistics, but also from all parties with vested interests. Various perspectives exist regarding the concept of logistics in the retail sector:

According to Gilbert (1999), "*Retail logistics includes functions related to the movement of goods, storing goods at storage points, ensuring the quantity of goods needed to meet consumer*

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demand, managing and operating the distribution system." The concept mainly refers to three main aspects of logistics operations including warehouse operations, ascertaining the quantity of merchandise to replenish at each warehouse, and managing a distribution system.

Kotzab (2012) provides a definition for retail logistics as an integral component of business logistics, encompassing various tasks such as order management, storage, warehousing, transportation, and the efficient delivery of goods to the store. Moreover, this concept entails the transportation and provision of goods to the store system in order to fulfill customers' needs in a timely manner.

According to Sithole (2015), retail logistics assumes responsibility for the movement of goods from the manufacturer or intermediary to the retail enterprise's warehouse, while also organizing transportation to the retail unit until the goods are eventually sold and delivered to the customer.

There are a variety of perspectives. however, the concepts all maintain that retail logistics is an ongoing process executed at retail establishments, encompassing the movement of goods and associated information from the supplier to the retail network and ultimately to the consumer.

As the social division of labor developed, logistics became a service industry that helped optimize the production process, distribute resources, and create a foundation for the economies of countries to develop effectively. A country with a well-developed logistics system will enhance the movement of goods within both domestic and international supply chains. According to Banomyong (2008), the national logistics system includes: logistics service providers, customers utilizing logistics services, legal institutional frameworks, and logistics infrastructure. In the context of this article, the authors focus on logistics activities at retail electronics supermarket chains, focusing on three basic contents: warehousing and inventory activities, freight operations throughout the entire chain, and logistics activities conducted within member supermarkets. These mentioned activities are considered to be the most crucial in the logistics operations of electrical supermarket chains.

1.1.2 The significance of logistics in retail businesses

Business logistics and logistics activities of retail enterprises play an important role in addressing the challenge of optimizing both input and output costs for enterprises. By streamlining the costs associated with warehousing, transportation reserves, and sales, retail chains are not only able to minimize expenses, but also enhance their competitive advantage.

For retail enterprises, the function of logistics is to provide support for the processes of product consumption, ensuring the timely delivery of products to meet customer needs. Customer satisfaction is often evaluated based on the availability of goods, the ability to offer services, and the quality of service.

Logistic operations serve as an additional role in optimizing the effectiveness of goods transportation, from the point of importation the point when goods become accessible at member supermarkets., specifically:

(1) Optimizing business costs, enhancing competitiveness for retail enterprises. Practice has demonstrated that there exists a strong correlation between the expense of storing goods and the expense of transporting them. If storage costs increase, transportation costs decrease and vice versa. Therefore, the calculation to determine the minimum quantity of goods in reserve and the quantity and location of the general warehouses should be of particular concern to logistics managers of

the chains. When merchandise is able to respond promptly to sales, the revenue generated will increase accordingly. Simultaneously, cost optimization will guarantee that retail supermarkets implement numerous initiatives aimed at enhancing the quality of customer service. This, in turn, will serve to heighten the competitiveness of electrical and electronics supermarket chains within the market.

Dao Thi Minh Thanh, Nguyen Quang Tuan (2018), in order to optimize costs, retailers must design a logistics system that ensures minimal cost reduction to achieve defined business goals. To assess the reasonableness of cost levels, the following formula can be employed.

$$D = T + FW + VW + S$$

Where:

D: Total cost of the logistics system

T: Total transportation cost

FW: Total fixed warehousing cost

VW: Total variable warehousing cost

S: The total opportunity cost of sales loss due to delayed distribution

Therefore, when storage costs increase, transportation costs will decrease. Based on the above equation along with the delivery timeframe demands imposed by customers in each market to determine the optimal cost for the entire logistics system.

(2) Enabling retail enterprises to efficiently transport goods and services to customers. By accurately assessing the average stock of goods in various warehouses, it ensures that the supermarkets within the chain consistently possess an adequate supply to meet customer demands, thereby enhancing customer satisfaction and bolstering the supermarket's reputation in the eyes of the consumers.

(3) *Assisting managers in making informed decisions regarding the supply and quantity requirements of their stores*. the advent of logistics service enterprises has facilitated the manager's decision-making process regarding the relocation of reserves, the minimal inventory requirements, and the optimization of transportation expenses throughout the entire system.

1.2. Logistics activities in the super chain of electronics

1.2.1. Overview of electronics supermarkets

Decision No. 1371/2004/QD-BTM of September 24, 2004 issuing The Regulation on Department Stores and Trade Centers of the Ministry of Trade introduced the concept of supermarkets as: "*Type of modern store; general or specialized business; have a diverse structure of maple goods and ensure quality; meet the standards of business area, technical equipment and qualifications of management and business organization; have civilized and convenient service methods to satisfy the shopping needs of customers*." [4].

According to Dao Thi Minh Thanh and Nguyen Quang Tuan (2018), a supermarket is a type of self-service store that is relatively large in size, featuring low sales costs and catering to a wide range of consumer needs. These establishments are designed to offer various products, including food items, washing powders, detergents, clothing, fabrics, and other household utensils. Specialized stores, on the other hand, are establishments that focus on the sale of specific types of goods while maintaining a vast selection. Examples of such stores include clothing outlets, sports equipment vendors, furniture retailers, and electrical appliance suppliers [3].

Overal, it is possible to draw the concept of electronics supermarket as a large-scale specialized store with the method of self-service customers. According to the provisions of Decision 1371/2004/QD-BTM, the classification standard for specialized supermarkets is based on two criteria: (1) Business area and (2) Number of product names on the list of business goods. Based on this classification criterion, electronics supermarkets can be classified into 1st (I), 2nd (II) and 3rd (III) class supermarkets, as elucidated in table 1.1.

Table 1.1: Classification criteria of specialized supermarkets

Specialized supermarkets	Minimum Business Area	Minimum number of business items
I	1000m2	2000
II	500m2	1000
III	250m2	500

1.2.2 Fundamentals of logistics operations in the electrical retail chain

Warehousing and reserve activities

The promptness of product delivery is contingent upon the quantity of goods stored and the efficiency of warehouse management.

Warehouse management:

Logistics managers need to determine the number of storage points needed to accomplish defined business objectives. Typically, a greater number of storage facilities enables prompt fulfillment of consumer demands; however, the associated storage costs are typically substantial. To preserve and store goods, the electronics supermarket chain can either utilize its own warehouses or lease storage spaces from warehouse trading enterprises (warehouse rental services).

When electronics supermarkets store goods in their own warehouses, this will significantly enhance its ability to tightly regulate the operations within said warehouse. This, in turn, mitigates the potential risks associated with warehoused goods. However, the construction of proprietary warehouses necessitates a substantial amount of capital investment and lacks flexibility. This is due to the inherent difficulties that arise when attempting to relocate the warehouse location. Conversely, when utilizing a leased warehouse, the retailer is afforded a multitude of options for selecting suitable warehouse location and configuration. In this case, the average storage cost per product is usually higher when utilizing a warehouse owned by the business itself.

Inventory management

The inventory level of goods is a crucial decision in logistics management at electronics supermarket chains as electrical goods are bulky which occupy substantial space and have high unit prices. In addition, the level of commodity reserves also significantly impacts the satisfaction of customer demands. If business maintains an excessively large stock of goods, it will cost a lot of money. Conversely, a low reserve level will impede the ability to promptly respond to customer requests.

The greater the average level of stock of goods, the higher the cost of reserves, which includes storage costs, costs of capital mobilization, insurance, depreciation and amortization intangible costs. Managers who want to increase the amount of inventory need to substantiate that a substantial quantity of goods held in reserve will yield a surplus of profits surpassing the expense of additional reserves. To enhance the effectiveness of inventory management, electronics supermarket chains are making efforts to transition from make to stock to stocking based on demand.

To improve business efficiency, logistics managers in electronics supermarket chains exhibit particular concern towards amplifying sales at member supermarkets rather than diminishing inventory levels. Specifically, their primary focus lies in promptly catering to customer requirements rather than curtailing expenses.

The transportation of merchandise in electronics supermarket chains

The cost of transporting merchandise of electronics supermarket chains depends on the type of transportation used. The choice of carrier significantly impacts the cost (selling price), the ability to deliver punctually, and the condition of the goods upon arrival. All of these factors greatly influence the level of customer satisfaction.

Various means can be employed for the transportation of goods. Electronics supermarket chains must carefully evaluate the trade-off between delivery speed and shipping costs in order to determine the most efficient combination or selection of transport modes. When considering a mode of transport, it is imperative to take into account factors such as velocity, frequency, degree of reliance, capacity, and transportation expenses for each vehicle. Concurrently, the assessment of efficiency between self-transportation and rental must be conducted to make a rational choice.

Transportation costs at electronics supermarket chains include the cost of transporting products from suppliers to warehouses of supermarket systems; and the cost of transporting them from the chain's warehouse to the warehouses of the member supermarkets, and finally, the cost of delivering the goods to the customers.

The efficiency of logistics operations in the electronics supermarket chain is determined by conducting a cost analysis. In conducting such analysis, it is imperative to concentrate on the underlying principles that pertain to the economics of transportation and warehousing. This particular framework treats the act of transporting and storing goods as a distribution system that possesses the ability to curtail expenses archieving business objectives. Consequently, electric supermarket chains must be cognizant of the fact that achieving the lowest possible savings in logistics systems does not necessarily entail incurring exorbitant costs in transportation or warehousing. At the very least, the aim should be to reach an optimal level of expenditure that ensures the utmost satisfaction of customer expectations, thereby attaining the prescribed business objectives.

2. LOGISTICS OPERATIONS OF VIETNAM ELECTRONICS SUPERMARKET CHAINS

To evaluate the logistics situation of Vietnam electronics supermarket chains, the authors conducted a survey among managers of electronics supermarket chains with store systems across the country. However, due to time constraints, it is recommended to focus on surveying owners of Vietnam electronics supermarket chains that already have member supermarkets in Hanoi.

2.1. Warehouse activities of Vietnam electronics supermarket chains

Warehouse operations

At Vietnam electronics supermarket chains, warehousing involves three stages: receiving, warehouse operation and shipment. During the phase of receiving, most enterprises ensure the level of mechanization in the loading and unloading process, as well as the implementation of information technology in the overall management of the warehouse. Most of the goods at the Vietnam electronics supermarket chain are stored in a centralized warehouse, before being distributed to individual supermarket members based on their specific receiving requirements.

The survey results show that there are certain differences in the selection of storage facilities of Vietnam electronics supermarket chains. Some of these chains build their own warehouses, which encompass two distinct categories: the chain's warehouses and storage within member supermarkets. Such a practice is usually adopted by large supermarket chains such as Dien May Xanh, The gioi Di dong. On the other hand, other electronics supermarket chains adopt a combination of rental warehouses and self-built warehouses. Typically, large-scale warehouses serving the entire business chain tend to utilize rental warehouses, transfer warehouses, and warehouses located within member supermarkets as their designated storage facilities.

Reserve operations:

One of the crucial demands of Vietnam electronics supermarket chains is to guarantee the availability of products to fulfill customers' needs immediately after their purchase. Therefore, an immediate stock of goods is necessary at the point of sale. This stock of goods is primarily stored in the storage, on shelves, stalls, and counters in the sales areas of each member supermarket. Additionally, when Vietnam electronics supermarket chains employ transit warehouses, the goods are also stored there and subsequently transferred to member supermarkets within the optimal distance, as stipulated by the regulations of each chain. In order to optimize their reserves operation, these chains often strive to push their stock towards the supply side. However, this requires close collaboration between the chain and its suppliers. In reality, the retail market in Vietnam as a whole currently faces deficiencies and weaknesses in these aspects. Consequently, all Vietnamese electrical retail chains in the surveyed sample (100%) still manage and conduct their inventory of goods.

Vietnamese electronics supermarket chains always adopt a proactive approach in managing the optimal level of stock to ensure timely receive and deliver of goods with the assistance of computer systems. Regarding imports, the computer system automatically generates additional orders when the quantity of goods on the shelves falls below the predetermined reserve standard or is based on sales data recorded at the checkout. The import procedure is illustrated in Figure 2.1.

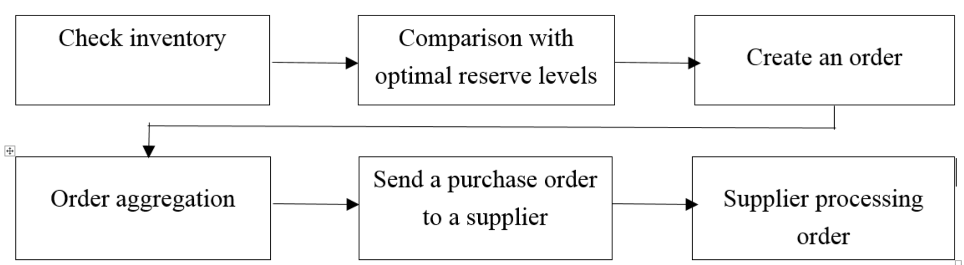

Figure 2.1 Reserve management model at Vietnam Supermarket Chains

Source: Description based on interview results

According to Decision No. 1371/2004/QD-BTM of the Minister of Trade: " Issuing the Regulation on department stores and trade centers", it is necessary for supermarkets to satisfy the demands of customers by ensuring the appropriate number of merchandise categories based on their classification. Specialized supermarkets are required to offer a range of goods between 500 and 2,000 items. The survey results show that certain large electronics supermarket chains such as Dien May Xanh, Tran Anh, The gioi Di dong,... following a business model that entails both physical store sales and online catalog sales, satisfied the conditions of first-class specialized supermarket.

Based on the survey findings, there exists considerable disparity in reserve requirements, product varieties, and consumption capacity among Vietnam electronic supermarket chains Consequently, each chain must establish specific reserve policies for each category of goods. The managers of these chains must calculate an appropriate inventory level to satisfy customer demands until the subsequent replenishment cycle. Presently, many electronic supermarket chains in Vietnam have only achieved a moderate level of efficiency in inventory management optimization. This deficiency can be attributed to the challenge of accurately determining the optimal inventory level, which heavily relies on sales forecasts for each supermarket within the chain. Precisely predicting future demand poses a formidable challenge, as electronics supermarket chains presently rely primarily on past sales figures and account for future promotional programs, without analyzing the influence of macro and micro factors on market demand.

2.2. The transportation operations within Vietnam electronics supermarket chain

In fact, the transportation of goods of Vietnamese electronics supermarket chains is conventionally managed by suppliers. Subsequently, the responsibility of transporting these goods to the chain' warehouses or delivering them directly to the member supermarkets of each chain falls upon the supplier. The objective of the Vietnamese electric and mechanical supermarket chain is to continue delivering goods from its warehouses to its network of supermarkets. Vietnam electronics supermarket chains on a smaller scale characterized by a limited network of supermarket systems and reliance on supermarket warehouses, prefer direct shipping. Conversely, larger-scale chains, boasting a network of supermarkets across various provinces, prefer centralized transportation methods. Incoming goods are transported to the warehouse with the intention of monitoring the caliber of imported products and guaranteeing the provision of merchandise to all establishments within the supermarket network. The process of arranging transportation for the electrical and electronic supermarket chains in Vietnam is elucidated in Figure 2.2.

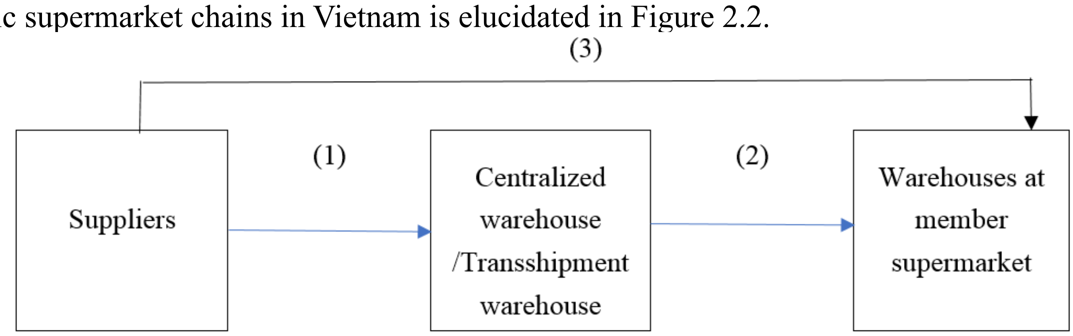

Figure 2.2 Input transportation organization of Vietnam electronics supermarket chains

(Source: Survey Results)

According to the findings of the survey, 60% of electronics supermarket chains employ a direct transportation system to centralized warehouses, whereas 40% opt for transporting goods to warehouses located within member supermarkets. This outcome aligns well with the distinctive characteristics of the electrical goods industry.

Nonetheless, certain prominent chains, which possess numerous points of sale within a province or city, typically adopt a strategy of shipping products to a centralized feeder warehouse and subsequently distributing them to individual member supermarkets. This approach was chosen by 40% of the surveyed supermarkets. Although this mode of transportation incurs higher transportation costs for the Vietnamese electrical retail chain, it ensures a higher level of product quality and guarantees compatibility in terms of the quantity of goods supplied to each supermarket and the customers' demands. Consequently, this method minimizes the occurrence of discounted items resulting from slow sales.

2.3. Direct logistics operation at member supermarkets

The direct logistics operations at member supermarkets are conducted through a series of four primary stages. Firstly, the receipt stage, wherein goods are obtained directly from suppliers or warehouses. During this stage, the goods undergo a thorough inspection to ensure they meet the required standards of quantity, quality, and type. Once the receipt stage is complete, the goods are then transferred to the storage area. The duration of storage differs depending on the type of goods. Subsequently, the goods are prepared for launch and displayed on booths for sale. Finally, the goods are transported to the customers.

According to the survey, the application of the aforementioned processes varies due to differing business characteristics. Typically, supermarket chains that specialize in electrical and electronic goods, particularly those that integrate online sales, have a dedicated shipping stage for customers with specific interests.

When evaluating the level of development in direct logistics, the investigation reveals that logistics activities at member supermarkets are relatively satisfactory. However, in certain chains of electronic supermarkets in Vietnam, the delivery of goods to customers lacks uniformity in terms of service quality.

Given the unique nature of Vietnam electronic supermarket chains are having member supermarkets scattered across the country, each with a large size, the volume of goods in circulation is substantial. Simultaneously, some retailers providing warehouse and transportation services fail to meet the requirements set by Vietnam electronic supermarket chains. Consequently, most of these chains opt for partial outsourcing, such as warehouse services or specific transportation stages, or undertake all their own logistics operations. This approach can lead to an increase in the logistics costs incurred by Vietnam electronic supermarket chains.

3. PROPOSALS FOR OPTIMIZING LOGISTICS ACTIVITIES WITHIN VIETNAMESE ELECTRONICS SUPERMARKET CHAINS

3.1 Warehouse and Inventory solutions

Solutions for warehouse operations and management

The development of indicators to assess the efficiency of warehouse management plays a crucial role in reducing costs, enhancing the ability to address customer demands promptly, and establishing the inverse relationship between warehousing and transportation expenses.

Measuring effectiveness and evaluating the expenses associated with warehouse operations are essential prerequisites for businesses to gauge the efficacy of warehouse management during each period. The indicators used for this purpose include storage duration, utilization rate, and warehouse costs, as well as delivery time.

The integration of warehouse management software with additional technologies enables effective warehouse management, particularly in terms of managing the flow of goods (i.e., import, storage, internal movement, and dispatch) and monitoring the progress and timing of deliveries among stakeholders. Based on this, the calculation of storage costs is performed by either utilizing the warehouses of the Vietnamese electronic supermarket chains or renting external warehouses.

Enhancing the centralization of warehouses is a strategy to optimize shipping costs while maintaining prudent warehousing expenses.

Optimizing reserve operations

Optimization of reserve operations is accomplished by the application of information technology to minimize the quantity of goods held in reserve while still satisfying customer demands in a timely manner. To determine the most optimal level of reserve for Vietnamese electronic supermarket chains, it is imperative to rely on pertinent data, including average import time, maximum delivery time as per customer requirements, sales figures of each supermarket in the chain, and other relevant factors. Additionally, it is essential to analyze the potential impact of future influencing factors on the aforementioned aspects. This necessitates a combination of information systems, automation, and artificial intelligence throughout the Retail Businessman's Supply Chain Management process. However, the survey results indicate that no Vietnam electronic supermarket chains in the sample have implemented these measures in a synchronized manner. Therefore, to optimize the inventory, Vietnam electronic supermarket chains need to employ a synergy of information systems, automation, and artificial intelligence in supply chain management, spanning from procurement to distribution to the end consumers. When determining the ideal quantity of goods to keep in reserve, it is crucial to clearly define the following: the amount of goods stored at each warehouse in the chain, the quantity of goods held at each member supermarket, and the quantity of goods in transit (including the amount received, the amount en route, and the amount pending delivery from suppliers). The optimal stock quantity refers to the quantity of goods that ensure the optimization of transportation and storage costs, while still effectively meeting the demands of customers and each member supermarket.

3.2 Solutions to optimize transportation operations

To ensure the efficacy of transportation operations, it is important for Vietnam electronic supermarket chains to meticulously select the appropriate means of transportation, regularly monitor and assess the quality of outsourced transportation services. This is particularly crucial for Vietnam electronics supermarket chains that primarily trade items with high unit transportation costs, as well as items that necessitate installation services and user manuals for customers. Consequently, the selection and regulation of transport units become pivotal and obligatory in this scenario. The decision to employ a transportation company or a chain of electronic supermarkets in Vietnam for the purpose of transporting and delivering goods to customers should be made based on the ability to control and the requirements to ensure the quality of goods during transportation.

If the Vietnam electronics supermarket chain decides to conduct its own large-scale transportation operations, the manager may contemplate utilizing Transportation Management software to strategize, implement, and optimize the transportation of goods.

In order to optimize shipping expenses, specific measures are indispensable to enhance orders in which the supplier provides free shipping to the chain's warehouse, and more importantly, to the warehouse of each member supermarket.

3.3 Recommendations

For the State: it is fundamental to establish mechanisms that facilitate the advancement of infrastructure for logistics activities and the proliferation of logistics service enterprises such as transportation services, warehousing services, consulting services, and others. Additionally, it is crucial to enact effective management, inspection, and supervision of logistics activities as a whole and logistics service enterprises specifically, to ensure the wholesome development of this market. This entails dealing strictly with any violations that may arise. Furthermore, it is essential to adopt a policy that attracts investors, notably foreign investors, to participate in Vietnam's logistics services market.

For retail supermarket chains in Vietnam: it is essential to formulate a financial plan that enhances the efficiency of logistics operations within the chain. Particular attention should be given to allocating funds for the application of information technology and artificial intelligence, among others. Additionally, there exists a solution to entice competent logistics personnel to join the chain.

For logistics service businesses: it is imperative to prioritize the enhancement of service quality to mitigate risks for electrical and electronics supermarket chains in Vietnam. Warehouse businesses must guarantee the quality of warehoused goods and implement technological advancements in warehouse management to minimize import and export duration for electronic supermarket chains. In addition to ensuring timely delivery of goods, transportation services should also prioritize the safety of transported goods and provide training to delivery personnel to cultivate a positive customer-oriented mindset.

Conclusion: Logistics operations are a pivotal element that holds significance in enhancing the efficacy and competitiveness of electronic supermarket chains in the Vietnam market. The optimization of logistics efficacy not only aids Vietnam electronic supermarket chains in cost reduction and profit augmentation but also contributes to the enhancement of customer satisfaction, thereby establishing a reputable image, gradually fostering brand development in the market, and heightening competitiveness.

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FACTORS AFFECTING NIGHT-TIME ECONOMIC DEVELOPMENT IN THE SOUTH CENTRAL PROVINCES OF VIETNAM

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Abstract: *The study's objective is to analyze factors affecting the development of the night-time economy in the South Central provinces of Vietnam. The study conducted Cronbach's Alpha testing, EFA, and regression analysis based on data collected from 435 valid survey forms (representatives of local management agencies, representatives of businesses/households, and local people). Research results show that seven factors, including policy mechanism, infrastructure, human resources, product and service diversity, linkage and cooperation between localities, communication and promotion strategy, and awareness, positively impact the development of the NTE in the South Central provinces of Vietnam. Based on the research results, the authors have some proposals to improve the effectiveness of night-time economic development in the region.*

Keywords: *night-time economic development, South Central Provinces, Vietnam*

1. INTRODUCTION

The night-time economy (NTE) is a critical economic development strategy for many countries worldwide. In Vietnam, on July 27, 2020, the Prime Minister issued Decision No. 1129/QĐ-TTg on Approving the Project to develop the NTE in Vietnam with the hope that in addition to making a significant economic contribution to the economy, the NTE can create significant changes for the domestic service and tourism industries, creating new momentum for economic recovery, especially after the downturn caused by the impact of the Covid-19 pandemic. Several types of night economy have been deployed recently in big cities in Vietnam, concentrated in some areas such as Ta Hien (Hanoi), Bui Vien (Ho Chi Minh City), and Ba Na Hills (Da Nang). However, in general, night-time economic activities in Vietnam have recently only been exploited on a small scale, individually and fragmented in some areas, and have yet to make a mark.

Considering the South Central region of Vietnam alone, this region has 07 provinces and one central city, including Quang Nam, Quang Ngai, Binh Dinh, Phu Yen, Khanh Hoa, Ninh Thuan, Binh Thuan, and Danang City. These are lands favored by nature, converging many conditions to develop the NTE, especially tourism. However, most of these localities do not yet have attractive mechanisms and financial policies to encourage businesses, organizations, and households to participate in night services. Meanwhile, the trend of integration, globalization, and fierce economic competition requires countries to strive to find and create new competitive advantages, and The NTE promises to be a new driving force for growth, which helps improve long-term competitive advantage in Vietnam in general and the South Central provinces in particular. In the world, many studies on the NTE related to the following aspects: measuring the NTE's development and the NTE's negative impacts. However, quite a few studies analyze factors affecting the NTED. In Vietnam, many authors have researched the factors affecting the NTE's development in some

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specific provinces/cities, such as Bac Giang, Hanoi, and Ho Chi Minh. However, there needs to be research on this issue specifically for the South Central region.

Starting from the above gap, the research focuses on identifying factors affecting the NTED, testing the factors' impact, thereby providing appropriate recommendations to help provinces/cities in the South Central region make changes and adjustments to develop the NTE effectively in the coming time. The content of the research article will include the following parts: (1) Introduction; (2) Theoretical basis and Research Model; (3) Research methods; (4) Research Results and Discussion; (5) Conclusion and Policy Implications.

2. THEORETICAL BASIS AND RESEARCH MODEL

2.1. Theoretical basis

2.1.1. Night-time economy

"Economy" is a widely recognized term for all production, distribution, exchange, and consumption activities of a community or country's goods and services. "Night" is the time of day, usually from sunset to sunrise. The scope of the NTE in each country can be broad or narrow depending on night-time consumption trends and behaviors between countries and the diversity and dynamism of each country's culture, society, and economy.

In the world, "Night-time economy" is a term (or an idea) that appeared in entertainment in urban areas after the 1960s. At that time, scholars called this phenomenon many different names, such as: "cultural economy" (Scott, 2000), "fun services" (Hannigan, 1998), or simply "urban entertainment" (Hollands and Chatterton, 2003).

In 1978, a term with a similar meaning also appeared: "the 24-hour city" (Melbin, 1978) referring to the integration of emerging entertainment industries in the capital market, creating a new trend/a new type of economy and consumer culture - where new policies and regulations are put to the test to encourage alcohol-related activities and entertainment activities at night. Since then, the term "24-hour city" has been used to describe the exciting economic and social opportunities a "non-stop" city can offer.

In their studies, authors (Robert et al., 2006) and Tabbot (2006) define the NTE as a concept that refers to economic activities during the period from 6:00 pm the previous night to 6:00 am the following day and spreads across many fields, including transportation, private sector criminal justice, services . Thus, the daytime economy stops from 6:00 pm the previous night to 6:00 am the following day, giving way to the NTE.

In the publication "A Guide to Managing Your NTE" (Sound Diplomacy & Andreina Seijas (2020), the NTE is divided into two parts: the evening economy ranges from 6:00 am to 12:00 pm and the late-night economy from 12:00 am to 6:00 am the following day – when the morning rush hour begins. According to this division, some cities are determined to develop according to the 24-hour city model (for example, New York, Amsterdam) and allow businesses to operate around the clock.

In Vietnam, the term "Night-time economy" is officially mentioned in Decision No. 1129/QĐ-TTg approving the Project to develop the night economy in Vietnam dated July 27, 2020 (from now on, abbreviated is Decision No.1129/QĐ-TTg), according to which: "The NTE is not a separate part of the economy. In the immediate future, developing the NTE aims to promote domestic consumption and develop tourism by developing cultural, entertainment, food, shopping, and travel services from 06:00 the previous evening to 06:00 am the next morning".

There are many different definitions and understandings of the NTE. Within the scope of this research, it can be understood that "The NTE is a part of the economy, including cultural, entertainment, food service, shopping and tourism activities that take place" from 6:00 pm the previous night to 6:00 am the following day.

2.1.2. Night-time Economic Development

According to Decision 1129/QĐ-TTg, "Development of the NTE must be based on respect and harmony of supply and demand in the market, without imposing the subjective thinking of management agencies. Accelerate piloting towards a 24-hour economy for cities/urban areas with great potential for night-time economic development. At the same time, improve the awareness and capacity of localities, businesses, and people about the NTE, thereby promoting the participation of the residential and business community" and "Do not encourage the development of night economic activities after 10 pm on a large scale, but develop with focus and emphasis."

According to (Lin et al., 2022), the development of the NTE plays an essential role in local development. Among them, the most significant and direct impact of night-time economic development is taking advantage of public places and commercial establishments at night to increase employment opportunities for people (Bianchini, 1995). In addition, promoting the development of the NTE also helps promote the development of related industries (service, catering, transportation, retail, and consumer promotion) (Heath, 1997; Hobbs et al., 2005). Regarding economic significance, Chew (2009) affirms that the economic benefits brought by the NTE are enormous, including: "industrial restructuring, reducing environmental pollution, creating jobs to a large number of people, regenerate and develop urban areas, create favorable conditions for domestic consumption, and bring in revenue from local taxes." It can be seen that the majority of studies on night-time economic development focuses on an "economic" perspective; however, it is also necessary to carry out studies that evaluate both the economic impact and the social impact of urban nightlife (Bianchini, 1995).

Regarding social significance, Yao et al. (2022) believe that although there are many positive impacts, such as diverse entertainment activities creating jobs for local people, Night-time economic development also comes with alcohol consumption and many other social impacts. According to Chew (2009), "If the level of negative impact on society of the NTE is excessive, then developing it is unreasonable even though it brings significant economic benefits."; Furthermore, the NTE's social impacts vary between countries and regions within each country. Clearly, "Not only tourists, if local people see the excitement of urban nightlife, they will be more open to participating in entertainment activities after work" (Heath, 1997).

Environmentally, the encroachment of night entertainment activities can lead to noise and dust pollution from late-night traffic activities, affecting residents in night entertainment areas. Similarly, Shaw (2010) argues that there have been many concerns about violence and health from the impact of nightlife. According to Son et al. (2023): "Sustainable night-time economic development is evaluated according to the following aspects: economy, society, environment, safety and security, urban planning and design, and politics and regulations. When these aspects are balanced, the development of the NTE can contribute to the community's common good, enhancing local attractiveness and thereby supporting long-term economic growth."

Synthesizing the views of previous studies, harmonizing with the opinion in Decision 1129/QĐ-TTg, the authors approach the view of developing the NTE in the study as follows: "Development of the NTE is economic development simultaneously meets economic, cultural, social and environmental requirements, ensuring harmony of interests of entities participating in economic activities, based on exploitation and use local resources reasonably and aim to build a 24-hour economy". According to this perspective, the assessment of night-time economic development includes three aspects: (1) Economic growth, (2) Preserving and promoting core traditional cultural and social values, and (3) Raising environmental awareness by meeting the needs of local people and tourists. Night-time economic development must aim at efficiency, ensuring that the overall efficiency of the local economy is greater than the total costs, ensuring economic growth associated with sustainable development.

2.2. Research Model

Policy mechanism (PM)

A policy mechanism is a system of documents (laws, regulations, resolutions, development strategies) issued to harmonize the rights and responsibilities of individuals and organizations in a social order toward the synthesis of community interests. In night-time economic development, the State's policy mechanism plays a vital role - it is a guideline to help localities have clear directions in development, creating an overall sustainable NTE regionally and nationally. According to Roberts and Eldridge (2009), the development of the NTE must be connected to relevant Government policies. The role of the policy is shown in the fact that night entertainment venues (restaurants, bars, clubs) are not allowed to stay open until late without a government license. In addition, government policies are also related to supporting the provision of public transport, security, protection, and environmental services to ensure the maintenance of night-time economic development (Hobbs et al., 2003). In Vietnam, Son et al. (2023) believe that the legal framework and policies to promote the development of the NTE need to be made available in Vietnam, based on the results: "If institute and environment increase by 1%, then NTE in Hanoi will increase by 0.152%".

H1: Policy mechanisms have a significant impact on night-time economic development

Infrastructure (IN)

Infrastructure is the physical, technical, and social institutional conditions that serve production activities and human life. Research on the impact of infrastructure on night-time economic development by Son et al. (2023) shows that "If infrastructure and safety increases by 1%, then the NTE in Hanoi will increase by 0.157%". The infrastructure mentioned by the authors here includes transportation systems, roads, electricity, water, restaurants, shops, and motels. In addition, according to Tai et al. (2022), "the variable Infrastructure and public utility services have the second decisive influence on Developing night-time economic services in Bac Giang (standardized Beta = 0.231). So, infrastructure must be invested in and developed for the NTE to develop synchronously and exploit Vietnam's tourism, culture, and art potential. On the other hand, the types connected in a synchronous and tight infrastructure will create conditions for transparent and precise management, avoiding potential risks.

H2: Infrastructure has a significant impact on night-time economic development

Resources (RE)

Depending on geographical location, natural conditions, history of formation, and development, each locality and region will have different economic development resources. Resources for developing the NTE can include natural landscapes, cultural heritages, historical sites, cultural events, traditional art forms, and local products... These resources will determine the advantages the locality can exploit (or, in some cases – bring certain disadvantages). The results of the study by Son et al. (2023) show that "If natural resources increase by 1%, then the NTE in Hanoi will increase by 0.099%". In Shaw's study (2014), the author mentions the significant impact of this factor on the sustainable development of the NTE.

H3: Resources have a significant impact on night-time economic development

Human resources (HR)

Human resources play an essential role in economic development in general, especially the NTE. The night-time economic activities are mainly experiential activities at night about entertainment, arts and culture, and cuisine, with the target audience being domestic and foreign tourists. This requires a human resource with skills and knowledge in tourism, accommodation, tour guides, etc., and passion and enthusiasm. According to Hobb et al. (2003), "Night labor – although widely agreed to be an important aspect of the political economy of the night – remains an area often neglected by many scholars". Similarly, Chew (2009) mentions that "Night-time labor deserves scholarly attention as the sizes of night-time economies worldwide continue to grow." According to Tai et al. (2022), "the variable human resources have a positive influence on night-time economic services development in Bac Giang" with the standardized beta factor = 0.186.

H4: Human resources have a significant impact on night-time economic development

Product and service diversity (PS)

Products and services are the core factors of economic activities and NTE, in particular. Products and services serving the development of the NTE include (1) Cultural and entertainment activities, (2) Catering services, (3) Shopping services, (4) Travel services. Products and services also affect visitors' return ability and willingness to recommend a destination to relatives, friends, and colleagues. Furthermore, local people are also potential customers when products and services are diverse and attractive enough to make them leave the house at night. Therefore, diversifying products and services to develop the NTE will help localities quickly succeed in forming a NTE. The authors proposed the Product and service diversity variable and received high consensus when consulting experts.

H5: The diversity of products and services has a significant impact on the development of the NTE

Linkage and cooperation between localities (LC)

According to experts, if the provinces/cities in the South Central region carry out joint activities on developing the special economic zone, it will positively impact the development of the NTE in both the region and each locality. Each locality in the region has yet to form its mechanisms, policies, and development orientations for the NTE. Therefore, regional integration to increase the night-time economic development capabilities and opportunities has not received adequate attention. The authors propose the LC variable as one of the factors that can potentially impact the development of the NTE in the South Central region of Vietnam. After consulting, some experts have proposed additional scales for this variable.

H6: Linkage and cooperation between localities have a significant impact on the development of the NTE

Communication and promotion strategy (CP)

Communication, advertising, and promotion activities are propaganda, promotion, and advocacy activities aimed at finding customers and promoting opportunities, thereby increasing benefits. In the modern economic context, almost all economic activities - including the NTE - are challenging to reach potential customers, investors, and partners without effective communication and promotion strategies. According to Dupeyras and MacCallum (2013), social media provide an essential source of information and, therefore, significantly impact consumer decision-making in the digital era. The results of the study by Son et al. (2023) showed that "if promotion and sharing increases by 1%, then NTE in Hanoi will increase by 0.23%" and determined that this is the factor that has the most significant impact on the development of the NTE in Hanoi.

H7: Communication and promotion strategies have a significant impact on the development of the NTE

Awareness (AW)

To develop local economic activities, it is necessary to understand the impact of cognitive factors on the ability to accept, support, and join hands in local people's and management agencies' economic activities. Suppose the perception leans in a negative direction; it will have an adverse impact, creating negative actions and protests from local people. Besides, many management agencies have the mindset of "if you cannot manage it, then ban it," so, with easily noticeable negative impacts from this type of NTE, it is easy for localities to "ignore" opportunities from the night economy. In their study, Son et al (2023) determined that one of the main reasons why night-time economic activities in Vietnam and Hanoi are underdeveloped is due to limited awareness of its importance and role, and many concerns and reservations remain when planning economic development policies at night. According to Tai et al. (2022), the group of factors belonging to the participation of the local community in night economy development influences night economic development; however, the level of influence is not high (standardized Beta coefficient of 0.121). In this study, the authors expect to find a positive impact of awareness on night-time economic development.

H8: Awareness has a significant impact on night-time economic development

From the above hypotheses, the research model is proposed as follows:

$$\boldsymbol{Y(NTED) = \alpha + \beta_1 PM + \beta_2 IN + \beta_3 RE + \beta_4 HR + \beta_5 PS + \beta_6 LC + \beta_7 CP + \beta_8 AW + \varepsilon}$$

In there:

- Y (Dependent variable): Night-time Economic Development (economic, social, and environmental aspects) in the South Central provinces of Vietnam (NTED)

- Independent variables (X_i): Policy mechanism (PM); Infrastructure (IN); Resources (RE); Human resources (HR); Product and service diversity (PS); Linkage and cooperation between localities (LC); Communication and promotion strategy (CP); Awareness (AW)

- Slope coefficient (k=1, 2, … 8)

α: Intercept coefficient of the regression function

$\beta_1, \beta_2, \ldots \beta_9$: Coefficients show the influence of the independent variable on the dependent variable

ε: Random error

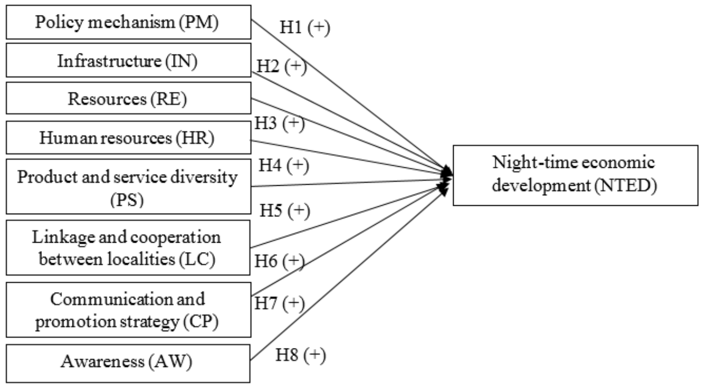

Figure 1: Research Model

Source: Suggested by the authors

3. RESEARCH METHODS

3.1. Research scales

The summary scale is referenced by the author from the studies of Tai et al. (2022), Son et al. (2023), and Nam (2023). However, the research problem is still relatively new, especially for the South Central region of Vietnam. Therefore, the expert method was chosen to record comments on the content and relationships between factors in the proposed research model. Based on the summary scale, the study conducted semi-structured interviews with 20 experts (10 experts from local management agencies and 10 lecturers at universities and research institutes). The experts selected for the survey met the following criteria: (i) Have knowledge about NTE; (2) Have appropriate professional qualifications (bachelor of economics or higher); (iii) Have ever participated in night-time economic activities or tourism in the South Central provinces; (iv) Working in departments/ agencies, universities, and research institutes related to the field of economics.

The interview results showed that all experts (20/20) agreed on the eight independent variables in the proposed research model. In addition, experts propose adding measurement scales for some factors in the model. The official scale after consulting experts is in the Appendix.

Table 1: Factors affecting the development of the NTE

Variable	Factor	Source
X1	Policy mechanism (PM)	(Hobbs et al., 2003); Roberts and Eldridge (2009); Tai et al (2022); Son et al (2023); Nam (2023)
X2	Infrastructure (IN)	Tai et al (2022); Son et al (2023); Nam (2023)
X3	Resources (RE)	Shaw (2014); Son et al (2023)
X_4	Human resources (HR)	(Hobbs et al., 2003); Chew (2009); Tai et al (2022); Nam (2023)
X_5	Product and service diversity (PS)	Suggested by the authors, with expert consultation
X_6	Linkage and cooperation between localities (LC)	Suggested by the authors, with expert consultation
X_7	Communication and promotion strategy (CP)	Dupeyras and MacCallum (2013); Son et al (2023)
X_8	Awareness (AW)	Tai et al (2022)
Y	Night-time Economic Development (NTED)	Chew (2009); Shaw (2010); (Yao et al., 2022), (Lin et al., 2022); Tai et al (2022); Son et al (2023); Nam (2023)

Source: Suggested by the authors, with expert consultation

3.2. Data

According to Hair et al. (2010), the minimum sample size for exploratory factor analysis (EFA) is 50. At the same time, to ensure reliability, the ratio of observations to 1 analyzed variable is 5:1 or 10:1. The scale has 43 measurement variables, so the minimum scale is 430 samples (ratio 10:1). To ensure the representativeness of the research sample, based on consultation with experts, the number of survey samples is as follows:

Table 2: Distribution of survey questionnaire samples for each South Central province

No	Place	Number of representing local management agencies survey forms	Number of enterprise/ business household survey forms	Number of local people's survey forms	Add
1	Danang City	10	15	35	60
2	Khanh Hoa	10	15	35	60
3	Binh Dinh	10	15	35	60
4	Quang Nam	10	15	35	60
5	Binh Thuan	10	15	35	60
6	Phu Yen	10	15	35	60
7	Ninh Thuan	10	15	35	60
8	Quang Ngai	10	15	35	60
Total		80	120	280	480

Source: Compiled from survey results by the authors

The survey was conducted directly in 04 provinces/cities: Danang City, Quang Ngai, Binh Dinh, Khanh Hoa, and via email for the remaining 04 provinces. The locals surveyed were mainly people currently living where night-time activities occur. For localities not directly surveyed, the authors distributed and received questionnaires through representatives of management agencies. In total, 458 survey forms were collected, of which 435 were valid. Of the 435 valid surveys, 80 were obtained from representatives of local management agencies (100%), 112 were obtained from representatives of enterprises/business households (93.33%), and 243 survey forms were obtained from local people (86.79%).

4. RESEARCH RESULTS AND DISCUSSION

4.1. Testing reliability and validity

Based on the collected data, the authors encoded and entered data into SPSS26.0 software and performed necessary testing. The inspection results are as follows:

4.1.1. Cronbach's Alpha test

Table 3: Cronbach's Alpha test results

Independent variables	Symbol	Number of scales	Cronbach's Alpha
Policy mechanism	PM	05	0,873
Infrastructure	IN	05	0,825
Resources	RE	05	0,833
Human Resources	HR	05	0,901

Product and service diversity	PS	05	0,877
Linkage and cooperation between localities	LK	05	0,792
Communication and promotion strategy	CP	05	0,891
Awareness	AW	05	0,766

Source: Compiled from calculation results with the support of SPSS26.0

The test results show that Cronbach's Alpha of the dependent and independent variables is more than 0.7. Thus, the independent variables are retained to perform the following analysis steps. The test results show that the scales are suitable, reliable, statistically significant, and can be used for EFA exploratory factor analysis.

The Cronbach's Alpha test results show that the highest Cronbach's Alpha coefficient belongs to the variable "Human resources" (0.901); The variable with the lowest Cronbach's Alpha coefficient is "Awareness" (0.766). In addition, the model's independent variables all have Cronbach's Alpha coefficients greater than 0.7. Thus, the scale is considered reasonable, appropriate, and reliable enough to conduct EFA exploratory factor analysis (Hulland, 1999).

4.1.2. EFA exploratory factor analysis

After testing reliability using Cronbach's Alpha, the authors conducted an EFA exploratory factor analysis; the results were as follows:

Table 4: Results of KMO and Bartless's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,803
Bartlett's Test of Sphericity	Approx, Chi-Square	15.117,236
	Df	1.298
	Sig.	0,000

Source: Compiled from calculation results with the support of SPSS26.0

According to the KMO table and Bartlett's Test, we have the coefficient KMO = 0.803 > 0.5 with Sig. = 0.000 is less than 0.05, so the variables are correlated in the population, and the EFA analysis for the independent variables is significant. In addition, nine factors are extracted in the extracted variance table according to the standard Eigenvalue>1. The total variance extracted is 60.295% (more significant than the standard level> 50%), which means eight groups of factors explain 60.295% of the variation of the data. (Hair et al., 2010). Thus, the EFA exploratory factor analysis results ensure the discriminant and convergent validity standards and are qualified for further analysis.

4.2. Regression analysis

Table 5: The appropriateness of the regression model

Model Summary					
Model	**R**	**R Square**	**Adjusted R Square**	**Std, Error of the Estimate**	**Durbin - Watson**
1	0,764[a]	0,652	0,695	0,12295	1,837
a. Predictors: (Constant), PM,IN,RE,HR,PS,LC,CP,AW					

Source: Compiled from calculation results with the support of SPSS26.0

The results of measuring the model fit show that the selected model is appropriate with adjusted R squared = 0.695 - meaning independent variables explain 69.5% of the variation of the dependent variable (Night-time economic development). Besides, Durbin – Watson value = 1.837

(range from 1.5 to 2.5); therefore, the model does not violate the first-order serial autocorrelation assumption (Qiao, 2011).

Table 6: ANOVA analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43,629	8	6,728	118,279	0,000[b]
	Residual	11,828	322	0,156		
	Total	55,457	309			
a. Dependent Variable						
b. Prredictors: (Constant), PM,IN,RE,HR,PS,LC,CP,AW						

Source: Compiled from calculation results with the support of SPSS26.0

The results of testing the suitability of the regression function through the F statistic from the ANOVA table show that the model is suitable (the Sig level of the test is minimal, 0.000).

Table 7: Results of regression analysis

Model B		Unstandardized Coefficients		Standardized Coefficients	t	Sig. Tolerance	Collinearity Statistics	
		Std. Error	Beta				VIF	
1	(Constant)	0,372	,109		0,221	,642		
	PM	0,184	,112	0,359	4,827	,000	,629	1,392
	IN	0,135	,034	0,336	2,723	,000	,539	1,295
	RE	0,101	,022	0,197	3,372	,311	,720	1,038
	HR	0,148	,011	0,229	1,828	,000	,791	1,167
	PS	0,193	,021	0,325	3,992	,000	,620	1,102
	LC	0,035	,026	0,134	2,162	,000	,520	1,182
	CP	0,144	,033	0,234	4,891	,000	,610	1,018
	AW	0,088	,036	0,188	3,391	,004	,606	1,263
a. Dependent Variable: NTED								

Source: Compiled from calculation results with the support of SPSS26.

The regression results table shows that the multicollinearity problem does not appear in the model. Specifically, the VIF variance magnification factors are all less than level 10 (the level determined to have multicollinearity that needs to be handled).

Besides, the RE variable has Sig.=0.311 (>0.05), which is not statistically significant. The remaining variables (PM, IN, HR, PS, LC, CP, AW) have values of Sig. < 0.05., statistically significant. Among them, policy mechanism (PM), infrastructure (IN), and product and service diversity (PS) are the three variables that have the strongest impact on the development of the NTE in the region (the regression numbers respectively are 0.359, 0.336, and 0.325). The weakest impact on night-time economic development belongs to the variables Linkage and Cooperation between localities (LC) and Awareness (AW), with regression coefficients of 0.134 and 0.188, respectively. The linear regression equation according to the standardized Beta coefficient is as follows:

NTED = 0,359*PM + 0,336*IN + 0,229*HR + 0,325*PS + 0,134*LC + 0,234*CP + 0,188*AW

The research results are consistent with previous studies, the author's expectations, and expert opinions. Specifically, the analysis results show similarities with the investigations of Tai et al. (2022), Son et al. (2023), and Nam (2023) on the need to focus on perfecting the NTE: policy mechanisms, infrastructure development and diversification of nighttime products and services. In addition, unlike previous studies, this study also found several other factors that positively impact the development of the region's NTE, such as linkage and cooperation between localities, promotional communication strategy, awareness of local people, and management agency representatives.

5. CONCLUSION AND POLICY IMPLICATIONS

Based on the research results, the authors have some suggestions as follows:

Firstly, research and develop policy mechanisms to encourage investment and extend the NTE.

Policy mechanisms are essential for local authorities to continue supporting the NTE's development. First, it is necessary to develop preferential tools and policies on taxes, fees, charges, and credit policies to support businesses and business households setting the NTE. After that, research and create a type of tourism combined with casinos to diversify tourism products and services, meeting market needs in the new context, especially for localities that meet the primary infrastructure and human resources conditions and available tourism platforms such as Da Nang and Khanh Hoa.

Second, complete infrastructure to serve the development of the NTE.

Local authorities need to call for investment and use socialized capital to build and improve infrastructure to meet the needs of people and tourists. At the same time, prioritize public investment resources to invest and focus on completing infrastructure items in areas planned for night-time economic development, creating motivation for accelerating local economic development.

Third, Develop human resources to serve the NTE.

Some possible solutions to develop human resources include focusing on training according to the needs of the labor market on night economic development activities; Organize training and fostering knowledge and skills in managing and operating night economic activities for state management advisory staff in related fields; Strengthen cooperation and linkages between prestigious universities and colleges to open training and retraining courses on the development of night-time economic activities for participants in night-time economic development.

Fourth, organize the exploitation and development of products and services to serve the development of the night economy.

In the coming time, localities must continue investing in expanding and deploying products and services to develop the night economy. (i) Cultural and entertainment activities: Establish walking streets with various night-time activities and services such as sightseeing, check-in, entertainment, cuisine, shopping, and street art. Upgrade the scale and increase the organization of music programs gathering famous domestic and foreign artists, especially on weekends and holidays. (ii) Food and beverage services: There is a plan to renovate and upgrade existing night food streets, focusing on exploiting local specialties and dishes with regional characteristics. (iii) Shopping services: There is a plan to upgrade, renovate, and improve the quality of operating night markets, diversifying products but still focusing on developing typical goods and products of the locality. (iv) Tourism services: Developing community tourism products associated with night-time economic development; Investing in construction works that create highlights at night in squares, central parks, and landscape areas.

Fifth, strengthen cooperation to develop the NTE.

Localities in the region need specific linkage policies such as developing coordination policies between sectors, creating favorable conditions for developing the NTE, creating linked products and services, and building separate brands for each locality and brand connection for the whole region. In the linkage strategy, it is necessary to identify the specific factors of each locality and the combination in the region's linked value chain to create a system of attractive night-time economic destinations for tourists and local people.

Sixth, strengthen promotion, advertising, and cooperation in developing the night economy.

In the current era of information explosion, promotion, advertising, and cooperation activities is essential. This activity not only helps strengthen the connection between those involved in night-time economic activities but also means disseminating official information with reliable sources about night-time economic activities of the South Central provinces of Vietnam. To promote the development of the NTE, it is necessary to attach the characteristics of each locality to night-time economic activities. Based on this foundation, localities deploy communication and promotion campaigns on multiple platforms in many different forms.

Finally, raise awareness about night-time economic development.

The NTE brings both positive and negative impacts. Therefore, raising awareness about the development of the NTE is an urgent issue that needs to be implemented promptly through specific activities such as collecting ideas and contributions from people and tourists through different reception channels, promoting propaganda, and dissemination of night-time economic activities to local people, encouraging them to participate in night-time economic activities as service providers as well as experience participants.

Although the study has identified the factors and levels of impact on the development of the NTE and made recommendations to develop the NTE in the region shortly, the research still has many limitations because of limited time and resources. The study's most significant limitation is that the survey subjects have not included tourists visiting, traveling, and experiencing nightlife services in localities in the South Central region. The lack of diversity in the survey sample could partly skew the research results. Therefore, the authors will add more tourists to the survey sample in upcoming studies on this issue.

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APPENDIX

Factor	Observed variables	Symbol
Policy mechanism (PM)	The State has views and policies to support investment in developing the NTE	PM1
	Localities proactively develop policies to promote night-time economic development	PM2
	State management of night-time economic development is focused	PM3
	Have policies to mobilize and allocate resources for night-time economic development	PM4
	There are policies to support investors, business households, and businesses providing night-time services	PM5
Infrastructure (IN)	Transport infrastructure (airport system, docks, stations, roads) meets the needs of operating and developing the NTE	IN1
	Complete and modern medical system	IN2
	Information technology infrastructure meets the needs	IN3
	A complete and rich system of hotels, restaurants, entertainment, shopping, and entertainment venues	IN4
	The system of information channels serving tourists operates 24/7	IN5
Resources (RE)	Diverse and unique natural landscape	RE1
	The local cultural heritage, historical sites, and artistic architecture are impressive and unique.	RE2
	The locality organizes regular and diverse cultural events, sports, and traditional festivals.	RE3
	Traditional art and local folk culture are unique and attractive	RE4
	Local products, unique traditional handicrafts	RE5
Human resources (HR)	The locality has a strategy to develop human resources to serve the NTE	HR1
	The locality has policies to train, foster, and attract human resources to serve the NTE	HR2
	Safe and healthy night working environment	HR3
	There is a team of quality management staff for night-time activities	HR4
	The quality of human resources of business households/enterprises providing night-time services meets the requirements	HR5
Product and service diversity (PS)	Accommodation facilities in night-time economic development areas are diverse and fully equipped	PS1
	Attractive and wealthy night-time entertainment and entertainment activities	PS2
	There are many attractive nightlife destinations	PS3
	Foodservice, unique local cuisine	PS4
	There are diverse means of transportation at night to meet the needs of tourists.	PS5
Linkage and cooperation between localities (LC)	There are regional linkage policies in developing the NTE	LC1
	Localities cooperate in exploiting tours, routes, and sightseeing spots (both day and night)	LC2
	Localities cooperate in using and developing human resources to serve the NTE	LC3
	Implement infrastructure links to serve the development of the NTE	LC4
	Linking to diversify and individualize night-time economic products of each locality	LC5
Communication and promotion strategy (CP)	Regularly implement communication and promotion strategies about the NTE	CP1
	Well exploit traditional markets, expand new markets	CP2
	Organize night programs and events	CP3
	Promote new products and services	CP4
	Communicate and promote the characteristics of the local NTE	CP5
Awareness (AW)	Local people actively participate in night economic development activities	AW1
	Local people are friendly and hospitable	AW2
	Local people create conditions and support night-time economic activities	AW3
	Management agencies are aware of the importance of developing the NTE	AW4
	Management agencies have activities to facilitate the development of the NTE	AW5
Night-time Economic Development (NTED)	The locality develops the night economy in terms of economic aspects	NTED1
	The locality develops the night economy in terms of cultural and social aspects	NTED2
	The locality develops the NTE in terms of the environment	NTED3

Source: Suggested by the authors, with expert consultation

CORPORATE FINANCIAL ANALYSIS TOOLS IN THE DIGITAL TECHNOLOGY AGE

MA. Bui Thi Yen[1]

Abstract: Financial management in businesses today is greatly influenced by the development of digital technology. Financial analysis requires a change to adapt to digital platforms, digital finance. Modern financial analysis tools were born to meet the needs of assessing the financial situation of enterprises that traditional financial analysis tools couldn't.

The article systematically provides an overview of corporate financial analysis tools, shows the current status of using financial analysis tools in businesses and organizations in Vietnam today to realize the results. and limitations, thereby offering solutions to increase the use of corporate financial analysis tools in today's digital age.

Keywords: tools, financial analysis, digital technology

1. INTRODUCTION

Corporate financial analysis is the performance of an assessment of the financial position of a business. The information from the results of financial analysis is a scientific basis to help business managers as well as other interested parties make appropriate decisions related to their own interests. Especially when the market economy is developing more and more, it becomes more and more necessary to properly evaluate the financial activities and economic efficiency of enterprises. And corporate financial analysis becomes a concern not only for business managers, but also necessary for investors, state agencies, creditors...

Financial analysis tools play an extremely important role for analytical activities. They can explain a business's financial activities and business position in a meaningful way. Therefore, analysts need to understand the financial analysis tools, the application cases and the advantages and disadvantages to be able to use them reasonably and flexibly to meet the analysis purpose. The article points out the tools of corporate financial analysis and the trend of using these tools in financial analysis in Vietnam today.

2. OVERVIEW OF CORPORATE FINANCIAL ANALYSIS TOOLS IN THE DIGITAL AGE

2.1. Concept of corporate financial analysis tools

Financial analysis tools are different ways of evaluating and interpreting a business's financial statements for different purposes such as planning, investing and operating, some of which are financial tools. The main ones most commonly used based on their usage and requirements are general size reporting (vertical analysis), comparative financial statements (comparison of financial statements), ratio analysis (quantitative analysis), cash flow analysis and trend analysis.

Taking advantage of the development of the 4.0 revolution, analysts not only use traditional financial analysis tools, but also use modern financial analysis tools for their analysis reports. Therefore, today's corporate financial analysis tools are not only simple indicators, but also include complex aggregate models, even specific statistical methods, aggregate data. with a "huge" scale,

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playing an important role when measuring the company's performance and financial management in the enterprise.

2.2. Corporate financial analysis tools in the digital age

**** Traditional financial analysis tools***

- Analysis table tool

This is the first financial analysis tool used by analysts when assessing the financial position of a business. This tool will mostly reflect the report of the overall size of the business, showing how the company's financial resources have been used and allocated in the process of production and business activities.

The analysis tool has the advantage of being easy to use, easy to implement to monitor trends, evaluate periodic performance in the business, etc. However, it has the disadvantage of ignoring the impact of factors outside the report, high reliance on financial information, which can be manipulated to make analysis less accurate.

- Ratio analysis tool

In 1919, Alexander Wall proposed a ratio analysis tool, providing a more complete analysis system for businesses. Ratio analysis is the most commonly used financial analysis tool in the market. Ratio analysis helps analysts assess profitability, solvency, financial potential strength, effective and efficiency of capital use...

Using a ratio analysis tool has the advantage of helping analysts to forecast future income and cash flows of the business, assess the flexibility of financial policies, and effectively manage the business. as well as comparisons with industry competitors and industry averages.

However, when evaluating individually, financial ratios are not useful, it is necessary to evaluate and compare different indicators to draw conclusions. Besides, this tool can only be implemented based on past information, almost can only evaluate the impact of the available factor in the formula, but cannot evaluate it. external influences such as inflation, market, management, etc.

- Dupont model

Dupont model was created by American Dupont in 1910, also known as segmentation analysis method. This is a technique often used by financial people to analyze the profitability of a company, to identify the causes of the current situation based on the quantitative relationship between financial indicators.

The advantage of the Dupont model is that the calculation is quite simple and through this model, everyone can easily access basic knowledge about the factors that affect business results.

Using the Dupont model as an analysis tool also reveals many limitations. The accuracy of this technique completely depends on the hypothesis and input data provided by the accountant. This tool does not mention the cost of capital in the analysis process and does not determine the level of influence of the factors.

**** Modern financial analysis tools***

- Graphical analysis

When doing financial analysis, instead of presenting with ordinary data tables, financial professionals have a variety of images and colors performed by graphic software. The most common visualizations of this tool that can be seen are presented in the form of a histogram, depending on the case, using a column chart, pie chart, line chart, word chart or all. integrated to reflect the overall financial situation.

This tool allows to compare the performance and financial structure over time, supports a wide variety of graphical images and also allows the conversion of digital data to images to help communicate. information to users effectively.

However, with graphic images, it requires the analyst to explain more about the representation image to help readers understand. In addition, the displayed image is prone to errors if the ability to use graphics is weak.

- Regression analysis

Regression analysis helps financiers predict the relationship between financial variables in a business. This tool needs data types available for empirical analysis, time series data, cross-spatial data, panel data. Linear regression is relatively complicated, involving many computational procedures, analysts need to master the models (ECM, GLS, FEM, REM, GMM,) and then apply the appropriate model. into the analysis. The advent of software PcGive, SAS, STATA, Shazam, Eviews, and many others make the implementation of data regression models quite easy.

Although regression analysis is favored in applied research and is increasingly available, it is not really suitable in all situations, requiring very large and complex statistical data. Regression models raise some estimation and inference problems because the data reflect both spatial and temporal factors.

- Data analysis tools

Today's popular data analysis tools can be mentioned as Exel, Microsoft Power BI, R Programming, Tableau, Python, Sas, RapidMiner ... They are software, programs or programming languages, capable of modeling data visualization, using cloud-based services that enable analysts to perform in-depth analysis and forecast the future of the business. Businesses use this tool to monitor competitor activity, control commodity prices, and analyze the market to study consumer behavior, helping to stay competitive.

However, some software is only available for a few users and cannot be used by outsiders. The use of software must also meet the compatibility with the operating system of the computer.

3. METHOD

The necessary data for the research content is collected through a survey questionnaire based on surveys by Nguyen Thu Trang (2019), Nguyen Phuong Anh (2021) and MIT Technology Review Insights (2021). The surveys focus on corporate financial analysis activities within the units and the financial analysis techniques used for analysis activities. Research conducted in Vietnam includes commercial banks, securities trading companies and large businesses and corporations. Other data are collected from articles published in reputable scientific research and journals.

4. CURRENT SITUATION OF USING FINANCIAL ANALYSIS TOOLS IN ENTERPRISES TODAY

4.1. Currentsituation of using corporate financial analysis tools

In Vietnam today, financial analysis of enterprises has not been paid proper attention. The research team of Faculty of Economics and Management - Hanoi Polytechnic University has conducted a survey in more than 100 enterprises in manufacturing industries nationwide. The survey results show that the proportion of enterprises participating in financial analysis is 42%, usually only focusing on large companies, state-owned enterprises and foreign-invested companies. The remaining 52% do almost no analysis. In addition, commercial banks and securities companies regularly conduct business financial analysis to serve business activities and provide services.

**** At commercial banks***

Corporate financial analysis plays a very important role in the decisions made by commercial banks. The important activities of commercial banks are associated with credit - lending, investment, and other business activities. Commercial banks in Vietnam now regularly conduct financial analysis to assess the financial potential of their customers, thereby reducing risks in lending activities.

The results of the survey conducted by Nguyen Thu Trang in 2019 showed that the analysis of joint stock commercial banks was still simple, the analysis content was not comprehensive, the tools used in the analysis were not accurate. diverse and less flexible.

Table 1. Financial analysis toolsof commercial banks in Vietnam

Traditional analysis tools	Usage rate	Modern analytical tools	Usage rate
Analysis table	100%	Graphical analysis	11,7%
Ratio analysis	96,7%	Regression model	0%
Dupont Model	81,7%	Data analysis	0%

Source: Nguyen Thu Trang (2019)

Through a survey of the current situation of financial analysis at commercial banks in Vietnam, it can be seen that the tools used in the analysis are mainly traditional analytical tools.

- About "Analysis table" tool. According to the survey conducted, 100% commercial banks use this tool to perform financial analysis in businesses. This tool is used to apply the comparative method, the division method to evaluate the fluctuations of the criteria on the financial statements of the enterprise for many consecutive years. Here, commercial banks evaluate the change in both the absolute and the relative numbers of the indicators on the financial statements, thereby making judgments about the direction, speed, trend, and trend of changes of the indicators compared to that of the financial statements. base year. Analysis activities are used by commercial banks in a long time series (mainly the last 3 years of the enterprise) to provide long-term trends of changes in indicators. This tool serves analysis contents such as: analyzing business results; analyzing changes in assets and capital sources; analyzing the solvency and cash flow of the business

- In terms of "Rate analysis" tool. According to the survey results, most commercial banks synchronously calculate financial ratios as a basis for assessing the financial situation of corporate customers (ratio 96.7%). Each group of financial ratios provides a financial perspective, a financial aspect to the process of corporate financial analysis of bank staff.

However, some banks (accounting for 3.3%) only conduct preliminary analysis of corporate financial situation, all data is transferred to the appraisal center of the bank's headquarters, so this tool cannot be used

- About "Dupont Model" tool. This tool is used to apply factor analysis method in analysis. In fact, commercial banks mainly use the Dupount model method in assessing the impact of factors on return on working capital (ROA) targets and return on equity (ROE) targets of the enterprise.

Summary of the survey results shows that 46.7% of the respondents frequently use Dupont model in business financial analysis, 13.3% answered very often, but also 25% answered. rarely use this tool. This shows that although the use of “Dupont model” allows to identify factors that directly affect the profitability of enterprises (through 2 indicators, ROA and ROE), a part of commercial banks not really interested and used this method.

In addition to using traditional tools in analysis, commercial banks have gradually approached, become familiar with and initially used modern financial analysis tools for financial analysis of specific businesses.

- About “Graphic analysis tool”. The use of this tool for analytical activities of commercial banks is still simple, mainly using images of column charts, line charts and pie charts for corporate financial analysis reports. According to the survey results, only 11.7% of banks use this tool based on the integrated features of Word and Excel software without using other intelligent software to develop analytical images. The tool helps banks track the development, change, speed and trend of the analysis indicators, in addition, it also supports the method of forecasting the financial situation of the business.

- The tools “Regression Modeling” and “Data Analysis” are currently not used for financial analysis activities in commercial banks. This causes the analysis results to have no link between business activities, profits, stock market value, etc. to the financial situation.

**** At securities companies***

Besides joint stock commercial banks, securities companies in Vietnam also continuously perform financial analysis activities to serve the investment needs of both individual and corporate customers. as well as the operation of an investment fund managed by the company.

According to a survey by Nguyen Phuong Anh (2021), in order to ensure the efficiency of their business operations, securities companies that are members of the Vietnam Stock Exchange perform financial analysis. The results of the analysis help to strengthen the risk management of these companies’ business operations.

Table 2. Financial analysis tools of securities companies

Traditional analysis tools	Usage rate	Modern analytical tools	Usage rate
Analysis table	100%	Graphical analysis	27%
Ratio analysis	100%	Regression model	0%
Dupont Model	67%	Data analysis	0%

Source: Nguyen Phuong Anh (2021)

Similar to commercial banks, securities companies tend to use traditional financial analysis tools.

- About “Analysis table “ tool. The survey results show that 100% of securities companies use the analysis tool. This tool helps securities companies evaluate the total size of business capital, revenue, costs and profit in the business. Thereby, assess the growth prospects of businesses in the future.

- About “Rate analysis” tool. All securities companies in the sample use this tool to assess the financial performance and financial capacity of enterprises. Thereby comparing with other businesses in the same industry or in the economy to make the right investment decisions, bringing profits to the company and customers.

- About "Dupont Model" tool. Up to 67% of companies use this tool to analyze the factors affecting profitability ratios in businesses. This is one of the important indicators to evaluate the efficiency of capital use and the ability to meet the expected return rate for investors.

Looking at Table 2, we can see that the situation of using modern financial analysis tools for corporate financial analysis in securities companies is still very limited.

- About "Graphic Analysis" tool. In order to make analytical reports clear, complete, easy to see and understand, securities companies have increased the use of this tool for analysis. Up to 27% of businesses responded using images and charts to show financial results such as revenue, costs, and profit of the business. Besides using Word and Excel, some analysts in securities companies have used software such as Microsoft Power BI to represent trends and change rates of indexes with drawings and colors. variety of colors.

- However, the tools "Regression Modeling" and "Data Analysis" have not been used by companies for analysis yet.

**** At large enterprises and corporations***

According to a survey by MIT Technology Review Insights of 255 business leaders and administrators in October 2021. The financial analysis carried out by these enterprises is a combination of the use of traditional and modern financial analysis tools.

Survey results indicate that 100% of businesses use traditional financial analysis tools.

- About "Analysis table" tool. The purpose of using this tool is to help businesses assess the overall size of their financial situation, of which up to 48% of businesses use it regularly. The method used by enterprises here is mainly the comparative method.

- About "Rate analysis" tool. In order to comprehensively assess the financial situation, enterprises must combine comparative methods with other methods such as detailed indicators, factor analysis, etc. The purpose of enterprises when performing financial analysis. to use for long-term business goals, control management activities, profitability. Therefore, most use this tool for analysis. Enterprises will self-assess their investment situation and results, efficiency of capital use, efficiency of production and business activities and profitability. These are all top concerns of business managers.

- About "Dupont Model" tool. The leaders and managers in the survey all said that ROA and ROE indicators accurately reflect the financial efficiency in the process of using capital of the business. They always try to find all ways to promote the increase of these indicators. Analytical activities in enterprises use "Dupont Model" to explain the change of ROA, ROE, find out the causes and thereby overcome limitations in production and business activities of enterprises.

When asked about issues related to modern financial analysis tools used in financial analysis of enterprises.

- About "Graphic Analysis" tool. 45% of respondents said they only use images, color charts that reflect their financial situation to have basic understanding of their business and make decisions. The purpose of financial analysis of enterprises is to bring value and achieve important business results, so businesses have diversity and flexibility in the application of graphic analysis software.

- The tools "Regression Modeling" and "Data Analysis" are currently not applied in the analysis process of enterprises. These two tools can solve problems related to factors affecting financial situation as well as build relationships in production and business and financial forecasting in enterprises. A market impact can also have a big impact on an enterprise's business, even bankruptcy.

In addition, the financial analysis in enterprises is almost not according to the process, leading to low quality of financial analysis, lack of flexibility in analysis, and inaccurate and untimely results

4.2. Assess the current status of using corporate financial analysis tools

**** Obtained result***

Current financial analysis tools are used diversely and flexibly to meet the analysis needs of units and organizations. Therefore, many analytical methods are applied to evaluate the size and efficiency of enterprises.

Commercial banks, securities companies and some businesses are aware of the importance of digital technology, along with the introduction of a series of software and applications for financial analysis. Analysts of these organizations and units initially had a combination of using traditional analytical tools and modern analytical tools for their analysis reports.

Business managers today are increasingly aware of the importance of financial analysis tools. According to a survey by ACCA, up to 46% of businesses are aware of the importance of improving skills. ready-to-invest financial functionality at an advanced level, thereby reducing manual analysis and increasing the use of modern analytical tools.

**** Limitations and causes***

Through surveys, it can be seen that most enterprises in Vietnam today focus a lot on using traditional financial analysis tools, but have not paid enough attention to modern analytical tools. Therefore, mainly using relatively simple analytical methods, not many new methods have been applied to make multi-dimensional and more effective assessments.

Reasons for preferring using traditional analytical tools in Vietnam today:

- Analytical activities in enterprises and organizations are not aware of the importance and application of financial analysis tools. Not yet grasping the outstanding advantages of modern financial analysis tools compared to traditional analytical tools.

- The financial analysis at the units is still very sketchy, unfocused, many contents and methods of analyzing enterprises have not been approached, the database and analysis process have not been paid attention by enterprises. fully collected.

- The qualifications of financial analysts have not met modern financial knowledge. Therefore, they prefer to use methods to calculate traditional financial ratios that are simple and easy. Meanwhile, to be able to apply the "regression model" or "data analysis" tool, a large amount of data about businesses, markets, and customers is required. The data collection process can be difficult in the era of the data economy, the information collected may not be correct, creating misleading results in the analysis report.

- Use traditional financial analysis tools without using complicated software that costs a lot of money. In case the information is missing, it can be replaced by another method (For example, there is not enough data on capital used directly for business activities, which can be replaced by working capital). Meanwhile, modern analytical tools require users to be competent, qualified and knowledgeable in the field of information technology and digital technology.

5. SOLUTIONS TO INCREASE THE USE OF CORPORATE FINANCIAL ANALYSIS TOOLS IN THE DIGITAL AGE.

Traditional analytical tools are now commonly used and have had positive effects, accurately reflecting the financial position of enterprises in the past. However, this tool mainly uses financial statements as the basis for analysis, limitations and delays of financial statements will affect the results of financial analysis. Traditional analytical tools will not be able to detect factors that are not reflected in financial statements such as economic, political, social factors, industry cycles, technological innovation, human resources, etc.

Nowadays, with the development of digital technology, many important information cannot be provided in reports but exists outside of financial statements. Modern analytical tools are used to evaluate the operating conditions of the business, find out the remaining problems, and then guide the business decision policy. These tools help analysts, business managers transform in the form of digital data, digital financial analysis presented in the form of tabular data. Besides, the role of enterprise financial analysis is forecasting, helping managers make decisions about the future direction of the business. Therefore, information that predicts the future development of the business is extremely practical and valuable.

Digital technology is a key industry in national development and international economic integration. Digital finance is a component of corporate finance, using disruptive technology, data, and people to enhance the role and function of financial management. Modern financial analysis tools are programmed by software algorithms to perform continuous analytical processes, support analytical work for financial professionals, increase analytical capabilities and support business. These software solutions provide benefits in terms of cost, quality, and predictability in terms of risk and business growth. However, these tools are currently used very limited, it is necessary to have mechanisms and measures to promote the combination of using traditional and modern analytical tools to improve the quality of analysis, help businesses sustainable growth and development. Solutions to enhance the use of business financial analysis tools can focus on the following directions:

Firstly, for businesses, financial companies and financial analysts, more attention should be paid to the analysis process and content. Raise awareness about the importance of financial analysis tools and their pros and cons. Invest, foster and improve analytical skills for individuals and departments responsible for financial analysis.

Secondly, on the part of the content analysis. Besides the financial analysis of some basic criteria, the analyst needs to further improve the efficiency of the analysis process. Using a variety of analytical methods, enhancing financial forecasting and forecasting activities in the business.

Thirdly, in terms of the data source. It is necessary to combine data collection inside and outside the financial statements. Especially data related to industries, business fields, technology, human resources, and markets. Collected data can be in the form of tables, using analytical software tools, impact assessment, level of influence from which the analysis process is detailed, specific and accurate.

Fourthly, regularly update enterprise data analysis technology, develop an overall strategy on development and application of digital technology in business financial analysis activities. Associate with information technology enterprises to build a technology system. Automation software can shorten the time companies spend manipulating table data, allowing users to interact directly with the data.

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IMPROVING THE QUALITY OF ACCOUNTING AND AUDITING SERVICES TO PROMOTE THE DEVELOPMENT OF VIETNAM'S PRIVATE ECONOMY IN THE CONTEXT OF DEEP AND WIDE INTERNATIONAL INTEGRATION AND DIGITAL TRANSFORMATION

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Abstract: Accounting and auditing services in Vietnam in recent years have made strong development and contributed significantly to the country's economic development in general and private economic development in particular. In the new context today with the increasing requirements of international economic integration, enhancing the application of information technology and digital transformation, accounting and auditing services have many opportunities to develop. However, along with that, the new context also poses many difficulties and challenges for this service. Through the analysis of the current situation, the author proposes some solutions to improve the quality of accounting and auditing services to promote the development of Vietnam's private economy in the new context.

Keywords: Service, accounting, auditing, private economy, Vietnam, new context.

1. INTRODUCTION

The private sector plays an important role in creating growth, innovation and competitiveness of the national economy. However, the private sector in Vietnam still faces many difficulties and limitations, such as lack of transparency, non-compliance with legal regulations, lack of professionalism and efficiency in business operations... Accounting and auditing services are one of the important factors for the development of the private sector in Vietnam. In the context of deep and wide international integration and digital transformation, the demand for accounting and auditing services is increasing, requiring enterprises to comply with the regulations and standards on accounting and auditing according to the law and international organizations. At the same time, improving the quality of accounting and auditing services also contributes to enhancing the trust of investors, customers, partners and state management agencies in the business activities of private enterprises. Therefore, it is necessary to have appropriate solutions and strategies to improve the quality of accounting and auditing services, thereby contributing to promoting the development of the private sector in Vietnam in the context of international integration and digital transformation.

2. THE CURRENT SITUATION OF ACCOUNTING AND AUDITING SERVICES IN VIETNAM

Accounting and auditing are important economic management tools that have the function of creating a system of information on economic, financial and budgetary matters to meet the requirements for economic management and decision making of the state as well as of each unit, organization and enterprise. Therefore, it is necessary to improve and enhance the quality of the accounting and auditing information system in a transparent, public, truthful and complete manner, reflecting the economic and financial data in the national economy (Prime Minister, 2022). The accounting and auditing service activities in Vietnam in recent years have been developing strongly and continuously improving in quality. This service brings many benefits to the economy, finance

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and enterprises. Not only playing a role in providing information for managers to make business decisions, accounting and auditing services also contribute to supporting effective economic and financial management and are an indispensable part of the national economy.

The accounting and auditing service market of Vietnam has developed in both quality and scale of operation over time, thereby contributing to improving the quality, making healthy and enhancing the transparency and publicity of economic and financial activities of all units, organizations in the socio-economic system. The legal environment is basically regulated relatively fully, clearly, suitable for the conditions of Vietnam, customs, principles and international standards, thereby creating favorable conditions for the formation and development of the accounting and auditing service market provided by accounting and auditing enterprises at home and abroad (Vu Duc Chinh, 2021).

The accounting and auditing service market with its efforts to develop and innovate in recent times has achieved important achievements. To create a legal environment for accounting and auditing service activities, Vietnam has continuously reformed the accounting and auditing legal system. Specifically, the National Assembly passed the Independent Audit Law No. 67/2011/QH12 dated March 29, 2011; Amended Accounting Law No. 88/2015/QH13 dated November 20, 2015 with the content containing issues of accounting and auditing in integration conditions. At the same time, the Government also issued Decision No. 480/QD-TTg dated March 18, 2013 on approving the "Vietnam Accounting - Auditing Strategy to 2020, vision to 2030"... Accordingly, Vietnam's goal is to establish a complete accounting and auditing system that is suitable for the management mechanism of the Vietnamese State and develop accounting and auditing professions in the region and the world to meet information requirements for management, operation and inventory, control of economic resources, economic-financial activities of the country... (Prime Minister, 2013). Vietnam has many policies to create favorable conditions for the formation and development of a system of accounting-auditing service enterprises.

After 10 years of implementing the Accounting-Auditing Development Strategy to 2020, vision to 2030 issued under Decision No. 480/QD-TTg dated March 18, 2013 of the Prime Minister, Vietnam's accounting-auditing system in general and accounting-auditing service market in particular have achieved remarkable development and progress. Up to now, it has gradually developed an accounting-auditing service market according to criteria, both in terms of quality and scale; thereby contributing to making healthy and enhancing transparency and publicity of economic-financial activities of units, organizations in the socio-economic system. Accounting-auditing service activities both help enterprises create economic-financial information according to state regulations and contribute to national economic growth. At the same time, it plays an important role in advising businesses and investors on legal, financial, accounting regulations as well as preparing, recording accounting books, preparing financial statements, calculating taxes... (Duong Thi Thieu, 2021).

To enhance the development of accounting and auditing services, the Vietnamese government has also had many policies and initiatives to innovate and improve the quality of training human resources for accounting and auditing in line with the new requirements of global integration and information technology application. In addition, to ensure the transparency, publicity and quality of economic and financial information, the Ministry of Finance and the State Securities Commission have strengthened the organization of inspections and supervision of the quality of accounting and auditing services to timely detect and handle violations.

3. OPPORTUNITIES AND CHALLENGES FOR ACCOUNTING AND AUDITING SERVICES IN THE NEW CONTEXT

International integration and digital transformation are two irreversible trends in the present era. To adapt to the new situation and take advantage of the opportunities brought by the fourth industrial revolution, on September 27, 2019, the Central Executive Committee issued Resolution No. 52-NQ/TW on some guidelines and policies to proactively participate in the fourth industrial revolution, which emphasizes the urgent requirement to accelerate the process of digital transformation (Central Executive Committee, 2019). Based on that, on June 3, 2020, the Prime Minister signed Decision No. 749/QD-TTg approving the national digital transformation program until 2025, with a vision to 2030. Accordingly, Vietnam becomes a digital country, stable and prosperous, pioneering in testing new technologies and models; fundamentally and comprehensively innovating the management and administration activities of the Government, the production and business activities of enterprises, the way of life and work of people, developing a safe, humane and widespread digital environment. The National Digital Transformation Program aims at a dual goal of both developing a digital government, digital economy, digital society, and forming Vietnamese digital technology enterprises with global capabilities, with some basic indicators (Prime Minister, 2020). The new context brings many opportunities for all sectors and fields in general and accounting and auditing services in particular, but also comes with many difficulties and challenges.

3.1. Opportunities of the new context for accounting and auditing services

In the context of international integration and digital transformation, accounting and auditing services have many new opportunities, specifically as follows:

First, with the achievements of advanced and modern science and technology, accounting and auditing services can be performed in a computerized environment. This makes the work of accountants, auditors, and consultants simpler, faster, and more efficient.

Second, accounting and auditing service providers have more opportunities to access and expand the supply of products and services suitable for different types of customers (Mai Ngoc Anh, 2020).

Third, in the context of international integration, management agencies, professional associations, and enterprises have the opportunity to access effective accounting and auditing models from developed countries in the world. This contributes to improving management capacity, management quality, and helping the State to complete the legal system, standards, meeting international requirements, as well as helping service providers to refer to and learn from international experience to apply to Vietnam's reality.

Fourth, with the application of big data centers (Big data), data analysis and management in accounting and auditing services become more convenient. Collecting, analyzing, and processing big data will contribute to creating new knowledge, as well as supporting decision-making quickly and effectively, thereby reducing costs and creating competitive advantages for service providers.

Fifth, the advances from industrial networks 4.0 and digital transformation are the driving force for domestic accounting and auditing service companies to develop and compete with advanced companies and groups in the region and in the world. This contributes to enhancing competitiveness and improving service quality provided by domestic companies.

Sixth, the requirements of the new context also affect the awareness and actions of staffs and employees working in accounting and auditing services. It sets out requirements for each individual to constantly strive to improve their professional skills and foreign languages, science and technology, apply technical advances to improve labor productivity and work quality. At the same time, each individual needs to regularly update information, new issues to be able to innovate, create, and adapt to new requirements.

3.2. Difficulties and challenges of the new context for accounting and auditing services

In addition to many opportunities, accounting and auditing services in Vietnam face many difficulties and challenges in the current new context.

First, the new context requires the management agency to complete the legal framework for accounting and auditing services that are compatible with the context of international integration and transformation. The state management agency faces many challenges related to many contents, among which quality control of accounting and auditing services is one. In terms of legal basis, there are some standards and contents that have not changed according to international practice, so it takes time and a suitable roadmap to change (Mai Ngoc Anh, 2020).

Second, the new context poses new requirements for the quantity and quality of staffs and employees working in accounting and auditing services. In the context of digital transformation, if accountants, auditors, and service providers do not understand technology, they will face many difficulties in performing professional tasks. To solve the limitations of the level and capacity of staffs and employees and arrange work reasonably is not an easy problem for accounting and auditing services.

Third, the development of technical technology brings new opportunities for accounting and auditing services, but also poses many challenges in preventing network security risks and protecting the confidentiality of customer information and business information. Information security is a very important issue in accounting and auditing services. It requires effective measures to protect software, hardware, and data of enterprises and customers using services. In the process of applying the results of digital transformation, the requirement is that accounting and auditing service providers must manage the changing contents and ensure that the services are safe and secure while deploying new services (Vu Duc Chinh, 2021).

Fourth, in the context of deep and wide international economic integration, competitive pressure on the market of accounting and auditing services will be fiercer for Vietnamese enterprises when foreign enterprises enter. This means that if domestic enterprises do not improve themselves, they will face many risks such as bankruptcy, dissolution, or shrinking scale and scope of operation... (Tran Ngan Ha, Vu Thi Thao, 2022).

Fifth, a big challenge for accounting and auditing services is to invest in developing equipment and infrastructure to be able to adapt to the advances of digital science and technology. Investing in advanced and modern technologies will bring many benefits but the investment cost is a matter of concern for service providers and the whole industry.

4. SOME SOLUTIONS TO IMPROVE THE QUALITY OF ACCOUNTING AND AUDITING SERVICES IN THE NEW CONTEXT TO PROMOTE THE DEVELOPMENT OF THE PRIVATE ECONOMY

Accounting and auditing services in Vietnam have made important progress in recent years. However, in the current new context, besides many opportunities and advantages, there are many difficulties and challenges for accounting and auditing services. Improving the quality of accounting and auditing services is one of the key factors to promote the development of the private economy. Some solutions to improve the quality of accounting and auditing services in the new context are proposed as follows:

- Training and improving the capacity of accounting and auditing staffs: This is the most important solution to ensure the quality of accounting and auditing services. Accounting and auditing staffs need to constantly update their knowledge, skills, and regulations on accounting, taxation, financial reporting, auditing... In addition, they also need to be equipped with tools and software to support accounting and auditing work effectively and accurately.

- Enhancing transparency and responsibility in accounting and auditing activities: This is a solution to create trust for partners, customers, and management agencies about the quality of accounting and auditing services. Accounting and auditing firms need to strictly comply with professional standards, legal regulations, and ethical principles. They also need to disclose and transparent information related to their accounting and auditing activities, such as customer list, financial statements, audit reports...

- Expanding the market and diversifying accounting and auditing services: This is a solution to increase revenue and profit for accounting and auditing firms. They need to seek and exploit new markets, such as small and medium enterprises (SMEs), startups, foreign direct investment enterprises (FDIs)... They also need to diversify their accounting and auditing services to suit the needs and requirements of each type of customer, such as tax consulting services, investment project preparation services, risk management services...

5. CONCLUSION

Vietnam is participating in many free trade agreements and deep and wide international integration, requiring to improve the quality of accounting and auditing services to meet international standards and enhance transparency, responsibility in business activities. This is a key factor to promote the development of the private sector in Vietnam, especially in the context of digital transformation that is taking place strongly around the world. High-quality accounting and auditing services not only help private enterprises grasp their financial situation, but also contribute to enhancing their reputation, trust of partners, investors, management agencies and society. To achieve this goal, it requires the efforts of the entire accounting and auditing industry in Vietnam, from training high-quality human resources, constantly updating the latest knowledge, applying modern information technology, to complying with professional ethics and legal principles. This is an important topic and needs more attention in the future, as it not only affects the transparency and efficiency of business activities of private enterprises, but also relates to the reputation and image of Vietnam in the world.

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DIGITAL TRANSFORMATION - ESSENTIAL FOR SUSTAINABLE DEVELOPMENT OF VIETNAMESE REAL ESTATE ENTERPRISES

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Abstract: *Digital transformation is a trendy and comprehensive change of individuals and organizations in the way of living, working and producing based on digital technologies. Digital transformation is increasingly popular in social life. Businesses around the world from retail, healthcare, manufacturing, finance to public administration units are currently participating in digital transformation to improve business efficiency. The application of technology to all business activities (including real estate businesses) will completely change the way of operations, increase productivity, quality, efficiency and bring benefits, and bring value to customers. It can be said that digital transformation is an inevitable trend. However, implementing digital transformation is also a challenge for many real estate businesses in Vietnam in the current context.*

In this article, the authors research the current status of operations of Vietnamese real estate businesses in the context of digital transformation, thereby pointing out opportunities, challenges and proposing some solutions to help real estate businesses develop sustainably in the future.

Key words: *digital transformation, real estate businesses, necessity, challenges.*

1. INTRODUCTION

Digital transformation is business innovation driven by the explosion of artificial intelligence (AI), cloud computing and Internet of Things (IoT) technologies, providing new ways to understand, manage, monitor and transform business activities in businesses in general and real estate businesses in particular. In other words, digital transformation is integrating digital technologies and solutions into the core nature of each business, profoundly changing the way the business operates, thereby creating new production processes, maximizing customer experience and improving organizational culture. This process contributes to the creation of new working methods to meet the expectations of comprehensive market changes, thereby helping to increase productivity during work, minimize costs, and bring benefits to customers and creating a new developed working space as well as creating new values in addition to existing traditional values.

Digital transformation is in fact an inevitable trend of the times for all businesses in general and real estate businesses in particular. Whether we like it or not, the digital transformation process will still take place strongly. Life is constantly changing and moving. Each business will also need to constantly change itself, find ways to adapt, otherwise it will certainly be left behind.

2. METHODOLOGY

In this study, the statistical approach was employed. After that, data were synthesized and analyzed to answer 5 research questions as follows:

1. What are some advantages of Vietnamese real estate businesses?
2. What are some disadvantages of Vietnamese real estate businesses?
3. How important is Digital transformation in real estate businesses in Vietnam?
4. What are some challenges in applying Digital transformation to real estate businesses?
5. What are some solutions to applying Digital transformation to real estate businesses?

3. FINDINGS OF THE STUDY

3.1 Current status of real estate businesses in Vietnam

3.1.1 Size of real estate businesses

The number of domestic real estate businesses has been growing. Many businesses have enough professional and financial capacity to carry out large-scale projects on a regional level.

(Source: Annual report of the Department of Business Registration Management)

From 2006 to 2020, the number of real estate businesses annually increased by nearly 50%. As of 2020, the number of real estate businesses is 6,694, increased nearly 6 times compared to 2006.

3.1.2 Capital size

Many real estate businesses do not have enough financial potential, so they often suffer from great risks when the market fluctuates. The number of businesses with capital from 200-500 billion VND only accounts for nearly 6% of the total number of businesses. The number of businesses with capital of 500 billion VND or more accounts for only 3%. The majority are businesses with small capital and are unlikely to be able to carry out large projects without the support of banks or some other channels of mobilizing financial resources.

Table 01: Number of real estate companies basinh on capital size (to 31 December 2022)

(unit: companies)

Quantity of real estate companies	From 10 to 50 Billion VND	From 50 to 200 Billion VND	From 200 to 500 Billion VND	Over 500 billion VND
4223	1267	1246	250	136

(Sources: Department of Statistics)

3.2 Advantages of real estate companies

3.2.1 Attractive investment environment

Vietnam attracts investors thanks to its young workforce of more than 96.3 million people, stable political environment and one of the fastest growth rates in the world. All factors show that the investment environment is quite attractive. This is an opportunity for Vietnamese real estate businesses to call for foreign investment capital through cooperation and joint ventures.

(Source: World bank, 2021)

Vietnam ranked 69th out of 190 countries with a good business environment, ahead of Indonesia (ranked 73rd), the Philippines (ranked 95th) and Myanmar (ranked 165th).

3.2.2 Investment capital from abroad

It can be clearly seen that most domestic investors' capital capacity is limited. Through FDI, industrial parks, large urban and entertainment areas with international standards have been created. Thanks to FDI, the infrastructure has changed a lot and many high quality real estate products have been built. Although recently foreign investment capital has decreased, this is still an effective capital mobilization channel in providing capital for our country's real estate market.

(Source: According to Report of the Ministry of Planning and Investment in 2016-2020)

3.2.3. Increasing diversification and expansion of investment partners

As usual, the main partners investing in Vietnam were traditional foreign investment enterprises such as Japan, Korea, Singapore. Now investment partners are more diverse because Vietnam is establishing diplomatic relations with 178 countries around the world. In addition to investors, there are countries in the Asian region, such as: Japan (accounting for 22%), Singapore (accounting for 14%), Korea (accounting for 21%), Thailand (accounting for 11%), Hong Kong (accounting for 11%). Vietnam's real estate market is increasingly attracting more real estate investors around the world. Especially since Vietnam has a policy to attract FDI into the real estate market, there have been many investors in different countries, such as Accor group, InterContiential Hotel group etc. Big investors from the Middle East such as IFA, Kingdom Hotel have invested in large real estate projects in Vietnam.

3.2.4. Various opportunities to improve business efficiency:

New Free Trade Agreement (FTA): Vietnam joins free trade agreements with developed economies to turn from exporting low-value goods to high-value goods; along with that is to exchange science and technology with developed countries.

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) officially signed in January 2019 will help Vietnam's GDP grow by 1.32% by 2035, thereby strongly promoting economic growth.

The Vietnam-European Union - EU Free Trade Agreement (EVFTA) signed in June 2019, eliminated 99% of customs duties between Vietnam and the EU. With this historical agreement, Vietnamese real estate businesses will have a lot of opportunities and advantages in business.

3.2.5 Many advantages to transform high-value industries of real estate companies

Industry 4.0 and smarter manufacturing

Industry 4.0 is spurring countries globalized. Vietnam is not an exception. Strategy and legal framework for industry 4.0 policy in business and industry should be proposed.

Prospects and transformation of high-value industries

Vietnam's industrial real estate segment is growing on the momentum of a 10-fold increase in FDI capital over the past decade. Vietnam needs to carefully choose upcoming projects for growth. Many industrial developers offer ready-built factories (RBFs) and built-to-suit factories (BTS) to tenants.

This trend quickly entered the market and met well with small and medium-sized enterprises, as well as manufacturers using small areas from 500 - 5,000 m2. Ready-built factories and custom-built factories create opportunities for investors and industrial developers to keep up with the demands of the industrial market and operate production, focusing on attracting lease terms from 3 years to 10 years. The increase in the number of investors has led to the expansion of industrial park areas in the form of joint ventures with local businesses and the transfer of real estate use rights. This transformation has contributed significantly to increasing chain value, increasing competitiveness and sustainable development for Vietnamese real estate businesses.

3.3 Difficulties of real estate companies

3.3.1 Competition in size and capital

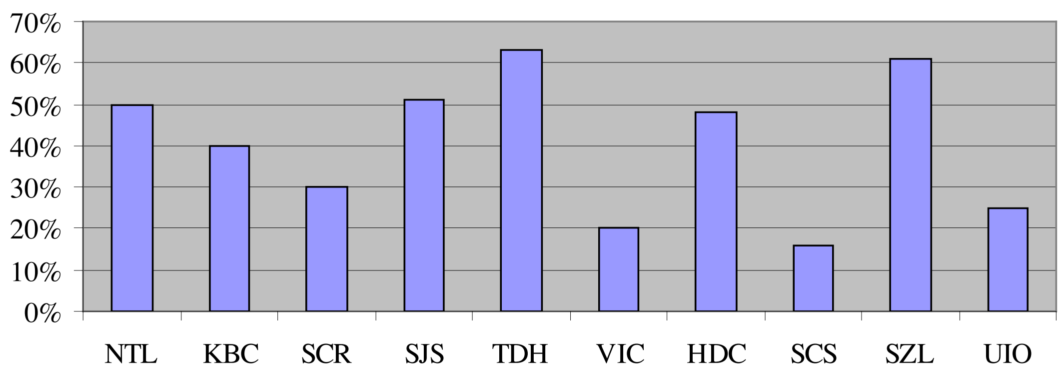
In the context of globalization, Vietnamese real estate businesses must face fierce competition against corporations and reputable real estate businesses from countries around the world.

One challenge for Vietnamese real estate businesses is competition for capital. In fact, most Vietnamese real estate businesses have a relatively small capital, the main source of development capital is bank loans and mobilized from customers.

<u>Chart 04</u>: Demand for capital of real estate companies *(Unit: billion VND)*

The owner's capital of real estate businesses only is under 13% (equivalent to 24,065 billion VND). Meanwhile, investment demand is increasing, real estate businesses are not only waiting for owner's capital contributions but continue to mobilize other capital channels such as issuing shares, etc.

Chart 05: Owner's Capital compared with total capital of real estate companies (In 2020)



Note: NTL (Tu Liem Urban Development Joint Stock Company); KBC (Kinh Bac Urban Development Joint Stock Company); SCR (Saigon Thuong Tin Real Estate Joint Stock Company); SJS (Song Da Joint Stock Company); TDL (Thu Duc Housing Development Joint Stock Company); VIC (Vincom Joint Stock Company); HDC (Ba Ria-Vung Tau Housing Development Joint Stock Company); SCS (Construction Joint Stock Company No. 5); SZL (Sonadezi Long Thanh Joint Stock Company); UIC (IDICO Urban Housing Development and Investment Joint Stock Company).

It can be seen from chart 05 that in addition to big real estate business in Vietnam such as Thu Duc House (TDL), Sonadezi Long Thanh Joint Stock Company (SZL), Tu Liem House (NTL) with owner's capital of 61%, 60% and 50% respectively, most real estate businesses have a relatively limited amount of equity and a low level of financial autonomy, so the proportion of equity compared to total capital is quite small.

3.3.2 Competition on management level and application of scientific and technological advances in production and business

In addition to the challenge of competing in capital and financial potential, Vietnamese real estate businesses also faces competition in terms of management experience and business experience and application of scientific and technical advances and achievements, etc.

3.3.3 Low market transparency

Low market transparency is also a challenge for real estate businesses, especially in the current period. Investment activities, real estate creation to buying, selling, transferring, and leasing transactions still reveal many limitations. Speculation is also common, especially in large urban areas, making real estate market operations a lack of sustainability and stability, thereby greatly affecting real estate enterprises.

3.3.4 Marketability

Vietnam's real estate market has some drawbacks:

(i) The competitiveness of the real estate market is still low, especially for the primary market. Although the land auction and project bidding mechanism has been stipulated in a number of legal documents, its application in practice is still limited, and there are even issues that have not been implemented

(ii) The real estate market still has many paradoxes and inadequacies. The number of underground transactions which are not registered with state agencies still accounts for about 70%. Most of the respondents answered that the administrative procedures of the relevant units are too cumbersome, troublesome, time-consuming and costly

(iii) Land use planning, urban development, and residential area development are still scattered, only focusing on master planning, lacking detailed planning and often having to be adjusted (iv) The legal system is not synchronized and overlaps with the real estate market. The real estate registration system is fragmented, unqualified for open and transparent management, etc. All of the characteristics create also a challenge for Vietnamese real estate businesses to develop sustainably in the current context.

4. APPLICATION OF DIGITAL TRANSFORMATION FOR VIETNAMESE REAL ESTATE BUSINESSES TODAY

4.1 The importance of digital transformation for Vietnamese real estate businesses

Technology application is said to be a trend that creates a rapid change in real estate business models in Vietnam. Data analysis, artificial intelligence, Internet of things, virtual reality technology and block chain will change the way to invest and control the real estate market in the future. The management of project, customer information or common documents is all proactively carried out on common software, which creates synchronization in the entire system. This helps information exchange take place more coherently and give better faster customer service. Furthermore, as everything is controlled by the land registry, digitized land transactions will create more transparency in the market. For real estate businesses, digital transformation will benefit in the following ways:

(i) Changing awareness and perspective of work management and organization culture: The application of advanced technology to work operations requires managers to really change their awareness and perspective. They need to be proactive in their work, explore new working methods and allow the storage of data, business information, and product information on a third-party cloud space. By that way, business managers will not spend too much time directly monitoring working employees and can still grasp the company's operating situation. Furthermore, digital transformation will help strengthen the connection between departments and teams within the organization. Departments have related jobs, goals, and tasks and they can easily grasp common work thanks to information on the system. As a result, it helps increase transparency and rationality in the organization and optimize the performance of all members in the organization.

(ii) Minimizing operating costs: With the digital transformation process, many work tasks in the traditional working model will no longer exist and will gradually be replaced by other types of modern technology, thereby saving time, effort and costs.

(iii) Enhancing the comparative advantage of real estate businesses: Digital transformation has now become one of the vital issues in the 4.0 industrial era. This is not simply a matter of choice; it is a must-to-do thing if businesses want to maintain a comparative advantage in the market.

(iv) Providing information and data quickly: When organizations and businesses carry out digital transformation, all information and data will be uploaded on a cloud computing cloud account. This helps business managers to easily track, monitor and update information to quickly make accurate decisions about their businesses and organizations. In addition, business employees can also easily access information to work effectively, quickly, and promptly at anytime and anywhere.

(v) Creating convenience for customers: Storing customer data and information is an extremely important issue in the digital transformation process of real estate businesses. From specific information such as transaction history, real estate segments, and services that customers are interested in, sales staff can advise on the types of products or services that are good and suitable for their needs. In addition, thanks to regularly updated information, companies can offer many customer care programs such as sending messages of congratulations on birthdays, holidays, etc., thereby making a good impression and creating customer sympathy for the business.

4.2 Benefits of digital transformation for real estate companies

In today's digital age, digital transformation is playing an increasingly important role for real estate businesses in Vietnam. The application of digital technologies and digital transformation helps improve operational performance, optimize work processes, enhance customer experience and create new opportunities in the real estate sector. Some benefits are listed below:

(i) Asset management

Digital technology allows real estate businesses to manage asset information more effectively. They can create and manage property databases, including detailed information about apartments, real estate, location, value and legal status. This enhances asset management and tracking capabilities, thereby enhancing the ability to make smart decisions and optimize asset utilization.

(ii) Work procedure optimization

Digital transformation allows real estate businesses to optimize their work processes through the use of project management software, CRM (Customer Relationship Management) systems, and customer information management systems, contract management system, planning and monitoring project progress, and managing financial resources. This helps reduce risks and increase employee efficiency and productivity.

(iii) Customer experience improvement

Digital transformation brings significant improvements in customer experience. Real estate businesses can use technology to provide online services, such as virtual apartment viewing, 360-degree photography, online consultancy, and detailed project information sharing. This saves customers time and effort, increases convenience and reduces the need for in-person visits. In addition, technology also helps increase interaction and create personalized experiences for customers by providing information and answering questions quickly and accurately.

(iv) Data analysis and forecasting

Digital transformation allows real estate businesses to collect and analyze data to better understand the market, predict trends and make strategic decisions. Technology such as artificial intelligence (AI) and machine learning can be applied to analyze and forecast real estate value, market demand and economic situation. This helps businesses obtain strategic information to enhance competition and make the right decisions about investment and development.

(v) For online marketing and sales

Digital transformation opens up new opportunities to reach customers more widely and effectively through online marketing and sales. Real estate businesses can create websites and mobile applications to introduce products, provide detailed information, images and videos about their real estate projects. They can use social media channels and digital marketing tools to reach potential customers, increase engagement, and drive sales.

In summary, digital transformation plays an important role in enhancing operational efficiency by providing better customer experience, improving work processes and creating new opportunities for real estate businesses.

4.3 Challenges for Vietnamese real estate businesses with application of Digital transformation

Besides the benefits that digital transformation brings to businesses, there are many challenges and difficulties for businesses. Because real estate business is an economic industry with very specific products and processes, digital transformation is a difficult process for real estate businesses.

Firstly, it is difficult to change awareness and thinking. Real estate businesses in Vietnam are facing many opportunities and challenges in the race for digital transformation. In Vietnam, digital transformation models are also creating useful services for people and effectively taking advantage of society's idle resources. However, it also creates conflicts due to fundamental changes to the traditional business model. New technological strengths are helping many startups gain an advantage. This trend creates important changes in the value chain of industries as well as the global supply chain.

However, digital transformation in the Vietnamese real estate market is still slow because not everyone participating in the real estate market in general and personnel operating in real estate businesses in particular is fully aware of it. For example, when building a building, house, or project, digital transformation only helps in saving energy and applying green materials. It can't help choose suitable higher technologies in the process of investment development, operation. Therefore, in the context of the current digital economy, real estate businesses and organizations with traditional models are required to have a strong change in thinking, especially the perspective of managers - thinking to understand difficulties, challenges and accompany the whole process of implementing digital transformation.

The second one is regarding human resources and scientific and technical qualifications. In fact, digital transformation will help businesses shorten time, costs, and human resources in the process of researching, buying and selling real estate. Specifically, digital transformation will help customers find the most suitable real estate products at the most reasonable prices; help with quick capital turnover and market stability; connect supply and demand; helps the market circulate and increase liquidity. Furthermore, there are many information technology applications in real estate in Vietnam such as: Propzy, Homebase, Infina, Revex... However, currently many businesses are gradually closing and orders are being closed. The rest are also facing many difficulties to survive, even though the size of the market is very large. Revenue in the early stages for real estate technology businesses is very low, making it difficult to help businesses survive. Therefore, many businesses are very cautious about applying digital transformation technology. The reason is because there are too many difficulties related to people and technology.

Thirdly, they have difficulties in funding. Most real estate businesses in Vietnam are small and medium-sized enterprises with limited capital size. This is also a barrier for businesses when they want to apply digital transformation.

Finally, there are some other difficulties due to nature of this industry. For example, customers do not like to pay through banks because the transaction value is quite large, online payment fees are very high. So most pay in cash. The management of land use rights issued to new owners has enough basis to deploy asset management solutions, digitization in asset management that businesses cannot do etc.

4.4 Solutions to promote digital transformation to promote sustainable development for real estate businesses in Vietnam in the future

To improve business performance as well as the competitiveness of businesses, applying digital transformation is a must for businesses. To promote digital transformation for real estate businesses in Vietnam, it is necessary to combine a synchronous system of solutions.

Firstly, there needs to be participation and support from the government system to businesses. The state needs to have policies to support businesses in all aspects because real estate is a valuable asset. Buyers usually find it difficult to make a decision when they visit the real estate in person. Therefore, it is more difficult for them if they only depend on information on the internet. This requires real estate encryption to monitor market fluctuations. In addition, the government also needs codes for trading floors and each broker. It will make the government's management better and more effective, and thereby make the digital transformation of participating businesses and units more convenient. In general, successful digital transformation must be a process involving the entire system, especially creating a technology ecosystem for real estate is very necessary and indispensable for sustainable development.

Secondly, there needs to be a gradual change in thinking and awareness of participants (business leaders, employees, as well as customers and investors...) about the role of technology applications. First of all, you must let customers clearly understand your products. Furthermore, it is necessary to play a leading role in the market, ensuring relationships between suppliers and real estate businesses, brokerage floors. In addition, changing business habits and practices is considered a big barrier, causing businesses to come to a standstill. Most employees in real estate businesses do not have the mindset to use system software because of their fear of change, busy work and huge number of documents. In addition, too many complex processes are another difficulty in real estate digital transformation, because it involves many parties, not all of which have compatible platforms. Using too many platforms in a group of procedures among many parties will cause difficulties and even reduce speed compared to the traditional way.

In fact, many businesses have applied digital transformation software, but employees and workers have difficulty applying it or only partially applying it, causing the business's digital transformation to fail to achieve the expected success. Therefore, the core issue is the need for a change in thinking and awareness of the participants.

In addition, most customers today are familiar with traditional sales methods, so changing sales methods to new technology requires time for them to learn and promptly adapt. In addition, the psychology of Vietnamese real estate buyers is that they want to come to see the products in person because if they only view the products online, they still do not trust enough to sign a sales contract.

Thirdly, real estate businesses themselves need to invest in this activity. Businesses need to prepare funds to invest and apply many different technologies in business. For example, technologies are should be invested to increase the experience and bring the most authentic feeling to customers. Business should apply technology to search, compare, and transact real estate, thereby creating convenience and flexibility, cost saving in real estate transactions (smart technology applications help customers look up information about real estate segments through VR, AR technology, etc.).

Fourthly, the participants themselves also need to change their thinking and habits, improve their ability to use and apply information technology, and adapt to the digital transformation environment. In particular, businesses need to focus on fostering and training high-quality personnel and information technology experts. Conventional real estate businesses themselves currently operate in a traditional style and invest little in innovation, creativity and digital transformation.

5. CONCLUSION

Digital transformation in the real estate sector is an inevitable trend and helps the market develop healthily and sustainably. If a business proactively adapts and has an appropriate digital transformation strategy, it will expand the market, increase accessibility and experience for customers, thereby increasing the revenue and brand value of the business rapidly. On the contrary, if a business is slow and does not have a suitable digital transformation strategy, it will soon be eliminated from the market.

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AN INVESTIGATIVE STUDY ON DECISIONS TO DEPOSIT MONEY IN PERSONAL ACCOUNTS: EMPIRICAL EVIDENCE AT VIETINBANK BRANCH IN AN GIANG PROVINCE

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Abstract: *The study aimed to determine factors affecting the decisions of individuals to deposit in their accounts at the VietinBank branch in An Giang Province. In this study, a questionnaire was prepared and used to investigate 250 individuals who have or have not done transactions at the An Giang branch of VietinBank. The estimated results derived from the Probit model showed that the deposit decision is largely governed by the deposit interest rate, quality of customer services, business location, promotion, and individual's level of education, age and income. In addition, the Tobit model suggested that the deposit interest rate, quality of customer services, business location, and individual's age are the most influential factors in affecting the deposit amount.*

Keywords: *deposit amount, deposit decision, personal customers, VietinBank branch in An Giang Province.*

JEL codes: E50, G21

1. INTRODUCTION

Capital mobilization in general and deposit mobilization in particular are traditional operations of commercial banks and are one of the foundations ensuring the development of banks. They are important business activities that have decisive impacts on the bank's performance. Customer-oriented business strategy is crucial for commercial banks. Attracting new personal customers while strengthening the relationship with existing customers has become an effective business measure to bring high efficiency. It is of utmost importance for the bank's success that the bank endeavours to best satisfy customers who already made deposits to their accounts with the bank. Moreover, the bank should have regular follow-ups with existing customers to ensure that they remain loyal to their deposits to the banks. To achieve the desired outcomes from the strategy, the banks should have measures coordinating their efforts with support from the Government, State Bank, and other agencies. Therefore, in this study, empirical evidence collected from the An Giang branch of VietintBank was investigated to determine factors affecting the decisions of personal customers to deposit in commercial banks, thereby proposing solutions to enhance effective deposit attraction.

2. LITERATURE REVIEW AND METHOD

2.1. Literature review

The Theory of Reasoned Action (David et al., 1989) was applied to study the decision of personal customers to make savings deposits to their bank accounts. According to Shappard et al. (1988), an individual will make a savings deposit once the following three conditions are satisfied. Firstly, the behaviour of personal customers toward savings deposits is not entirely under their control; instead, the deposit decisions are influenced by deposit interest rates, service quality, etc. Secondly, the circumstance poses choices such that customers have only options to deposit in this bank and not the others. Lastly, personal customers can't make a sound decision on whether they

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should deposit to their savings accounts, due to insufficient information on the interest rate, the bank quality, or products from other banks. Therefore, this study uses the Theory of Reasoned Action to explore factors affecting the decision of personal customers to deposit in commercial banks.

Deposit decision of personal customers at commercial banks is of interest to many researchers. According to literature, the deposit decision can be influenced by the following factors:

Deposit interest rate: The deposit interest rate represents the payment that the bank makes to customers for using their capital. The deposit interest rate has a significant impact on the amount of deposits to commercial banks, in particular savings deposits because personal customers are interested in comparing the savings interest rate to the slippage rate of the currency as well as the profitability of other forms of investment. Based on the information, the customers decide whether to deposit, how much the deposit is and under what form. A bank that has a high deposit interest rate is likely to attract more customers because they tend to consider the interest rate as an essential factor when making the deposit decision. By studying Maskan Bank branches in Iran, Mohammadi and Shilan (2015) found that the deposit interest rate is the most decisive factor in attracting customers to make savings deposits. Vezifehdoost et al. (2015) and Mushtaq and Siddiqui (2017) demonstrated the positive correlation between the deposit interest rate and the deposit decisions of personal customers.

Quality of service: The quality of deposit service is measured as the capability of the bank to satisfy the needs of the customers. In other words, it represents the gaps between the customers' expectations and their experience when using the deposit service of the bank. High-quality services will therefore satisfy and attract more customers to choose the services of the bank. Phan et al. (2015) and Jaber and Manasrah (2017) studied factors affecting customer satisfaction at the Agribank branch in Vinh Long province. They found a positive relationship between the service quality and the deposit decisions of customers.

Business location: The business location of the bank represents the convenience for customers to access the bank. The closer the bank is to the customers' home address, the better their experience. Duong (2013) shows the longer distance to the bank has negative impacts on the deposit decisions of customers.

Transaction time: The transaction time is among other factors representing the professionalism in the services of the bank. It is measured as the time required for the bank to satisfy the needs of customers fully. The study of Phuong (2010) demonstrates that a longer waiting time while making deposits has a negative influence on the deposit decision.

Education level: Customers with high education levels have increased awareness of savings and investment. By studying the deposit decisions of households in the Mekong River Delta, Nguyen (2011) found a positive correlation between the education level of customers and their deposit decisions.

Age: Young people prefer investment rather than savings because they believe investment is more profitable. On the contrary, elderly people tend to save money to prepare for their retirement. The study of Nguyen (2011) shows that, for selected households in the Mekong River Delta, the age of customers and the deposit decision are positively correlated.

Income: The customer income measured as the monthly average income represents the customer's wealth. Customers with higher incomes have more money available and are more likely to deposit to their savings accounts, compared to customers with lower incomes. Using households in the Mekong River Delta as the research sample, Nguyen (2011) shows the positive correlation between the income of customers and their deposit decisions.

Promotion: In the banking sector, promotion aims to encourage, attract the customers' attention, and enhance their positive attitudes towards the bank when comparing it against other competitors offering similar services in the same conditions. The customers prefer to use services of the banks that have promotions or offers, rather than those without promotion programs. According to the studies of Duong and Nguyen (2016), Mokhlis et al. (2008), Alqasa et al. (2013), and Pham and Pham (2010), the promotion has a positive impact on the deposit decisions of customers.

2.2. Research Methodology

2.2.1. Regression model

This study uses the Probit model to analyze factors affecting the customers' decision to deposit to the VietinBank branch in An Giang province. In addition, the Tobit model was selected to study factors affecting the amount of deposits.

The Probit model is defined as: $y = \beta_0 + \sum \boldsymbol{\beta}_i + x_i + u_i$ (1),

where:

- y : is the dependent variable representing the customer's decision to deposit to the An Giang branch of VietinBank; y=1 means the customer decides to deposit to the bank, while y=0 means the customer decides to another bank;
- βi : are the regression coefficients of the Probit model given in (1);
- x_i : are the independent variables as described in Table 2.

The Tobit model is defined as:

$$y_i = \begin{cases} y_i^* = \beta x_i + u_i & \text{nếu } y_i^* > 0 \\ 0 & \text{nếu } y_i^* \leq 0 \end{cases} \quad (2)$$

where:

- y is the dependent variable representing the amount of deposit made by personal customers;
- x_i are the independent variables as described in Table 2.

Outcomes of the regression models are verified by the Pearson correlation, Durbin Watson and multicollinearity tests.

2.2.2. Data

Data used in this study was randomly sampled, including in total of 250 personal customers who have or have not made transactions at the An Grang branch of VietinBank. An interview was then conducted with two groups of customers who have or have not made savings deposits to the branch.

The number of samples (or customers) per group is given in Table 1. Further details of the data were provided in the Appendix.

Table 1: Research sample

Criteria	Research sample	
	Number of samples	Percentage
Customers who have made transactions at VietinBank	145	58%
Customers who haven't made transactions at VietinBank	105	42%
Total	250	100%

(Source: Summarized by the author)

Bảng 2: Variables in the regression model

Variable	Symbol	Definition	Expected correlation	Theories and empirical studies
Deposit interest rate	X_1	Measured in percentage	+	Mohammadi & Shilan (2015); Vazifehdoost et al. (2015); Mushtaq & Siddiqui (2017)
Services' quality	X_2	Artificial variable, measured 1 for good service quality and 0 for bad service quality	+	Phan et al. (2015); Jaber & Manasrah (2017)
Business location of the bank	X_3	Measured in kilometres from the customer's living address to the nearest branch	-	Duong (2013)
Transaction time	X_4	Measured in minutes	-	Phuong (2010)
Educational level	X_5	Artificial variable, measured 1 for higher education and 0 otherwise.	+	Nguyen (2011)
Age	X_6	Age of customers	+	Nguyen (2011)
Income	X_7	Income of customers in VND	+	Nguyen (2011)
Promotion	X_8	Artificial variable, measured 1 if there is available promotion and 0 otherwise	+	Duong & Nguyen (2016), Mokhlis et al. (2008); Alqasa et al. (2013); Pham & Pham(2010)

(Source: Summarized by the author)

2.2. Results and Discussion

Table 3: Regression results

	Probit Model		Tobit Model	
Variable	β coefficient	P_{value}	β coefficient	P_{value}
Constant	-4.397***	0.000	-160,854	0,136
X1	0.199**	0.041	0,998***	0,000
X2	0.818***	0.006	0,564***	0,007
X3	-0.024***	0.006	-0,403***	0,009
X4	0.017	0.292	0,0004	0,934
X5	0.767***	0.000	5,317	0,975
X6	0.040***	0.002	0,925***	0,000
X7	0.475***	0.000	-64,848	0,439
X8	0.612***	0.001	6,312	0,236
Number of observations	250		250	
Pseudo R2	0,8029		0,7216	
Prob>chi2	0,000		0,0000	
Log-likelihood	-118,55106		-607,57107	

(Source: Analysis results)

(***, ** represents the statistical significance level of 1% and 5%, respectively)

The results obtained from the Probit model demonstrate that the deposit decision of personal customers at the An Giang branch of VietinBank is affected by the deposit interest rate (X1), service quality (X2), business location (X3), educational level (X5), age (X6), income (X7) and promotion (X8).

The deposit interest rate (X1) has a positive correlation with the dependent variable at the statistical significance level of 5%. The higher the deposit interest rate, the more the deposit to the bank. Specifically, given that all other factors remain unchanged if the deposit interest rate grows by 1% per year, the likelihood that the customers' deposit to the bank will increase by 0.119%. This observation agrees with other studies by Mohammad and Shilan (2015), Vezifehdoost et al. (2015) and Mushtaq and Siddiqui (2017), all of which found a positive correlation between the deposit interest rate and the deposit decision of personal customers.

The quality of services (X2) was found to have a positive correlation with the dependent variable at the statistical significance level of 1%. The higher the service quality, the more the deposit to the bank. Given that all other factors remain the same, by improving the service quality by 1%, the probability that a customer will deposit to the bank will increase by 0.82 times. Similar to what was previously pointed out in other studies by Phan et al. (2015) and Jaber and Manasrah (2017), this study shows the presence of a positive correlation between the quality of service and the deposit decision of personal customers.

The business location of the bank (X3) is inversely correlated with the dependent variable at the statistical significance level of 1%. The customers are less likely to deposit to distant banks. If the distance between a bank and the customer's living address increases by 1 kilometre, the likelihood of the customer depositing to the bank diminishes by 0.024 times. As expected from a similar study by Duong (2013), the business location of the bank (or the distance from the bank to the customers' home address) has negative impacts on the deposit decisions of customers.

The educational level (X5) is positively correlated with the dependent variable at the statistical significance level of 1%. Customers with higher educational levels are more likely to make savings deposits to the bank. Given that all other factors remain unchanged, if the educational level of a customer is one level higher, the probability that the customer will deposit to the bank will increase by 0.767 times. This observation agrees with a similar study by Nguyen (2011), which confirms the positive correlation between the educational level and deposit decisions.

Age (X6) was found to have a positive correlation with the dependent variable at the statistician significance level of 1%. Elderly people are more likely to make savings deposits to the bank. If a customer is one year older, the likelihood of them depositing to the bank will increase by 0.04 times. This result is similar to the study by Nguyen (2011) where the customers' age is positively correlated with the deposit decision.

Income (X7) has a positive correlation with the dependent variable at the statistical significance level of 1%. It is more likely for customers with higher incomes to make savings deposits to the bank. Specifically, if the monthly income increases by 1 million VND, the probability that the customer deposits to the bank will be 0.475 times higher. As expected from a similar study by Nguyen (2011), this study shows a positive correlation between the customers' income and the deposit decision.

Promotion (X8) was also found to be positively correlated with the dependent variable at the statistical significance level of 1%. Given that all other factors remain the same, a bank with active promotions will increase the probability of customers making deposits by 0.612 times. This observation is agreed by the similar studies of Duong & Nguyen (2016), Mokhlis et al. (2008), Alqasa et al. (2013), and Pham and Pham (2010), all of which show that promotion positively influences the deposit decision.

The results of the Tobit model show that the amount of deposit made by personal customers to the bank is influenced by the deposit interest rate (X1), service quality (X2), age (X6) and business location of the bank (X3).

The deposit interest rate (X1) is positively correlated with the amount of deposit to the bank at the statistical significance level of 1%. A higher deposit interest rate will attract more deposits to the bank, and vice versa. Given that the other factors remain the same, for every 1% increase in the deposit interest rate, the deposit amount will increase by 0.998 million VND. This observation demonstrates the fierce competition in the current banking sector. However, the operation of the banks must comply with the general regulations of the State Bank. This study is in agreement with other studies by Mohammadi and Shilan (2015), Vezifehdoost et al. (2015) and Mushtaq and Siddiqui (2017), confirming the positive correlation between the deposit interest rate and the deposit decision.

The service quality (X2) was found to be positively correlated with the amount of deposit to the bank at the statistical significance level of 5%. The higher quality of banking service tends to attract more customers making deposits to the bank. If the service quality rating reviewed by the customers increases by one level, the total amount of deposit will increase by 0.564 million VND. This observation agrees with what was expected from other studies of Phan et al. (2015) and Jaber and Manasrah (2017), which confirms the positive correlation between service quality and deposit decisions.

The business location of the bank has an inverse correlation with the amount of deposits to the bank at the statistical significance level of 5%. The further the distance between the customers' home address to the bank, the less likely the customers will make deposits to the bank, and vice versa. The customers will feel inconvenienced in travelling and making transactions at distant banks. The study shows that for every one kilometre of the distance increased, the total amount of deposit to the bank will decrease by 0.403 million VND. This observation which is similar to the other study of Duong (2013) confirms the negative correlation between the business location of the bank (the distance between the bank and the customers' home address) and the deposit decision.

Age (X6) was found to be positively correlated with the amount of deposits to the bank at the statistical significance level of 1%. The elder people are more likely to make savings deposit to the bank, and vice versa. This also demonstrates that the elder customers tend to have more saving assets than the younger customers, which aligns with the current trend. The regression analysis shows that if the customers are one year older, the total amount of deposits will increase by 0.925 million VND. This result agrees with the study of Nguyen (2011) and indicates the positive correlation between the customers' age and the deposit decision.

3. CONCLUSIONS AND RECOMMENDATIONS

Currently, commercial banks always look for solutions to attract deposits from personal customers. However, this capital still increases slowly because, besides the deposit interest rate, there are other factors affecting the customers' decision to deposit to the An Giang branch of VietinBank. According to predictions of the Probit model, this study showed that the deposit decision of personal customers depends on the following factors: the deposit interest rate, service quality, business location, educational level, age, income, and promotion. While the business location of the bank was found to be inversely correlated with the deposit decision, there is a positive correlation between the decision and the remaining factors. In addition, the study applied the Tobit model to determine other factors affecting the deposit amount to the bank. The most influential factors comprise the deposit interest rate, service quality, business location, and age. The correlation predicted by the model between the most influential independent variables and the dependent variables is as expected.

The results of this study show that the An Giang branch of Vietinbank needs to be proactive and focus on improving the quality of customer service, building and developing banking culture and diversifying promotion policies and deposit interest rates, to attract more deposits from personal customers. Some recommendations are elaborated as follows:

Firstly, the customer service quality should be improved. Customers have an influential role in sales based on their perception of the quality of products and services. Therefore, the Vietinbank branch in An Giang province needs to pay more attention to managing the quality of customer service, ensuring uniformity in the service quality at all times. Besides, the bank needs to have a system for handling errors or either verbal or written customer complaints. To improve competitiveness, the An Giang branch of Vietinbank should build qualified staff by training employees to enthusiastically support customers through procedures in a considerate and thoughtful manner to create a comfortable and joyful environment for customers, and by organising external training for staff in professional skills, IT and foreign languages to diversify banking services and modernise banking technologies.

In addition, the branch should focus on developing the IT system, making Mobile Banking a main channel to improve the convenience and accessibility for customers who cannot use services at the branch.

Secondly, the branch should focus on building and developing the banking culture. Human factors play an integral role in business development. For the banking sector which is part of the financial service sector, it is important to combine human factors and cultural factors. A suitable corporate culture will enable employees to understand the purposes of the work, be more productive, feel proud to represent the bank and increase their loyalty to the bank. Besides, customers perceive and evaluate the banking culture through the behaviours of employees. Therefore, to develop and manage professional and efficient banking cultures, the organisational structure of the bank needs to have an apartment dedicated to plan, monitor and evaluate activities related to developing a new banking culture.

Thirdly, the branch needs to diversify promotion policies and deposit interest rates. Promotions and interest rates are two important factors affecting the deposit decision of customers as well as the capital mobilisation of the bank. Thus, the An Giang branch of Vietinbank should focus on diversifying promotional policies on holidays and develop incentive plans for customers with large deposits or long-time customers. Besides, it is necessary to consider adjusting the interest rate for short-term deposits (between 3 and 6 months) which account for a large proportion of the total deposits to the bank.

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APPENDIX: STATISTICS OF SURVEY DATA

Criteria	Customers who haven't made transactions at the An Giang branch of VietinBank		Customers who have made transactions at the An Giang branch of VietinBank	
	Frequency	Percentage (%)	Frequency	Percentage (%)
GENDER				
Male	45	42,86	67	49,20
Female	60	57,14	78	50,80
Total	105	100	145	100
OCCUPATION				
Workers/office workers	16	15,24	27	18,62
Civil servants / public employees	41	39,05	66	45,52
Traders	42	40,00	47	32,41
Students	0	0	0	0
Others (housewives, self-employed,…)	6	5,71	5	3,45
Total	105	100	145	100
Education Level				
Higher education	44	41,90	106	73,10
Others	61	58,10	39	26,90
Total	105	100	145	100
TRANSACTION PERIOD WITH THE BANK (NUMBER OF YEARS)				
Less than 1 year	13	12,38	33	22,76
From 1 to 2 years	32	30,48	47	32,41
From 2 to 3 years	38	36,19	30	20,69
More than 3 years	22	20,95	35	24,14
Total	105	100	145	100
NUMBER OF TRANSACTIONS AT THE BANK				
Less than 10 times	16	15,24	21	14,48
From 10 to 20 times	51	48,57	76	52,41
From 20 to 50 times	33	31,43	42	28,97
More than 50 times	5	4,76	6	4,14
Total	105	100	145	100
DEPOSIT TERM				
From 1 to 2 months	20	19,05	35	24,14
From 2 to 3 months	21	20	19	13,10
From 3 to 4 months	11	10,48	7	4,83
From 4 to 5 months	10	9,52	8	5,52
From 5 to 6 months	8	7,62	17	11,72
From 6 to 7 months	1	0,95	0	0
From 7 to 8 months	0	0	1	0,69
From 8 to 9 months	8	7,62	21	14,48
From 9 to 10 months	1	0,95	3	2,07
From 10 to 11 months	2	1,90	2	1,38
From 11 to 12 months	0	0	1	0,69
From 12 to 13 months	3	2,86	3	2,07

From 13 to 24 months	4	3,81	8	5,52
From 24 to 36 months	13	12,38	17	11,72
More than 36 months	3	2,86	3	2,07
Total	105	100	145	100
PURPOSE OF DEPOSIT				
Profit	105	100	145	100
Life maintenance	49	46,7	77	53,1
Back-up	36	34,3	56	38,6
Payments for goods and services	46	43,8	81	55,9
Transfer	24	22,9	32	22,1
Others	0	0	0	0
INFORMATION CHANNEL				
Friends, colleagues, neighbours	65	61,90	89	61,38
Family members	83	79,05	94	64,83
News, magazines	66	62,86	86	59,31
Bank staff	70	66,67	88	60,69
Employers	76	72,38	108	74,48
TV, radio	84	80,00	99	68,28
Internet	80	76,19	105	72,41

FACTORS AFFECTING THE QUALITY OF TAX CONSULTING SERVICES: THE CASE OF THE DELOITTE VIETNAM TAX ADVISORY COMPANY LIMITED

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Abstract: The article examines the factors affecting the quality of tax consulting services of Deloitte Vietnam Tax Consulting Co., Ltd. when providing consulting services to corporate customers in Vietnam as well as FDI enterprises and businesses. multidisciplinary, multinational worldwide. It analyzes the correlation between tax consulting service quality and customer satisfaction estimates; At the same time, evaluates the influence of these factors on the basis of surveying the opinions of businesses that have been and are currently customers of the company. The research uses the SERVQUAL model to analyse data from 300 customers including companies in Vietnam and companies with facilities in Vietnam. Based on entering and coding into SPSS v20.0 software for analysis, the research has determined that among the five factors given for analysis include: (i) Responsiveness, (ii) Reliability, (iii) Tangibility, (iv) Assurance, (v) Empathy. Among them, 3 variables have a positive linear relationship with customer satisfaction including Assurance, Tangibility, Emphathy. Eliminate two variables: Responsibility (RES) and Reliability (REL).

Keywords: Consulting Service, Customer Satisfaction, Influencing Factor, Service Quality, Tax Consulting.

1. INTRODUCTION

The definition of tax has been around for generations. Taxes are the main source of state revenue, helping to create and mobilize resources for the national budget, creating a decisive premise for realizing socio-economic development goals and improving people's living standards, strengthening national security, which is considered one of the top political tasks. Tax consulting services is a concept that has appeared for a long time in the tax administration of advanced countries in the world. It is a fundamental part of the operation of countries and businesses. Tax policies need to be clearly formulated and actively managed by governments and businesses alike. From a business perspective, tax management is an increasingly prioritized issue because of increasingly complex laws. Tax consultants work with clients to establish tax policies and procedures to ensure that tax compliance responsibilities are fulfilled and the appropriate alignment with markets and government agencies. In this way, business management can ensure good tax management and continue to focus on business management. Although it has been developed for a long time in the world, in Vietnam, the concept of tax advice has become popular in recent years. In fact, there are many businesses that really understand the tax, as well as the tax obligations that they have to perform, leading to many problems that arise not actively when the tax inspection and examination agencies step in. In particular, in the context of the country's rapid development, the period of economic integration and innovation, the enhancement and strengthening of the effectiveness of national tax administration is increasingly tightened, and the updated and renewed for stricter management. That explains the pressure to optimize tax management in every business in Vietnam. If enterprises want to grow and develop as well as integrate around the world, this task needs to be implemented synchronously, drastically, and effectively. Therefore, the development

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of tax-related services is a natural factor.

Present in Vietnam since 1991, formerly known as VACO auditing company, Deloitte Vietnam is famous as one of the four largest auditing and consulting firms in the world with extremely rich strengths and resources in the field of auditing and tax consulting. Deloitte develops its extensive international customer network, so Deloitte's customers are diverse and spread all over the world. In Vietnam, Deloitte Vietnam Tax Consulting Co., Ltd with a team of experienced staff and proven professional competence has always strived to provide high-class tax consulting services to large clients in Vietnam. Vietnam. However, facing the competitive pressure of the market and the needs of customers, improving the quality of tax consulting services is extremely important. Realizing the urgency of the topic, authors decided to choose the topic Factors affecting the quality of tax consulting services at Deloitte Vietnam Co., Ltd. Appropriate recommendations can help the company find a suitable direction for itself, thereby gradually developing and growing stronger in Vietnam.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Service Quality

Service concept

Service is a fairly broad and popular concept that has been around for a long time in life. There are many different definitions of services as follows: In the study of Glenn Parry and the authors, they said: "There is no perfect definition to separate goods from services, although scholars been trying for a very long time. In attempting to define the differences between goods and services, their similarities are often overlooked. However, Gronroos asserts: "Service is one or a series of non-essential intangible activities or interactions between customers and service personnel, physical resources or goods. or service delivery system." In the words of Kotler and the authors in their paper: "A service is any activity or benefit that one party can provide to another, that is essentially intangible and does not result in ownership anything. Its production may or may not be tied to a physical product.". In summary, from the many concepts mentioned above, the author gives the most general definition of service: it is the interaction and exchange between service providers and service users to meet customer needs.

The nature of services can also be considered as goods but they are not material. The nature of a service business is to provide solutions to solve problems.

Some features of the service include:

Firstly, ***Invisibility***: All types of services cannot be seen by the senses before they are traded. That is, verifying it directly is not possible.

Secondly, ***Inseparability***: This is quite easy to distinguish when compared to physical goods, physical goods will be hunted, then stored, then sold and consumed. In stark contrast, services are sold first, and then production and consumption take place at the same time shortly after. Therefore, services will be inseparable from their suppliers. For example: Beverage service provided by the waiter…

Thirdly, ***Heterogeneity (diversity)***: The quality of the service provided to the customer can vary depending on many different factors and it is quite difficult to make an absolute assessment of the level of quality. For example, real estate brokerage consulting services will depend on the experience and knowledge as well as soft skills of the consultant, which leads to different quality of advice.

The fourth is ***Inability to store:*** The Service cannot be archived for future use. Therefore, inventory purposes for services are difficult to achieve. For example, a dental service cannot be stored for later use, it can only be provided and experienced at the time the customer uses it.

Finally, ***Non-transferable***: A service cannot be separated from the consumer and the person providing it. Food service in a restaurant cannot be done without the customer and the chef.

The concept of service quality

There are many studies on the concept of service quality over the years as follows. In 2007, the same author stated succinctly: "Quality is the perception of customers about what they receive." That is, "service quality is a measure of how good a service is: the degree to which it is delivered in line with customer expectations. Because quality service means matching customer expectations on a consistent basis." _according to Lewis et al. (1983). Thus, in a nutshell, service quality from the perspective of the manufacturer is the assurance of providing the service according to the scenario with the high professional skills of the supply staff and the management team.

From the customer's perspective, service quality is the level of customer satisfaction in the consumption process, is the overall service of the business that brings a chain of benefits and fully satisfies the expected needs of customers commensurate with the cost to be paid by the customer.

Customer satisfaction

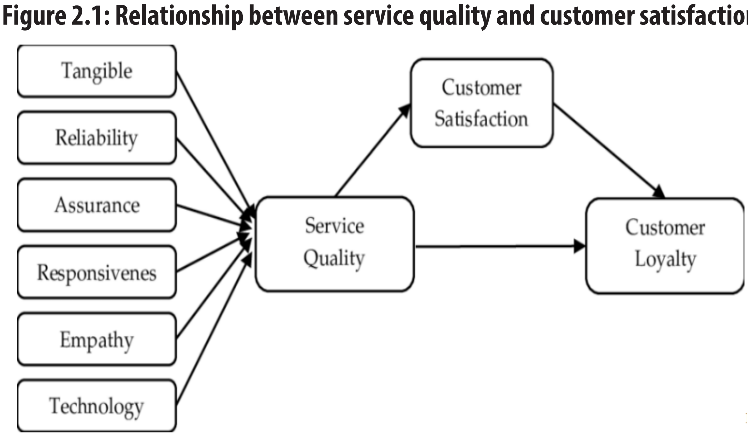
The more the world develops, the more businesses need to play a role not only to bring profits to sellers, but also to bring commensurate value to customers. Therefore, for a long time, the concept of customer satisfaction has become an important factor that businesses want to have. Fazal and Kanwal (2017) mention that customers are the core of every successful company.

Over time, the world has changed, the market has changed, and the marketing environment has also changed (Kotler, 2017), so businesses are facing difficult challenges to achieve their goals of ensuring value to customers (Shamsudin et al., 2018b) and their satisfaction (Hasan, 2019). Thus, customer satisfaction is determined through measuring or comparing customer satisfaction before purchasing and after using a product or service. This measurement is based on psychological factors, that is, the feeling of satisfaction of needs, from which the conclusion is satisfied or dissatisfied.

The relationship between service quality and customer satisfaction.

Customer satisfaction or loyalty and competitiveness are difficult-to-control variables that have been present in many global multidisciplinary studies. Academic debates on this topic are quite lively with high practicality such as the Swedish customer satisfaction barometer (SCSB; Fornell, 1992), or in the US the ACSI index.; Fornell et al., 1996). According to Zeithaml (1998), service quality is often located through customers' evaluation of the superiority of the whole service delivery process.

Figure 2.1: Relationship between service quality and customer satisfaction



Source: Atif Mahmood et al 2018

In summary, service quality is an important factor affecting customer satisfaction. A good service experience from customers will bring a lot of sustainable value to the business and vice versa.

2.2. Tax consulting service.

Tax consultant definition

Taxes are a fundamental part of the functioning of countries and companies. More and more businesses, large and small companies are established. Meanwhile, tax policy in any country is increasingly tightened with many legal regulations being issued. Therefore, tax policy always needs to be clearly formulated and managed accurately, transparently and flexibly. This leads to a consequence that tax-related issues are always difficult problems for almost every individual or business. From the business point of view, tax management is an increasingly prioritized issue in the current renovation period. Stabilizing the management process and optimizing tax obligations is a prerequisite in the process of building sustainability and transparency in business. This directly affects the need for a third party with sufficient professional and professional knowledge in tax and legal aspects. That is the reason why the tax consulting service was born in the context of social development and integration in Vietnam. Tax consulting is one of the important areas of legal services. The tax consulting industry brings value to customers by helping them save tax costs and find opportunities to optimize the amount of tax payable and avoid cases of being penalized by the General Department of Taxation. Tax consulting service can be considered as a service that provides long-term solutions on tax obligations and legal responsibilities for businesses, this helps businesses comply with and obey the law, creating trust in the hearts of customers people and peace of mind to build a sustainable business strategy.

Classify of tax consulting service

When businesses seek tax consulting services, their needs will include support for services on 8 current tax types in the Vietnamese tax system with more than 100 types of fees and charges. Fees are centrally managed. Typical taxes include: Corporate income tax, Personal income tax, VAT, Import-export tax, Special consumption tax, etc. Tax services that Deloitte Vietnam Tax Consulting Company Limited shares according to each period of each customer company. Depending on the business situation and business needs of customers, Deloitte accompanies businesses in the process of entering the market, supporting optimal operations, restructuring and transformation, and exiting the market. Additionally, support linked transactions, Global trade planning to optimize supply chains to achieve the most efficient customs duties, Support dispute resolution and work with authorities,…

The role and necessity of tax advice for businesses in Vietnam

Currently, there are many businesses facing tax difficulties, leading to large losses when paying taxes. The reason is that most businesses in Vietnam do not have a deep understanding of tax laws and procedures. Although any business has its own accounting department, which can carry out normal tax declaration and calculation procedures, it still requires tax advice on professional issues. profound and complex, requiring a deep understanding of the law. Tax consulting services are expected to support businesses in all stages of the organization including establishment, operation and even in the cancellation process.

In Vietnam, tax services are provided mainly by the following groups: (i) Auditing companies; (ii) Accounting service enterprises; (iii) Tax service businesses (collectively referred to as tax agents)

From 2018 until now, the number of tax agents has increased slowly. According to the General Department of Taxation, the number of tax agents as of January 2022 is 817. Compared to the number of newly registered businesses every year (about 30,000 - 40,000 newly registered businesses annually), the growth rate is very high. big. taxes are very low. In particular, with the need to use tax services in particular and tax services in general of businesses in the economy, the number of tax agents is still very small. Currently, the country has about 700,000 operating businesses, of which 98% are micro, small and medium enterprises (of which, about 90% are small and micro enterprises).

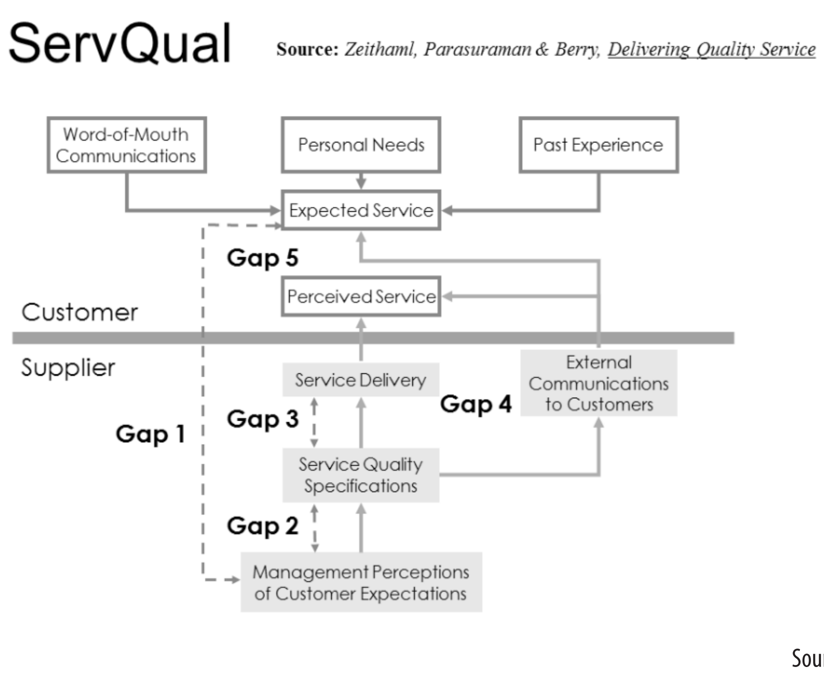
However, looking comprehensively at the development of tax services in Vietnam, we can see that the most obvious weakness in the development of tax services in Vietnam is that the number of tax agents is still small, not fully exploiting the demand. , potential for tax service in the economy. While many businesses are still confused when carrying out tax procedures, improper implementation of tax procedures due to lack of in-depth understanding of tax laws (inadvertently violating the law) leads to administrative sanctions. about tax. Based on annual data, there are tens of thousands of problems sent to the websites of tax authorities at all levels, questions in document discussion conferences asking tax authorities to answer. It can be seen that the demand in the market is extremely large and the potential of the tax consulting service industry is also highly appreciated.

2.3. Research related to the research topic.

2.3.1. Model 5 quality gaps SEVQUAL, Parasuraman et al (1998)

Implemented by American experts A. Parasuraman, Valarie Zeithaml and Leonard Berry in 1988, the instrument is a scale that is considered highly reliable and accurate, widely used in quality research. Industry services such as banks, restaurants, hospitals, schools, etc. The SERVQUAL model considers the difference between the expected and actual value perceived by the customer. The scale includes 21 variations measuring 5 parts of service quality including: Reliability, Responsiveness, Assurance, Tangibility, Empathy.

Figure 2.2: SERVQUAL quality 5-gap model



Source: Parasuraman 1988

2.3.2. Hyphotheses

Based on and theoretical framework presented in part 2.1 of the study, within the scope of the research, the authors will apply SERVQUAL model to analyze the quality of tax consulting services of the Company. Deloitte Vietnam Tax Consulting Co., Ltd.

Based on the SERVQUAL model and related studies, the research hypothesis is detailed as follows:

Reliability: The reliability of tax consulting services is demonstrated through the full and correct implementation of the consulting contract signed with the client. It is the commitment and implementation of the best possible support, including the difficulties that arise during the performance of the service, the company limits the risks of errors that may occur. go out.

The level of customer satisfaction is directly proportional to the level of satisfaction from them. From there, the first hypothesis of the study is stated as follows:

H1: Reliability will positively affect customer satisfaction when using tax consulting services for Deloitte Vietnam Tax Consulting Co., Ltd.

Responsines: From the results of qualitative research, the customer's response will depend on whether the customer is interested and willing to help or provide relevant necessary solutions in a timely manner. When customers receive the feedback from the supplier as expected, they will feel satisfied.

The second hypothesis is stated as follows:

H2: Level of feedback positively affects customer satisfaction when using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd.

Assurance: As for the assurance factor, the aspects that are concerned include the professional qualifications of the staff, the improvisation and handling of situations quickly and accurately during the service process... ensure a professional customer experience that will score in the hearts of customers.

Therefore, the third hypothesis is stated with the following content:

H3: Assurance positively affects customer satisfaction when using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd

Empathy: Service attitude of service staff will directly affect customer loyalty. To achieve this, employees need to pay attention to the needs and know how to put themselves in the shoes of service users to understand what the value customers require.

Customers will be extremely satisfied when they receive the value they deserve from someone who understands their psychology.

Thus, the sympathy hypothesis is stated:

H4: Sympathy positively affects customer satisfaction when using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd

Tangibility

The tangible factors mentioned in this study include factors that are difficult to determine such as brand value, reputation of the company's image, the guarantee of the company's name. Customers will feel more secure when choosing a company that provides reliable coverage and guaranteed quality.

This is also a factor that is assumed to have an impact on customer satisfaction, especially in specific areas such as tax and legal.

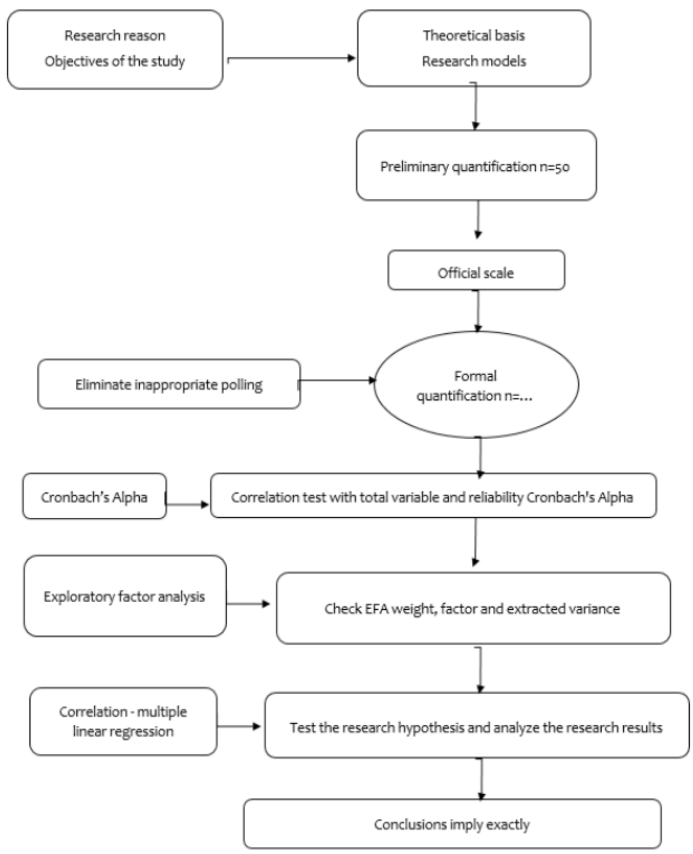
H5: Tangibility has a positive effect on customer satisfaction when using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd.

3. RESEARCH METHODOLOGY

3.1. Research process

In order to provide a practical basis for the topic, the authors will do research by combining the use of qualitative research methods and quantitative research methods. The specific research process is presented below:

Figure 3.1: Research Process



3.2. Building survey scales and questionnaires

The scales are built and developed based on theory and empirical studies related to SERVQUAL model. The scale used in the study is the Likert scale with 5 levels specified as follows: "1 - completely disagree; 2 – disagree; 3 - puzzled; 4 - Agree; 5 - totally agree.

The survey questionnaire was carried out in 2 steps. The first step will be to form a preliminary questionnaire based on theory and research needs. In the second step, the authors will hold preliminary interviews with customers who are companies that have signed contracts and are provided with services by Deloitte Vietnam Tax Consulting Co., Ltd. This interview helps to detect questions that are unclear or do not reflect reality to adjust the questionnaire so that it can be used in a formal interview. In order to serve the purpose of analysis at a later stage, the factors will be coded corresponding to the question codes and the number of sentences as follows:

Table 3.2: Variable name in model and question

No.	Factor	Corresponding code	Number of questions
1	Reliability	REL1, REL2, REL3, REL4, REL5	5
2	Responsiness	RES1, RES2, RES3, RES4, RES5	5
3	Assurance	ASS1, ASS2, ASS3, ASS4	4
4	Empathy	EMP1, EMP2, EMP3, EMP4, EMP5	5
5	Tangibility	TAN1, TAN2, TAN3, TAN4, TAN5, TAN6	6
6	Satisfaction	HL1, HL2, HL3	3

The coded elements of each variable will correspond to the content of the 28 questions in the questionnaire sent to the survey.

The object of the study is how customers have been using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd. This target group is mostly large and medium-sized enterprise customers in Vietnam market.

The survey collection method is through a google form questionnaire sent to chief accountants and CEOs or managers of the client company (who carries out a tax consulting contract with Deloitte). After conducting surveys and research, the study has collected 350 soft word tables (google forms). The authors conducts check to eliminate incomplete answer sheets and inconsistent answer sheets. As a result, 40 results were eliminated, leaving only 300 results for analysis.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Descriptive statistics of the study sample

Table 4.1: Summary of descriptive statistics of the study sample

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
No.	300	45.7%	356	54.3%	656	100.0%
Gender	300	45.7%	356	54.3%	656	100.0%
Age	300	45.7%	356	54.3%	656	100.0%
Where is the client company?	300	45.7%	356	54.3%	656	100.0%

From the above results, we can see that with the Initial Score attribute, we can study. N is the sample size: 300. Standard deviation of the variable Std. Deviation. The smaller this number, the smaller the difference between the values, and vice versa, if this value is high, it means that the number of points in the sample has a large difference.

4.2. Check the reliability of the scale

4.2.1. Check the scale

First, the scales will be tested for reliability through Cronbach's Alpha coefficient. This coefficient indicates the degree of correlation between the observed variables in the questionnaire and is used to calculate the change of each observed variable and the correlation between the variables. Specifically, the scales will be selected if the Cronbach's Alpha coefficient is > 0.6 and the observed variables must have a correlation coefficient with the total variable from 0.3 or more.

Table 4.2: Summary table of Cronbach's Alpha test results

No.	Factor	Symbol	Number of observed variables	Cronbach's Alpha	Correlation coefficient with the lowest sum	Result
1	Reliability	REL	5	0, 930	0,733	Obtain
2	Responsiness	RES	5	0,946	0,803	Obtain
3	Assurance	ASS	4	0,922	0,761	Obtain
4	Empathy	EMP	5	0,921	0,736	Obtain
5	Tangibility	TAN	6	0,957	0,847	Obtain
6	Dependent variable	HL	3	0,837	0,617	Obtain

The table provides the test results of Cronbach's Alpha coefficient, which are eligible to conduct exploratory factor analysis. Thus, at this time, keeping the number of 25 variables representing 5 variables eligible to conduct exploratory factor analysis.

4.2.2. Reliability test

Similar to the test criteria of the group of independent variables. The dependent variable needs to satisfy the necessary and sufficient conditions to be able to proceed to the next steps of the research. The test results show that the Cronbach's Alpha coefficient of the satisfaction scale is 0.837 > 0.6 and the lowest correlation coefficient with the total variable is 0.617 > 0.3, so the satisfaction scale is basic enough to perform the analysis steps.

4.3. Exploratory factor analysis

After evaluating the reliability of the scale, the study continued to perform exploratory factor analysis (EFA). EFA will show more specifically whether the above scales are separated into new factors or excluded factors. This helps to evaluate the scale more accurately, while eliminating unsatisfactory variables, the purpose is to make the scales ensure uniformity. The exploratory factor analysis method requires the model to satisfy certain conditions. According to Hair et al. (2008), the KMO coefficient must be between 0.5 and 1 and the model's significance coefficient according to Bartlett's test must have statistical significance of 5%. Or according to Gerbing and Anderson (1988), the model's scales are only accepted when the total variance extracted is greater than 50%. In addition, according to Hair et al. (1998), observed variables with loading coefficient must reach the minimum level of 0.30 or more; greater than 0.40 is considered important and greater than 0.50 is considered to be of practical significance. Besides, Hair et al. (1998) also give the empirical rule to choose the load weight according to the sample size as follows: If the load weight is > 0.3, the sample size should be at least 350, if the sample size is about 100 then the sample size should be at least 350. Should choose the standard of loading weight greater than 0.55, if the sample size is about 50, then Factor loading must be greater than 0.75.

4.3.1. Factor analysis explores a group of variables related to service quality

The study conducted exploratory factor analysis for 25 factors representing 5 variables of the model.

Table 4.3: Summary table of exploratory factor analysis results 1

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.949**
Bartlett's Test of Sphericity	Approx. Chi-Square	11745.112
	df	300
	Sig.	.000
	Extraction Sums of Squared Loadings	76.449%
Extraction Method: Principal Component Analysis.		

The results of the EFA times showed: KMO = 0.949 > 0.5, sig Barlett's Test = 0.000 < 0.05, so the EFA exploratory factor analysis is appropriate. Only 1 factor is extracted, the matrix cannot be rotated, so the scale is guaranteed to be unidirectional and the observed variables of the dependent variable converge quite well. The Eigenvalue criterion is greater than 1 with a cumulative total variance of 76.449%.

4.3.2. Factor analysis explores customer satisfaction when using tax consulting services.

The EFA results of the customer satisfaction factor scale when using tax consulting services have the KMO coefficient of 0.696 and the significance level (Sig.) of the Bartlett's test of 0.000, showing that these three variables are correlated with each other and fully conform to EFA. At the same time, this observed variable has a factor loading factor greater than 0.5. At extraction level eigen>1, we have only one factor extracted with 1 observed variable with a total variance extracted of 76.449%, this shows that this variable reflects the evaluation level of customer satisfaction when using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd.

4.4. Cronbanh's Alpha test results after EFA

After EFA 25 observed variables of 5 factors affecting customer satisfaction when using tax consulting services at Deloitte Vietnam, there are 25 observed variables. Therefore, it is necessary to test Cronbach's Alpha for all 5 variables of the study. The results of this retest are shown in the table, which shows that this scale also meets the requirements for reliability. Therefore, the analyzed scales are accepted and will be included in the next analysis.

Table 4.4: Summary table of Cronbach's Alpha test results after EFA

No.	Factor	Symbol	Number of observed variables	Cronbach's Alpha	Correlation coefficient with the lowest sum	Result
1	Reliability	REL	5	0, 930	0,733	Obtain
2	Responsiness	RES	5	0,946	0,803	Obtain
3	Assurance	ASS	4	0,922	0,761	Obtain
4	Empathy	EMP	5	0,921	0,736	Obtain
5	Tangibility	TAN	6	0,957	0,847	Obtain

4.5. Correlation matrix analysis

Before analyzing multiple linear regression, it is necessary to consider the linear correlation relationships between the dependent variable and the independent variables. If the correlation coefficient between the dependent variable and the independent variable is large, it shows that there is a relationship between them and regression analysis is suitable.

Table 4.5: Check the goodness of fit of the regression model

Correlations

		HL	REL	RES	ASS	EMP	TAN
HL	Pearson Correlation	1	.854**	.863**	.858**	.875**	.871**
REL	Pearson Correlation	.854**	1	.962**	.937**	.932**	.960**
RES	Pearson Correlation	.863**	.962**	1	.937**	.934**	.955**
ASS	Pearson Correlation	.858**	.937**	.937**	1	.928**	.924**
EMP	Pearson Correlation	.875**	.932**	.934**	.928**	1	.935**
TAN	Pearson Correlation	.871**	.960**	.955**	.924**	.935**	1

**. Correlation is significant at the 0.01 level (2-tailed).

The results of the correlation coefficient matrix analysis show that there is a positive relationship between the variables RES, TAN, REL, EMP with the significance level of 1%. In which the asset variable has the highest and positive correlation with a correlation coefficient of 0.962. This can initially identify the factors of feedback, reliability, tangibles, assurance, sympathy that have a positive relationship with customer satisfaction when using private services. tax advice. However, this is only a preliminary assessment, in order to be able to draw accurate conclusions, it is necessary to conduct in-depth analysis with multiple regression models and necessary testing procedures to have a more accurate conclusion.

4.6. Analysis of multiple regression models

Based on the results of the correlation analysis, the study builds a multiple linear regression model with the following form:

$HL = \beta0 + \beta1RES + \beta2TAN + \beta3REL + \beta4ASS + \beta5EMP + u$

In there:

- RES : Responsiness
- TAN : Tangibility
- REL: Reliability
- ASS : Assurance
- EMP : Empathy
- $\beta0 – \beta5$: regression coefficient
- u : Error

The method of selecting the Enter variable is carried out. Besides, the assumptions of the linear model will also be tested.

4.7. Check the goodness of fit of the regression model

The fit of the regression model was tested by looking at the F-statistic from the analysis of variance (ANOVA) table. The results in the table below show that the F-statistic of the regression model is equal to … and the significance level of the statistic is 1% (sig = 0.000), which shows that the multiple linear regression model is suitable for data. In other words, the independent variables (RES, TAN, REL, EMP, ASS) have a linear relationship with the dependent variable HL with a confidence team of 99%.

Table 4.6: Multicollinearity test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.923[a]	.852	.838	.38942	1.953

The adjusted coefficient R2 represents the fit of the multiple linear regression model because the value of this coefficient does not depend on the number of variables included in the research model. Accordingly, the model's adjusted R2 coefficient is 0.838, which represents the regression model that explains 83.8% of customer satisfaction when using tax consulting services at Deloitte Vietnam. Through the model with 5 independent variables including: Reliability, Responsiness, Assurance, Empathy, Tangibility explained 83.8% of the variation in customer satisfaction.

4.8. Regression coefficient test

The research results of Table 4.9 show that the following factors: Reliability, Responsiness, Assurance, Empathy, Tangibility have statistical significance at 5% significance level (Sig. <=0.05). In other words, these four variables show a linear relationship with statistical significance for customer satisfaction using tax consulting services at Deloitte Vietnam Co., Ltd. with 95% confidence.

The variable RES (Responsibility) (=0.224) and REL (Reliability) (=0.267) is not enough to conclude a linear relationship with customer satisfaction using tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd.

Table 4.7: Coefficient test

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients		Sig. Lower	95.0% Confidence Interval for B	
B		Std. Error	Beta		t	Bound	Upper Bound	
1	(Constant)	.506	.110		4.613	.000	.290	.721
	REL	-.140	.115	-.144	-1.218	.224	-.367	.086
	RES	.126	.113	.126	1.111	.267	-.097	.349
	ASS	.187	.082	.198	2.282	.023	.026	.348
	EMP	.390[a]	.091	.375	4.305	.000	.212	.569
	TAN	.324	.099	.354	3.272	.001	.129	.519
Dependent Variable: HL								
Independent Variable: REL, RES, ASS, EMP, TAN								

4.9. Hypothesis testing of the regression model

4.9.1. Checking for multicollinearity

One of the assumptions of the multiple linear regression model is that the independent variables do not have a strong correlation with each other, if this assumption is violated, the model has multicollinearity, Hoang Trong and Mong Ngoc (2008) said that one of the ways to detect the existence of multicollinearity in the model is to use the variance exaggeration factor (VIF), if VIF >= 10, the regression model there is a phenomenon of multicollinearity. The above table occurs multicollinearity in the following variables: REL1, REL3, RES3, ASS3, EMP5, TAN4, TAN5.

Table 4.8: Coefficientsa

(Constant)	REL2	REL4	REL5	RES1	RES2	RES4	RES5	ASS1	ASS2
VIF	5.168	5.687	5.902	5.949	5.789	7.957	5.465	4.611	6.329
(Constant)	ASS4	EMP1	EMP2	EMP3	EMP4	TAN1	TAN2	TAN3	TAN6
VIF	4.505	4.497	7.174	5.669	3.050	7.011	5.889	5.170	7.431

a. Dependent Variable: HL

b. Independent Variable: REL2, REL4, REL5, RES1, RES2, RES4, RES5, ASS1, ASS2, ASS4, EMP1, EMP2, EMP3, EMP4, TAN1, TAN2, TAN3, TAN6

Proceed to remove those variables and retest for multicollinearity for the second time, the results of model testing when removing variables REL1, REL3, RES3, ASS3, EMP5, TAN4, TAN5 give VIFs <10. Therefore, the regression model does not have multicollinearity.

4.9.2. Check the phenomenon of self-correlation

The assumption that there is no correlation between the residuals can be tested using Durbin-Watson statistics.

In fact, when conducting the Durbin-Watson test, the following rules can be applied (Hoang Trong and Mong Ngoc, 2010):

- If 1 < D < 3, then the model has no autocorrelation
- If 0 < D < 1, then the model has positive autocorrelation
- If 3 < D < 4, then the model has negative autocorrelation

The results in the table above show that the Durbin-Watson coefficient is 1.944, so it can be concluded that the regression model has no autocorrelation.

4.9.3. Checking for the phenomenon of variance of variable error

One of the assumptions when performing multiple linear regression is the assumption of constant variance (also known as uniform variance). If the phenomenon of variance occurs, the results of the regression equation will be inaccurate, deviating the results from reality, thereby causing the researcher to misjudge the quality of the linear regression equation.

To assess whether the regression model violates this assumption or not, the study uses the Spearman rank correlation test between the normalized residuals and the independent variables. If the Spearman correlation sig value between the standardized residuals (ABSRED) and the independent variables is greater than 0.05, then it can be concluded that there is no variable variance phenomenon, the case has at least 1 value. sig value is less than 0.05, then the regression model violated the assumption of constant variance.

Table 4.9: Checking for the phenomenon of variance of variable error

			ABSRED	REL	RES	ASS	EMP	TAN
Spearman's rho	ABSRED	Correlation	1.000	.050	.021	-.037	.034	.160**
		Coeffeicient Sig. (2-tailed N)	.	.384	.722	.520	.560	.005
	REL	Correlation	.050	1.000	.849**	.805**	.858**	.853**
		Coeffeicient Sig. (2-tailed N)	.384	.	.000	.000	.000	.000
	RES	Correlation	.021	.849**	1.000	.839**	.867**	.858**
		Coeffeicient Sig. (2-tailed N)	.722	.000	.	.000	.000	.000
	ASS	Correlation	-.037	.805**	.839**	1.000	.835**	.771**

		Coeffeicient Sig. (2-tailed N)	.520	.000	.000	.	.000	.000
	EMP	Correlation	.034	.858**	.867**	.835**	1.000	.841**
		Coeffeicient Sig. (2-tailed N)	.560	.000	.000	.000	.	.000
	TAN	Correlation	.160**	.853**	.858**	.771**	.841**	1.000
		Coeffeicient Sig. (2-tailed N)	.005	.000	.000	.000	.000	.

**. Correlation is significant at the 0.01 level (2-tailed).

All sig values of the rank correlation between ABSRED with independent variables are greater than 0.05, so residual variance is uniform, the assumption of constant variance is not violated, so the model can be concluded regression has no change in variance.

4. DISCUSS AND CONCLUSION

4.1. Discuss

With the tests, all conditions are satisfied and there are enough grounds to ensure that the estimate is not different. Therefore, the regression results are used to discuss the factors affecting the quality of tax consulting services at Deloitte Vietnam Tax Consulting Co., Ltd. including the following variables: Assurance (ASS), Empathy (EMP), and Tangibility (TAN). Eliminate two variables: Responsibility (RES) và Reliability (REL).

4.2. Conclusion

Based on the research objectives, the thesis has synthesized a theoretical basis and related studies to analyze the impact of tax consulting service quality on customer satisfaction. The basis of this goal is that tax consulting services are increasingly expanding and developing in Vietnam. This invisibility has created fierce competition between businesses. In addition, to constantly tighten legal requirements, the needs of hired consulting businesses are not only in regular consulting but also in the level of response and compliance with the law. With the theoretical foundation from the SERQUAL model from the research of Parasuraman, Zeithaml, and Berry proposed in 1988, the author surveyed customers when using tax consulting services at Deloitte Vietnam Tax Consulting Company Limited to evaluate how the price and quality of tax consulting services affect customer satisfaction? With 5 variables representing service quality including (i) Responsiveness; (ii) Reliability; (iii) Tangibility; (iv) Warranty; (v) Empathy; The study conducted a survey of 350 customers using tax consulting services at Deloitte Vietnam. Data were analyzed according to the multiple linear regression model, research results showed that 3 variables all have a positive linear relationship with customer satisfaction including Guarantee, Tangibility, empathetic. The research results also confirm the correlation between tax consulting service quality factors and customer satisfaction in the model. This is one of the important arguments as a basis for proposing solutions to improve the quality of tax consulting services at Deloitte in particular and in Vietnam in general.

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RISK MANAGEMENT OF LOGISTICS SERVICE ENTERPRISES LISTED IN VIETNAM

Assoc. Prof. From Van Ninh[1], Dr. Nguyen Thi Thuy Dung[2]

Abstract: *Trading in logistics services is a type of business that bears a lot of risks because the internal and external environment is constantly changing and according to the speed of economic development, especially for countries with low-income and growing economies as Vietnam. Logistics service businesses not only face risks and manage them when setting up a business, but also throughout the business operation. If risk management is implemented effectively, business opportunities will be fully exploited.*

This article is to show how risk can be managed in the transport business according to the ISO 31000:2018 risk management model. The method used in the research article is comparison, evaluation and application. Risk management as well as handling of each crisis situation has its own and unique nature, associated with different circumstances, implemented in different conditions and associated with different event contexts. The resolution of each crisis situation requires practical experience and special expertise in different fields.

Keywords: *Risk management, ISO 31000:2018, Listed Logistics Service Enterprises*

1. INTRODUCTION

According to the Agility 2022 ranking [10], the market Vietnam logistics market is ranked 11th in the group of 50 emerging logistics markets globally. The compound annual growth rate (CAGR) in the period 2022-2027 is forecasted to reach 5.5%, along with the strong recovery of the economy after the Covid-19 pandemic. Vietnam is currently the leading country in ASEAN countries in terms of the number of logistics service businesses licensed by the US Maritime Administration (FMC). The contribution of the logistics sector to annual GDP is at 4-5%. In addition, e-Logistics (electronic logistics) has pushed Vietnam's logistics industry to improve service quality more professionally and effectively.

Globalization has increased the consumption of media, tourism and information services. The increasing specialization of businesses has led to close cooperation with external service providers. The current phenomenon of the economy is the attempt by businesses to acquire activities that have hitherto been carried out by themselves. Many businesses have realized that it is better to specialize in a particular area and other activities to be more effective in it. It is a logical consequence of the increasing complexity of markets and competition. These activities include transportationdownload (Buganova & Luskova, 2011) [2]

Transportation contributed significantly to the creation of today's modern world. Life today would be unthinkable without it, so each country seeks to build its own perfect transportation system. The goal of each transport service provider is to optimize its services for efficiency, quality and to meet the needs of customers.(Dvorak, Leitner, & Novak, 2012)[5] Mark (2013) [9]

Logistics service enterprises make a great contribution to the economy because they help the movements of goods, services and people for economic development in general, however, there are not many studies that go into analyzing the risks of this group of enterprises in a scientific way.

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ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization. (ISO guide, 2009) [11]

This study will study the risks of logistics service businesses in Vietnam today and use the risk management model given by ISO to provide solutions.

2. LITERATURE REVIEW

Many studies suggest that risk management must be considered in all aspects of management and marketing, but there are also risks that will be attempted to be transferred to risk management agencies from the outside. (Hittmar & Striss, 2001)[6]

Business risk management is the assumption that business risks will be properly identified, assessed and managed and that business opportunities will be fully exploited. Risk management can be described as a rational behavior in a situation where a risk cannot be avoided in order to protect and enhance a company's current and future assets through detailed risk analysis and make important management decisions. Risk management in small and medium enterprises cannot operate in isolation, separate from the company's operations, it needs to be included in the system The application of risk management in small and medium enterprises contributes to part that maintains or increases the company's value to its owner. It leads to higher quality of strategic management, increased stability, faster response to changing market conditions, and reduced potential for errors and fraud.(Belas, et al., 2014) [1], (Maris, 2013)[8]

Risk management can be applied to the entire company or to several areas of business activity, at some specific level or function. In particular, the advantage for the company is that the transition from passive management to active management allows to minimize potential losses. One of the factors for successful risk management in a transportation company is its integration into the strategic framework (Mark, 2013)[10]

Strategic risk management ensures that risk information is adequately reported and used as a basis for decision-making at all key levels of the company. Many studies analyzed the internal and external connections of the business – factors of internal and external business environment, relationships with stakeholders, company culture, and more. can have a significant impact on the structural proposal.

- ❖ Establish a risk management policy
- ❖ Demarcation of responsibilities, powers,
- ❖ Integrate risk management into shipping processes
- ❖ Allocate necessary resources to
- ❖ The establishment of internal communication mechanism
- ❖ Set up an external connection mechanism

A book about the challenges of running an effective business in the context of globalizationDixon, J. R, Nanni, A. J, & Vollmann. T. E. (1990) [4] can be considered as one of the foundational books for effective financial management in the context of constantly changing society. Many books will go into analysis of both qualitative and quantitative factors related to the resource development of businesses. It can be mentioned as the book of Cokins, G. (2009)[3] With a study of more than 150 pages, the author has made a relatively comprehensive assessment of financial indicators and approaches to evaluate the efficiency of capital use in an enterprise in terms of safety and risk avoidance. . The study not only deals with the simple aspects of financial numbers but also puts the numbers in the context of a real business and motivates businesses to develop their resources through both policies on human resources, on the relationship between directors and employees, on short-term and long-term orientations to develop resources,

Marie Pavlakova Docekalova, Alena Kocmanova (2015)[7] The study presents a model to evaluate the performance of manufacturing companies using financial and non-financial indicators related to corporate sustainability. Sustainability is a generic concept because it is based on a balance between core environmental, social and economic issues. It is difficult to assess sustainability because it is represented by many variables, most of which are non-financial variables. Analysis using data based on the assessment of inputs consumed by output produced and the estimation of the production possibility frontier; it computes a scalar measure of efficiency and identifies potential improvements of inputs and outputs without requiring explicit specification of the functional relationship between inputs and outputs and setting weights of variables. Based on the calculations of the super-efficient DEA model CCR, companies are divided into four groups: sustainable, social, environmental and unsustainable companies. The results of the model allow the user to evaluate a particular company and reveal the company's performance weaknesses, so the model can serve the user as a basis for decision making and management. efficiency.

3. DATA AND METHODS

***Database:** The author selects 58 logistics service companies whose stocks are traded on HOSE, HNX and UPCOME stock markets and analyzes the actual risk situation of these businesses.

The ISO risk management standard is given as a basis for assessing and analyzing the existing risks of logistics service businesses to provide solutions.

***Methods:** The method used in the research article is comparison, evaluation and application

4. RESEARCH RESULTS

4.1. Overview of the risks of listed logistics service companies in Vietnam.

Types of risks in logistics activities in Vietnam

To manage risks in logistics effectively, it is important that we understand what types of risks will arise in logistics activities.

According to analysis of reports from logistics companies listed on the Vietnamese stock market and disseminated on public exchanges, every company has a section where they assess the risks, difficulties, possibilities, and future prospects of their particular business. As it is based on actual business operations, this is a significant source of knowledge.

There are 7 types of risks in logistics activities, specifically as follows:

4.1.1 Transport risks

Transport risks are inevitable in the logistics chain

Some transportation risks that often arise during logistics activities are as follows:

- Damage and accidents to machines or working vehicles.
- Problems in finding spare parts for machines or working vehicles, repair and maintenance equipment is not suitable.
- External conditions affecting the routes prevent transportation.
- There is no plan to use fuel.
- Do not ship according to product specifications or the documentation used in shipping or installation is incorrect.
- The incident of theft when loading or unloading or transporting.
- Incidents such as outages or business outages make shipping untimely.
- Failure to comply with laws or regulations during transportation.
- Transportation personnel have poor physical or mental health or do not get enough rest.
- The supplier is in financial difficulty.
- Problems arising from information technology

4.1.2. Inventory risk

The risks that can be encountered in the process of inventory management can be listed as follows:

- Excessive inventory investment.
- Inadequate customer service.
- Profit and loss due to unplanned inventory management.
- Repository is not suitable for storage capacity.
- Software problem.
- Subjective in inventory management.
- Staff is not trained, turnover rate is too high.
- Production department halted due to lack of raw materials.
- Preserve uneven product input and output.
- If there is a lot of damage, waste and loss.
- Excess amount due to fluctuating demand.
- Theft, fire, natural disaster.
- Security system error, warning system error.

4.1.3. Risks of customer service management

Some risks may arise in the process of serving customers:

- Incorrect sales or incorrect orders.
- Lack of information systems, security problems or errors.
- Pass information about customers to competitors.
- Staff are not trained or customer service staff do not learn, change to meet the needs of guests.
- Budget shortfall.
- The reality is that survey studies are not conducted correctly.
- Slow delivery.

- High shipping cost.
- Customers cannot accurately express their wants and needs.
- Failure to maintain continuity in customer service.
- Loss of customers due to failure to demonstrate a distinct relationship with loyal customers.

4.1.4. Risks of reverse logistics management

The risks occurring in the reverse logistics process can be summarized as follows:

- Shipping costs are very high.
- Quality problems during operation.
- Inappropriate customer service practices.
- Failure to perform cost-benefit analysis, financial resource issues.
- Storage problems.
- Disruption in the supply chain.
- Difficulty in reproduction.
- Packaging issues.
- There is no strategic plan.
- The mismatch of the information system and technology that the business is using with the development of the business.
- Insufficient human resources.
- Quality problem of the returned product.

4.1.5. Risks when processing customer orders

The risks associated with customer ordering activities can be listed as follows:

- Problems caused by product characteristics.
- Management issues in product diversity.
- Change in demand.
- Software problem.
- The problem of sharing information between departments.
- Employee training issues.
- Failure to prepare orders on time.
- Insufficient tools and equipment needed to prepare the order.
- Costs incurred in connection with order processing.

4.1.6. Warehouse management risks

Warehouse management risks come from:

- Product returned, product pending.
- Delays due to product density between floors in the warehouse.
- Store at the place where the product is shipped.
- Sovle problems.
- Incorrect/incomplete delivery/delivery documents.
- The product does not have a barcode.

- Insufficient means of transport.
- The warehouse system lacks security.
- Error in the selection of warehouse location.
- Because the shelf price does not match the product characteristics.

4.1.7. Purchasing management risk

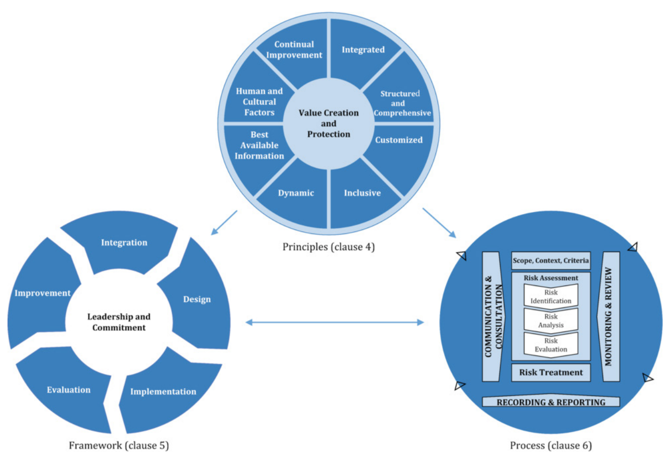
The risks that may arise in purchasing activities include:

- Risk of inactivity due to product functionality.
- Risk of product damage affecting human health/other products.
- Financial risk of the entity.
- The risk arises that the product being bought/sold will not follow the local culture.
- If the purchased product does not match the customer's expectations.
- In the process of returning products, there is a risk of repair and replacement of defective products.

4.2. ISO standards

Follow the guidelines (STN ISO 31000:2011, 2011).

Figure 4.1 ISO 31000:2011



4.2.1 Principle (4)

The principles outlined provide guidance on the characteristics of effective and efficient risk management, value communication, and explain the intent and purpose of risk management. These principles are fundamental to risk management and should be considered when establishing an organization's risk management framework and risk management processes. These principles should enable the organization to manage the effect of uncertainty on its objectives.

4.2.2 Framework (5)

General (5.1)

The purpose of a risk management framework is to assist an organization in integrating risk management into its operations and critical functions. The effectiveness of risk management will depend on integrating risk management into the organization's operations, including decision-making. This requires support from stakeholders, especially top management.

Leadership and commitment (5.2): Top management is accountable for risk management and oversight is accountable for risk management oversight.

Integration (5.3):Integrating risk management into an organization is a dynamic, iterative process and needs to be customized to the needs and culture of the organization. Risk management should be an integral part of the organization's purpose, operations, leadership and commitment, strategy, goals and operations.

Design (5.4)

Understanding the organization and its context (5.4.1):When designing a risk management framework, an organization needs to consider and understand its internal and external context.

Affirm commitment to risk management (5.4.2): Top management and oversight, where applicable, should demonstrate and articulate their ongoing commitment to risk management through policy, statement or other means of clear communication. the organization's objectives and commitment to risk management.

Assign roles, authority, responsibility and accountability within the organization (5.4.3): Top management and oversight, if any, should ensure that the authority, responsibility and accountability of the positions are related to risk management.

Resource Allocation (5.4.4): Top management and oversight, where applicable, should ensure appropriate allocation of resources for risk management

Establishment of communication and consultation (5.4.5): The organization should establish an approved approach to communication and consultation to support the risk management framework and facilitate effective application of risk management.

Application (5.5): A properly designed and implemented risk management framework will ensure that the risk management process is part of all activities throughout the organization, including decision making and changes. internal and external contexts will be fully captured.

Review review (5.6): To review the effectiveness of the risk management framework, the organization should: periodically measure the performance of the risk management framework against its objectives, implementation plan, indicators and behaviors expected; determine whether the risk management framework remains appropriate to support the achievement of the organization's objectives.

Adjustment (5.7.1): The organization needs to continuously monitor and adjust its risk management framework to address internal and external changes. In doing so, the organization can enhance its value.

Continuous Improvement (5.7.2): The organization needs to continually improve the suitability, adequacy and effectiveness of the risk management framework and the way in which the risk management process is integrated.

4.2.3. Process (6)

General (6.1):The risk management process requires the systematic application of policies, procedures and practices to communication and consultation activities, setting the scene and assessing, handling, Monitor, review, record and report on risks.

Information exchange and consultation (6.2): The purpose of communication and consultation is to assist stakeholders in understanding the risks, the bases for decision making, and why specific actions are needed. Communication is geared towards promoting awareness and understanding of risk, while consultation requires obtaining feedback and information to support decision making. Close coordination between the two will make the exchange of information practical, timely, factual, accurate and understandable, taking into account the reliability, integrity of information as well as the privacy rights of individual.

Scope, context and criteria (6.3)

General (6.3.1): The purpose of setting scope, context and criteria is to customize the risk management process,

Define scope (6.3.2)

The organization should define the scope of its risk management activities.

Since the risk management process can be applied at different levels (e.g. strategic, operational, program, project or other levels), it is important to clearly state the extent to which it is viewed. considered, relevant objectives should be considered and their alignment with the organization's objectives.

Internal and external context (6.3.3): The internal and external context is the environment in which the organization aims to define and achieve its objectives.

The context of the risk management process should be established from an understanding of the internal and external environments in which the organization operates and should reflect the specific operating environment in which the risk management process is located. ro is applied.

Determination of risk criteria (6.3.4): The organization should specify the amount and type of risk it is allowed or not allowed to accept, relative to its objectives. The organization also needs to define criteria for assessing the severity of risks and to support decision-making processes. The risk criteria should be consistent with the risk management framework and tailored to the specific purpose and scope of the activity under consideration. Risk criteria should reflect the organization's values, objectives and resources and be consistent with the risk management policy and statements.

Risk Assessment (6.4)

General (6.4.1) Risk assessment is the overall process of risk identification, risk analysis and risk assessment. Risk assessment should be conducted in a systematic, iterative and collaborative manner, drawing on the knowledge and perspectives of stakeholders. The best available information should be used, supplemented by broader requirements as needed.

Risk identification (6.4.2): An organization can use a variety of techniques to identify uncertainties that may affect one or more objectives.

The organization should identify risks, whether or not the source of the risk is under the organization's control. It should be noted that there can be many types of outputs, which can lead to a variety of tangible or intangible consequences.

Risk Analysis (6.4.3): The purpose of risk analysis is to understand the nature of the risk and the characteristics of the risk including the degree of risk, as appropriate. Risk analysis requires detailed consideration of uncertainty, risk sources, consequences, likelihood, events, scenarios, controls and their effects. An event can have many causes and effects and can affect multiple goals.

Risk norms (6.4.4): The purpose of risk assessment is to support decisions. Risk assessment entails comparing the results of a risk analysis with established risk criteria to determine when additional action is needed.

Risk handling (6.5)

General (6.5.1): The purpose of risk treatment is to select and implement options to deal with the risk.

Risk treatment related to an iterative process includes: planning and implementing risk treatment; evaluate the effectiveness of such treatment; decide whether the residual risk is acceptable; If not acceptable, carry out further processing.

Selection of risk treatment options (6.5.2): Risk treatment options are not necessarily mutually exclusive or appropriate in all circumstances. Risk treatment options may include one or more of the following:

Tackling risk by deciding not to start or to continue an activity that increases risk; accept or increase risk in order to pursue an opportunity; change the likelihood; change the consequences; risk sharing (eg through contracts, buying insurance); Manage risks by making the right decisions.

Prepare and implement risk treatment plans (6.5.3):Treatment plans should be integrated into the organization's management plans and processes in consultation with appropriate stakeholders.

Monitoring and review (6.6): The purpose of monitoring and review is to ensure and improve the quality, effectiveness of the design, implementation and results of the process.

Making records and reports (6.7):Reporting is an integral part of the operation of the organization and it should improve the quality of dialogue with stakeholders, support top management, supervisors in the implementation of responsibilities. their.

5. CONCLUSION

+ Companies promote risk awareness for their staff: the company can learn from experience from foreign units, hire consultants, organize training sessions, send training in professional training institutions, using internal training, ... to build a comprehensive top-down systems thinking on industry-specific risks. The contents of training or consulting will need to be highly specialized, going into the specifics of the company as well as going into the specifics of business products in the current context.

Several steps can be taken:

Step 1: Complete the content framework on the types of risks that may occur with the current business type of the company in a macro context like Vietnam

Step 2: Classify the level of risk and damage level of each type of risk

Step 3: Evaluate the probability of occurrence of each type of risk

Step 4: Develop scenarios to deal with each type of risk

(1) Disaster risk: actively monitor and closely follow the announcements and warnings of the hydrometeorological agencies of each region to which the logistics roadmap is related.

(2) Risk of fire and explosion: respecting the design of means of transport and storage, minimizing arbitrarily expanding and installing parts outside the design to increase exploitation capacity. Periodic repair and maintenance of spare parts in a timely manner. In addition, train operators on skills to deal with fire and explosion risks periodically.

(3) Risk of theft: tighten the monitoring process and attach direct responsibility to each activity at each stage of the process. Specifically for large value orders, it is required to strengthen order

tracking through the creation of package tracking tools like location chips. It is also necessary to have ways to use high technology on identifying the package that does not present at the appropriate time and location.

(5) Risk of information disclosure: strengthen information security and train employees to be more alert to the fact that information can be changed, causing damage to customers.

(6) Misinformation: Use reputable tracking software and monitor the rate of misinformation to adjust the process as well as the use and update of the software.

Disseminate and train all employees with in-depth knowledge about company-specific characteristics and risks to raise awareness, limit the occurrence of risks and proactively deal with incidents when there is an incident.

+ Companies need to maintain and expand insurance purchases

Although the insurance will cost a fee, it will ensure that the capital flow of companies is not too deep, especially in times of crisis such as the Covid pandemic. The Covid pandemic also showed companies the importance of insurance packages, when the pandemic occurred, activities stopped, companies had to proactively cope and bear all the damage without support from them. third parties such as insurance.

+ Companies need to actively and proactively make provisions

The current provisions in companies are still very short and weak, many provisions have not been made up to the required level of provision and many provisions account for only 1/20 of the debt value the ability to protect the financial ability of companies when the risk is still low.

In addition to setting aside according to regulations on accounting, companies need to proactively allocate resources to deal with risks, treat them as a fixed amount that needs to be maintained and do not specifically account for any item of the company. accounting work, only belongs to the management strategy of the enterprise.

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DEVELOPING THE PRIVATE SECTOR ECONOMY IN THE CONTEXT OF INTERNATIONAL ECONOMIC INTEGRATION IN VIETNAM TODAY

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Abstract: *In recent years, the private sector has played a great role in Vietnam's socio-economy. Along with the change in economic policy, there have been many economic groups, including large regional corporations. The private sector not only contributes greatly to the country's GDP but also contributes to creating jobs for a large number of workers. In the context of such deep international economic integration, the private sector also reveals some existence. Therefore, the core issue is to change thinking and development management methods while innovating policies, management mechanisms and allocation of effective use of State resources to ensure that the private sector is developed in an equal environment, bring into full play dynamism, creativity and movement in accordance with the laws of the market economy.*

Keywords*: Economy, economic sector, private economy, private sector, economic integration.*

1. INTRODUCTION

In the current era of globalization, particularly with the ongoing process of global economic integration, significant opportunities and challenges have emerged for Vietnam's economy. Vietnam has been taking measured steps towards constructing a market-oriented socialist economy while actively engaging with the world. These steps involve harnessing internal resources and capitalizing on external resources through the active participation of various economic components. Among these components, the role of the private sector in the private economy cannot be overlooked, as it is an integral part of the overall national economy. The contributions made by the private sector to the economy have been substantial in recent years. The private sector not only makes a substantial contribution to the nation's GDP but also significantly contributes to creating employment opportunities for a large workforce. However, within the current context of profound global economic integration, the private sector faces numerous difficulties, challenges, and opportunities. Part of the reason for this lies in our country's low starting point, and limited and imperfect policies of the Party and the State. Additionally, it is attributed to a mindset of dependency, outdated thinking rooted in centralized planning mechanisms, and incorrect perceptions held by some segments of state officials toward the private sector. Consequently, there is an urgent need for appropriate measures to promote the private sector rapidly and sustainably in the foreseeable future.

2. RESEARCH CONTENT

2.1. General Theories on the Private Economy

2.1.1. The Essence of the Private Economy

Since the 6th National Party Congress, the Party's direction has allowed for the development of a diverse range of economic components, various forms of ownership, and types of enterprises

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to enhance the productive forces and create favorable conditions for the revival and development of the private economy. The Party's viewpoint on the private economy has remained consistent and has continued to evolve and improve with each Party Congress. On June 3, 2017, the Central Committee adopted Resolution 10 - NQ/TW on the development of the private economy, officially designating the private economy as a significant driving force in the market-oriented socialist economy. This resolution emphasized the clear directive to eliminate all barriers and prejudices, creating favorable conditions for the healthy and oriented development of the private economy. The issuance of a separate resolution for the development of the private economy provided a unique opportunity for the private sector to demonstrate its influence on the national economy, particularly within the context of Vietnam's heavy dependence on foreign direct investment (FDI). In such conditions, the domestic private economy truly became a lever for development, contributing to enhancing the competitiveness of the Vietnamese economy and enabling it to take off.

The private economy is a form of economic activity based on private ownership rights over production materials, closely linked to the labor of the owner and wage laborers.

The private economy emerges, exists, and develops under specific socio-economic conditions, driven by the development of productive forces. Therefore, the essence of the private economic form is based on private ownership rights over production materials. Those who own the production materials are the owners, and they tend to maximize their own profits, often at the expense of exploiting the labor of others.

The concept of a private capitalist market economy always accompanies the formation and development of the capitalist mode of production. The process of economic reform in our country, marked by the emergence and development of various forms of private enterprises, did not coincide with the return of capitalist society and the capitalist class. These private enterprises operate according to the business laws of the Socialist Republic of Vietnam and were established and developed under the leadership of the socialist Party. Furthermore, the private enterprises and the pool of entrepreneurs in our country emerged and developed in a new context, without having a class nature or inherent capitalist characteristics as in a capitalist society. This is evidenced by the presence of many entrepreneurs who are members of the Communist Party. The private enterprises in our country represent a new productive force, serving as one of the driving factors for economic growth and the development of the market-oriented socialist economy.

2.1.2. The Role of the Private Sector in the Economy

The private economy, in the broadest sense, refers to the economic sector outside of the state-owned sector, encompassing businesses both within and outside state ownership, where private ownership constitutes over 50% of the capital investment. The private economy comprises all production and business entities that do not rely on private ownership of the factors of the production process. In a narrower context, the private economy refers to the economic sector closely associated with private ownership, including individual enterprises, cooperatives, and privately-owned capitalist enterprises that are based on private ownership of production materials. The private economy exists in various forms, including private enterprises, limited liability companies, joint-stock companies, and individual business households.

The 5th Plenum of the 12th Central Committee of the Communist Party of Vietnam, held in May 2017, passed a new resolution aimed at promoting the private economy as a crucial driving force for the market-oriented socialist economy. This resolution outlined specific goals, as articulated in Resolution 10: By 2020, there should be at least one million private enterprises; by 2025, more than 1.5 million private enterprises; and by 2030, at least two million private enterprises. Additionally, the contribution of the private sector to GDP is targeted to reach approximately 50% by 2020, around 55% by 2025, and between 60-65% by 2030.

The prominent characteristic of Vietnam's private economy is that the majority of enterprises are small, with limited resources and low competitiveness. They often operate with relatively short lifespans amidst challenging business environments that are prone to various inherent risks. The Law on Support for Small and Medium-Sized Enterprises, passed on June 12, 2017, which became effective on January 1, 2018, is seen as a breakthrough step to facilitate smoother operations for the non-state sector, particularly for small and medium-sized enterprises (SMEs). SMEs constitute over 95% of the approximately 600,000 businesses nationwide and contribute to more than 10% of the GDP, while also providing employment for over 7 million workers. Therefore, the private sector has become a vital driving force for the socio-economic development of our country.

Firstly, the private sector has unlocked a significant portion of the nation's potential, bolstering the labor force and contributing to the development of the national economy.

Secondly, the private sector has made positive contributions to stimulating growth and restructuring the national economy. The average GDP growth rate of the private sector is equivalent to and on par with the overall economic growth rate. The robust development of the private economy has significantly contributed to the economic growth and development of the nation.

Thirdly, the private economy has played a role in mobilizing a substantial workforce and training new human resources to enter the labor market. The private sector has an advantage in terms of its capacity to provide employment opportunities. In general, the private sector excels in providing a diverse and abundant labor force, ranging from unskilled to highly skilled labor, spanning all regions and sectors of the country. Consequently, the private economy contributes significantly to job creation. In addition to addressing unemployment, private businesses must also effectively manage labor and maintain strict labor discipline to foster a professional workforce. This has contributed to the training of skilled labor with professionalism. Moreover, during its development phase, the private sector can be seen as a platform for nurturing future business leaders and as the primary economic foundation for reforming state-owned enterprises.

Fourthly, the private sector has played a role in promoting the process of international economic integration. For Vietnam to achieve high growth, it is necessary to engage in regional and international economic integration, attract capital, and adopt advanced technologies for the country's economic development.

2.2. Status and Solutions for Developing the Private Economy in the Context of Global Economic Integration

2.2.1. The Recent Development Situation of Vietnam's Private Economy

Since the 6th National Party Congress in 1986, with a change in perception by the Party and the Government regarding the private economy, the private sector has experienced significant growth and has made substantial contributions to the overall economic development of the country. Policies such as credit development, land use, capital, and taxes have been implemented to promote the development of the private economy and have played a pivotal role in transforming the landscape of the private sector.

On average, during the period from 2010 to 2021, more than 100,000 new businesses were established each year. Notably, from 2018 to 2022, there were over 130,000 new businesses established annually. Correspondingly, the registered capital reached over 500 trillion VND (Vietnamese dong) annually. During the 2018-2022 period, the newly registered capital exceeded 150 trillion VND annually.[1]

Up to now, the private sector has formed and developed several large-scale private enterprises[2] that are gradually diversifying their business activities and becoming significant players in the economy. Additionally, some private sector enterprises[3] are export-oriented and have achieved success, establishing their own brands. The community of entrepreneurs is growing stronger, with an entrepreneurial spirit, creativity, and an aspiration for growth, contributing to a sense of community, responsibility, and cultural refinement that continues to spread.

The rapid development of the private sector can be attributed to the government's enactment of the Private Enterprise Law in 1990, which marked the beginning of rapid growth in the scale of the private economy. The Enterprise Law, which took effect on January 1, 2000, was a turning point that stimulated the robust development of the number of enterprises in the private sector.

The achievements of the private sector in contributing to the country's economic development can be seen in the following aspects:

Firstly, during the period from 2010 to 2021, the contribution of the non-state sector (including the private sector and collective economy) consistently accounted for over 50% of the national GDP (50.55% in 2019, 50.56% in 2020, 50.04% in 2021, including the cooperative economic sector) and had the highest proportion among the three sectors (state, private, and FDI).[4]

Secondly, the non-state economic sector (including the non-state sector in industry, trade, services, excluding individual income) has continuously increased its contribution to the central budget during the period from 2010 to 2021, reaching 11.7% in 2011 to 18.48% in 2021. Especially, since 2017 until now, the contribution ratio to the state budget of the private economic sector has exceeded the state-owned enterprise and FDI business sectors.[5]

Thirdly, the private economy has gradually joined regional and global production networks and supply chains through vertical integration with the FDI sector. By 2021, the private economy has a relatively high proportion in the production of some items, accounting for 91.27% of sea salt production, 88.45% of sugar production, 48.69% of NPK fertilizer production, 44.64% of cement production, 39.21% of iron and steel in ingot or other crude forms, and 49.91% of rolled steel production.[6]

Fourthly, private sector investment continues to increase, and the proportion of private sector investment in the total state investment has surpassed the state-owned and FDI sectors. During

[1] General Statistics Office: Economic Census 2021 - Preliminary Results, 2022, p. 72

[2] Vinamilk, FPT Group, Vingroup Corporation, Hoa Phat Group, Truong Hai Corporation, Masan Group, Hoang Anh Gia Lai Group.

[3] Long Thanh Golf Corporation, Hoang Anh Gia Lai Group, Truong Hai Corporation, Vingroup Corporation, Viet Phuong Group, CAVICO Mining Company, Sakai Mining Company.

[4] General Statistics Office: Statistical Yearbook for the year 2021, 2022, p. 194, p. 206

[5] General Statistics Office: Statistical Yearbook for the year 2021, 2022, p. 258, p. 263

[6] Dual high-speed expressways Ha Long - Van Don and Van Don - Mong Cai, Van Don International Airport, Cam Ranh - Khanh Hoa International Airport, Deo Ca Tunne

the period from 2010 to 2021, the proportion of private sector investment increased from 44.6% in 2010 to 59.5% in 2021.[7] Thanks to this, although public investment has been reduced, the total infrastructure investment has still increased. In particular, during the period from 2010 to 2022, a series of large infrastructure projects undertaken by the private economic sector were initiated, completed, and put into operation.[8]

Fifthly, private sector companies have maintained a relatively stable capital turnover ratio, fluctuating between 0.7 to 0.78 times during the period from 2010 to 2017. This ratio is lower than that of FDI companies (ranging from 0.84 to 1.08 times) but significantly higher than that of state-owned enterprises (ranging from 0.36 to 0.59 times).

Sixthly, the private economy plays a positive role in the recovery of public investment capital during times when public investment must be cut. In the period from 2010 to 2021, the proportion of public investment in total investment reached its highest at 36.1% (in 2012) and its lowest at 24.1% (in 2019). However, the high growth rate of private investment, including attracting foreign investment, has helped stabilize the economy.

Seventhly, the private sector significantly contributes not only to the economy but also to society in terms of labor and employment. During the period from 2010 to 2021, although the proportion of the working-age population (15 years and older) in the private sector gradually decreased from 86.3% in 2010 to 82.6% in 2021, this sector still provided employment for over 80% of the labor force in the economy. The average growth rate of the labor force in the private economic sector from 2011 to 2018 was over 3.6%, and private sector companies alone achieved a growth rate of nearly 5.4%.

In addition, the private sector still faces several drawbacks:

- The political system's perception of the private economy, despite undergoing changes, still exhibits bias and discrimination, particularly among some officials, civil servants, and even party members towards the private sector. Lack of unity and, in some cases, inappropriate views regarding the interests of the private sector within the framework of a market-oriented socialist economy.

- The legal system, institutions, and policies still contain numerous obstacles, drawbacks, and inconsistencies that do not genuinely facilitate the development of production and business activities of economic entities, especially private enterprises. Tax policies are not always suitable, and there remains inequality in budget allocation for different economic regions. Policy implementation often overlaps, and market protection policies, anti-smuggling, and anti-trade fraud measures lack synchronization and have various shortcomings.

- Policies have many limitations, especially concerning the implementation of low-quality and ineffective mechanisms and policies. There are insufficient mechanisms and policies to promote the innovative development of the private sector and enhance its competitiveness on the international stage. Administrative procedures are cumbersome and complicated in many places, and support activities are often dispersed, occasionally lacking clear objectives, target groups, and resulting in low efficiency.

- The number of economic entities in the private sector has increased rapidly, mainly due to the registration of newly established businesses. However, the rate of businesses terminating their business activities, dissolution, and bankruptcy remains relatively high. The quality and efficiency of operations in the private sector have not significantly improved, primarily focusing on limited business activities and industries.

- Economic entities in the private sector are primarily small and medium-sized enterprises, with a relatively high proportion falling into the micro-enterprise category. In terms of the number of employees, in 2017, approximately 74% of private sector businesses had a small-scale workforce (compared to 63% in 2010). Only slightly more than 1% of state-owned enterprises had a workforce of around 200 employees or more. Among these, the proportion of businesses with fewer than 10 employees in the FDI sector was 30%, while in the state-owned sector, it ranged from 7.7% to 13.4%.

- The technological level and competitive capacity of the private economy, in general, remain low, with the majority of businesses being small-scale private enterprises or individual businesses. Notably, 95% of private enterprises are small-scale, have low development levels, limited financial capacity, and low economic efficiency. The connectivity among private sector components is weak, and their ability to participate in domestic and international supply networks is limited.

- The average labor productivity of the private sector is lower than the national economic average.

- Limited financial capabilities lead to small market scales, and private enterprises often lack the ability to compete in the international market.

2.2.2. Opportunities and Challenges for the Development of the Private Economic Sector.

Opportunities:

The process of participating in regional and global trade agreements brings numerous opportunities for the private business sector in Vietnam. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTTP) and the recently signed EU-Vietnam Free Trade Agreement (EVFTA) are expected to provide significant opportunities for expanding the import and export market share for the community of private businesses in Vietnam. With the ongoing globalization efforts, Vietnam is considered one of the most promising locations to attract foreign investors in the Asia-Pacific region, primarily due to advantages such as cost-effective labor, favorable demographic factors, a convenient geographical location, and political stability. Recent statistics indicate that foreign investors increasingly value and trust Vietnam.

The government continues to vigorously promote the divestment and restructuring of state-owned enterprises, creating numerous opportunities for the private economic sector. In the coming years, billions of dollars in capital and assets will change ownership and be transferred to the private economic sector, further facilitating the growth and expansion of businesses within Vietnam's private economic sector. Opportunities for the private economic sector will also expand as public infrastructure projects, which were previously reserved for state-owned enterprises, are now open to private businesses. This includes investments in the development of projects such as airports, highways, bridges, ports, and power plants.

The Fourth Industrial Revolution and the platform economy bring significant opportunities for private businesses. The utilization and exploitation of big data, the use of new algorithms, and cloud computing will create a new digital economy without national boundaries. Private enterprises will have significant opportunities to emerge as large corporations based on knowledge and technology, becoming regional and global players in a shorter time frame without the need for substantial initial capital. These opportunities will be even more significant for the Vietnamese private business community because most of the current Vietnamese businesses have small-scale operations and limitations.

Furthermore, the entrepreneurial spirit of the Vietnamese people is growing strongly and is actively supported by the government and various information and communication programs. This spirit is a crucial factor in harnessing the enormous potential (in terms of human resources, material resources, and financial resources) of the private economic sector for production and business, thus fostering stronger economic development.

Challenges:

Limited access to credit, business informality, and regional disparities, which include shortages of high-quality labor, inadequate road and infrastructure, tax administration, customs procedures, and trade issues. Significant differences in the development of private enterprises compared to state-owned enterprises and foreign direct investment (FDI) companies.

The development of the private economic sector is influenced by the diversity of industries and sectors through various support programs, often implemented through multiple state organizations. This leads to an uneven allocation of projects and support programs, affecting the progress and outcomes of their implementation. Many small and medium-sized enterprises in the private economic sector do not fully understand the current situation of the business support programs being organized and the registration methods for participation in these programs.

Small and micro-enterprises in the private economic sector primarily rely on existing resources, which are decreasing and include abundant but low-cost labor and scarce resources. Their management and technological innovation capabilities remain limited."

2.2.3. Some Solutions to Promote the Private Economic Sector in the Context of International Economic Integration in Vietnam Today

Firstly: Eradicate societal self-esteem issues and the discriminatory attitudes held by some individuals within state agencies toward the private economic sector.

Some policy and legal planning, as well as practical implementation, should objectively assess the private business model. In practice, state-owned enterprises have significant advantages in terms of land and credit compared to private businesses. In the future, it is essential to clearly distinguish between public utility services and goods, which require appropriate operational and administrative regulations.

Develop an economic mechanism that maximizes the country's competitive advantages, linked to the construction and improvement of a market-oriented economic management mechanism. Simultaneously, enhance the macroeconomic management role of the state through economic tools to leverage positive factors and address the shortcomings of the market mechanism. This should aim to perfect the socialist-oriented market economy in our country.

Widely disseminate the Party's and the State's policies regarding the private economy to all citizens through mass media channels, especially to key leaders in local governments. They need to correctly understand that the development of the private economy is vital for the economic development of each locality and immediately eliminate any discrimination between economic components.

Secondly: Enhance the legal environment to create favorable conditions for enterprises.

Although the state has issued several policies and regulations to facilitate the development of the private economic sector, the fundamental institutional and legal framework for the private economic sector remains incomplete and lacks consistency. Some documents do not align with the provisions of business laws and need significant investment for improvement. Deficiencies in the implementation of administrative reforms and institutional changes remain obstacles to the development of the business community. Some enterprises still complain about provincial People's Committees issuing documents that are beyond their authority and contrary to business laws. Delays in the issuance of legal documents, such as guidelines for granting legal certificates to private practitioners, persist. Many of the Party's policy directions for encouraging the development of the private economy have not been specified and implemented correctly. In numerous cases, state agencies draft legal documents that do not originate from the needs of private enterprises but are driven by subjective considerations and their own interests.

Clearly defining management responsibilities and delegating functions will enhance the effectiveness of state management tasks within each state administrative agency. Economic policies must be carefully considered and aligned with reality, tailored to the specific requirements of each economic entity. It is essential to ensure fairness across all economic components, both in economic and political aspects. Achieving this requires the state to formulate a unified policy among various economic components. Economic policies and organizational management structures must follow the principles of systematization and consistency, avoiding differentiation based on economic components. When constructing the management apparatus of enterprises, it is crucial to ensure that all relevant factors positively influence the overall economic growth process.

Thirdly: Enhance the competency of the workforce in the market economy in general and enterprises in particular.

In tandem with the changes in the education and training system and the state's positive investment in human resource development, every enterprise needs to proactively plan and provide training for its employees. This ensures that learning and education remain lifelong endeavors for each individual, with a focus on acquiring practical knowledge that translates into effective job performance within their designated roles and responsibilities.

Localities and enterprises should establish policies that support education and elevate understanding of the Party's principles, the state's policies and laws. Improve the professional competence and ethical conduct of business owners toward their employees. For business leaders, it is crucial to emphasize education and training, promote a sense of professionalism, social responsibility, ethical integrity, maintain professional ethics, uphold trust, and serve as role models in adhering to the Party's policies and state laws, ensuring the well-being and safety of their employees within the enterprise.

Fourthly: Leverage the core role of business associations.

Create opportunities for businesses to develop their production and trade on a multinational scale. Enhance cooperation and collaboration among enterprises to ensure a unified voice in the market, avoiding situations where businesses are pressured in terms of supply and pricing. Encourage each business association to develop contingency plans according to their respective industries.

The socialist-oriented market economy model in Vietnam is relatively new and has no precedent worldwide. It has undergone a period of construction, development, and experience accumulation. Some inherent imperfections in the system, legal framework, and their incompatibility with regional and global standards are inevitable. However, with the determination of the Communist

Party and the Government, this model will undoubtedly continue to evolve based on the socialist-oriented market economy, proactively integrating deeply and broadly with other countries in the region and the world. The Party's viewpoint and the state's leadership and management role are to always create the most favorable and convenient conditions for business development in general and private enterprises in particular.

Enterprises must strive for self-renewal, adopting management methods that align with the available workforce, which is patriotic, highly skilled, multilingual, and adept with advanced technology. This is how high-quality, cost-effective products with diverse designs, suitable for the varied needs of people in different countries, can be created.

Efforts should be made to establish credit guarantee funds for small and medium-sized enterprises, in line with the guidance provided in Government Decree No. 90/2001/ND-CP dated November 23, 2001, aimed at supporting small and medium-sized enterprises.

Encourage the formation of science and technology organizations with the goal of supporting and sharing experiences that help businesses develop science and technology, as well as disseminate scientific knowledge. Expand the network of scientific research activities for private enterprises. Localities should implement measures such as organizing short-term classes to disseminate scientific and technological knowledge to business owners and private enterprises, providing support for enterprises to rent or purchase information technology equipment to improve technology and implement efficient protection of intellectual property rights. Encourage individuals and businesses to apply new technologies with successful results.

III. CONCLUSION

Under the management of the state, the private economic sector has made significant contributions to the development of physical and technical infrastructure, driving the rapid process of industrialization and modernization in our country. It has played a vital role in advancing the national economy. The role and position of the private economy have been increasingly recognized, and it has made substantial contributions to the overall economy. The private economy faces both favorable conditions and challenges stemming from various external factors and internal dynamics within the private economic sector. These challenges pose significant obstacles for the state as it seeks to foster the development of the private economic sector. Economic integration is an inevitable and natural process that has presented both opportunities and challenges to the Vietnamese economy as a whole and to private enterprises in particular. Therefore, it is essential to implement appropriate solutions to maximize favorable opportunities, overcome difficulties, and address new challenges in order to achieve sustainable economic development.

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FACTORS AFFECTING THE FINANCIAL CAPABILITY OF LOGISTICS SERVICES COMPANIES IN VIETNAM STOCK MARKET

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Abstract: The study's main focus is on the factors affecting the financial capacity of logistics service companies. The study is based on a survey of 80 financial professionals and managers from educational institutions and businesses in the industry. The survey content was designed according to the 5-level Likert scale and put into testing the EFA factor discovery model to find out the outstanding factors that affect the financial capacity of listed logistics services companies. The research results show that a number of prominent factors such as the economic infrastructure environment, the ability to cope with risks, the growth of total industry assets, and experience in dealing with them are among the most important factors that have a prominent influence on the capital growth of logistics service companies in Vietnam today.

Keywords: financial capacity, listed logistics services companies

1. INTRODUCTION

Financial capacity is a fairly broad concept, including the ability to mobilize capital, the capacity to use capital and the capacity to ensure capital adequacy. There are many studies in the world that have gone into studying the financial capacity of enterprises for different groups in different markets. Research results show many similarities but also show many differences due to the influence of industry specificity and research market specificity.

The logistics service business group is considered one of the key industries of the modern economy, especially the boom of e-commerce after the Covid pandemic, however, how to expand and develop faster and stronger the logistics service business, it is necessary to have studies on the financial capacity of this industry group in Vietnam.

The following study will delve into the topic of factors affecting the financial capacity of logistics service enterprises in Vietnam and the study is divided into the following parts: part 2 is Literature review, part 3 is Research methods and research data, then part 4 Research results. Part 5 Conclusions and suggestions will end the study with some comments on the factors affecting the financial capacity of listed logistics service companies in Vietnam.

2. LITERATURE REVIEW

A lot of research has been done on different capital mobilization markets such as bond market, stock market or bank loans and the factors affecting the mobilization of such capital. Among those capital sources, raising equity capital, which is considered low risk and suitable for long-term business growth, also receives a lot of attention. Some typical studies can be mentioned as the study of Mark Maffett, Anya Nakhmurina, Douglas J. Skinner (2022) [5], the study analyzed nearly 7,000 active campaigns of stock investors across the world, 56 countries and shows that the activity of equity investors is now a global phenomenon. The analysis of the study provides evidence on the factors that explain the development of international investment activity. First, the study measures

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the extent to which national governance regulations facilitate shareholder participation, a necessary condition for performance, and shows that measures of governance regulation of shareholders explains the shift in investment activity. Second, research shows that changes in these regulations also affect outcomes for companies facing a high operational threat but that is not a matter of concern. in particular, including increased profits, higher payouts and reduced investment. These effects are most pronounced in countries with weak minority shareholder rights, where previous performance is relatively unimportant.

A number of studies have analyzed the factors affecting the capital mobilization of enterprises, with the strong support and influence of social networks, making the investment channel through capital mobilization more effective. Equity activity from investors becomes stronger such as research Ziaul Haque , Aimin Qian , Md Rakibul Hoque, Suraiea Akter Lucky (2022) [8], A unified framework for exploring the determinants of online social networks (OSNs) on institutional investors' capital market investment decision. Online social networks (OSNs) are information dissemination platforms for investors in the capital markets. This study aims to determine the factors that influence the equity market investment decisions of investors and the extent to which each factor influences their decisions. A questionnaire was used to conduct the survey and 285 capital market participants in Bangladesh. The data were analyzed using structural equation modeling (SEM). Proposed factors (e.g., institutional pressure and cost-benefit size), as well as usefulness, are strong predictors of ability to make investment decisions. Indirect influences include a different hypothetical construct (e.g. context) and personal perception. The decision to enter the capital markets is greatly influenced by the intention to use the OSN. It is worth noting that the predictive relationship between situational context and cognitive ability, as well as the relationship between cognitive ability, are both significant. Surprisingly, perceived risk did not affect OSN adoption.

Michela C. Mason et al (2015) [6], based on a sample of 300 small and medium enterprises (SMEs) in the Province of Udine (Northeast Italy) and the Kärtner Region (Southern Austria), the study analyzes the impact of Entrepreneurship Orientation (EO) on SMEs. The study develops a model in which the dimensions of the EO are adjusted for leverage. The results suggest that leverage can play a significant role through interactions with the EO dimension.

Ayşegül Güner (2016) [1] conducts a comparative test between the trade-off theory and pecking order theory using firm-level data of 131 publicly traded Turkish companies from 2008 to 2014. The study also attempts to exploit differences between capital structure decisions for degrees of freedom of float in different markets. According to the empirical results, although pecking order theory seems to better describe the capital structure of firms, some determinants are consistent with the trade-off theory. The research results also reveal that firms with a free float ratio of 50% to 75% have lower levels of leverage and different degrees of leverage for different market values of companies. Many studies are interested in capital structure in general, such as the study of Marius Sikveland et al. [4], the study of the factors affecting capital structure in hotel service businesses.

A lot of research on risk management and capital safety, such as when approaching financial capacity from the perspective of capital efficiency of enterprises from the perspective of capitalists, Ian C. Macmillan et al (1985) [3] developed a questionnaire for one hundred venture capitalists to identify the most important criteria they use to decide to fund new ventures. The most important finding is that research has found a problem frequently made by the venture capital community that above all is the human factor expressed through the business plan. In a business plan, there is usually very little information about the planner, but a savvy investor will see the planner's ability to transform through the strategies he develops, situations, his way of planning and contingencies.

Factor analysis of the results indicates that venture capitalists seem to systematically evaluate ventures for six types of risk that can be managed. They are: Risk of losing the entire investment; The risk of not being able to guarantee; the risk of not realizing the joint venture idea; Competition risk; risk of management failure; and the risk of leadership failure.

Hailiang Yang (2003)[2] builds a new risk model for a company whose volatility is quite sensitive to credit quality. The modified Jarrow, Lando and Turnbull model (Markov chain model) was used to construct the credit rating model. Recursive equations for finite time probabilities and time distributions are derived. The combined Volterra systems of integral equations for final probability, severity of impact and general residual distribution before and after impact are also obtained.

Many studies have been conducted recently, such as Qi Liu & Jiejie Wu (2022) [7], assess the impact of strict financial regulation on corporate risk taking through the issue of capital control policy. Using an experiment from real businesses, the study found that tight financial regulation lowers both agency costs and also reduces managers' risk aversion, making them more willing to participate. in high-risk investments. Research results provide evidence that tight financial regulation promotes more risk-taking.

3. RESEARCH METHODS AND RESEARCH DATA

Based on statistics from existing studies, the factors affecting the financial capacity of listed logistics services companies on the Vietnamese stock market are classified into groups of subjective factors, objective factors and in each category, the group of factors, again divided into factors affecting the mobilizing capacity, the capacity to use and the capacity to ensure capital safety.

After analysis, to ensure that the groups of factors are described in a general and distinctive manner, the groups of factors are divided into 6 groups (03 groups belong to objective factors and 03 groups belong to human factors). subjective factors) and at the same time affect the financial capacity as follows:

Group 1: Macroeconomic environment

Group 2: Policy environment

Group 3: The vibrancy of the industry

Group 4: Quality of company's human resources

Group 5: Company characteristices

Group 6: The company's risk management ability

The groups of factors after being redesigned are detailed through the indexes in the following table:

Table 3.1 Factors affecting financial capacity

The objective factors				
Group 1	Macroeconomic environment	1	GDP	ME1
		2	Technical infrastructure of the economy	ME2
		3	The level of development of the free market economy	ME3
		4	The level of development of the capital market	ME4

Group 2	Policy environment	5	Industry related policies	PE 1
		6	Policies related to supporting industries	PE 2
		7	Policy for related industries	PE 3
		8	Fiscal policy such as taxes, fees, fees	PE 4
		9	Monetary policy such as raising and lowering interest rates	PE 5
Group 3	The vibrancy of the industry	10	The growth of the number of companies in the industry	VOI1
		11	The growth in total assets of companies	VO2
		12	Overall profitability of the industry	VOI3
The subjective factor				
Group 4	The quality of the company's human resources	13	Quality and quantity of highly qualified senior staff	HR1
		14	Quality and quantity of company's human resources	HR2
		15	Quality and quantity of training programs	HR3
Group 5	Company characteristices	16	From a state-owned company	CC 1
		17	Age of life	CC 2
		18	Asset size	CC 3
		19	ROE	CC 4
		20	ROS	CC 5
		21	LONG	CC 6
		22	EPS	CC 7
		23	Possibility to raise new shares	CC 8
		24	Ability to accumulate retained earnings after tax	CC 9
		25	Possibility to receive joint venture capital	CC 10
Group 6	The company's ability to manage risk	26	Insurance	AR1
		27	Provisions	AR 2
		28	Experience in dealing with risks	AR 3

3.2 Survey of experts and managers

Description of the survey:

The survey was conducted based on collecting opinions from managers of listed logistics services companies in the Vietnam stock market and financial experts from universities, academies, etc.

Survey content:

The assessment of managers and financial experts on the level of influence of factors on the financial capacity of companies according to the 5-level Likert scale, in which, level 1 means little influence, level 2 is low influence, level 3 is moderate influence, level 4 is highly influential, and level 5 is extremely influential.

Number of votes: Total number of votes issued: 80 votes for managers and 40 votes for financial experts, total 120 votes. Number of valid votes received: 62 votes for managers and 40 valid votes for experts, total number of votes is 102, accounting for 85%

After collecting and processing data on excel, all data are entered into SPSS testing software for processing and giving results.

4. RESEARCH RESULTS

4.1 Evaluate the reliability of the scale.

Evaluation of internal consistency, i.e. assessing whether the observed variables in a scale are strongly correlated with each other, explain the same concept and Cronbach' Alpha is a measure this internal consistency. If a scale in which the observed variables are positively correlated, the more consistent that scale is, the higher the Cronbach's Alpha coefficient will be. According to Nunnally (1978), a good scale should have Cronbach's Alpha reliability of 0.7 or higher. Hair et al (2009) also suggested that a scale that ensures unidirectionality and reliability should reach Cronbach's Alpha threshold of 0.7 or higher, however, as a preliminary exploratory study, the threshold is Cronbach's Alpha of 0.6 is acceptable. The higher the Cronbach's Alpha coefficient, the higher the reliability of the scale.

Testing the appropriateness of the answers for 6 groups of factors and the appropriateness of all the answers is shown in the following tables:

Table 4.1 Test results of Cronbach's Alpha coefficient of 6 factor groups

Reliability Statistices		
	Cronbach's Alpha	**N of Items**
Group 1	0.716	4
Group 2	0.668	5
Group 3	0.620	3
Group 4	0.763	3
Group 5	0.859	10
Group 6	0.716	3

Table 4.2 Conformity of the responses to the entire sample

Reliability StatistiPE		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.809	.819	28

Based on the Cronbach's Alpha test, the test results show that the Cronbach's Alpha coefficient for each factor group is greater than 0.6 and this coefficient for the whole sample is up to 0.819, showing the suitability of the set. data is very high.

4.2 Using the EFA exploratory factor model to discover groups of factors that have a statistically significant influence on the financial performance of companies.

*** Analysis through KMO coefficient and Bartlett test:**

KMO coefficient (Kaiser-Meyer-Olkin) is an index used to consider the appropriateness of factor analysis. The value of KMO must reach a value of 0.5 or more ($0.5 < KMO < 1$) is a sufficient condition for factor analysis to be appropriate. If this value is less than 0.5, then factor analysis is likely not suitable for the research data set.

Bartlett (Bartletts test of sphericity) used to see if the observed variables in the factor are correlated with each other or not. The necessary condition for applying factor analysis is that the observed variables reflecting different aspects of the same factor must be correlated with each other. This point is related to the convergence value in the EFA analysis. Therefore, if the test shows no statistical significance, then factor analysis should not be applied to the variables under consideration. Bartlett's test has statistical significance (sig Bartletts Test < 0.05), showing that observed variables are correlated with each other in the factor.

Table 4.3 KMO and Bartlett Test Result

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	3685.836
	df	153
	Sig.	.000

Thus, according to the test results, the coefficient **SME=0.801** and **Sig** of the coefficient **Barlett's Test = 0.000** shows that the factors that are suitable for the research data set as well as the observed variables are correlated with each other in the research data set.

*** Analysis using Eigenvalue, total variance extracted observed factor loading factor:**

Eigenvalueis a commonly used criterion to determine the number of factors in EFA analysis. With this criterion, only factors with Eigenvalue 1 are kept in the analytical model.

Total Variance Explainedgreater than 50% indicates that the EFA model is appropriate. Considering the variation as 100%, this value shows how much % of the extracted factors are condensed and how many % of the observed variables are lost.

Factor Loading Also known as the factor weight, this value represents the correlation relationship between the observed variable and the factor. The higher the factor loading coefficient, the greater the correlation between that observed variable and the factor and vice versa. According to **Hair & ctg (2009,116), Multivariate Data Analysis, 7th Edition** then:

Factor Loading at ±0.3: Minimum condition for the observed variable to be retained.

Factor Loading at ±0.5: The observed variable has good statistical significance.

Factor Loading at ±0.7: The observed variable has very good statistical significance.

Table 4.4 The results of the factor analysis

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.472	47.065	47.065	8.472	47.065	47.065	4.103	22.792	22.792
2	2.297	12.761	59.826	2.297	12.761	59.826	3.911	21.727	44.520
3	1.853	10.296	70.123	1.853	10.296	70.123	3.096	17.199	61.718
4	1.257	6.985	77.107	1.257	6.985	77.107	2.106	11.699	73.417
5	1.001	7.617	80.714	1.001	7.617	80.714	1.875	10.307	80.714
6	1.011	5.617	83.724	1.011	5.617	83.724	1.675	9.307	83.724

7	.578	3.210	91.301						
8	.557	3.094	94.395						
9	.281	1.564	95.958						
...	...	...	...						
28	.005	.030	100.000						
Extraction Method: Principal Component Analysis.									

Thus can be seen:

Initial Eigenvalues>1 appears in 6 factors representing 6 groups, so these 6 factors summarize the information of 28 observed factors to be included in the EFA analysis in the best way.

The total variance extracted by these 6 factors is 83.724% (Cumulative = 83.724%) >50%, which means that these factors explain 83,724 data variations of the observed variables participating in EFA.

The results of the rotation matrix used to gather the influencing factors into groups (only the load factor greater than 0.5) is shown in the following

Table 4.5 Matrix after rotation

Rotated Component Matrixa						
	Component					
	1	2	3	4	5	6
ME2	0.894					
ME3	0.802					
ME1	0.741					
ME4	0.727					
PE1		0.892				
PE2		0.891				
PE3		0.879				
PE4		0.876				
PE5		0.792				
VOI 2			0.754			
VOI 1			0.698			
VOI 3			0.565			
HR3				0.861		
HR2				0.841		
HR1				0.828		
CC4					0.833	
CC5					0.721	
CC3					0.711	
CC1		0.772			0.688	

CC2					0.672	
CC6					0.665	
CC7					0.632	
CC9					0.612	
CC8					0.517	
CC10					0.506	
AR3						0.885
AR2						0.823
AR1						0.734

According to the rotation matrix, there is a variable CC1 (derived from a state-owned company) that is uploaded in two factors: factor group 2 (state policy) and group 4 (company characteristices). We need to rely on the difference in the load factor in the two factors of each variable to make a decision whether to exclude this variable from the model or not. According to Matt C Howard (2015), if an observed variable loads up in 2 factors but the load factor is less than 0.2, it should consider removing this observed variable.

Above, for the variable CC1, the difference of the two load factors is 0.772-0.668= 0.104. Therefore, this variable should be removed from the group of factors because this variable is showing unclear characteristices of any group of factors. After removing that variable, the remaining 28 variables are combined into 6 main groups that affect the financial capacity of companies, specifically analyzing each group 1 as follows:

Table 4.6 Group 1- Factors related to the environment

Factor group	STT	Content	Sign	Order of influence
Macroeconomic environment	1	Technical infrastructure of the economy	ME2	1
	2	The level of development of the free market economy	ME3	2
	3	GDP	ME1	3
	4	The level of development of the capital market	ME4	4

The factor that is considered to have the most significant influence on the industry in the macro environment is the technical infrastructure of the economy. The specificity of the group of companies dealing in logistics services is that they have to move through many geographical areas and the current transportation system is revealing a lot of inadequacies, causing difficulties and increasing time and costs for logistics companies, which reduces the satisfaction of the passenger experience as well as the protection of the packages, such difficulty and inconvenience will be evident when compared to the traffic and transportation situation in other countries, where the transport system is invested and built, the traffic is planned, the technical parameters such as road surface smoothness, the width of the road, the level of regional connectivity of the roads, ... are scientifically calculated to ensure the transportation and business of logistics services.

Then it can be seen that the development of the free market, the current trade and trade is a golden opportunity for the development of logistics services, but free trade also means that companies develop. Foreign logistics services also penetrate the market and compete directly with Vietnamese companies. The GDP growth rate is fast, but no matter how large the market is, if a reasonable logistics service system is not quickly built, the market will be acquired by foreign companies.

Although the level of development of the capital market is influential, the main problem of logistics services lies in the operating process rather than in capital, there are many domestic and foreign organizations willing to invest money for Logistics companies in Vietnam because they see the potential of the industry, banks as well as the stock and bond markets also have a positive attitude towards financing this industry group. Many new companies continuously start up and develop in the industry group, showing strong investment from the market, however, the investment efficiency is not really as expected, the companies have only met a market demand.

Table 4.7 Group 2 – Factors related to the policy environment

Factor group	STT	Content	Sign	Order of influence
Policy environment	1	Industry related policies	PE1	1
	2	Policies related to supporting industries	PE2	2
	3	Policy for related industries	PE3	3
	4	General monetary policy such as raising and lowering interest rates	PE4	4
	5	General fiscal policy such as taxes, fees, charges	PE5	5

The logistics industry has now been classified as one of the priority groups for development. Especially in the period when companies are heavily affected by the Covid pandemic, the policy of reducing electricity prices for warehouses, extending the payment of taxes and fees, and receiving a reduction in warehousing fees of logistics services, subsidized petrol prices with transport companies, etc. Industry-related policies are of great significance to the development and response to crises of companies in the industry.

The supporting industries for the main logistics service businesses are all production and business companies that do not have their own logistics system and need to connect to a large-scale logistics network to save costs. Unlike manufacturing industries that need specific materials or machines, the logistics service business will develop well if companies or trading floors use the services of these companies. The development of logistics companies is highly dependent on other companies in the economy and during the research period, especially during the Covid period, the recession and freeze of general production made logistics companies strongly influenced. The policies for companies are generally only temporary support.

Industries related to the logistics industry can be mentioned such as the petroleum industry, the manufacturing industry and domestic production of means of transport such as shipbuilding, automobile manufacturing, traffic construction industry, and construction of bridges and roads , ports, ... are all industries that are not the strength of Vietnam's economy and although there are many supportive policies, due to the requirement of too large production resources, these groups of industries still have not really promote to meet actual needs.

General policies such as monetary policy, fiscal policy applied across the economy have a general effect on the development and recovery of companies and will indirectly affect the activities of the industry of services of Logistics.

Table 4.8 Group 3 - Group of factors related to the excitement of the industry

Factor group	STT	Content	Sign	Order of influence
The vibrancy of the industry	1	The growth in total assets of companies	VOI2	1
	2	The growth of the number of companies in the industry	VOI1	2
	3	Overall profitability of the industry	VOI3	3

In this group, the size of assets of companies will most clearly reflect the excitement of the industry according to experts, whether the number of companies is small or the overall profitability of the industry has not yet been established, most clearly reflects the excitement of the industry by the size of the industry's assets. However, this assessment will probably only be true for the logistics service industry in its infancy like this industry in Vietnam today, the development and application of information technology is still limited, the improvement of the ability to exploit Maximizing the use of existing resources is still limited, so when companies want to increase their ability to serve customers, they will mostly increase their assets, purchase additional equipment and means of transport. Over time, when the level of science and technology improves, the growth of the industry will come from the strong application of science and technology to make the most of existing resources, and then to asset growth.

The overall profitability of the industry is not always a criterion to reflect the excitement of the industry because there is a phenomenon that when companies grow to near saturation, there will appear a phenomenon of narrowing of the average profit margin because companies are competing fiercely with each other on price and must sacrifice profits to gain market share.

Therefore, to assess how the excitement of the industry affects the financial capacity of companies in the industry, one can look at the development of the total asset size of the companies in the industry and the total size of the industry. Larger can imply a higher ability to serve the market.

Table 4.9 Group 4 – Group of factors related to the quality of human resources

Factor group	STT	Content	Sign	Order of influence
The quality of the company's human resources	1	Quality and quantity of training programs	HR3	1
	2	Quality and quantity of company's human resources	HR 2	2
	3	Quality and quantity of highly qualified senior staff	HR 1	3

The quality and quantity of training programs will show more about the long-term vision and scale of human resource development than the current quality of human resources as well as the quality and quantity of highly specialized and professional staff. Only through training, both in school, practical training and continuous training in the working process, can the human resources of the industry be stable and developed. With the demanding needs of the market today, the current team needs to be professionally developed at a faster, stronger, and continuously developed pace to be able to keep up with the demand for logistics services.

Table 4.10 Group 5- Factors related to company characteristices

Factor group	STT	Content	Sign	Order of influence
Company characteristics	1	ROE	CC4	1
	2	ROS	CC5	2
	3	Asset size	CC3	3
	4	From a state-owned company	CC1	4
	5	Age of life	CC2	5
	6	ROA	CC6	6
	7	EPS	CC7	7
	8	Ability to accumulate retained earnings after tax	CC9	8
	9	Possibility to raise new shares	CC8	9
	10	Possibility to receive joint venture capital	CC10	10

Factors related to specific company characteristices will strongly affect the financial capacity of that company, but according to experts, ROE can be considered as the most important factor because it is the strength of the company. return on equity, the source of equity is the capital formed from the owner's contributed capital and the residual profit after tax of the companies and is the active resource of the companies, if after each year the source is expanded at the same time as ROE is increased, the company's ability to sustainably grow thanks to equity will be significant in the long run.

Other factors that reflect aspects such as profitability on sales, size of assets, return on assets or profitability per share all reflect a part of the company's profitability but has not shown the stability of self-financing and sustainable development as ROE

Asset size or whether the company comes from a state-owned company will partly affect the ability to expand and develop financial capacity for companies because of its large scale as well as its prestige and business. With many years of experience coming from long-standing state-owned companies, it is easier for companies to find and persuade customers, thereby increasing the ability to exploit the market and expand the financial capacity of the company. However, this is not an absolute competitive advantage because many companies, although young and coming from private companies, have a professional logistics operation system and are direct competitors of foreign companies. State-owned company with many years of experience. This comes from the specificity of the logistics industry, which involves a lot of use of technology to calculate routes and optimize costs as well as the management system of delivery points and these factors are often updated sector, with investment support from foreign investors, than in the public sector.

Table 4.11 Group 6 – Factors related to the company's risk management ability

Factor group	STT	Content	Sign	Order of influence
The company's ability to manage risk	1	Experience in dealing with risks	AR3	1
	2	Provisions	AR2	2
	3	Insurance	AR1	3

Experience in dealing with risks can be considered as the factor that has the most significant influence on the financial capacity of companies because of the constant variability of the types of risks that can be found in the process of industry activities. . Companies with leadership teams with experience in dealing with risks will have better visibility to minimize the chance of risks occurring as well as establish risk reduction channels for the company. Dealing with risks as well as the question "prevention is better than fire", provisions and insurance can reduce the negative and unexpected effects of a risk, but experience in dealing with risks can ring safe production and business strategies, ensure the safety of business capital, maintain and improve financial capacity for companies.

5. CONCLUSIONS AND SUGGESTIONS

The following sets of solutions are advised and are anticipated to have a direct impact and indirectly favorably affect the efficacy of risk management, in the order of the level of influence assessed in the preceding section and the examination of the reasons leading to the factors being listed in that manner.

*** For factors belonging to the Economic Environment group:**

In order of the impact level assessed in the above section, the following steps should be taken:

+ Logistics infrastructure system: Exploiting the current logistics infrastructure system is not synchronized, lacks the connection between components in the system: Multimodal transport to combine the advantages of each mode of transport has also not developed effectively in Vietnam. Connectivity between modes of transport continues to be limited. The effect of poor infrastructure and limited exploitation is the increased cost of transport operations and the long run.

+ The level of development of the capital market has not met the needs of the market: The capital market still has many disadvantages, especially the development level of the capital market has not met the market demand. Some disadvantages can be mentioned such as: market size is still quite small compared to other countries in the region and lack of stability; products are few, not diversified; professionalism is not high, transparency is low, sanctions are not enough deterrent; infrastructure limitations lead to order congestion, affecting confidence in the market; the risk of bubbles in the market due to the lack of capital from new investors, a lot of knowledge about the stock market; unsustainable investor base...

+ Free economic development leads to increased competition: Although domestic companies are superior in number, they only account for about 30% of the market share, the rest of the market share belongs to foreign companies because Vietnamese companies are mainly small in scale and limited.

*** For factors related to the policy environment for the industry**

In order of the impact level assessed in the above section, the following steps should be taken:

Although the logistics industry receives the attention of many levels of government and there are many documents related to supporting this industry The company's logistics management system is inefficient, causing trouble and time-consuming for companies in completing related procedures.

*** For factors related to the vibrancy of the industry**

In order of the impact level assessed in the above section, the following steps should be taken:

The logistics industry is currently considered to be very active, but in fact, the number of companies is largebur the scales of companies are not reakky big. The number of small and medium-sized companies accounts for the majority and 90% of the registered companies have capital of less than 10 billion VND; In terms of service types, logistics companies operate in many different service areas.

*** For factors related to the quality of the company's human resources**

Quality and quantity of training programs is the most important thing for improving the company's human resources. The industry's human resources are considered to be both lacking in quantity and weak in capacity and need more active actions such as coopration between university and companies in training the employees.

*** For factors related to company characteristics**

In order of the impact level assessed in the above section, the following steps should be taken

+ Scale of assets increases slowly, most of which come from small-scale companies: the companies in the industry, although growing very fast, are growing in number of companies rather than in asset size as well as growth in market coverage

+ The age of most is young: Newly equitized state-owned companies account for only a small part of logistics companies, a strong boom comes from private companies with both domestic and foreign investment capital

+ The ability to set financial goals is still weak: The companies continuously fails to achieve the set targets even though the targets have been adjusted according to the actual market situation, this is a consequence of the ability to diversify products, lower costs and poor competition...

+ The possibility of issuing new shares occurs in many companies, but the size of the issued capital is low and the frequency is not frequent: The company's capital will create conditions to push up its financial capacity, but in the group of companies studied, the increase of capital through this form does not really receive positive attention from the market.

+ The possibility of receiving capital contribution to the joint venture is not high: If companies in the industry form a chain of joint ventures to take advantage of the idle resources of the parties or simply link up to form a group capable of providing better services, it will create strength for the logistics industry in Vietnam.

*** For factors related to the company's risk management ability**

In order of the impact level assessed in the above section, the following steps should be taken:

+ Experience is mostly young:

Stemming from the low age of the companies and the limited human resources in the industry, the risk handling experience of the companies is still weak, leading to the continuous incurring of related costs, which reduces the risk company's expected profit

+ The provisioning has not yet followed the reality

The provisions of companies in the industry have not been built closely with the company's possible risks because the characteristics of the logistics service industry have many different risks and the activities of companies.

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SUSTAINABLE DEVELOPMENT OF BANKQUE POUR LE COMMERCE EXTERIEUR LAO PUBLIC (BCEL)

Weo Phouangsavath[1]

Abstract: *Sustainability is not a mere buzzword in the banking industry now but rather a key concept that will shape the direction of the industry in the years to come. Thus, the study aims to ascertain various sustainable banking practices at a Laos. It also intends to identify the existing framework developed for assessing the performance of sustainable banking.*

The study makes use of exploratory and descriptive research design and is based on secondary sources of data collection. The dimensions of sustainable banking have been identified as environmental, social and governance (ESG). The research further highlights that sustainability issues focused by banks primarily involve "environmental" and "social" considerations, however, the "governance" aspect has not yet been considered by many. Moreover, the study reveals that there are no guidelines specified by the Bank of Lao PDR (BOL) for sustainable banking practices in Lao to date. The insights gained from the study would enrich the existing literature on sustainable banking in Lao. The findings would also help in developing a new framework for assessing the performance of sustainable banking practices.

Key words: *Sustainable, Development, Bank*

1. INTRODUCTION

It can be said that in the modern economy, along with the extensive development of the financial economy, financial conditions are "loosened", causing an increase in new types of risks in the operations of banks. (Crisised in America). These risks can spread strongly to the economies of countries along with the financial liberalization process. This is also a negative factor affecting the development of the bank.

Clearly, BCEL is contributing a huge role in Laos' economic development. However, this bank is facing new challenges: competition and increased risks in the process of international economic integration. Choosing which direction to survive and develop in a competitive environment while promoting its role in the economic development of Laos is an urgent issue for this bank.

In the world and in Laos, sustainable development is being mentioned and receiving the attention of many audiences. Sustainable development is about satisfying current human needs without harming the needs of future generations (This concept was first mentioned at the United Nations in 1970).

Sustainable development (which includes sustainable development of the commercial banking system - sustainable development of commercial banks is stable development in the present but does not affect future development in the relationship with the business environment) is always the goal of any country.

In addition, sustainable development tends to start inside the bank, arising through the need to set core goals and create their brand value, aligning and balancing the benefits of their stakeholders, create goodwill, build consumer base and market share, attract financial partners thereby increasing profits in short and long term.

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In Laos, the development of sustainable banking is at an early stage. Some banks are interested in this. However, the implementation of sustainable development of banks is not equal, many banks do not have environmental and social risk management system. Solutions are lacking and legal procedures for sustainable development are incomplete. In the trend of globalization, the system of commercial banks must integrate deeply. Therefore, sustainable development helps to improve the competitiveness of the banking system and is an indispensable trend in line with the trend of international integration.

Currently, the commercial banking system in Laos is being restructured in association with bad debt handling to ensure the safety, health and sustainability of the credit institution, thereby creating a firm premise to curb inflation. developing and innovating growth models aimed at sustainable economic development.

Because of its urgency and its applicability to sustainability in the future, PhD candidate decided to choose "Sustainable development of Bankque Pour le Commerce Exterieur Lao Public". to assess sustainability and propose solutions for sustainable development of BCEL in the trend of international integration.

1. OBJECTIVE

Research situation of sustainable Development of Bankque pour le Commerce Exterieur Lao Public (BCEL);

Proposing solution and recomendations for Bankque pour le Commerce Exteureur Lao Public (BCEL)

2. REVIEW OF THE PREVIOUS STUDIES

Thaddeus. C. Trzyna, in the work (2001), "Sustainable World", sustainable development requires the penetration of many specialties, fields and subjects. It forces us to move beyond the previous method of thinking narrowly in each field and to consider the relationship between ecological, economic and social fields. Sustainable development is a social process. First of all, this is an ethical principle.

Stephen Viederman in his work (2001), "What knowledge do we need for sustainable development" writes "Sustainability is not a technical problem that needs to be solved but a vision into the future, ensuring us a roadmap." and help us focus on a set of logical and ethical values and principles that guide our actions as individuals, as well as in our relationships with organizational structures. organizations that we contact such as government organizations, non-governmental organizations and other related works...". According to the author, sustainable development needs to focus on the following issues: quality of actions, use of a systemic approach, clear concern for future generations, sustainability and equity, concern for Pay attention to mobility, inequity, mixture and discontinuity.

"Sustainable development" is also accepted by many scholars around the world such as: David Munro in the work (2006) "Is sustainability a rhetoric or a reality", sustainable development is any or all activities activity or process that increases the capacity of people or the environment to meet human needs or to improve the quality of life. The product of development is that people are healthy, well-nourished, clothed, housed, engaged in productive work for which they are well trained, and able to enjoy their leisure time. Leisure and entertainment are something we all need.

Development is a complex combination of activities, some with social goals, some with economic goals, some based on physical resources, some based on intellectual resources, All enable people to achieve their full potential and enjoy a good life. For development to be sustainable, it must continue forever, or its benefits must be maintained indefinitely. That means sustainable development must be worth doing, must meet the above mentioned socio-economic goals.

Denis Goulet, in his work (2006), "Is true development sustainable development", sustainable development includes four aspects: economic, political, social and cultural. Political stability ensures that all members of society have choices in their existence, which can only be achieved when all enjoy freedom, human rights, protection and faith in The political system is strengthened. This system pursues the common good, not simply individual self-interest calculations. Based on sustainable social and cultural development, community foundations and symbolic meaning systems need to be protected. The right development strategy will be oriented towards economic development where production products focus on basic needs, creating jobs.

Nguyen Thanh Phuong (2012), said that: A sustainable commercial bank is a bank that operates at a level of profitability according to the requirements of its owners in a safe state. Banks need to maintain a balance between profitability and safety over a long period of time. Besides, banking activities need to serve the interests of customers, increase benefits for the community, society and the environment.

Nguyen Hong Son et (2015) summarized the views and criteria for evaluating sustainable bank development. The authors assessed the development of Vietnam's commercial banking system and restructured in line with international practices, which also provided solutions for the sustainable development of the Vietnamese commercial banking system. However, the content of the study focused on assessing the realities of banking system development and restructure, mainly based on criteria for assessing the stability and soundness of the banking system. This study đin't elaborate on the situation of sustainable development of the commercial banking system in line with international practices on environmental and social factors affecting banking operations.

In general, studies on sustainable development of commercial banking system in the country are not much, especially studies on sustainable banking models. Domestic studies focued on assessing the performance of commercial banks, there were very few researches on sustainable development of commercial banks. Research directly related to the topic of dissertation is a study by Nguyen Hong Son et al. (2015). This study analyzed the development status of commercial banks associated with the restructuring of the banking system. However, this study analyzed the sustainable development of the banking system, which did not integrate environmental and social issues into the bank's operations - these are considered important elements of sustainability.

Tran Thi Hoang Yen (2016) applied a linear regression model to examine the relationship and impact of independent variables: corporate social responsibility to the bank's financial results through variables Dependencies are ROA and ROE. In this study, the author clarified theories of corporate social responsibility. This was the core theory of social responsibility of organizations.

Bui Khac Hoai Phuong (2019) "sustainable development of commercial banks in Vietnam", the results of the study show that based on the results of the situation analysis as well as the assessment of the sustainable development of commercial banks in Vietnam, the dissertation proposes solutions for the sustainable development of Vietnam's commercial banking in line with the trend of international integration. Firstly, commercial banks need to improve consistently and soundly, including raising capital adequacy to protect shareholders, investors and customers, and improving the quality of their assets and improving operational efficiency. Secondly, complete the ESMS system consists of three stages: the first building internal environmental management system, the second environmental and social risk management in the lending and investment activities, providing sustainable financial products.

Saxena, D., Dhall, N., & Malik, R. (2021), "Sustainable banking: A roadmap to sustainable development", the study suggested that sustainable banking includes ESG dimensions and all other aspects are derived from ESG. Banks aim to achieve the sustainable development and thus sustainable banking can help achieve sustainable development. Moreover, it has been revealed that foreign banks and private banks are performing well in regard to sustainable banking than the public sector banks and RRBs. It has been brought to the notice that for public sector banks it is not easy to change the policies due to the regulatory framework and also sustainability is considered as a secondary issue rather than a primary issue. Thus, based on the in-depth interviews conducted with the banking professionals, it can be stated that there is a connection between sustainable banking and sustainable development.

3. RESEARCH METHODOLOGY

Comparative statistics, using time series data and at a point in time to compare vertically, the performance indicators of Bankque Pour le Commerce Exterieur Lao Public through periods of development. Statistical functions such as frequency, proportion, average, growth rates is applied for comparative analysis.

Therefore, in order to ensure that the business operation of the bank is consistent with international standards, BCEL emphasizes the financial services that takes into account responsibility for sustainable business operation in order to be trusted by our customers as well as all stakeholders underlying longterm value in alignment with environmental, social, and governance principles which are considered key indicators of bank's sustainable growth.

4. RESEARCH RESULTS

Establishment

Banque Pour Le Commerce Exterieur Lao Public (BCEL) was established in accordance with the Decision on Bank Establishment No. 129/BOL dated 01 November 1989 issued by the State Bank (The Bank of the Lao PDR today). At that time "Banque Pour Le Commerce Exterieur Lao" was the name of BCEL. The origin of BCEL, however, commenced in 1975 when Lao PDR was established. During 1975-1989, BCEL started from being a Division of the State Bank, in charge of international settlement, loans and foreign aid management. Responding to the new economic mechanism of the Party and the demands of businesses in new era, the government has agreed to transform BCEL into a full state-owned commercial bank on 1 November 1989 as per the said Decision of the State Bank.

The transformation has been the significant commencement of comprehensive banking business operation of BCEL, which has a variety of banking services such as deposit, loan, letter of credit, collection, and domestic and international settlement. This was the crucial condition that made BCEL developed gradually and became a strong state-owned commercial bank and achieved all criteria and conditions as the first commercial bank to be listed in Lao Stock Exchange. On 23 December 2010 BCEL accomplished IPO and renamed to Banque Pour Le Commerce Exterieur Lao Public according to the Enterprise Registration License No.0061/ ERO dated on 10 January 2011 issued by the Department of Enterprise Registration and Management, Ministry of Industry and Commerce of the Lao PDR. The Ministry of Finance representing the Government held 80% of the total shares. On 15 July 2011, the Ministry of Finance sold 10% of the total ordinary shares to its strategic partner named Compagnie Financière de la BRED (COFIBRED) which is a subsidiary of BRED, the largest banking society in the Banque Populaire Group a French group of cooperative banks.

In 2017, BCEL succeeded the recapitalization by public offering and right offering to the existing shareholders in accordance with a permission granted by the Lao Securities Commission Office on 17 August 2017. This made BCEL increase its registered capital in the amount of 355.728.500.000 LAK (71.145.700 shares) according to the certificate from the Lao Securities Exchange No. 01/LSX, dated 15 September 2017. Accordingly, the BCEL's registered capital was increased from 682,88 to 1.038,62 billion LK.

In order to develop BCEL further, the government has offered more room for the general public and investors to jointly own BCEL by reducing the government shares in BCEL and offering to the public and the existing shareholders. On 11 October 2019 the Lao Securities Commission Office granted a permission for this offering. On 29 November 2019, the Lao Securities Commission Office issued certificate endorsing the offering completion of 10% of BCEL's holders.

Register Capital

The registered capital of BCEL as at 31 December 2022 was 1.038.617 million Kips (1.038.617 million Kips as at 31 December 2021).

Shareholder Structure

The shareholders structure of BCEL as at 31 December 2022 was the following:

Shareholders	Number of shares	Percentage
Government (represented by theMinistry of Finance)	124.634.021	60%
Strategic Partner (COFIBRED)	20.772.359	10%
Local Investors (including employees ofBCEL) and Foreign Investors (*)	62.316.920	30%
Total	**207.723.300**	**100%**

(*) Each individual person or entity is allowed to hold a maximum of 2% of the total shares.

Principal Business

The principal activities of BCEL are to provide banking services including fund mobilization and deposit-taking for short-term, medium-term, and long-term from organizations and individuals. The bank also provides loans for short-term, medium-term, and long-term to business units and individuals based on the loan purposes and the capability of the bank in lending; foreign exchange transactions, international trade financial services, purchase discounts of trading instruments, bonds and other valuable documents and other banking services allowed by the Bank of the Lao PDR.

Location and network

The Bank's Head Office is located at No.01, Pangkham Street, Ban XiengNheun, Chanthabouly District, Vientiane, Lao PDR. As of 31 December 2022, the Bank has 01 Head Office, 06 joint venture companies, 20 branches, 97 service units, and 11 exchange units all over the Lao PDR.

Vision

BCEL has adopted a vision and applied to its business development to achieve its goal and objective of "becoming a strong and modern bank moving toward international standards".

Mission

In order to make BCEL a strong and modern bank moving toward international standards, the key missions of BCEL include development of strong corporate governance by focusing on: development of banking services which embraces changes in each period of time; creation of a strong culture of risk management and compliance with the BASEL II principles; increase in business operation capacity; creation and development of a capable, comprehensive, accurate and punctual management information system (MIS); utilization of modern technology; and upgrade of knowledge and expertise of the employees as of regional and international levels.

Core Values

BCEL firmly maintains 5 core values below:

1. Customer centrism;
2. Intergrity;
3. Work effectiveness;
4. Embracing changes;
5. Social responsibility.

BCEL's Sustainable Development

Sustainability is one of the key success factors in banking industry. Therefore, in order to ensure that the business operation of the bank is consistent with international standards, BCEL emphasizes the financial services that takes into account responsibility for sustainable business operation in order to be trusted by our customers as well as all stakeholders underlying longterm value in alignment with environmental, social, and governance principles which are considered key indicators of bank's sustainable growth.

BCEL takes into account minimizing negative impacts and creating net positive impact in improving business performance by integrating the international sustainable development principles including corporate governance, internal control, risk management as well as conducting business in facilitating governmental policy operations, supporting national digital infrastructure development and so on. Furthermore, the bank actively conducts its business with responsibility and strictly complies with laws and regulations in developing products and services contributing to sustainability in terms of Environmental, Social, and Governance (ESG). In other words, the bank commits to preserve natural resources, to enhance good quality of life for employees, customers and communities, and to promote working under sound corporate governance that effectively communicates to internal and external stakeholders.

Current status of sustainable development of BCEL

Sustainability is one of the key success factors in banking industry. Therefore, in order to ensure that the business operation of the bank is consistent with international standards, BCEL emphasizes the financial services that takes into account responsibility for sustainable business operation in order to be trusted by our customers as well as all stakeholders underlying longterm value in alignment with environmental, social, and governance principles which are considered key indicators of bank's sustainable growth.

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Fund Mobilization size

BCEL always determines that fund mobilized is the foundation for business expansion in the period 2018 - 2022, focusing on fund mobilization strategies, thoroughly grasping the spirit of self-reliance in mobilizing maximum domestic capital with the motto " Modern, Quick reliable". The capital source of BCEL in the period of 2018-2022 has continuously grown over the years to meet the lending needs to develop the economy, especially the production and trade sectors. The average total fund mobilized growth over the years is 29,86%, reaching the set target, the absolute increased by 55.476,92 billion LAK.

Strengthening the attraction of foreign currency fund: in the period 2018-2022, in order to meet the increasing demand for foreign currency loans, BCEL always focuses on mobilizing foreign currency fund. Through promoting payment activities, interest rate policies and flexible forms of fund mobilization for foreign currency capital, at the same time, introducing a mechanism to manage capital and fees to break even internally, preferential usage rates Using capital appropriately, BCEL has made a leap in attracting foreign currency, foreign currency capital increased by an average of 44,59%, the absolute increase was 58.729,13 billion LAK.

Thus, the capital scale of BCEL is increasingly expanding. In particular, this is the bank with the largest capital scale in Laos. In recent years, despite being affected by the COVID-19 pandemic, fund mobilization has decreased in recent years but still ensures an increase and average growth of the industry.

BCEL's fund mobilized grew steadily and steadily because during the year the whole system always attached importance to fund mobilization, especially medium and long-term fund. The bank has applied diverse forms of fund mobilization to promote marketing, better implement customer policies, persevere with the policy of fund mobilizing from the population, creating a healthy balance between demand and loan.

In addition, the bank also constantly improves and enhances the quality of traditional fund mobilization products, while also developing new products and services and forms of fund mobilization for each customer group. Focus on applying and introducing diverse fund mobilization products suitable for each stage:

Fund Mobilization Structure

In terms of fund mobiliztion structure: BCEL's fund mobilization in the period 2018-20122 accounts for the largest proportion, with deposits accounting for over 90% of the total capital. Total deposits are mainly non-term deposits. Demand deposits increase on average annually by 36,20%/year, the absolute increase is 39,078.06 billion LAK, the proportion of demand deposits reaches 65,86% in 2022 (increased 7,43% compared to 2018). In which, the proportion of term deposits in 2018 reached 41,58%, decreasing to 34,14% in 2022. The fund mobilization structure mentioned above does not change much. Thus, BCEL's capital structure is relatively reasonable because bank's capital is a cheaper source of capital than other deposits used by banks as the main source of capital to conduct business activities.

Table 1: BCEL's Fund Mobilization

Unit: Billion LAK

Details	2018	2019	2020	2021	2022
Total fund mobilization	36.958,13	44.455,08	51.757,38	66.104,84	92.135,05
1. By sectors	36.958,13	44.455,08	51.757,38	66.104,84	92.135,05
Due to banks and other financial institutions	3.349,27	7.769,02	6.444,90	8.624,05	10.697,59
Business Organizations	30.195,74	36.686,06	45.312,48	57.480,79	81.437,47
Individuals	21.137,02	25.680,24	30.359,36	39.086,93	59.449,35
2. By Deposit	36.958,13	44.455,08	51.757,38	66.104,84	92.135,05
Daily Demand Deposit	21.591,91	26.529,50	31.514,48	41.466,26	60.675,97
Fixed Deposit	15.366,22	17.925,58	24.638,58	24.638,58	31.459,08
3. By curency	36.958,13	44.455,08	51.757,38	66.104,84	92.135,05
Domestic Currency	19.230,43	23.832,97	26.846,44	32.692,22	34.879,22
Foreign Currency	17.727,70	20.622,11	24.910,94	33.412,62	57.255,83

(Sources: BCEL annual report 2018-2022)

By economic sector: Capital structure by economic sector of BCEL in the period 2018 - 2022, reflected through Table 1

BCEL pays special attention to fund mobilization, considering this a top task, gradually restructuring capital sources in the direction of gradually increasing stable capital sources such as residential fund, term deposits, limit accepting demand deposits and loans from other credit institutions, gradually increasing medium and long-term capital sources to meet credit needs for socio-economic development. Residential deposits increase from 21.137,08 billion LAK in 2018 to 59.449,35 billion LAK in 2022, the absolute increased by 38.312,33 billion LAK, an average growth rate of 36,25%/year, accounting for 70% of total deposits in 2018 and 73% in 2022.

Capital market share: BCEL's capital market share is always higher than the top 3 largest commercial banks in Laos. In 2022, BCEL's market share in terms of capital is 54,54%% of the total capital of the economy, much higher than the capital sources of other banks: LDB: 9,37%, JDB: 6,53%, LVB : 5,85% and other 43,55%.

Table 2: Capital market share

Unit: Billion LAK, %

Name of Bank	Fund Mobilization	Proportion
Bankque Pour le Commerce Exterieur Lao Public (BCEL)	92.135,05	54,54 %
Lao Development Bank (LDB)	15.828,53	9,37 %
Joint Stock Development Bank (JDB)	11.026,45	6,53 %
Lao Viet Bank (LVB)	9.883,92	5,85 %
Other Bank	40.042,74	43,55 %
Total	168.916,70	100%

(Sources: BCEL annual report and Bank of Lao Statistic)

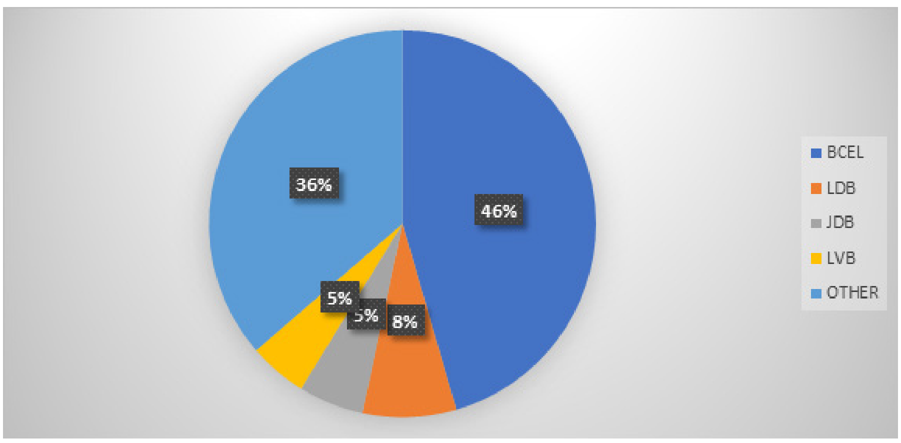

Figure 1: BCEL's capital market share

BCEL is the bank with the largest market share in capital mobilized from residents and economic organizations of the entire banking system in Laos. In 2022, BCEL's market share of fund mobilized from residents and economic organizations is 54,54%, LDB's market share mobilized from residents and economic organizations is 9,37%. JDB's market share of fund mobilized from residents and economic organizations is 6,53%, LVB's market share of fund mobilized from residents and economic organizations is 5,58% and its other bank is 43,55%.

Status of scale and growth rate of loan items

Table 3: Credit expansion

Unit: Billion LAK

Items	2018	2019	2020	2021	2022
Total loans	24.845,27	28.141,03	29.152,52	30.080,97	42.808,80
1. By term	24.845,27	28.141,03	29.152,52	24.845,27	28.141,03
Short term loan	1.825,03	1.581,90	2.541,42	2.714,30	4.560,76
Midium loan	14.431,80	16.311,13	16.009,86	17.234,24	24.929,59
Long term loan	8.588,44	10.248,00	10.601,24	10.132,33	13.318,45
2. By currency	24.845,27	28.141,03	29.152,52	30.080,97	42.808,80
Domestic currency	10.988,47	12.649,12	12.717,79	10.920,25	12.763,47
Foriegn currency	13.856,80	15.491,91	16.434,73	19.160,72	30.045,33

(Souces: BCEL annual report 2018-2022)

As of December 31, 2018, total loans and advances to customers reached 24.845,27 billion LAK, accounted for 64% of total assets on the balance sheet, accounted for 83% of total deposits and 36% of total bank loans in Laos. In which medium and long-term loans accounted for 92% of BCEL's total loans. Although Laos is an importing country, foreign currency lending is essential to import production equipment, industry materails, electrict nd post equipments etc., resulting in a foreign currency loan balance that is larger than a domestic currency loan.

By 2019, outstanding loans reached 28.141,03 billion LAK, an absolute increase of 3.295,76 billion LAK, an increase of 13% compared to 2018. Outstanding loans accounted for 60% of total assets, accounted for 63% total deposits and accounted for 38% of total bank loans in Laos. Medium and long-term loans accounted for 94% (of which medium-term loans accounted for 58%).

By 2020, outstanding loans will reach 29.152,52 billion LAK, an absolute increase of 1.011,49 billion LAK, an increase of 3% compared to 2019 with a low increase in outstanding balance due to the impact of the COVID-19 pandemic. Outstanding loans accounted for 60% of total assets, accounted for 63% of total deposits and 38% of total bank loans in Laos. Outstanding loans accounted for the largest proportion, medium and long-term loans accounted for 91% (of which medium-term loans accounted for 55%).

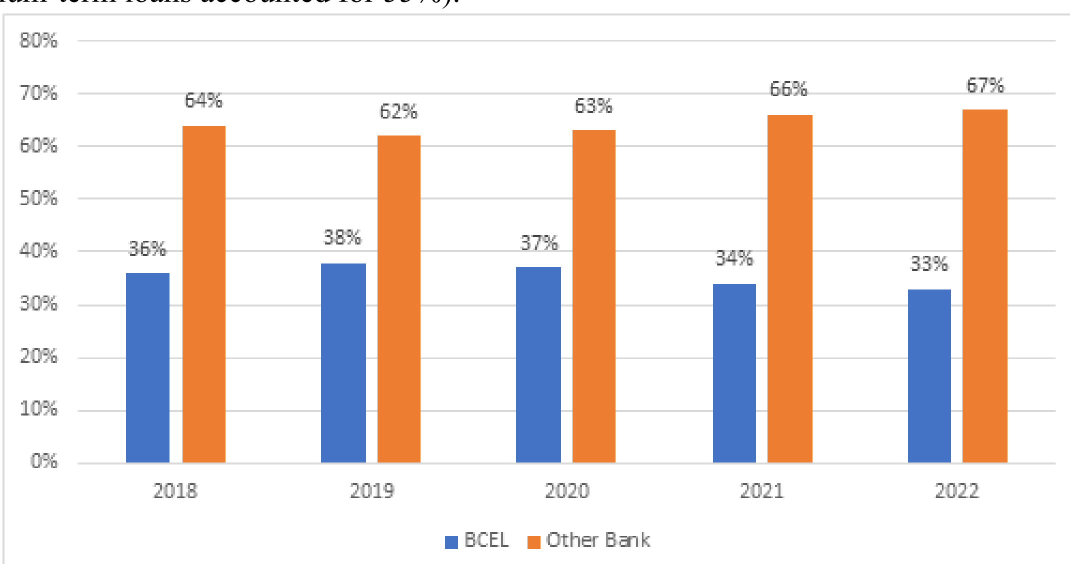

Figure 2: BCEL's credit market share compared to 41 banks

By 2021, outstanding loans will reach 30.080,97 billion LAK, an absolute increase of 928,45 billion LAK, equivalent to 3% compared to 2020; outstanding loan increased slightly due to the impact of the COVID-19 pandemic. From the beginning of 2020 to the beginning of 2022, it greatly affects the production and business development of customers. Outstanding loans accounted for 44% of total assets, 45% of total fund mobilization and 34% of total bank loans in Laos. Of which medium and long-term loans accounted for 91% (of which medium-term loans accounted for 58%).

By 2022, outstanding loans reached 42.808,80 billion LAK, an absolute increase of 12.727,87 billion LAK, equivalent to 42% compared to 2021. Outstanding absolutely increase because COVID-19 have been controled, production and business activities started again. Outstanding loans accounted for 49% of total assets and 46% of total deposits and accounted for 35% of total bank loans in Laos (of which, medium and long-term loans accounted for 89%).

The safetly of BCEL's business activities:

Non perfoming Loan

Item	2018	2019	2020	2021	2022
NPL/Loans overdue	742.874	827.346	862.915	1.158.117	1.652.420
NPL/Total loans	2,99%	2,94%	2,96%	3,85%	3,86%

(*Sources: BCEL annual report 2018 – 2022)*

BCEL's bad debt ratio in recent years has gradually increased over the years since 2018, bad debt was 742,87 billion LAK, equivalent to 2,99% of BCEL's total outstanding loan and accounting for 1,08% of outstanding loan all the bank in Laos. By 2022, bad debt was 1.652,42 billion LAK, equivalent to 3,86%, of BCEL's total outstanding loans, increased 0,87% compared to 2018 and accounting for 1,37% of the outstanding loans of all the bank in Laos . Bad debt increased due to the impact of COVID-19 pandamic, causing the business activities of loan customers to stop, and some customers even went bankrupt.

Profitability of BCEL

BCEL's income, expenses and profits fluctuated unevenly in the past period. 2018 was the year of the highest profit after tax in the period of 2018 -2022, after-tax profit in 2018 reached 353,65 billion LAK and in the following years, business results decreased year by year and fell to the lowest level in the year 2021, the profit is only 35,44 billion LAK due to the impact of the COVID-19 pandemic affecting the production and business activities of businesses in general and BCEL's borrowers in particular face many difficulties in business, making bad debts increase, leading to an increase in provision for credit risks. By 2022, after-tax profit will reach 228,19 billion LAK, an absolute increased of 192,75 billion LAK, equivalent to 544% compared to 2021. In general, BCEL's profit in 2022 seems to be very good, but when we Looking back at the business results in the three funds in 2022, all of them were nagative, but by the end of the year, the profit increased, according to the assessment, it could be due to the debt restructure.

Income

BCEL's net income grew very modestly in 3 years from 2018 -2020 compared to the previous year at 10%, 6%, 5%. By 2021, income reached 1.232,15 billion LAK, respectively (171,48 billion kip) decreased equivalent to -12,22% compared to 2020. By 2022, income will skyrocket to 228,19 billion LAK, an absolute increased of 522,88 billion LAK, equivalent to 42,44% compared to 2021. In 2021, the decrease in income due to the impact of the COVID-19 pandemic makes BCEL's borrowers face many difficulties, leading to customers having to freeze debts, freeze interest, and reduce interest for customers.

BCEL's income accounts for the largest proportion as interest income accounts for an annual proportion of over 70% of total income. 2021 only is the most difficult year for the economy in general and the banking industry in particular. BCEL is also one of the most affected banks in Laos, leading to a decrease in interest income to 61%, specifically, the proportion of net income over the years 2018 - 2022 is 73%, 72%, 77%, 61%, 82%. Next is service income, which has increased unevenly over the years but still ensures over 15% of total income, specifically service income over the years 2018 - 2022 is 19%, 16%, 15% , 22%, 17%. While payment and cash service fees are increasing with a proportion of over 50% of total service fee income, fee collection from guarantee services is decreasing with the proportion of 14% in 2018 to more than 5% annually 2021. This shows that BCEL's underwriting activities have not been focused on guarantee service. Foriegn currencies exchange, there is a tendency to gradually decrease even by 2022, the income from this activity is negative -38,15 billion LK.

Expenses

BCEL's total expenses increased steadily over the years from 2018 to 2022, specifically 2018 reached 1.808,53 billion LAK. By 2019 the cost increased by 280,27 billion LAK, equivalent to 15% compared to 2018. In 2020 expenses increased by 319,08 billion LAK, equivalent to 15% compared to 2019. By 2021, operating expenses will continue to increased 344,19 billion LAK with an equivalent increase of 14 % compared to 2020. The increase in total expenses is due to an increase in interest expenses and a very rapid increase in provisioning costs for credit risks because these two costs account for the largest proportion of total expenses that the proportion of interest expense over the years 2018-2022 is 55%, 57%, 55%, 54%, 52%, this expense has an annual increase of 12%, 19%,13%, 10%, 24%. Interest expense increased because fund mobilization has increased over the years despite the COVID-19 pandemic, but BCEL's fund mobilization continues to increase very high because people and businesses reduce investment in production and business during the year. The two-year period by disease control makes the production and business process very limited in both production, transportation and export and import.

The second is the cost of provisioning for credit risks, accounting for 12%, 15%, 20%, 23%, 25% of the cost of provisioning for credit risks, which increased steadily and had a very repidly growth rate compared with other types of expenses, specifically, the cost of provisioning for credit risks increased in turn from 2018 to 2022, by the year increased of 19 billion LAK, 93 billion LAK, and 159 billion LAK, 174 billion LAK, 263 billion LAK and equivalent increase over the years 9%, 42%, 50%, 37%, 40% of these expenses increased due to high increase in bad debts such as newly arising bad debts, bad debts converted into higher-risk debt.

In third is the staff salary cost in the period 2018-2022 with a decrease, employee salary expenditure in 2019 was 300,62 billion LAK, decrease 31,16 billion LAK, equivalent to 9% compared to 2018. But by 2020 this cost increased by 324,02 billion LAK, an absolute increased of 23,4 billion LAK, equivalent to an increase of 8% compared to 2019. By 2021, this cost will decrease by -18,21 billion LAK equivalent to decrease of -5% compared to 2020 and by 2022 this cost is increase 7% compared to 2021. Employee salary costs accounting for total costs over the years, 18%, 14%, 13 %,11%, and 9%.

Other expenses including administration costs, service fees and depreciation accounted for 14%, 13%, 13%, 11%, 13% of BCEL's total cost over the years.

Profit

Profit after tax has a negative growth fluctuation in 2018, 2019, 2020 and 2021 as follows: In 2019 decreased by -7% compared to 2018, but by 2020 and 2021, the profit strongly negative -26% compared to 2019 and -85% compared to 2020 due to the COVID-19 pandemic affects the production and business activities of banks in general and BCEL in particular.

Profit after tax on total assets (ROA) and profit after tax on equity (ROE) each year respectively: ROA in 2018 reached 0,99% and in 2019 reached 0,71% compared to In 2018, return on assets strongly decreased for the next two years, in 2021 reaching only 0,05%, but in 2022 this indicator increase again to reach 0,24% compared to the previous year. 2021 and ROE decrease gradually over the years from 2018 to 2021 respectively as follows: 18%,11%, 2% but this indicator increases again in 2022 to reached 10% compared to 2021. In these years, BCEL's risk provision increased dramatically, affecting ROA and ROE. In contrast, 2022 marks an increase in profit after tax. In general, the growth rate of profit after tax on assets and profit after tax on equity, although increased, was still lower than the average growth rate of the whole industry in the period 2018-2022 over the years (ROA: 0,80% ; 1,74% ; 0.62% ; 0,65% ; 1,35% and ROE: 10,89% ; 25,02% ; 11,96% ; 11,65% ; 15,84).

Capital adequacy

BCEL's equity ratio (CAR) decreased over the years during the research period from 2018 to 2022, the CAR over each year was 10%, 10, 8%, 7% and 6,29%. It can be said that BCEL's CAR decreases year by year, especially in 2021 and 2022, this criteria is lower than the minimum level prescribed by the bank of Lao. However, Laos commercial bank have a very clear division in terms of CAR as larger banks usually have a lower ratio than smaller banks. And indeed in the case of BCEL- which is the only equitized and largest-scale bank in Laos, the equity ratio fluctuates around the minimum, the highest level achieved by the bank is 10,64% in 2018. It shows that, with a high proportion of capital in the market, BCEL needs to actively increase its CAR to be able to avoid all kinds of risks in operations, such as credit risk, operational risk and market risk.

Criteria for assessing social sustainability

Employee benefits

Employee treatment policies include compensation policies, good employee benefits, training activities to improve the quality of human resources, provide career development opportunities for workers, and promote gender equality, creating fairness, paying attention to the lives and well-being of workers, human rights issues such as labor-related activities, etc.

Socail responsibility

BCEL takes part in social support in various aspects including donation application called "BCEL OneHeart" which is among key projects in promoting and further continue BCEL's Corporate Socail Responsibility or CSR which is a product that optimize the bank's advantages of technology and innovation in social support by acting as an intermediary channel that facilitate the donors and targeted recipients in fund mobilization. Moreover, the application is easy, convenient, quick, and transparent tool that can check donation information that entrusting both donors and targeted recipients. With this application, several sectors can easily participate more in improving the living conditions, life quality as well as the better society.

As of 2022, BCEL OneHeart comprises 82 projects amounted over 6.650 million LAK and BCEL has contributed to the society through various forms of support including medical equipment for hospital during COVID-19 pandemic, helping the underprivileged people and funding the schools construction in rural areas, other supports strataled 78 projects amounted over 0,60 million LAK.

Criteria of for assessing environmentally sustainable banks

BCEL adopts sustainable development as a model for bank's practice through providing opportunities to employee attending seminar titled "Dialogue on Responsible Business Practice in Lao PDR" to perceive the sustainable economic growth as well as human rights and environment protection. Furthermore, the employees are frequently assigned to attend other seminars related to environment management.

BCEL takes part in environment protection by utilizing digitalization including applying advanced technology in banking service and at work in order to reduce paper usage.

Educate employees in strictly emphasizing environment protection by issueing a saving policy covering mainly the energy saving as well as putting stickers about reducing environmental impact of materials on water closet walls and other places, notice on energy saving awareness and recycling.

Participates in several activities for cleaning up as well as planting on special occations.

Liquidity criteria

The liquidity of commercial banks is evaluated based on two criteria: the efficiency of fund mobilized and the ratio of highly liquid assets.

The loan/deposit ratio (LTDR) of commercial banks according to international practices is usually from 80% to 100%. Currently, Lao commercial banks have two ways to calculate the loan-to-deposit ratio, that is: according to the calculation method of the world when the total deposit includes only customer deposits (LTDR); The second calculation method is according to the decision No. 296/BOL of the State Bank of Laos when the total deposits in addition to customers' deposits also include deposits of credit institutions and the issuance of valuable papers (LTDR1). If applied according to the first calculation method, the LTDR ratio of BCEL in the research years is relatively low, from 2018 to 2022. Thus, the bank's ability to raise capital is developing very well in the first market.

Loan to total assets (LAR) shows how much money the bank will use with 100 LAK of assets to lend directly to customers. Typically, this percentage will range between 70% and 80%. Accordingly, BCEL's LAR in the research years from 2018-2022 almost always has this rate below 70%. This shows that BCEL has not improved the efficiency of using its own assets in the supply of capital in the market, and when compared with the results obtained by BCEL over the years, it shows the efficiency of capital use of the company. BCEL is relatively low.

Achievements:

BCEL is the largest commercial bank in Laos in terms of total assets by the end of 2022, reaching 94.493,01 billion LAK, accounting for 1/3 of the total assets of the whole banking system (272.330,54 billion LAK) in Laos. With its efforts, BCEL has gradually increased its credit rating with competitors in the economy, thereby attracting more customers. BCEL is the first bank, a pioneer in Laos in innovation in applying modern science and technology in the operation process and offering diversified and modern products and services to meet the needs of customers. BCEL is the only bank that implements Basel II, which regulates criteria according to international regulations and has built a regulatory risk management model. In addition, BCEL's staff is professionally trained both domestically and abroad, capable of absorbing new knowledge and applying modern technology well.

Limitations and Reasons

Limitations:

Although, BCEL is a large bank in Laos, but its relatively low equity (2.357,96 billion LAK) accounted for 0,87% of total capital (total assets 94.493,01 billion LAK) very business activities has a reputation and has more advanced technology than other banks, but too low equity can affect the bank's operational safety. And BCEL's asset size increased dramatically, but when assessing income and profit, it was found that the results achieved were not commensurate with the growth rate of assets. Regarding service activities, a variety of credit products and services have not been built and developed to limit risks and not focus too much on large customers.

Reasons

The period 2018-2022 is the period when the world economy is facing a global financial crisis due to the trade war between the US and China and the impact of the COVID-19 pandemic on the global economy growth slows down. Laos's economy is especially difficult when inflation reaches a very high level of 49% from the end of 2021 to the beginning of 2022, negatively affecting the operations of businesses - the main customers of commercial banks.

Laos's capital market is still weak, making it difficult for BCEL in particular and the banking system in general to increase equity capital. Besides the capital market, Laos's bad debt trading market has not yet been formed, from now on, handling collateral assets to recover bad debts becomes more difficult for BCEL.

People's consumption and spending habits. In Laos, there are many people who have mobile phones but do not have accounts opened at banks. The reason may be due to geographical conditions that prevent them from accessing the bank's services and products. Another reason is that these people have the habit of using cash transactions and payments;

The number of BCEL employees is continuously increasing but unevenly across branches and transaction offices. There is also a gap in the quality of staff between branches. Although some branches and transaction offices have a large number of counters, the structure between transactions is different

BCEL's equity capital accounts for too small a proportion of the bank's total assets (less than 5% in the years studied). The equity/total assets (ETA) ratio also tends to decrease over the research period, showing ineffectiveness in increasing BCEL's equity capital.

Solutions:

Measures to increase the size of equity

BCEL's equity to total capital is relatively low, to ensure operational safety, the bank can increase equity by: (1) issuing more shares to existing shareholders or shareholders strategic investment at home and abroad, but this measure is only implemented when the bank operates effectively. (2) stock dividend will help the bank increase its own capital from retained earnings, but this measure is often contrary to the wishes of some shareholders. (3) issuance of bonds and certificates of deposit

Measures to improve the quality of lending activities

BCEL has two main customer groups: economic organizations; and groups of individual and other customers. Thus, banks need to have separate measures for each of their customer groups in providing banking services and products.

First, for the group of customers of economic organizations: (1) divide them by type, field, industry, and profession, (2) by type of enterprise with state-owned enterprises and limited companies, joint stock company, foreign-invested enterprise, (3) By industry, there are agriculture, forestry and fishery, manufacturing and processing industry, build, Consumer loans……

Measures to improve the quality of investment activities

The first is to complete and standardize documents regulating investment activities of the bank, taking that as the basis for implementing investment processes and procedures. Risk regulations in investment activities should also be specified in these documents. Along with that, diversifying investment channels will help BCEL both reduce risks in investment, increase profits in investment activities, and increase liquidity.

Measures to improve risk management capacity

First, BCEL needs to perfect the system of general credit risk management documents for its entire banking system, from the head office to branches and transaction offices. Procedures and processes in credit risk management need to be completed and specifically guided, from regulations on credit products and corresponding interest rates for each customer group, to the lending process, how to decentralize approval authority; the roles and responsibilities of the relevant actors should also be specified in detail; and finally the regulation of the bank's internal rating system.

Measures to improve service quality

For payment services: First of all, BCEL needs to offer a variety of payment products and services to help people improve their cashless habits. The bank needs to upgrade its core banking system in the process of diversifying its services and products to make the payment and transaction process faster and safer. As mentioned in the previous solution, BCEL also needs to actively cooperate with Fintechs to provide more services and products for customers and the economy. In addition, the developed economy has appeared a lot of foreign transactions. To support its customers in cross-border transactions and payments, BCEL needs to expand its network of operations to countries, can open foreign currency accounts at banks of countries, or can open its own branch.

For foreign currency trading services: BCEL needs to have an appropriate pricing policy in spot foreign currency trading or foreign currency derivatives. Buying and selling in large quantities at a competitive price will sometimes bring unimaginable profits to the bank.

Solutions to improve the quality of human resources:

Although currently, high technology is used, human resources also play an equally important role as an important factor determining the existence of the bank. Thus, it is necessary to train and improve the number of human resources such as standardizing job titles and improving skills in using modern technology.

CONCLUSION

The paper assessed the sustainability development of BCEL, in particular, assessments of customer marketing capabilities, market share about fund mobilization, outstanding loans, profitability and paymentability.

The results of the study show that BCEL is interested in and committed to sustainable development, but there are many obstacles in the implementation process, including obstacles that need to be resolved quickly. Only with these barriers can the successful implementation of a safe, effective and sustainable development strategy for the commercial banking system, such as the completion of a legal framework for sustainable development, improve quality human resources and capacity building, and improvement of environmental and social risk management systems.

Based on the results of the situation analysis as well as the assessment of the sustainable development of BCEL, the paper proposes solutions for the sustainable development of BCEL in line with the trend of international integration. Firstly, commercial banks need to improve consistently and soundly, including raising capital adequacy to protect shareholders, investors and customers, and improving the quality of their assets and improving operational efficiency.

The article deeply evaluates the current state of BCEL's operations in the period 2018-2022. Using statistical methods, comparisons, analysis and evaluation, the article highlights achievements, while pointing out basic weaknesses and limitations of BCEL for sustainable development.

Based on the above causes and problems, the article has built groups of solutions for sustainable development of BCEL. That is a system of solutions: Solutions to improve the quality of human resources, increase risk management capacity, modernize information technology to develop digital banking, diversify products and services, and solution groups. exploiting capital sources, market and customer solution groups

With the above basic content, the article has completed the proposed research goal. The research on this topic is important in both helping BCEL systematically approach development theory and proposing specific solutions for BCEL for sustainable development.

Although the topic of research is not new, sustainable development is mentioned many times in industries and fields, but there are no standards for sustainable development for the commercial banking system in Laos, so the article does not avoid from certain shortcomings. The author hopes to receive comments from teachers, economists, readers and colleagues to improve the article.

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STRENGTHENING THE MANAGEMENT OF BALANCING THE STATE BUDGET TO CONTRIBUTE TO CURBING INFLATION IN VIETNAM IN THE COMING TIME

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Abstract: *The State budget plays a very important role in all soci-economic, security, defense and foreign affairs activities of Vietnam, which is a tool for the State to exercise macro control and macro balance of the economy, because the State Budget is the State's largest centralized monetary fund. Through the State Budget, financial sources focused on the State in the form of tax collection, fees, charges... will be used by the State to carry out its functions and tasks. In particular, when the inflation rate has positive and negative impacts on the economy and society, strengthening the management of balancing the state budget closely associated with curbing inflation is an urgent requirement. Vietnam has proactively implemented many solutions to manage the State budget reasonably and effectively, contributing to curbing inflation and promoting the country's economic growth and development. However, the implementation process is also facing some challenges and risks. The article offers a number of recommendations to improve management of the State budget balancing in order to contribute to stimulating growth, curbing inflation, and achieving equality and social progress.*

Keywords: the State budget balancing, management of the State budget balancing, inflation.

1. INTRODUCTION

The State budget is an important part of the national development. Managing the State budget appropriately and effectively is a special issue that receives special attention in any country, especially in a context where the global economy is experiencing major fluctuations such as: rising high oil prices, the Russia - Ulraine conflict, the financial crisis in the US..., inflation occurring in many countries around the world. Therefore, the issue of controlling inflation is extremely urgent, requiring financial management measures to ensure the effective implementation of strategic goals on socio-economic development, at the same time, to properly resolve the relationship between economic growth and current inflation control in Vietnam. With the above way of posing the problem, within the scope of this article, the author would like to mention the following contents:

2. RESEARCH OVERVIEW AND RESEARCH METHODS

The study on renovation of the State budget balancing has been mentioned quite a lot in articles and researches, both at home and abroad. The issue of the management of balancing the state budget is an indispensable, if not decisive, content in the process of innovating the state budget management. Martin, Lawrence L., and Kettner (1996) when studying the evolution of theories of state budget over time, such as: from itemized budgeting to task-based budgeting, program-based budgeting, to output-based budgeting compared and showed progress in the above budgeting theories in the study "*Measuring the Performance of Human Service Programs*" - Measurement measure the performance of human service programs, and show the superiority of the results-based budgeting approach. The implementation of the output budgeting approach answers the question that public finance managers always have to ask: "*how should I decide how to allocate X dollars to activity A instead of to activity B*" [3]

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In the Textbook "Public Economics", J. Stiglitz (1995), Public Economics, Science and Technology Publishing House, believes that the State should spend its budget to provide public goods and support the health, education, national defense, implementation of some social security policies..., but it is necessary to choose reasonable solutions based on the historical circumstances, because the goals of efficiency, fairness and stability that the State pursues may conflict with each other [4].

The article "*Fiscal Austerity and Public Investment*" - *tightening finance and public investment* (2011) by Wolfgang Streeck and Daniel Mertens, surveyed the public investment practices of three countries: the U.S., Germany and Sweden from 1981 to 2007 and concluded that these three countries tended to increase investment in education, research and development, support for families, and labor market policies. In this study, the authors also pointed out the relationship between public investment and investment in social policies, in limited financial conditions, how public investment should be made to achieve high efficiency, limit public debt and State budget deficit [2].

In Vietnam, recently, before the requirements of supplementing and amending the State Budget Law, there have been many research works on the state budget in each aspect of revenue, expenditure, and decentralization of the state budget... in the form of scientific works at ministerial and academy levels, theses and scientific articles published in specialized journals. However, separate research on the impact of state budget management on inflation has not received much attention from research and management agencies; sporadically, some authors have paid attention to research on the budget cycle. State budget follows the approach of researching each process area such as the process of preparing, executing and paying, finalizing the state budget, auditing the state budget with inflation in the form of scientific articles published in specialized journals or posted on websites, specifically:

The author Cao Ngoc Xuyen, Deputy Chairman of the Finance and Budget Committee, National Assembly Standing Committee (2011) in the Article *"Improving the process of budget decision by the National Assembly"*, said that the National Assembly Standing Committee has promulgated the Regulations on making, verifying and submitting to the National Assembly for making the decisions on the state budget estimates, central state budget allocation plans and approving the state budget settlements, which prescribed the order, deadlines, responsibilities, forms for making and sending the state budget estimates and finalization reports [7].

The Article: *"The relation between the preparation and implementation of the state budget and inflation"* (2011) is implemented by Dr. Vu Si Cuong, who is the member of the policy advisory group, the Ministry of Finance and posted on www.sbgov.vn/wcm/conect/ [1]. In this article, Dr. Vu Si Cuong has a preliminary assessment of the state budget estimation and implementation in association with the current inflation situation in Vietnam. Maybe due to the framework of an article, the author does not have the conditions to analyze the advantages and disadvantages of the current state budget process in Vietnam.

The above topics and research projects have built scientific bases and drawn practical experience on some basic contents of state budget management, especially the scientific basis of process establishment. State budget management, state budget allocation, improving the efficiency of state budget management, as well as providing diverse solutions to improve the efficiency of state budget management at the national level. .. However, there has not been a long-term research project in the form of a separate scientific topic on the impact of state budget management on inflation from a theoretical perspective as well as assessing the current situation. From the current status of research on inflation, it shows that implementing research on balanced state budget management to contribute to curbing inflation is extremely necessary to contribute to *stimulating growth, stablizing economics, and implementing the equality and social progress.*

In order to achieve the above goal, this study uses mainly qualitative research methods to analyze and synthesize theories and previous studies on state budget, state budget management, and conclusions, combining the research on theoretical issues with assessment of the actual situation of inflation in order to clarify the effects of state budget management on inflation in Vietnam, and on that basis form a scientific basis for proposing come up with solutions to strengthen balanced management of the state budget, contributing to curbing inflation in Vietnam in the coming time.

Some general issues about management of the State budget balancing

The State budget balancing

Viewed from the perspective of its nature, the State budget balancing is the balance between the revenue sources that the State mobilizes and focuses on the State budget in a year and the distribution and use of that revenue source to satisfy the needs of the State spending in that year.

– From an overall perspective, the State budget balancing reflects the relationship between revenue and expenditure in a fiscal year. It is not only the correlation between total revenue and total expenditure but also shows the reasonable allocation between the structure of revenues and the structure of expenditures of the State budget.

– In terms of the State management decentralization, the State budget balancing is the balance of revenue allocation and transfer between budget levels, between central and local levels and between localities to carry out the assigned tasks and functions. From the above, we can simply understand that the State budget balancing is an important part of fiscal policy, reflecting the adjustment of the interactive relationship between State budget revenues and expenditures to achieve the socio-economic goals that the State has proposed in each specific field and area.

The role of the State budget balancing

The State budget balancing is an important tool for the State to intervene in the national socio-economic activities. With that decisive role, the State budget balancing in the market economy has the following roles:

– Firstly, the State budget balancing contributes to the macroeconomic stability. The state implements the State budget balancing through tax policy, annual spending policy and determines the specific level of overspending, which has many impacts on economic activities as well as the international trade balance. Thereby, it contributes to stabilizing the implementation of macroeconomic policy goals such as: growth of average income in the economy, reduction of unemployment rate, inflation which is maintained at a stable level and can be estimated.

– Secondly, the State budget balancing contributes to the effective allocation and use of financial resources. To ensure this role, right from the time of preparing the state estimate, the State has chosen to present the reasonable priorities in the State budget allocation and the close connection between socio-economic development strategies and budget planning.

– Thirdly, the State budget balancing contributes to ensuring social equity and minimizing inequality between localities. In Vietnam, each region has a different socio-economic condition and there are regions with very difficult socio-economic conditions that affect people's income and quality of life, and there are regions with very favorable and developed socio-economic conditions for the people's income and lives. The State can mobilize resources from high-income people and economically developed regions.

The State budget balancing in Vietnam

During the process of transforming Vietnam's economy under the market mechanism with the State management following the Socialist orientations, the operations of the State budget in general and the State budget balancing in particular have undergone gradual changes in quality.

Revenues from taxes, fees, charges and other revenues as prescribed by law are fully summarized and the State budget balancing, in principle, is not tied to specific spending tasks. The promulgation of budget collection policies must ensure the principle of budget balance in the medium and long term and implement commitments on international integration. The State budget is balanced on the principle that total revenue from taxes, fees, and charges must be greater than total regular expenditures and contribute to increasing accumulation for development investment spending; In case there is still overspending, the overspending amount must be smaller than the amount spent on development investment, aiming to balance budget revenues and expenditures; In special cases, the Government submits them to the National Assembly for consideration and decision. In case of budget surplus, it will be used to pay principal and interest on State budget loans

Loans to offset State budget deficits can only be used for development investment, not for regular expenditure.

3. RESEARCH RESULTS

During the period 2016 - 2020, the economy was strictly regulated so the inflation rate was always stable at 4%. The year 2020 is the time when the Covid - 19 pandemic had complicated changes, strongly affecting the growth of different fields and industries.

In 2021, despite being affected by the Russia - Ulraine conflict and global supply chain bottlenecks during the Covid-19 pandemic, Vietnam's inflation was still well-controlled with an inflation rate of 1.84%. Currently, Vietnam is among the few countries with an average inflation rate of 4-6%.

Entering the year 2022, Vietnam's inflation will increase by 3.15% compared to the average rate in 2021, ensuring the inflation control target set by the National Assembly, but still higher than the 5-year average inflation rate for the period 2017 - 2021 (2.98%). Among them, some product groups had very high increases compared to the 5-year average increase such as transportation, beverages, household appliances, culture and entertainment; Some product groups had strong deceases, mainly product groups under the State management such as healthcare and education [6]

In 2022, although inflation was still under control, it was higher than the 5-year average inflation rate for the period 2017 – 2021; this caused a number of positive and negative effects on the economy and society, specifically:

Regarding positive effects: When commodity prices increase, typically gasoline prices increase, the revenue for the State budget is supplemented through increased revenues from oil, revenue from import and export taxes... .The revenue from crude oil will reach 77 trillion VND in 2022, an increase of 72.5% compared to 2021, mainly due to higher oil prices compared to estimates (on average reaching about 105 USD/barrel, an increase of 45 USD/barrel compared to estimates); Besides, import and export activities increased sharply, along with rising commodity prices, so the balanced revenue from import and export activities also increased, estimated at 280 trillion VND, an increase of 29.7% compared to 2021.

Regarding negative effects: Inflation has impacts on the economy such as:

(i) Reduction in State budget revenue: Oil prices and prices of raw materials and fuel inputs for production increased, causing impacts on domestic production and business activities. Commodity prices increased sharply while income had not yet been adjusted, causing income to fall. Consumers' real income decreases, reducing the purchasing power of the economy, causing a significant impact on economic growth and State budget revenue.

(ii) Effects on public debt: When commodity prices, interest rates and inflation increase, it becomes difficult to mobilize government bonds and increases public debt mobilization interest rates due to increased interest expenses of the State budget. In the long term, if prices and inflation increase, it can worsen the difficult situation of the global and domestic economies, causing macroeconomic instability and affecting major balances of the economy…., including State budget revenues and expenditures and ensuring public debt sustainability...

(iii) Impact on the reallocation of State budget expenditures for socio-economic development tasks: The National Assembly passed the Resolution No.43/2022/QH15 in 2022 on fiscal and monetary policies to support the socio-economic recovery and development program, including adjusting and reducing value added tax (VAT), reducing environmental protection taxes; extending, exempting, reducing taxes, fees, charges and rent of the land... to limit the negative effects of rising commodity prices and contribute to controlling inflation . The Government has made cost savings, cut some unnecessary expenses, and has not implemented some expenses such as adjusting the base salary increase to be able to mobilize resources to implement the Socio-economic Recovery and Development Program with the goal of giving priority to solving economic difficulties.

In 2022, rising commodity prices also had impacts on the implementation of development investment spending and implementation of public investment projects. The sharp increase in raw material prices and costs reduced the profits of contractors and many investment projects had to recalculate options, waiting for the stabilized prices.... leading to a situation where many projects could not be implemented or were delayed.

(iiii) The State's price administration and management is affected: Price management is always in a proactive state, closely monitoring and ready to respond to any arising situations, especially for many important items under State management such as textbook prices, prices of agricultural product supplies, energy... Besides, the management of gasoline prices must closely follow market price developments, to make appropriate adjustments. In 2022, the joint ministries of Finance - Industry and Trade issued 34 price adjustment documents, of which the price of A95 gasoline decreased by 2,590 VND/liter; E5 gasoline price increased by 2,580 VND/liter and diesel price increased by 4,030 VND/liter.... [10].

The cause of inflation in Vietnam in recent times can be attributed to the following main reasons:

- Inflation due to a sudden increase in consumer demand causes prices to increase.

- Inflation can also occur when the prices of production factors such as salaries, indirect taxes and raw material prices increase.

- Inflation occurs due to imports: Prices of imported goods often increase due to increased tax costs or increases in the world market, from which the selling price of goods will increase.

- Inflation occurs due to changes in demand: The relationship between demand and supply changes, leading to a situation where suppliers have a monopoly on providing a certain type of goods with unstable price policies and continuous price increases.

- Inflation is due to State budget management not being close to the actual situation in recent times. In the management and administration of the State budget, the impact of inflation has not yet been fully evaluated, so public investment is still too large and ineffective. Regular expenditures are not closely monitored, so they are still wasteful, and handling of State budget overspending is still not drastic. ....

Thus, among the causes of State budget inflation in recent times in Vietnam, the reason that the State budget management is not close to the inflation situation is one of the important causes. Therefore, in order to contribute to curbing inflation, in addition to the measures to curb inflation that the Government and other ministries are implementing, the issue of strengthening the management of the State budget balancing is extremely urgent and very important..

4. RECOMMENDATIONS

To contribute to curbing the current inflation in Vietnam in the coming period, a number of financial management measures to the State budget balancing should be implemented, including:

Firstly, it is necessary to implement drastic State budget revenue management solutions such as promoting administrative procedure reform, applying information technology, modernizing tax and customs management, State Treasury..., striving to complete the assigned revenue estimates at the highest level on the basis of continuing to perfect institutions and legal policies on State budget revenue, strengthening State budget revenue management Water ensures the principle of correct and sufficient collection. Focus on restructuring and improving the operational efficiency of state-owned enterprises, focusing on state-owned corporations and corporations; Accelerate the progress of equitization and divestment of state capital in enterprises, ensuring State budget revenue estimates. Besides, it is necessary to step up the fight against loss of revenue, transfer pricing, trade fraud, and tax evasion; Urging the collection of outstanding tax debts and reducing the rate of outstanding debts.

Secondly, State budget expenditures should be managed strictly, economically and effectively within the budget decided by the National Assembly, implementing the cuts in spending tasks that are not really necessary, slow in implementation, reducing the regular spending, increasing the development investment spending, with the priority given to investment spending to develop important socio-economic infrastructure projects.

Thirdly, it is necessary to ensure the budget balance at all levels; to strictly control overspending, public debt, contingent debt obligations of the State budget, local government debt, to ensure national financial safety, to improve the efficiency of loan use... aiming to reduce State budget deficit compared to estimates and reports to the National Assembly.

Fourth, it is necessary to strengthen inspection, examination, supervision, and improve financial and budgetary discipline in the performance of public duties to ensure openness and transparency in the management of State budget revenues and expenditures. water, public assets, land, resources... It is necessary to complete the legal corridor and inspection and supervision mechanism to ensure the stable and safe operation of the financial market and financial services; Strictly handle violations and promote fair competition among economic sectors.

Fifth, it is necessary to increase the application of information technology and strong digital transformation with the goal of moving towards digital finance towards an open, transparent and sustainable finance. It is necessary to build an integrated, public, transparent, and effective tax management information system that serves people and businesses well, ensuring synchronization in the direction of e-Government and digital transformation; Building integrated platforms and big data platforms to provide information for executive direction and information connection between tax authorities and state management agencies; Applying technology of the 4.0 Industrial Revolution to automate a number of tax management business processes and analyze big data to serve policy planning, revenue forecasting, and propaganda to support payers tax, risk management, compliance management and tax inspection, examination, investigation...; Developing information technology technical infrastructure, advanced, modern, synchronous equipment, ensuring smooth continuous, effective operations, information security and data security. The agencies such as: State Treasury, Taxation Departments, and Customs Departments can change the current service method from pre-audit to post-audit - risk management, reducing time and trouble for businesses and reducing costs for businesses, bringing benefits to society.

5. CONCLUSIONS

In a modern market economy, the State budget plays a particularly important role not only as a financial resource to meet the needs of operating the State's management apparatus, but also in influencing production, consumption and macroeconomic stability. Therefore, the State budget management is increasingly respected, contributing to socio-economic efficiency. However, this is a complicated process, requiring meticulous and thoughtful research and efforts not only from financial agencies but also the consensus and determination of all agencies. management agencies and beneficiaries of the State budget so that the State budget truly becomes a macroeconomic management tool of the State, contributing to orienting production development, regulating the market, contributing to stabilizing prices and stabilizing the state. stabilizing life, ensuring social security... contributing to curbing inflation, promoting growth and economic development of Vietnam./.

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PRIVATE ECONOMY - AN IMPORTANT DRIVING FORCE OF VIETNAM'S ECONOMY

PhD. Vu Thi Thanh Tinh[1], MA. Vu Thi Thuy Hang[2]

Abstract: *Private economic development is an issue of profound theoretical and practical significance for our country. From the mindset of abolishing the private economy, our Party now affirms that the private economy is an important driving force of the economy. The practical movements of economic sectors during the transition period to socialism have proven that private economic development brings breakthrough achievements to the country's economic development, contributing to ensuring security. social welfare, improving the quality of life for the people. The article focuses on clarifying the Party's perception of the role of the private economy, pointing out the contributions of the private economic sector in 35 years of comprehensive reform of the country, thereby proposing a number of solutions. solutions to continue developing this economic sector in the coming time.*

Keywords: *Private economy, role of the private economy, socialist-oriented market economy.*

RESEARCH RESULTS

1. THE DEVELOPMENT OF THE PARTY'S AWARENESS OF THE ROLE OF THE PRIVATE ECONOMY

The private economy, as an economic sector, has been raised to a new level in the Documents of the 12th Party Congress. That is an important result of the whole process of innovation and developing the Party's awareness of this economic sector.

In Resolution 16 of the VI Politburo (July 15, 1988) and the Resolution of the Central Conference During the 6th Central Committee, Session VI, our Party affirmed: The private economy is developed without restrictions on location, scale, and industries that are not prohibited by law.

The Resolution of the 9th Party Central Committee's 5th Plenum (March 2002) continues to affirm that the private economy is an important component of the national economy. The development of the private economy is a long-term strategic issue in the development of a multi-component socialist-oriented economy, making significant contributions to the successful fulfillment of the central task, which is the development of the economy, industrialization, modernization, and enhancing the country's internal strength in the process of international economic integration.

At the 10th Party Congress (April 2006), the private economy was officially recognized as an economic component based on the integration of two economic elements: individuals and small owners and private capital. It was clearly defined as follows: "The private economy plays an important role and is one of the driving forces of the economy".

The congress has approved a very important decision to allow party members to be a private economy. The role of the private economy continues to be confirmed at the XI Congress (January 2011) with the thesis: "The private economy is one of the drivers of the economy".2

At the 12th Party Congress, a new development in the Party's perception of the private economy was officially recognized. It stated: "Improve mechanisms and policies to encourage and create

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favorable conditions for the strong development of the private economy in most sectors and fields, becoming an important driving force of the economy" 3. This is one of the latest points in the documents of the 12th Party Congress. It reflects the Party's continuous innovation in economic thinking to align with the practical development of the economy.

The 13th Party Congress affirmed that strongly developing the private economic sector in terms of quantity, quality and efficiency "truly becomes an important driving force in economic development"4. This is the Party's major and consistent policy of promoting the private economy to continue to develop; while promoting the role of this economic sector in socio-economic development and strengthening national security and defense in the new situation.

2. THE ROLE OF THE PRIVATE ECONOMY AFTER 35 YEARS OF COMPREHENSIVE REFORM OF THE COUNTRY

2.1. Developing the private economy helps shorten the transition period to socialism

Marxism-Leninism has pointed out that during the transitional period, it is necessary to utilize non-socialist economic components for the purpose of constructing socialism. Regarding the construction of production relations during the transition to socialism, V.I. Lenin affirmed: "One cannot directly transition to socialism; it must be achieved indirectly, not hastily or abruptly, without adequate preparation." V.I. Lenin clearly stated the need to build new production relations through the indirect path of state capitalism: "To transition to communism, it is necessary to go through intermediate stages such as state capitalism."6.

The transitional steps through state capitalism are reflected in the new economic policies, which require temporary and partial concessions to capitalism in order to develop productive forces and gradually socialize production in practice. V.I. Lenin pointed out some forms of state capitalism such as concessions, agencies, leasing enterprises, mining districts, and so on7.

Thus, in both theory and practice of building socialism in Soviet Russia, V.I.Lenin also instructed that during the transition period it is necessary to use non-socialist economic sectors such as capitalism. State capital and private capital for the purpose of developing productive forces. V.I.Lenin considered it the optimal measure to arouse motivation, liberate production capacity, increase labor productivity, thereby solving post-war economic difficulties, and gradually building physical bases for socialism.

For Vietnam, our market economy is defined as an economy with "multiple forms of ownership and multiple economic components." The equal economic components, recognized as important integral parts of the economy, are developed in a long-term, cooperative, and healthy competitive manner, in accordance with the law.

General Secretary Nguyen Phu Trong affirmed: "The transition to socialism is a long, extremely difficult and complicated process... Vietnam moved to socialism from a backward agricultural country, ignoring the capitalist regime, The production force is very low, and after decades of war, the consequences are very severe, hostile forces often seek to sabotage, so it is even more difficult and complicated, and it is necessary to go through a long transition period with many steps and many intertwined forms of socio-economic organization"8.

Reality also shows that the imposition of production relations that are far ahead of the level of the backward production forces has become a drag. The driving force of production is not promoted, production power is not stimulated, which leads to stagnation not only for the productive forces but also distorts the purpose of perfecting production relations. When the private economy still has room to develop during the transition period, rushing to eliminate it is a mistake in both theory and practice. What needs to be done is to create a mechanism for the private economy to develop, or in other words, to stimulate, promote and use it for the purpose of modernizing the productive forces and building the material basis for socialism.

2.2. Contribution of the private economy to the process of socio-economic development and strengthening national security and defense.

During more than 35 years of the reform period, the private economy in our country has gradually developed, truly becoming an important material force in the economy. The development of the private economy contributes to realizing the goals of the transition period to socialism. The Party and State have guidelines and policies to encourage the private economy to develop without limiting scale and quantity. The role of the private economy in building the material and technical basis for socialism is enormous. The private economy has created a strong attraction for resources in the economy, creating a "rebound" in technology levels, vocational training for workers, increasing the ability to absorb capital and technology. Modern technology, promoting increased labor productivity. More importantly, the development of the private economy has contributed to perfecting modern economic and social infrastructure. These are the physical infrastructure that socialism needs.

Under the Party's leadership, the private economy has developed widely throughout the country; making an important contribution to economic development, mobilizing social resources for production and business, creating more jobs, improving people's lives, increasing the state budget, contributing to maintaining political stability, the country's social security.

Private economy in Vietnam has consistently maintained a relatively high growth rate, accounting for around 39-40% of GDP. It attracts approximately 85% of the labor force in the economy and plays a significant role in mobilizing social resources for investment in production and business development, economic growth, economic restructuring, state budget revenue, job creation, improving people's lives, and ensuring social security9. That helps workers and disadvantaged groups in society ensure stable livelihoods, even in the face of risks from natural disasters, epidemics as well as the impact of the Covid-19 pandemic.

We can see that large corporations such as Sun Group, Vingroup, Thaco, Masan, FPT, and others have been successful in various sectors that were previously only undertaken by state-owned enterprises, such as building airports, seaports worth billions of dollars, automobile manufacturing, and the aviation industry. A notable example is Sun Group investing in three major projects: Van Don International Airport, which was built in less than two years and received two awards for "Asia's Leading New Airport 2019" and "World's Leading New Airport"; Ha Long International Passenger Terminal and the Ha Long-Van Don Expressway. Companies like Thaco and VinFast are turning the ambition of "Made in Vietnam" automobiles into reality. Private Economic Groups such as Sun Group and Vingroup have created unique tourism projects, services, and products with international standards, such as Ba Na Hills, the Golden Bridge, Vinpearl resorts; the Danang International Fireworks Festival; and Carnival street festivals in various provinces and cities such as Hanoi, Ha Long (Quang Ninh), Sam Son (Thanh Hoa), and Danang, creating a strong boost for Vietnam's tourism industry.

Alongside the "significant achievements" in the economy, the position of private enterprise is increasingly elevated in political and social life. Currently, legislative documents related to the economy are required by the National Assembly and the Government to seek the opinions of the private business community through the Vietnam Chamber of Commerce and Industry (VCCI) before issuance.

In terms of national defense, the development of the private economy in recent years has directly or indirectly contributed to strengthening the people's heart position, stabilizing the socio-political environment, enhancing the potential political - spiritual strength, economic potential, scientific - technological potential of the all-people national defense. The widespread development of private economy, especially in rural areas, remote and border regions, and islands, has directly contributed to improving the overall national defense posture and gradually meeting the regular and unexpected needs of the armed forces. Individual economic household owners, small business owners, and private enterprises across the country have effectively implemented numerous military support policies, "repaid debts of gratitude" to the families of wounded soldiers, martyrs, and revolutionary contributors, and supported the activities of the people's military and self-defense forces. This demonstrates the significant potential, role, and value of private economy in the construction and defense of the nation. The viewpoint that private economy is "an important driving force of the economy" has been objectively reaffirmed by the 13th National Party Congress as a scientific and popular consensus.

3. SOME SOLUTIONS TO PROMOTE THE ROLE OF THE PRIVATE ECONOMY IN THE COMING TIME

To fully implement the viewpoint of the 13th National Party Congress on the development of private economy and create favorable conditions for its development in the direction of socialism, with greater contributions to socio-economic development and strengthening national security in our country, it is necessary to effectively implement the following fundamental measures:

Firstly, it is necessary to improve the work of ideological understanding and unify the perception of the role of private economy in the construction and defense of the nation. Enhancing awareness and correctly understanding the Party's policy of promoting the development of private economy as a strategic, consistent, and long-term issue in the development of a socialist-oriented market economy. This involves applying the laws of the compatibility of production relations with the level of productive forces in our country correctly. At the same time, there is a need to unify the understanding that recognizing and affirming the contribution of private economy, no matter how important it is to the economic and social development in our country today, is not a basis for "taking private economy as the center" or asserting that private economy plays the role of "the leading force of the national economy". From there, it is necessary to overcome both skepticism and illusions about the development of private economy. Raise the spirit of vigilance and struggle against the plots and tactics that exploit the Party's policy on the development of private economy to incite the privatization of our country's economy, with the aim of diverting the socialist orientation in the country's development.

Second, in the strong integration trend, the State needs to focus on reforming economic institutions in a synchronous manner, including: Compatible economic institutions and compliance with international integration commitments (adjustments, perfect economic law in accordance with integration commitments); defense institutions to protect legitimate interests and minimize unfavorable impacts when implementing integration commitments (anti-monopoly, protection of fair competition, technological and environmental standards, support support vulnerable subjects,etc); Supporting institutions to take advantage of opportunities and benefits of international integration (encourage competition, creativity, technological innovation,etc).

Continuing to improve the legal system, which is the focus on the Law on Defense, the Investment Law, the Law on Enterprises, the Militia Law,… to create a stable legal corridor for business entities operating. In particular, there must be sanctions that specify the obligations and interests of private enterprises for the cause of national defense consolidation; Strengthen the supervision and strict handling of cases of evading obligations to the cause of national defense. Create all opportunities for businesses to exploit and have an equal, public and transparent environment for all businesses. After all, it is also the best implementation of the economic role of the State. Regarding the management function, there also needs to be further innovation. Up to now, world practice has proven that there is no better way to handle the problem of the relationship between the state and the market than by formula: "The market is everywhere, the state is where it is needed". With such a state, it will certainly strongly promote the private economy to become the driving force for the development of our country's economy.

Third, promote support for the development of private enterprises, specifically focusing on effective support for two groups of businesses: startups and small and medium-sized enterprises.

For startup enterprises, it is important to have regulations and supportive policies regarding capital, technology, management, and other favorable conditions. These measures aim to facilitate the administrative establishment of businesses, their entry into competitive markets, and the development and consumption of new products.

For small and medium-sized enterprises, the largest and most dynamic force, with undeniable contributions to the economy and society, but also a vulnerable area, policies are needed. Specific support is clearly defined by law, eliminating all informal burdens, is easily accessible and allows effective exploitation of national resources.

DISCUSSION AND CONCLUSION

The development and contribution of the private economy have proven that the development of the private economy not only does not abandon the goals of socialism but, on the contrary, we utilize it as a necessary instrument during the transitional period to develop productive forces and increase material resources for the goals of socialism. The Party's policies and perspectives on the development of the private economy as an important driving force for the economy are correct and consistent with the laws of developing productive forces during the transitional period towards socialism.

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DEVELOPING THE CORPORATE BOND MARKET IN VIETNAM: AN APPROACH FROM THE BOND SUPPLY PERSPECTIVES

PhD. Tran Thi Viet Thach, PhD. La Thi Lam[1]

Abstract: *The corporate bond market (CBM) plays a very important role in the development of the financial market and the economy in each country. The supply of corporate bonds (CBs) is one of key factors contributing to the development of the market. On the basis of clarifying the role of corporate bond supply, the article focuses on evaluating the corporate bond supply of the Vietnamese corporate bond market (VCBM) in the period of 2019-2022, thereby proposing recommendations for developing the supply for the VCBM in the coming years.*

Keywords: *Corporate bond market, Corporate bond market in Vietnam, Bond supply, Corporate bond supply, developing corporate bond supply.*

1. CORPORATE BOND MARKET AND THE SUPPLY OF BOND MARKET.

Corporate Bond Market

A corporate bond is a debt security that a company issues in order to raise capital. The corporate bond market is the marketplace for exchanging corporate bonds. CBM is divided into 2 levels primary markets where new bonds are issued and secondary markets in which existing securities can be traded. The primary markets helps companies mobilize capital for their business operations and the secondary market creates liquidity for CBs. Therefore, operations of the primary market help develop the secondary market and vice versa.

CBM is an important component of national financial markets and plays a vital role in the development of financial markets and the economies, including:

Firstly, the CBM is an important channel for capital mobilization. CBM helps businesses to raise medium and long-term capital, reduce costs and time of capital mobilization and others obstacles which preventing them aproaching bank loans. When CBM operates effectively, it also helps reduce the burden of providing capital for commercial banks. Therefore, CBM contributes to stability and effectiveness of national financial market.

Secondly, CBM helps provide capital resources effectively in the economy. With strict requirements on information disclosure and transparency of CBM, participants are those who evaluate and monitor the issuers. Bonds of the reputable and strong financial companies are more attractive. So, the financial resources in the economy will be allocated to effective usage areas to improve productivity, jobs and added value for the economy.

Thirdly, CBM helps improve financial literacy and accelerate financial inclusion. When investors buy or sell bonds, they have to study and evaluate issuers' financial capacity. On the CBM, moreover, brokers and consultants are always willing to advise or provide useful information for investors. Therefore, investors have opportunities to understand financial instruments and financial markets in particular and improve financial literacy in general, thereby accelerating financial inclusion.

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The supply of Corporate Bond Market

Supply is the quantity of particular goods or services that sellers are willing and able to provide to the marketplace during a given of time. Demand is the quantity of a certain good that consumers are willing and able to purchase at various prices during a given time. In the marketplaces, supply and demand will together determine the price of goods or services. A transaction is established when the price satisfies both the buyer and the seller, matching supply with demand. If demand is higher than supply, the prices increase and the opposite occurs if demand is lower than supply. Along with the demand factor, the rich, diverse and quality supply is very crucial factor that increases the demand, thereby price of goods or services are effective.

On the CBM, bond supply is considered as the quantity of bonds available to the investors. Bond supply plays a fundamental role of the soundness of the market. CBs are financial instruments and quality of CBs depend on financial capacity of CB issuers. Indeed most investors, especially individual investors, their knowlegde is insufficient to understand and evaluate financial capacity of companies. In case the market has good and attractive supply sources, it will attract more investors, push demand of CBs, and the CBM will operates more effectively. On the contrary, the market lacks supply resouces, It operates ineffectively.

2. EVALUATING BOND SUPPLY ON CORPORATE BOND MARKET IN VIETNAM.

CBM in Vietnam (VCBM) was formed in the 1990s and started to develope in the 2000s. Since 2017, with a boom of internal life insurance market, VCBM has recorded a better growth and gradually became an channel for medium and long-term capital mobilization.

Along with development of the VCBM, the corporate bond supply have improved, types and quantity of bonds have significantly increased, specifically as follows:

2.1 The supply for the primary corporate bond market in Vietnamese

The first, the value and number of CB issuances have witnessed a robust increase in 2019-2021 and sudden drop in 2022.

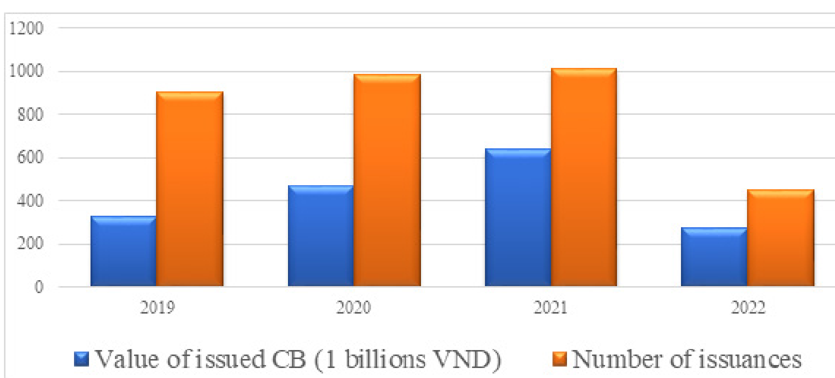


Chart 2.1: Value and number of CB issuances in the period of 2019- 2022

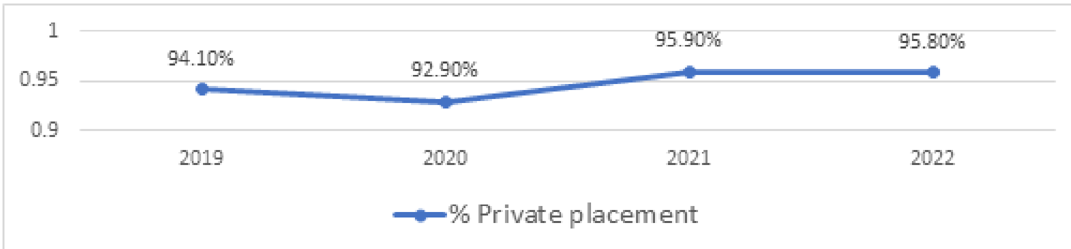
Sources: Report of VCBM 2019-2022

The value of issuances has experienced a staggering growth in the years of 2019-2021, and a deep plummet in 2022. During the years of 2020 and 2021, it has been remarked as a period of explosive growth of the primary market. On the side of the number of issuances, each year in the period 2019-2021, the number of issuances witnessed an upward trend, in 2021, the number of issuances reached a peak at 1012 issuances with the top-hitting value at 637,000 billion VND. In

2022, the issuance scale saw a tremendous decline, only 450 issuances with a marginal value of 270 billion VND.

The second, most of issuances took the form of private placement

Chart 2.2: The percentage of private placement bonds

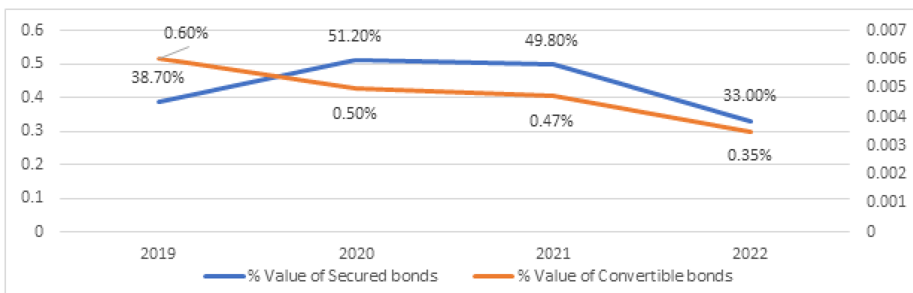


Sources: Report of VCBM 2019-2022

Most of issuers considerably took the private placement form to increase capital in the period 2019-2022 thank to the easier conditions of private offering. The value of private issuances always accounts for over 90% of the total value of issuances in each year. In 2021, 2022, the rate reached over 95%.

The third, bond supply were undiversified and unattractive.

Chart 2.3: Issuances of convertible bonds and secured bonds



Sources: Report of VCBM 2019-2022

In terms of the security, the percentage of secured bonds increased from 38,7% in 2019 to 51,2% in 2020. After 2020, secured bond issuances declined substantially and only reached 33% of total value of issuances in 2022. Besides, a large number of bonds got secured by the issuers' shares which didn't really protect investors.

In terms of the convertibility, non-convertible bonds issuances were recorded to be dominant during 2019-2022, the rate of issuance of convertible bonds are alway less than 1% of total value of issuances.

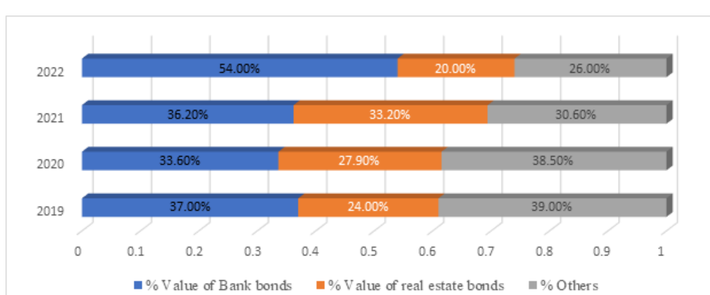
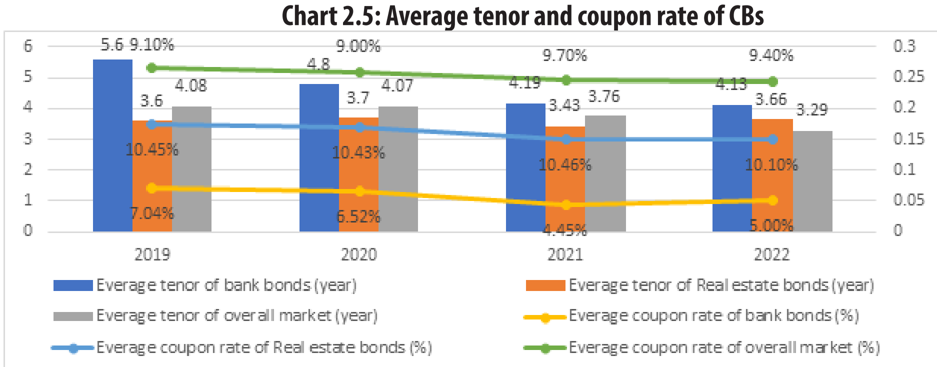


Chart 2.4: Sectoral structure of bond supply

Sources: Report of VCBM 2019-2022

In terms of the issuer, over 60% of the bond value were issued by Banks and real estate companies. In 2022, total insuance value of Bank and real estate sector accounted for 69,4%. Commercial banks made up a significantly higher proportion than that of real estate companies. In 2021, it was considered a boom year for issuing real estate bonds, with 33.2% of the total insuance value. In 2022, the real estate sector showed signs of recession, bond issuances of the sector significantly reduced, accounted for only 20% the total insuance value. Meanwhile, commercial banks steadily remained the biggest issuers.

Chart 2.5: Average tenor and coupon rate of CBs



Sources: Report of VCBM 2019-2022

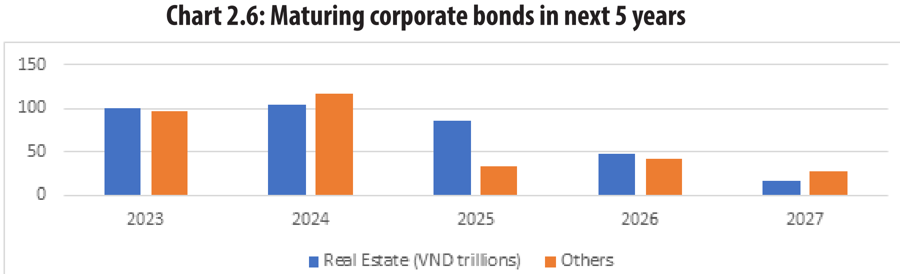
In terms of the tenor and coupon rate, the average tenor of overall market has gradually decreased in the period 2019-2022. In 2019, average tenor was 4,08 years and in 2022 was only 3,29 years. Everage rate of overall market has slightly raised in the period of 2019-2022, the rates went up from 9,1 % to 9.4% per year.

In general, bank bonds had a longer tenor and lower interest rates in comparing with others. Real estate bonds constantly held short terms and highest interest rates in the market.

The fourth, defaulted bonds increased.

According to the report of FiinRatings, there were 54 defaulted issuers at early Jan 2023. As of 17 March 2023, 69 issuers was unable to meet debt obligations with defaulted value of 94,43 VND trillions, representing 8,15% of total outstanding bond value, of which 43 issuers was real estate companies. In fact, the bond supply from real estate businesses have seriously threaten to the quality of supply in VCBM. Infact, about over 80% of real estate corporate bond value belongs to unlisted companies with little information transparency. According to experts' predictions, the real estate companies are going to cope with dificulties and challanges with down sales, scarce capital as Vietnam's real estate market remains quiet in the coming years. Meanwhile, the number of maturing real estate corporate bonds will still be quite big in the coming years.

Chart 2.6: Maturing corporate bonds in next 5 years



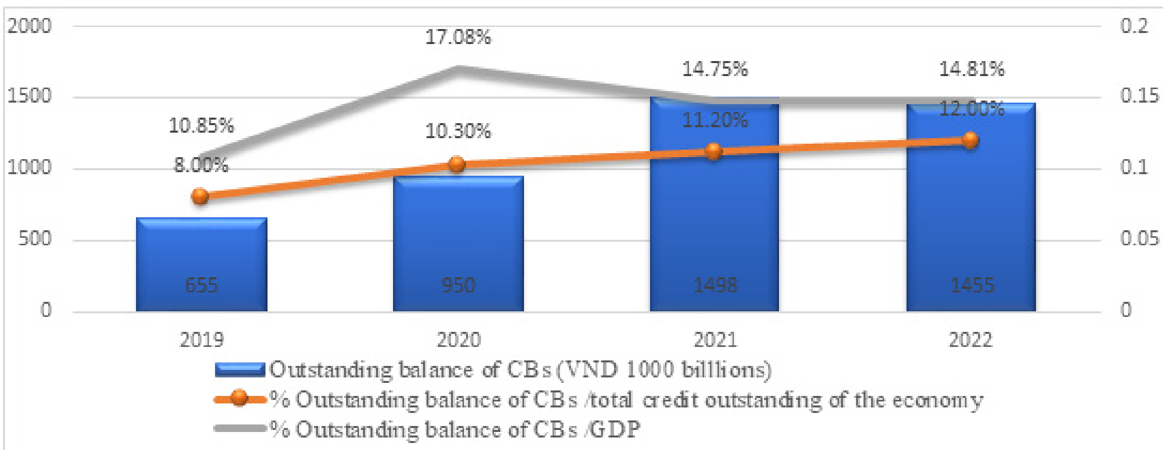
Sources: Report of FiinRating.

2.2. The supply for the secondary corporate bond market

The secondary VCBM divided into 3 channels: Listed bonds in Hochiminh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX) ; Trading platforms offered by institutions (banks and securities companies); and Direct OTC transactions. From the year 2023, all listed bonds have been traded in HNX according to the plan of reorganising the Vietnam stock exchange market.

The first, the supply of secondary VCBM was small.

Chart 2.7. Outstanding balance of CBs

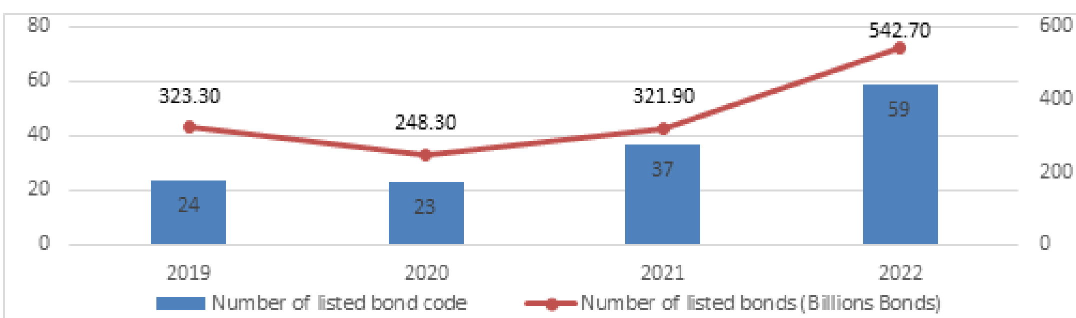


Sources: Report of VCBM 2019-2022

The VCBM size has increased considerably in the period of 2019-2022, achieved at 1.455 VND trillions, equivalent to 14,75% of GDP and accounted for 12% of total credit outstanding. However, in comparison to Southeast Asian countries, the VCBM size still limited at minimal fraction of GDP (in 2022, Malaysia: 54.3% of GDP, Singapore: 34.3% of GDP, Thailand: 25.5% of GDP).

The second, there was a few of listed bonds

Chart 2.8: The listed bonds in VCBM



Sources: Report of VCBM 2019-2022

Listed bond code increased during the years of 2019-2022. In 2019, 24 codes were recorded, of which 22 codes were listed on HOSE and the remaining 2 on HNX. In 2021, 2022 the number of listed codes saw a sharp leap , achieving 37 codes in 2021 and 59 codes in 2022.

The above analysis show that the CB supply in VCBM was considerably small, undiversified and low quality. This is an obvious explanation as well as concrete answer for quiet trading of the market, reducing investors' confidence and hindering market development in recent years.

3. RECOMMENDATIONS FOR DEVELOPING BOND SUPPLY IN THE COMING YEARS.

The first, enhancing the role of commercial banks for developing bond supply.

Bonds of Vietnam commercial banks are high-qualified supply sources. Currently, safety limits setting on commercial banks' operations have been tightened and international standards are applied gradually, especially with the reduction in the ratio of short-term capital for medium and long-term loans, Vietnam commercial banks are under pressures to mobilize medium and long-term capital. Besides, issuing subordinate bonds help bank to increase bank's tier 2 capital for complying the Basel Accord 2. Thus, issuing bonds by commercial bank in Vietnam both improves banks'capital and helps increase a quality supply for VCBM. In the coming time, banks should continue to issue bonds as follows:

- Commercial banks need to re-evaluate the scale, structure of mobilized capital sources and requirements of medium and long-term capital sources in the coming years. Thereby, banks should establish plans for medium and long term capital mobilization which must ensure: (i) The scale and term of capital mobilization must be consistent with the scale and term of loans and invesments in each specific period; (ii) Determining the channels for mobilizing with low costs, exploiting advantages of current customers; (iii) Offering attractive "combo" products based on characteristics of target customers.

- In case of issueing bonds for tier 2 capital: Since the VCBM has not really recovered, banks should choose the bonds with characterictics: (i) term of about 10-15 years; (ii) Floating interest rate based on 12-month term deposits at the bank; (iii) allowing to convert to common stocks or sell back to the issuers after at least 5 years of holding bonds.

- Banks should strengthen services related to CB issuance such as consulting and agents. At the same time, the State Bank needs to strengthen inspection and supervision to ensure that the bank's service provision always comply with regulations.

The second, Improving the efficiency of handling defaulted bonds

Defaulted bonds are considered to be a great and serious concern of investors. Therefore, to strengthen investors' confidence, these bonds are necessarily to be quickly and effectively handled. The issuers must prioritize repayment of matured bonds. Issuers need also to decrease costs and handle assets to strengthen cash flow for debt payments. For the secured bonds, issuers should prioritize selling secured assets and their other assets for repayment. For issuers with weak cash flow, it is necessary to enhance negotiations with investors for solutions such as changing to bond terms and conditions; repaying by assets other than cash; converting debt into capital. For the bonds held by commercial banks, banks should consider to allow issuers to extend the due date if issuers have plans for effectively restructuring their debts.

The commercial banks should review their bond portfolios and loan portfolios to control credit risks. On that basis, Banks should consider to support issuers through restructuring the issuer's debts, funding new loans...

The third, improving new bond issuances

In fact, the demand for bond issuance is remained remarkably high in the economy. To enrich good quality supply, it is necessary to improve the quality of new bond issuances, including:

- The Ministry of Finance should review regulations on corporate bond issuance, continue to amend CB issuance conditions. Especially, conditions for private placement should be seriously controled on issuers' financial capacity and repayment ability. Greater attention should be paid to all amendments in order to create more favourable enviroments for businesses with strong financial capacity and effective plans for using capital to expand bond issuances.

- Companies should improve the efficiency of internal management, business operations and push up digital transformation to promote their reputation, thereby taking full advantage to reduce costs and increase the efficiency of bond issuances.

The fouth, strengthening inspection and supervision of CB issuances and strickly handling violations of issuances.

The Ministry of Finance need to strengthen inspection and supervision of issuance activities, early detect violations to protect investors' rights and interests. Violating issuances have to be strickly addressed to improve the transparency and soundness of the market and investor confidence.

4. CONCLUSIONS

Supply plays an crucial factor on the market. In order to gain a stable development for the VCBM, the bond supply needs to be abundant, diverse and good quality. Therefore, paralleling with handling defaulted & violated bonds to consolidate current supply, The VCBM should promote new bond issuances with good quality. The solutions need to be synchronized, including strengthening legal framework for CB issuance and trading in secondary market, tightening inspection and supervision of issuance activities and effectively establishing and complementing plans for bond issuances from companies./.

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TRADE BARRIERS OF THE EUROPEAN UNION FOR VIETNAM'S SHRIMP

MA Nguyen Vu Minh[1]

Abstract: Research on trade barriers has never been more urgent than it is today as the globalization process becomes increasingly stronger. In Vietnam, as the economy develops more and more, the impact of trade barriers on export activities becomes more and more complicated. One of Vietnam's main export products that is significantly affected by these trade barriers is shrimp.

In recent years, the European Union (EU) market has tended to impose many strict trade barriers on seafood from exporting countries, which will cause many difficulties for Vietnam's shrimp. In recent years, although Vietnam's shrimp export activities to the EU have achieved great achievements and contributed significantly to Vietnam's GDP, they still reveal many limitations and difficulties, mainly difficulties in responding to EU trade barriers. The article focuses on analyzing the impacts of EU trade barriers on Vietnam's shrimp products and Vietnam's responses to these barriers.

Keywords: trade barriers, shrimp exports, European Union, tariff barriers, non-tariff barriers

1. OVERVIEW OF STUDIES ON TRADE BARRIERS FOR VIETNAM'S SEAFOOD PRODUCTS

In Vietnam, there have been studies on trade barriers that have been mentioned a lot in studies with rich and diverse content.

Research by Dinh Van Thanh and colleagues (2005) used research methods to solve the following issues: (1) system and analysis of regulations related to international trade barriers in various documents to better serve the research, teaching and practical activities of State management agencies and businesses. (2) research and forecast the possibility of these types of barriers appearing as well as solutions for Vietnam

Research by Bui An Binh (2013) has shown: (1) the current situation of trade barriers for Vietnamese seafood products in the US market, (2) the successes and shortcomings of seafood Vietnam in overcoming trade barriers to penetrate the US market during the period (1994 - 2012) since the US removed the trade embargo against Vietnam; (3) propose some solutions to help Vietnamese seafood overcome trade barriers in this market

Research by Tran Thanh Long (2013) used statistical methods to describe trade warnings and the number of lawsuits to clarify the effects of trade barriers on exports, including positive effects such as increasing costs, strict procedures, diverting trade activities and also positive effects such as motivating businesses to increase investment, increasing experience in responding to barriers . However, these research results are only based on the author's experience and arguments, the research does not have quantitative results.

Through the studies mentioned above, it can be summarized into the following main contents: Firstly, the studies have generalized the development of trade barriers in international trade, serving as a basis for the development of trade barriers in international trade, recognize the nature of trade barriers as a manifestation of new protectionism. Second, trade barriers have a huge impact, limiting international trade, but they can also be used as an effective tool to protect domestic

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production. Third, the trend of increasing trade barriers in the world and in the European Union market is an objective reality, associated with the development of the world economy. Besides the research results mentioned above, related research projects still have many gaps that have not yet been researched and clarified. That is: lack of studies that deeply and fully address the current situation and impact of the European Union's trade barriers on Vietnam's shrimp exports recently, lack of evaluation studies on factors limiting the ability of the Vietnamese seafood industry to respond to trade barriers. Therefore, the article focuses on analyzing the current situation of the European Union's trade barriers against Vietnam's shrimp exports and Vietnam's response measures, evaluating the results and shortcomings in the process implementation.

2. EUROPEAN UNION TRADE BARRIERS FOR VIETNAM'S SHRIMP

Due to its geographical location and harsh climate, moreover, the EU's seafood resources are below biosafety limits, forcing the EU to apply measures to limit exploitation and fishing while consumer demand still increasing rapidly. Therefore, to meet consumer demand in the bloc, the EU is forced to import seafood from American and Asian countries, including Vietnam. In terms of the structure of seafood products exported to the EU, shrimp is the product with the highest export turnover. For the last 3 consecutive years, shrimp has always been the leading key product in the seafood export structure to the EU market.

Vietnam's seafood exports to the EU have gradually decreased in the years 2017-2020, after increasing from 1.22 billion USD in 2016 to nearly 1.5 billion USD in 2017. In 2020, Vietnam's seafood exports Vietnam to the EU only reached 958.7 million USD, down about 26% compared to the previous year, this is the largest decrease in the period 2017-2020. One of the main causes of this decline is the impact of increasingly strict trade barriers from the European Union on Vietnamese shrimp.

Tariff barriers

The European Union – Viet Nam Free Trade Agreement (EVFTA) with major tax incentives has been helping Vietnam's shrimp initially take advantage of opportunities and boost exports to EU. However, most of these items are still subject to tax over a period of 3-7 years.

For shrimp products: since EVFTA comes into effect, the export tax of some shrimp products to the EU will immediately return to 0%, there are still some products that are still subject to export tax of 5 - 7 years with tax rates gradually adjusted from 18 - 20% to 0% such as shrimp code HS 03061794, shrimp code HS 16052110, ...

Non-tariff barriers

- Quantitative restrictions: These are measures that directly limit the volume or value of goods imported into a country. Therefore, it is highly protective, including import bans, quotas and non-automatic import licensing.

- Price management measures: Measures to manage import prices or selling prices in the EU market through regulating maximum prices, tax prices, fees and surcharges can have a direct impact. or indirectly to Vietnam's shrimp exports to the EU.

- Technical barriers and sanitary and epidemiological measures: measures to protect the environment, human and animal health, prevent bad actions,... that the EU considers appropriate , provided that such measures are not applied in a manner that constitutes arbitrary discrimination or unreasonable restrictions on international trade. The most common technical standard regulations used by the EU include: (1) Regulations for health and food safety; (2) EU standards on quality management; (3) EU regulations on environmental and resource protection (ISO 14000, EMAS, IUU, EU regulations on social responsibility).

- Temporary trade protection measures: including safeguard measures, anti-subsidy and anti-dumping measures. Recent trends show that the EU uses these measures quite often to restrict seafood imports into the EU market.

- Administrative management measures: Payment regulations, deposit regulations, goods size regulations, advertising regulations, customs clearance positions, ...

The EU currently applies a variety of barriers to control the flow of imported goods, protect domestic consumers and the environment. Since 2010, shrimp products imported into the EU must comply with IUU regulations (Illegal unreported and unregulated fishing). Accordingly, shipments must have information from the name of the fishing vessel, the name of the ship owner, the fishing means and the fishing area, the type of product and weight, the declaration of shipment at sea, in the port area, and the ship. receiving or receiving unit in the port... Thus, to export to the EU, businesses cannot use shipments of unknown origin or insufficient documents. The EU's imposition of the IUU yellow card in 2017 on Vietnam's seafood exports is one of the main reasons why shrimp export turnover to the EU market has fluctuated a lot in recent years.

3. CURRENT STATUS OF VIETNAM'S SHRIMP EXPORTS TO THE EU

Vietnam's seafood exports to the EU have gradually decreased in the years 2017-2020, after increasing from 1.22 billion USD in 2016 to nearly 1.5 billion USD in 2017. In 2020, Vietnam's seafood exports Vietnam to the EU only reached 958.7 million USD, down about 26% compared to the previous year, this is the largest decrease in the period 2017-2020. The cause of the decline in turnover in 2020 is due to the UK leaving the EU market, while this is the bloc's large seafood import market with import turnover from Vietnam ranging from 280 - 340 million USD/year. . Besides, the cause comes from the impact of the COVID-19 pandemic in the EU. In August 2020, the EVFTA Agreement took effect, which is important in promoting the export of Vietnam's seafood to the EU market.

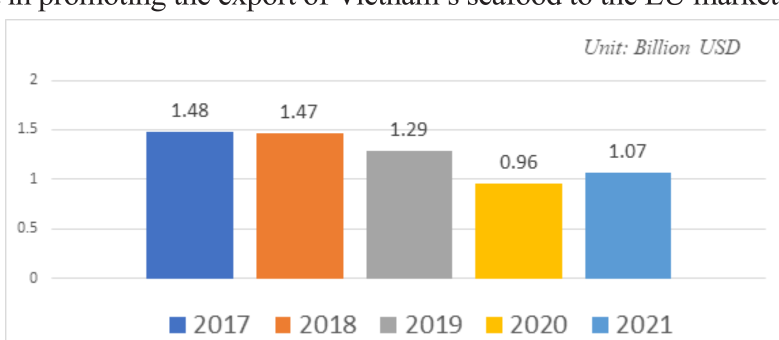

Figure 1: Seafood export turnover to the EU market in the period 2017 – 2021

Source: VASEP's Vietnam seafood export report for the years 2017 – 2021

In 2021, Vietnam's seafood exports have reached 8.9 billion USD (up 5.8% over the same period in 2020). Of which, Vietnam's seafood export turnover to the EU is about 1.077 billion USD, an increase of 12.3% compared to 2020, making the EU the third largest export market after the US and Japan. This is a positive result in the first year of Vietnam implementing the EVFTA, businesses have taken good advantage of the preferential conditions brought by this Agreement. This number could be even higher if Vietnam's seafood production in the third quarter of 2021 is not interrupted by the COVID-19 pandemic.

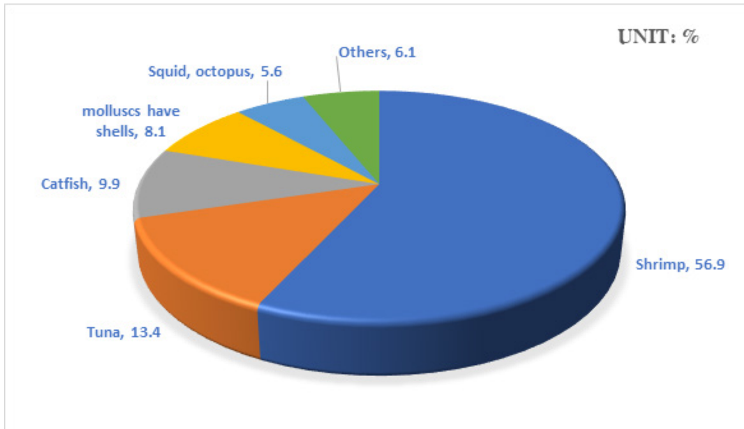

Figure 2: Structure of seafood products exported to the EU in 2021

Source: VASEP's Vietnam seafood export report in 2021

In recent years, shrimp has always been the leading key product in the structure of seafood exports to the EU. In 2017, shrimp exports to this market reached over 862.8 million USD, an increase of 43.7% over the same period in 2016 and the EU became the largest import market for Vietnamese shrimp (accounting for 22.2% of the total export value). Exports to the Netherlands increased by 70.5% to 224.2 million USD; followed by the UK and Germany with growth rates of 55.5% and 52.1%, respectively. In 2021, shrimp exports have reached 613,136 million USD, an increase of 18.6% compared to 2020 (517,108 million USD). Of which, exports to the Netherlands increased by 10%, to Germany increased by 25% and to Belgium increased by 19%.

Ranked second in this structure is tuna, with a proportion of 13.4% in 2021, an increase of 6.4% compared to 2020. Catfish still maintains its position as one of the main products exported to the EU (accounting for nearly 10% of the proportion).

4. VIETNAM'S RESPONSE TO EU TRADE BARRIERS

To respond to trade barriers from the EU and support businesses exporting, the Vietnamese Government has issued policies to guide, support and promote shrimp export businesses.

Policies to support traders to take advantage of incentives from the EVFTA to promote exports to the EU market

Immediately after EVFTA took effect on August 1, 2020, the Vietnamese Government along with relevant ministries and branches issued a series of guiding documents and EVFTA implementation plans. After one year of the Agreement taking effect, 19 ministries, branches and 57 provinces and cities across the country have issued EVFTA implementation plans.

The Government has issued a Project to promote the export of agricultural, forestry and fishery products to 2030 according to Decision No. 174/QD-TTg dated February 5, 2021. The Prime Minister assigned the Ministry of Finance to preside and coordinate with other ministries, relevant sectors review and supplement policies to encourage and support enterprises exporting agricultural, forestry and fishery products.

The Ministry of Agriculture and Rural Development has also issued a plan to implement the EVFTA according to Decision No. 3233/QD-BNN-HTQT August 22, 2020. Accordingly, the tasks of propagating and disseminating information about the EVFTA to relevant subjects, including businesses exporting shrimp to the EU, and building laws and institutions: amendments, supplement legal documents, improve competitiveness of the Agriculture sector, including fisheries.

EU market development policy to promote shrimp exports

The Ministry of Industry and Trade has issued a plan to implement sustainable export development solutions in the last months of 2021 and early 2022 (Decision No. 1993/QD-BCT dated August 20, 2021). Accordingly, the Ministry of Industry and Trade directs units to implement the following requirements:

- Strengthen the provision of market information and trade promotion activities aimed at markets with room for development such as Eastern European and Northern European markets, etc.

- Promote coordinated activities with major e-commerce platforms in the world such as Amazon, Alibaba, etc. The formation and development of e-commerce platforms is a fundamental solution for businesses to access markets easily and quickly and improve the ability to take full advantage of the opportunities brought by the Free Trade Agreement.

In addition, the Ministry of Industry and Trade has deployed many online trade promotion activities to support Vietnamese businesses in promoting products in general and exported shrimp products in particular. The Ministry of Industry and Trade is also continuing to strongly implement solutions to promote exports to the EU market. In particular, focus on organizing the exploitation and taking advantage of opportunities from EVFTA, removing barriers in transportation, warehousing, logistics,... to create favorable conditions for businesses. At the same time, prioritize implementing export promotion activities in markets that recover quickly after the pandemic.

Policy for exported shrimp aims to meet EU market regulations

- *Policy to ensure technical and epidemiological hygiene requirements*

On February 9, 2021, the Ministry of Agriculture and Rural Development issued Official Dispatch No. 859/BNN-QLCL on enhancing the effectiveness of quality control and aquatic food safety. Accordingly, the Ministry requires export shrimp processing enterprises to immediately implement the following solutions:

Firstly, proactively research and fully update import market regulations on quality and food safety to implement during the production process.

Second, in the context that Vietnam has signed and implemented a number of new generation free trade agreements (CPTPP, EVFTA, UKVFTA, VN-EAEU FTA,...), Comprehensive Economic Partnership Agreement region (RCEP) offers many tariff incentives. However, businesses need to establish and effectively implement a traceability system throughout the entire production process from raw materials to finished products before being sold to the market strictly comply with rules of origin and tax obligations according to market regulations to avoid investigations on tax evasion, origin fraud, etc.

Third, proactively establish information channels between importers, businesses and management agencies to promptly handle difficulties and problems in export, especially issues related to quality and safety food.

- *Product brand development policy*

Project to promote agricultural, forestry and fishery exports to 2030 according to Decision No. 174/QD-TTg dated February 5, 2021, the Prime Minister assigned the Ministry of Finance to preside and coordinate with relevant ministries to review Control and supplement policies to encourage and support enterprises exporting Vietnamese branded products. The Government aims to promote the growth of export turnover of agricultural, forestry and fishery products (AFF), comprehensively and sustainably participate in the global AFF supply chain; Improve the quality and value of Vietnam's exported AFF products to meet the regulations of import markets; continue to position and develop brands for Vietnamese AFF products in the international market

Looking at Vietnam's export turnover to the EU market, we can see Vietnam's efforts in responding to EU trade barriers. Shrimp export turnover is continuously increasing while trade barriers in the EU market are increasingly complex and sophisticated, proves that Vietnam's seafood industry in general and shrimp products in particular have had successes in dealing with these barriers.

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APPLICATION OF PPF AND DEA IN FINANCIAL ANALYSIS: FACTORS INFLUENCING THE EFFICIENCY OF ANALYSIS IN COMMERCIAL BANKS

Ph.D Luu Huu Duc[1], Ph.D Cao Minh Tien[2]

Abstract: This research explores the influence of various factors on the effectiveness of financial analysis methods and processes employed by enterprises in commercial banks. Financial analysis plays a crucial role in assessing the health and performance of businesses, making its efficiency of paramount importance. Through a combination of qualitative and quantitative research methods, this study investigates internal and external factors that may impact the efficacy of these processes. Key findings indicate that technological advancements, the competency of analysts, the size of the bank, regulatory environments, and organizational culture significantly sway the effectiveness of financial analytical processes. Recognizing and understanding these factors can enable commercial banks to refine their financial analysis practices, resulting in more accurate assessments and better-informed decision-making..

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Keywords: Financial analysis, Commercial banks, Effectiveness, Analytical methods, Organizational culture, Technological advancements

1. INTRODUCTION

Financial analysis remains a cornerstone in the banking sector, particularly for commercial banks tasked with assessing the fiscal health and credibility of businesses. This vital function determines not only the bank's lending decisions but also informs enterprises of their financial standing, shaping their strategic and operational choices. While the fundamental principles of financial analysis remain unchanged, the methods and processes have evolved over the years. This evolution is driven both by internal advancements within banks and external shifts in the broader financial landscape.

The importance of an effective financial analysis process cannot be understated. Inaccuracies or inefficiencies in this domain can lead to misguided lending decisions, misallocation of resources, and potential financial losses. For enterprises, an inaccurate financial analysis might result in missed opportunities or misguided strategic decisions. As such, understanding the factors that influence the effectiveness of these methods and processes becomes paramount.

This research delves into the myriad of factors that impact the efficacy of financial analysis methods within commercial banks. By scrutinizing both traditional practices and contemporary challenges, the study aims to provide a holistic view of the current landscape, with the goal of highlighting areas for potential refinement and innovation.

The subsequent sections will shed light on the theoretical underpinnings of financial analysis, detail the research methodology employed, and discuss the findings and their implications for the commercial banking sector.

2. LITERATURE REVIEW

The literature on the effectiveness of financial analysis methods and processes in commercial banks is vast and multifaceted. This review aims to encapsulate the prominent themes and findings that have emerged in this domain over the past few decades.

1. Historical Evolution of Financial Analysis: Jones et al. (1995) provided a comprehensive history of financial analysis, tracing its origins and its evolution. Traditional methods primarily

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focused on ratio analysis, trend analysis, and comparative financial statements. However, as industries diversified and globalized, these methods began to show their limitations.

2. Technological Advancements: With the advent of technology, the nature and speed of financial analysis have transformed dramatically. Smith & Johnson (2008) highlighted how software tools and digital platforms have streamlined the financial analysis process. These tools offer automated calculations, predictive analytics, and visual representation of financial data, adding depth and dimension to the analysis.

3. The Role of Analysts: Human expertise remains at the heart of financial analysis. Williams (2011) emphasized the importance of the competency of analysts. While technology aids the process, the interpretation and understanding of results rely heavily on the analyst's skills and experience.

4. Regulatory Impact: The regulatory environment has profound implications for financial analysis. Davis & Thompson (2014) discussed how regulations, such as the Basel Accords, have affected risk assessment and financial reporting methods in banks. The need for transparency, consistency, and adherence to these regulations has reshaped the financial analysis landscape.

5. Organizational Culture and Structure: The culture and structure of a bank can greatly influence its analysis methods. Brown & Mitchell (2017) found a significant correlation between a bank's organizational culture and its approach to financial analysis. Banks that foster innovation and continuous learning often employ more advanced and effective analytical methods.

2. ANALYSIS METHOD

To evaluate the impact of various factors on the financial analysis methods and processes for small and medium-sized enterprises (SMEs) of commercial banks, based on actual survey results and research application of some models: the Production Possibility Frontier (PPF) and boundary analysis method; the Data Envelopment Analysis (DEA) method.

2.2. The Production Possibility Frontier (PPF) method and the Boundary Analysis method:

Farrell (1957) introduced the idea of using the Production Possibility Frontier (PPF) as a criterion to evaluate the (relative) efficiency among companies in the same industry. Accordingly, companies that reach the frontier are considered to be efficient (more so) and those that do not reach the PPF are considered to be less efficient (compared to the other companies). Specifically, in Figure 1, the DMUs B, C, and E have TEB = TEC = TEE = 1; while DMU A and D have TEA = 0A/0A' < 1 and TED = 0D/0D' < 1.

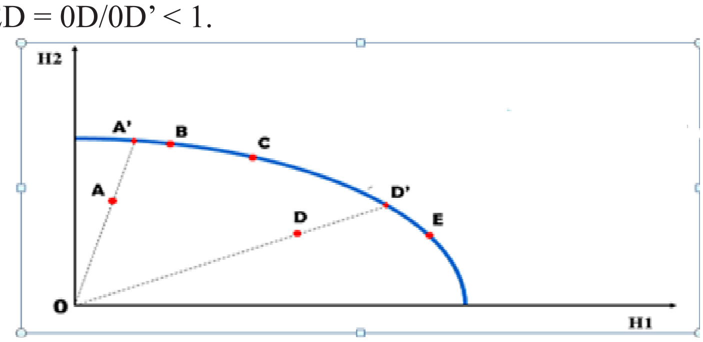
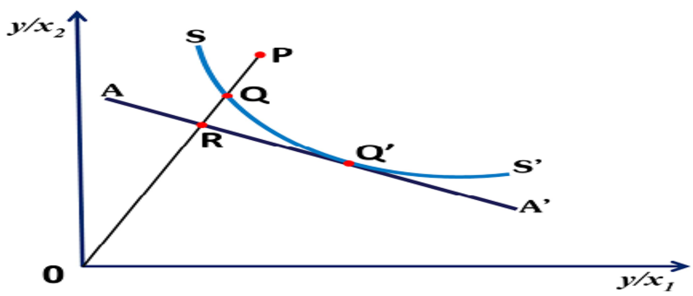


Figure 1. Production Possibility Frontier corresponding to two goods H1 and H2.

Source: Farrell (1957)

The PPF for the case utilizing 2 input factors (x1 and x2) to produce 1 output factor (y) can be represented as an isoquant in Figure 2. Accordingly, a DMU producing at position Q is considered efficient (TEQ = 0Q/0Q = 1), whereas if it produces at position P, it is deemed inefficient (TEP = 0Q/0P < 1). Note that Figure 2 assumes that for a given output y, SS' is the isoquant representing the minimum combination of x1 and x2, and thus, Figure 2 applies the input-minimization model (input-orientation). If the input remains constant and the highest possible output level can be achieved, then the PPF will have a similar form as in Figure 1, applying the output-maximization model (output-orientation).

Figure 2. PPF in the case of input-minimization.



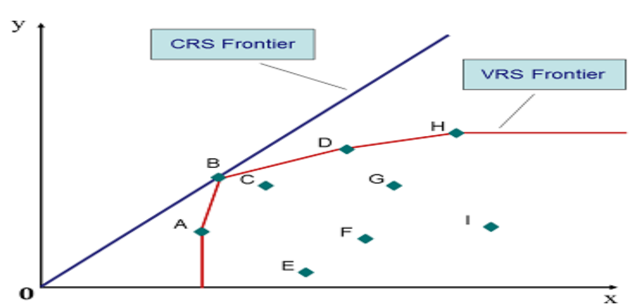
Source: Farrell (1957)

Another noteworthy point in Figure 2 is that when combined with the isocost line AA', it can be observed that Q' is the optimal point, not Q. Therefore, if a DMU produces at Q, it might be technically efficient (TEQ=1) but inefficient in resource allocation (Q lies on the isocost line AA'). As such, QR represents allocative efficiency. Concisely, we have: Economic (overall) efficiency = Technical efficiency x Allocative efficiency 0R/0P = 0Q/0P x 0R/0Q

In the boundary analysis method, another commonly encountered type of graph represents the relationship between total inputs and total outputs (Figure 3).

(Note: DMU stands for Decision Making Units. The notations TEQ, 0R/0P, etc., are assumed to be efficiency values or measurements based on the given context.)

Figure 3. Scale invariant/variable efficiency and the PPF enveloping boundary.



Source: Farrell (1957)

The method to determine the total input and output values will be elaborated on in the subsequent section. Here, the author wants to highlight the distinction in determining the PPF under conditions of constant returns to scale (CRS) and variable returns to scale (VRS). Accordingly, the CRS PPF is a straight line connecting the origin of coordinates and the DMU with the highest efficiency

(TE = y/x) (TE = 1). The CRS PPF, thus, does not account for scale differences among DMUs but simply compares efficiency ratios (TEi = yi/xi) between using input xi to generate output yi. On the other hand, the VRS PPF takes into account the scale factor, so its shape resembles an envelope surrounding other less efficient DMUs (The CRS PPF is also a type of envelope, but more "loose"). This is the origin of the name Data Envelopment Analysis method.

(Note: DMU stands for Decision Making Units. The notations TE, y, x, etc., are assumed to be efficiency values or measurements based on the given context.)

2.3. The Data Envelopment Analysis (DEA)

Data Envelopment Analysis (DEA) is a non-parametric method used to determine the efficiency of various units, especially in situations where the output quality is multi-dimensional. This technique, originating from Farrell's work in 1957, focuses on technical and allocative efficiency. Farrell's model, however, faced challenges related to assumptions on constant returns to scale and strong disposability of inputs. Fare and colleagues, in subsequent years, addressed these challenges by introducing more flexible non-parametric methods.

In essence, DEA constructs an efficiency frontier, reminiscent of the production function, in the input-output space. This frontier acts as a benchmark to evaluate the efficiency scores of individual firms. DEA offers a relative efficiency assessment by comparing firms against each other based on their positions in the multi-dimensional input/output space. This frontier is formed using multiple linear programming problems, resulting in straight lines connecting the most efficient points and defining a convex production set.

The primary advantage of DEA is its ability to handle constraints in determining production forms and its applicability to numerous distribution methods for residuals. It delivers a boundary closer to reality by estimating the production frontier based on existing results, making it suitable for sectors like education, healthcare, finance, and more.

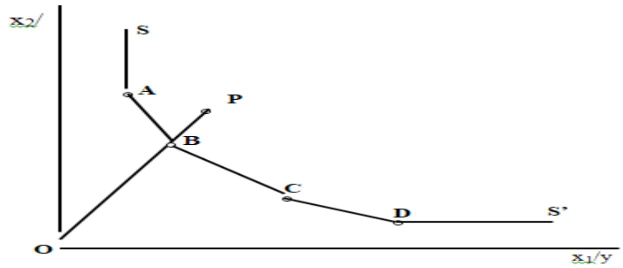
However, there are concerns regarding DEA. Since it's non-parametric, traditional statistical tests can't be applied. Also, DEA predominantly considers the supply side, potentially neglecting demand and market aspects. It's essential to recognize these limitations when interpreting results derived from DEA.

In summary, DEA is a versatile tool applicable across various sectors to evaluate efficiency. It has evolved considerably from its initial conception, with continuous research to mitigate its limitations and broaden its application scope.

2.4. The Data Envelopment Analysis (DEA) based on the input minimization model.

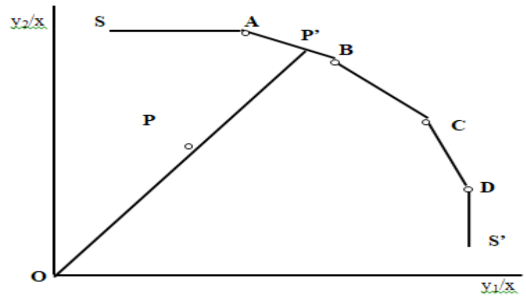
The Data Envelopment Analysis (DEA) based on the input minimization model. To illustrate this issue, consider a hypothetical example with two inputs, x1 and x2, and one output, y (as shown in figure 1.1). Enterprises A, B, C, and D lying on the efficiency frontier SS' are considered efficient. The degree of technical inefficiency is reflected by the distance from B to P. The Technical Efficiency (TE) ratio = OB/OP represents the technical efficiency of enterprise P, meaning that the input costs of enterprise P can be reduced without affecting the output. By definition, these efficiency levels range from 0 to 1.

Figure 4: DEA Model for Input Minimization and the Data Envelopment Analysis Approach for Output Maximization Model.



Technical efficiency is perceived as the capacity of an industry to produce maximum output given certain input conditions. In the case of the DEA output maximization model, consider a hypothetical example with two outputs, y1 and y2, and one input, x (as depicted in Figure 5). Enterprises A, B, C, and D located on the efficiency frontier SS' are deemed efficient. The degree of technical inefficiency is reflected by the distance from P to P'. The Technical Efficiency (TE) ratio = OP/OP' represents the technical efficiency of enterprise P, indicating that it's possible to maximize the output of enterprise P without affecting its input. By definition, these efficiency levels range between 0 and 1.

Figure 5: DEA Model for Output Maximization



2.5. Unaffected Scale Production Model DEACRS and Scale-Affecting Production Model DEAVRS

The DEA (Data Envelopment Analysis) methodology establishes a unique best practice frontier for each sector. Measuring technical efficiency typically relates to overall technical efficiency. The residual of overall technical inefficiency represents all causes leading to inefficiency, encompassing both observable and unobservable factors. Estimating overall inefficiency corresponds to inefficiencies due to objective causes such as industry scale, weak management capability, or unobservable factors like estimation errors.

The original DEA model proposed by Charnes and associates is the model where scale doesn't affect production results, known as Constant Return to Scale (CRS) or DEACRS. In 1984, Banker and colleagues considered the DEA model under the assumption that scale affects production outcomes, known as Variable Return to Scale (VRS) or DEAVRS.

The DEA approach can be applied to analyze the efficiency of production activities of companies, farms, or production households. Based on prior studies, Coelli et al. (2005) established the DEA analysis model. The objective of DEA analysis is to construct a non-parametric efficient convex hull, such that observed points will not lie above the production efficiency frontier.

The input minimization model, unaffected by production results (CRS), with basic steps will be outlined below. Assume we have data of I companies, each using N inputs and producing M outputs. For the i-th company, input data is represented by column vector xi and output by column vector yi. Consequently, input and output data for all companies are represented by matrix X (N rows, I columns) and matrix Y (M rows, I columns).

The method using "ratios" is considered a visual descriptive method for data envelopment analysis (DEA). For each company, we measure the ratio of the total quantity of output products over the total quantity of used inputs (u′yi/v′xi) where u is the output quantity vector (M rows, 1 column); v is the input quantity vector (N rows, 1 column). The optimal input and output quantities for the i-th company are determined by solving the following mathematical model: ..."

$$\max_{u,v} (u'y_i/v'x_i)$$
$$\text{St: } u'y_j/v'x_j <= 1 \qquad j = 1,2,3\ldots I \qquad (1)$$
$$u,\ v >= 0$$

From this problem, we can determine the input and output quantities for company i such that its efficiency coefficient (total output/total input) is maximized, under the condition that its efficiency coefficient is always less than or equal to 1. A potential difficulty that may arise is that there could be multiple solutions to the above problem (for example, if u* v* and 2u* 2v*are solutions, then u và 2u* 2v* are also solutions). To avoid this, we impose the constraint v'xi = 1.

The change in notation from u and v to μ and ν respectively suggests that we are considering a different, yet similar, linear mathematical model

$$\max \mu\nu\ (\mu' y_i),$$
$$\text{st} \quad \nu' x_i = 1,$$
$$\mu' y_j - \nu' x_j \le 0,\ j= 1,2,\ldots, N \ (2)$$

The DEA model as in (2) is considered a fractional linear programming model. Using the duality property of linear programming, we can develop a corresponding data envelopment analysis model as follows:

$$\begin{aligned} \min_{\theta,\lambda}\ & (\theta), \\ & -y_i + Y\lambda \ge 0, \\ & \theta x_i - X\lambda \ge 0, \qquad (3) \\ & \lambda \ge 0 \end{aligned}$$

θ is a scalar quantity, representing the efficiency level of the firm;

λ is an Nx1 vector of constants.

The problem (3) is solved N times, meaning once for each firm. Thus, the solution value q is determined for each firm. If q = 1, it means the firm is efficient; if q < 1, the firm is not efficient. Inefficient firms can be projected onto the efficiency frontier, and we then obtain the linear combination (Xl, Yl) - the hypothetical reference firm's position. For firms that are inefficient (θ < 1), an objective can be set to reduce the input factors by a quantity of q while still maintaining the same output values.

The DEA model oriented towards input minimization with scale influencing production outcomes (DEAVRS) (2) is established based on (1) with an additional constraint N1λ = 1.

$$\begin{aligned} &\min_{\theta,\lambda} (\theta), \\ &-y_i + Y\lambda \geq 0, \\ &\theta x_i - X\lambda \geq 0, \\ &N1\lambda = 1 \\ &\lambda \geq 0 \end{aligned}$$

θ is a scalar quantity, representing the efficiency level of the firm;

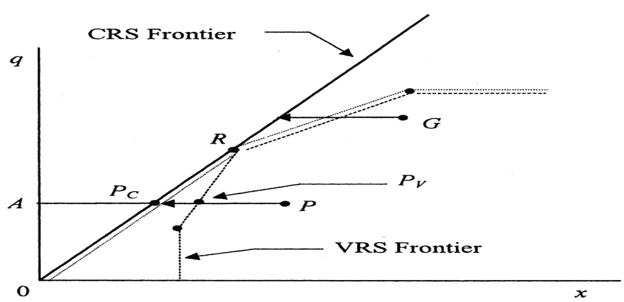
λ is an Nx1 constant vector;

N1 is a unit Nx1 vector.

The models (DEACRS) and (DEAVRS) oriented towards output maximization are constructed similarly.

2.6. Measuring scale efficiency – SE using the DEA method

Figure 6. Scale Efficiency in the Direction of Minimizing Inputs



To measure scale efficiency – SE using the DEA method, we compare CRS - DEA and VRS – DEA. If there's a difference between CRS – DEA and VRS – DEA for a specific enterprise, we conclude that there's scale inefficiency.

Given that: TECRS = TEVRS x SE

APc/ AP = (APv/ AP) x (APc / APv)

→ SE = TECRS/TEVRS hay: SE = APc / APv

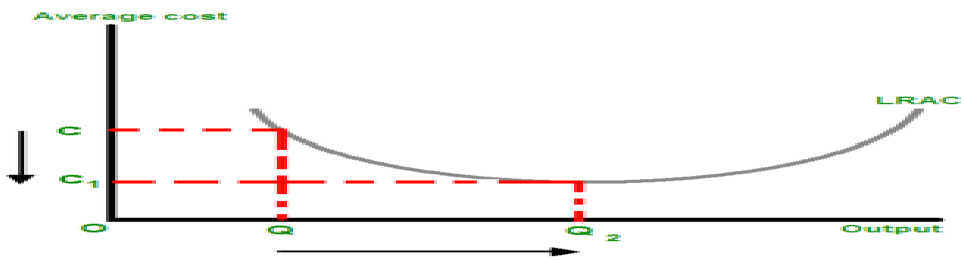
Where efficiency coefficients TECRS, TEVRS, and SE in the input-minimizing data envelopment analysis model always lie between 0 and 1. Similarly, SE in the direction of output maximization has efficiency levels ranging from 0 to 1.

In this context, input efficiency means minimizing inputs without reducing outputs, and output efficiency refers to maximizing outputs with unchanged inputs when the production doesn't change according to CRS scale and the VRS scale affecting the output results.

Scale efficiency here implies that an enterprise operates at an optimal scale. Not every enterprise operates at this optimal scale due to constraints like capital, government regulations, etc. Scale economies characterize a production process wherein an increase in product quantity results in a reduced average cost per product. Such scale economies exist in most industries and can be utilized both at the plant level and at a firm comprising multiple plants. It arises due to reasons like:

The ability to leverage scale economies can be limited for various reasons. In certain sectors, the nature of the product, processing, or technology might curtail scale economies even at modest outputs. From the demand side, the market might not be large enough for a firm to reach its efficient scale, or the firm might be too small. Consumer demand for diverse products (diversity of demand) can hinder standardization and long-run production. When scale economies are crucial across industries, it leads to a trend of high seller concentration.

Figure 7: Long-Run Average Cost Curve



LRAC: The U-shaped long-run average cost curve characteristic of a plant. Output: production output Average: average cost

As output increases from Q1 to Q2, the cost decreases from C to C1. In the graph, Q2 is the optimal production level, where the average cost is at its lowest. Beyond this point, economies of scale decrease and eventually reach a level where they are no longer beneficial.

4. THE IMPACT OF VARIOUS FACTORS ON THE EFFECTIVENESS OF FINANCIAL ANALYSIS METHODS AND PROCESSES FOR BUSINESSES IN COMMERCIAL BANKS CAN BE DESCRIBED AS FOLLOWS

- **Staff and Skills**:

Positive Impact: Highly skilled and experienced staff can evaluate finances accurately, enabling the bank to make informed investment decisions.

Negative Impact: Improperly trained or inexperienced staff can lead to wrong decisions, causing losses for the bank.

- **Technology and Information Systems:**

Positive Impact: Using modern information systems and technology aids in quick, accurate, and reliable data analysis.

Negative Impact: Over-reliance on technology without cross-checking can lead to decisions based on inaccurate data.

- **Processes and Standards:**

Positive Impact: Clear financial analysis processes and standards ensure consistency and accuracy.

Negative Impact: Overly rigid or outdated processes might cause the bank to miss opportunities or face unnecessary risks.

- **Culture and Leadership Style:**

Positive Impact: An open culture that encourages innovation and learning can propel the bank towards continuous improvement in its financial analysis processes.

Negative Impact: A guarded culture that discourages feedback can hinder innovation and improvements.

- **Relationship with Customers and Market:**

Positive Impact: Understanding customer needs and market expectations helps in refining analysis processes.

Negative Impact: Failing to update market information might result in missing new trends and making inaccurate decisions.

- **Laws and Regulations:**

Positive Impact: Clear regulations help banks understand their responsibilities and reduce legal risks.

Negative Impact: Excessive or frequently changing regulations can complicate compliance and process updates.

5. CONCLUSIONS:

The effectiveness of financial analysis methods and processes in commercial banks is influenced by a myriad of intertwined factors. These range from the competence of the staff, the tools and technology available, to the prevailing culture and external regulatory environment. It's evident that for a bank to remain successful in its financial assessments, it should maintain a balance by continuously training its workforce, updating its technology, and being responsive to the market and regulatory changes. Moreover, fostering a culture that promotes innovation and feedback can act as a bedrock, ensuring that the bank remains agile and accurate in its financial evaluations. While challenges abound, understanding these influencing elements offers banks a clearer path to navigate the complex realm of financial analysis.

Financial analysis processes in commercial banks are pivotal for decision-making, risk assessment, and strategic planning. The effectiveness of these processes is contingent upon a multitude of variables, both internal and external.

Human Resources Competence: The expertise, experience, and training of the personnel involved directly influence the accuracy and reliability of financial analyses. A knowledgeable workforce that's continually updated on the latest trends, tools, and methodologies is essential for accurate financial assessment.

Technological Infrastructure: The tools, software, and systems utilized for financial analysis need to be up-to-date, robust, and secure. The more advanced the technology, the better equipped a bank is in handling complex data sets, running simulations, and deriving insightful analyses.

Organizational Culture: A culture that promotes continuous learning, innovation, and feedback can be the backbone of effective financial analysis. When employees are encouraged to question, innovate, and collaborate, it often leads to more thorough and insightful analyses.

Regulatory Environment: Commercial banks operate within stringent regulatory frameworks. Compliance with these regulations is not only mandatory but also influences the way financial analysis is conducted. Changes in regulations can necessitate adjustments in methodologies and approaches.

External Market Dynamics: Economic conditions, industry trends, and competitive pressures also play a significant role. An effective financial analysis should be contextual, considering these external dynamics to provide relevant and actionable insights.

Feedback Mechanisms: A dynamic feedback mechanism ensures that the financial analysis process is continuously refined. By revisiting past analyses and comparing them with actual outcomes, banks can refine their models and assumptions for improved accuracy in the future.

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SUPERVISING CADRES IN USING PUBLIC FINANCE IN VIETNAM

Master. Nguyen Thi Thanh[1]

Abstract: The article analyzes the role, content, and value of Ho Chi Minh's ideology on controlling officials in the use of public finances to serve the implementation of functions of the Party and State and meet the needs and common benefit of economic entities in society. By textual research, generalization, comparison, and statistics, the author has systematized and analyzed: (1) Ho Chi Minh's ideology on controlling officials using public finances; (2) Current status and some issues raised in controlling officials using public finances and public assets for economic development in Vietnam; (3) Requires continuing to creatively apply Ho Chi Minh's ideology to develop a number of solutions to control officials and prevent corruption of power. Based on the research results, the author discusses and evaluates the value of Ho Chi Minh's ideology on controlling officials using public finances to create institutions and scientific institutions, contributing to boost Vietnam economic develops.

Key word: Supervise, officials, supervising official, public finance

1. RAISING AN ISSUE

Public finance plays an important role in the organization and activities of the Party and State. Ho Chi Minh addressed the subject of party finances in the Summary Charter of the Communist Party of Vietnam (1930), and he mandated that the collection and handling of party funds be routine and consistent with party committee levels and local authorities, local ministry organizations. Upon becoming the governing party, the Party established economic ties with the State as well as other societal groups. Ho Chi Minh saw that if financial inspection and supervision were not implemented in order to create reasonable spending regime, it would be the reason of the possibility and risk of profiteering by officials in power, leading to stagnation of the Party's work and the Government, creating barriers for the development of economic sectors. Thence, Ho Chi Minh requested that the Party must lead the State in building a spending regime, strictly supervising officials in the use of public finances to practice savings policies, anti-waste and establish a regime of officials' personal responsibility to people and the Party, serving the country's socio-economic development.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

The issue of controlling officials, especially controlling officials in the use of finance and public assets, is a basic and central content for controlling the power of the Communist Party of Vietnam. Below, the author would like to summarize some research projects related to the above issue:

Firstly, on inspection, supervision, and control of the Political Party: *In the The Aristotle's article has name The Politics* (2011) (translated by Nong Duy Truong), Aristotle identifies power control as necessary for politics, which focuses on people with power, which he often uses the terms "official control", "observant supervision". His approach laid the foundation for the issue of checking, supervising, and controlling the power of political parties by checking and supervising its team of officials.

In the book: "*LKY on Governance*" (2016) (translated by Nguyen Phan Nam An) by author Janie Tay . The issue of power control mentioned in this book is the issue of self-control of those in power.

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Lee Kuan Yew said that the principle of rulership is that we are entrusted with the destiny of the people. The first duty of a leader is to fulfill that trust even at his personal risk, otherwise he should not accept that position.

In the book: *Controlling power in our country through inspection, supervision and party discipline* (2019) by Mai Truc [9]. The author presented and analyzed the views of Marxism-Leninism, Ho Chi Minh's ideology, the Vietnamese Party and State on controlling power through inspection, supervision and party discipline. The work also contributes to identifying some manifestations of power corruption in a number of fields. In the financial sector, this study clearly shows that acts of abuse of power, abuse of power, abuse of power... in the financial sector are manifested through problems, events, and information of officials, Party members may violate directives, resolutions, regimes, policies of the Party and State laws on the financial sector. Therefore, identifying the corruption of power in the process of creating, distributing and using monetary funds of the Party, the State, businesses and socio-economic entities is very important for develop the country…

Secondly, the issue of inspection, supervision, and control of officials in the use of public finances and assets. Article: *Controlling and preventing abuse of power in financial and public asset management* (2022) by author Le Hoa [10]. The article commented that in the period 2016-2020, the State Audit promptly detected violations, abuses of power, waste, and negative acts such as: Spending beyond authority, exceeding standards and norms; deciding on investment policies, making investment decisions beyond the authority... of units and individuals... Reviewing and handling cases showing signs of violating the law through audit activities, thereby contributing to deterring threaten and prevent abuse of power in the management of public finances and public assets. From there, the author affirms the need to continue promoting the role of the Party and State in monitoring and controlling the use of public finances and assets with related individuals and organizations.

Article: *Controlling assets and income of officials and civil servants to make corruption "impossible" (2021)* by Nguyen Dinh Quyen [11]. The author affirms that controlling assets and income is the most important tool in preventing corruption; Vietnam has a gap in this issue, so it is necessary to develop synchronous and comprehensive regulations on power control, with cross-control between institutions in the implementation of tasks and powers, authority related to the responsibility to control assets and income of government official, civil servants, and high-level manager. From there, contributing to promote economic entities and the country to enter a new period of development.

Article: *Highlights in private economic development in Vietnam during the renovation period (from 1986 to present)* (2023) by author Nguyen Thi Luyen [12]. This study has clearly shown the phenomenon of "tham nhũng vặt", "chung chi" to circumvent the law, distort guidelines and policies, businesses have to pay unofficial fees to officials, and discrimination. Many large-scale business households do not want to register to establish businesses due to concerns about compliance costs, informal costs and implementing tax policies and financial policies... which has hindered the development of private economy. Accordingly, solution from the State side focus on building a team of officials with good quality and capacity to improve the quality of institution building and implementation, focusing on enhancing openness, transparency, ensuring equal access of private economic entities to business opportunities, information and development resources, especially financial resources and land, creating motivation for the private economy develop...

Beside the typical works above, there are also studies from different angles on the issue of controlling Party officials. In general, with the achievements that the author evaluates as above, there are still aspects in the research that have not been mentioned in depth: *Firstly*, the works mainly research the issues of inspection, supervision, and control. Controlling the Party's power in general, there have been no direct studies of Ho Chi Minh's ideology on inspection and supervision of officials using public finances; *Secondly*, the works focus on clarifying basic points about economic development and the private economy, applying Ho Chi Minh's ideology to promote the control role of the Party and State to prevent cadres from corruption and negativity. There has been no in-depth research on the issue of awareness and application of Ho Chi Minh's ideology on inspection and supervision of officials using public finances to control officials, prevent corruption of power, and contribute to create motivation for Vietnam's economic development. Therefore, awareness and clarification of the above issue is the purpose and scientific task of this article.

3. RESEARCH METHOD

The research applies the methodologies of Marxism-Leninism, interdisciplinary and specialized research methods and specific scientific research methods. Methods of analysis, synthesis, generalization, prediction... are applied to clarify Ho Chi Minh's ideology on controlling officials using public finances, the current situation of controlling officials, preventing corruption, wastefulness and negativity in the use of public finances; Some issues raised in controlling officials using public finance and economic development in Vietnam and requirements for continuing to apply Ho Chi Minh's ideology to identify some solutions to control officials , prevent corruption of power, build an open and transparent political-legal environment to improve the efficiency of Vietnam's economy.

4. RESEARCH RESULTS

4.1. Ho Chi Minh's ideology on supervising officials in the use of public finances - the basis for preventing corruption of State power in Vietnam

Firstly, inspection, supervision and officials control in paying party fees and using state budget. In the collection of party fees, Ho Chi Minh made the following statement on the collecting of party dues: "Paying party dues, which is the responsibility of each party member, is to aid the Party in term of financial. Additionally, it is to ensure that every party member constantly remembers the Party" . These rules had to be scrupulously followed by every cadre and party member, and Ho Chi Minh used this as one of the key criteria for choosing, vetting, overseeing, and rating group members. In term of the state budget, he required officials to use it appropriately, and at the same time resolutely eliminate the situation of black funds in localities and agencies. So: "What is a black fund? It is a private fund, which is not included in the State's control: Revenue is used to spend less and declare more to cut into public funds. The limbs are buzzing and buzzing. What a shady way of doing things - as its name suggests, it is a "black fund"!... He criticized: is it "the "patronage" of some local leadership agencies? Because some of our officials still maintain a family-style working style. They said in the boss's voice: "It's all about housework! Black funds or white funds are all used for common work, there's no need to be afraid of losing anything!". Then, emphasizing the need to build: "The State's spending regime creates "binding"... It binds wasteful people and people who like to show off. It binds even those who only do not have the long-term thinking, who only know their benefits and forget the common affairs of the whole country...

It repairs gaps and keep our wealth. We are willing to try the best to combat wrong activities. We must be stricter in using our savings to move to a full and prosperous life for everyone .

Secondly, to discourage individuality, cadres should be inspected, supervised, and controlled as they practice thrift and battle waste. These are measures to reduce consumption, particularly when it comes to the utilization of public resources like labor and materials. Additionally, officials must constantly support efforts that boost productivity. labor, maintaining machinery, tools, and raw resources... to increase output and create industry; The State must know how to put capital into the most important industries, such as iron, steel, electricity, coal, mechanics... So that, the Party, State, and people will accumulate abundant capital for the country's industrialization. On the other hand, he specifically condemned the circumstance, saying that "there are officials and party members who still do not have the feeling of saving money in utilizing public resources, such as certain high officials who wish to "save" for themselves and use automobiles. The family's firewood is transported by state vehicles. That is individualism, State cars are to serve officials going to work, not to serve the housework of high-ranking official's family!" . Ho Chi Minh underlined the necessity for all levels, branches, cadres, and party members to further develop a feeling of accountability when employing the human and material resources of the people. Therefore, in addition to the necessity of establishing a State spending regime that "leaves no loopholes," it is also necessary to monitor and check on officials, stop public theft, embezzlement, and the chaotic working methods of some agencies of local leaders, Ho Chi Minh emphasized building a personal responsibility regime for officials, especially senior officials, in using public assets and public finances to decimate individualism with symbols: group interests, abuse of power, arbitrariness and against the public interests.

The solutions for monitoring and controlling cadres that Ho Chi Minh emphasized are: education by implementing the Party's organizational principles, especially self-criticism and criticism, combined with perfecting and practicing strict discipline, ensure the strictness of the law; Promoting the personal reputation of the leader, the active supervision of the people, the Inspection Committee, party organizations, and judicial agencies against offending cadres to "create a public atmosphere around them." They are indignant and morally boycotted." There must be no one to pat them on the shoulder or gently nudge them anymore!" . At the same time, it is necessary to check and supervise regularly, systematically, from top down, from bottom up, combined with inspection, supervises cadres inside and outside the Party to implement the policy: "Intellectualize workers and farmers, that helps the Party resolve class relations, consolidate, and expand the ideological foundation of the working class in the Party and society, and overcome the bureaucratization of cadres. These methods are applied by the Party and State to control officials in the use of public finances to prevent abuse of power, personal profiteering and build a regime of personal responsibility for officials when performing their duties.

4.2. Present situation and some matters mentioned in relation to policing officers' usage of public funds

4.2.1. Current situation of controlling officials, preventing corruption, waste, and disadvantages in the use of public finances

Ho Chi Minh highlighted the necessity of enforcing rigorous control over the Party's financial assets, revenue, and outlays as well as the establishment of a fair spending regime to have an impartial, unbiased inspection and monitoring system in place for the exercise of power chosen by the staff. Using the aforementioned perspective, the Party confirmed the policy in the 6th Congress (1986): "In thought as well as in action, we must thoroughly fight against corruption, against special privileges. With the conscience of communists, each cadre and party member should seriously consider whether they are living a healthy life, living by their own labor or not? Thoughts and actions of chasing money, selfishness, acts of violating socialist property, infringing on the people's interests, stealing public property, taking public property to give away, indulgence, "internal distribution", must be criticized and strictly handled." [17]. At the 8th Congress (1996), the Party underlined and made clear the demand: "Strictly inspect the use and expenditure of the state budget... continue to innovate public asset management in state agencies... Release the income and property declarations of party officials and public personnel from the top down to all levels [18]. At the 11th Congress (2011), the Party affirmed that it must "Effectively implement the declaration and disclosure of assets and income of officials and civil servants according to regulations" [19] associated with "Increasing Strengthen the audit, inspection, examination and supervision of the authorities [20]". In 12th Congress (2016), The Party clearly pointed out that promoting the prevention of corruption, waste and negativity requires strictly handling the responsibility of the leader when "cadres and civil servants violate the disregard their disclosures of assets and income [20]. "The 13th Congress (2021) highlighted "Effective control of assets and income of high-ranking people [20].

The results: Regarding the outcomes of the battle against bad effects, particularly the battle against corruption: Since the start of the 12th Congress, the Central Steering Committee on Anti-Corruption has Investigated, prosecute, and adjudicated 126 cases (637 defendants) that are serious, complicated, and of public concern; 3 defendants to be under death sentences, 13 prisoner serving life sentences, 8 people punished by 30-year sentences, 20 people punished by imprisonment from 20 to less than 30 years, and 546 have received sentences ranging from 12 months to less than 20 months and 16 cases of non-custodial reform. Typically, cases occurred at Vietnam Shipbuilding Industry Corporation (Vinashin); VN Pharma Joint Stock Company; Vietnam National Oil and Gas Group; The cases of Phan Van Anh Vu, Dinh Ngoc He, Nguyen Van Duong, and Phan Sao Nam; the case of Pham Cong Danh and his accomplices; AVG case; the case at Phuong Nam Bank; case at Hai Thanh Company, Navy case and a case related to project 8/12 Le Duan, District 1, Ho Chi Minh City; case at BIDV Bank, … In 2016, the asset recovery rate in corruption cases reached 26%. In 2017, it increased to 29.4%. In 2018, it decreased to 19%. In 2019, it reached 47.32%. In 2020, it went down to 38.43%. From the beginning of the term until now, in serious and complicated economic corruption cases that have been monitored and directed by the Central Steering Committee, more than 84,000 billion VND has been frozen and recovered [23]. Authorities uncovered 49 corruption cases (an increase of 63.3%) and 72 persons (an increase of 80%) in the first half of 2023. 7 of these cases and 14 individuals were found through internal inspection actions of these; 26 instances and 45 persons were found through inspection and examination efforts; By addressing grievances and accusations, 13 cases and 13 people related to corruption were discovered [24].

Regarding the outcomes of organizing and auditing the Party's finances and assets in budget revenues, expenditures, production, and business, including party committee finances, administrative unit finances, career unit finances, production units, and business units, as well as auditing the use of funds and assets that result in loss, waste, and the recovery of corrupt funds and assets. When there were indications of infractions during the 11th Party Congress, inspection committees at all levels inspected 55,250 party members; including checking 2,957 party members for signs of corruption and intentional wrongdoing and checking 263 party organizations on practicing thrift and combating waste, of which 1,143 party members were disciplined for corruption violations and intentional wrongdoing. The allegations of corruption and willful misconduct against 1,303 party members as well as six organizations that promote thrift and waste reduction have been settled by inspection committees at various levels. Many party members were sanctioned for their transgressions. Regarding inspection of party finances, budget revenues and expenditures and production and business, the 11th term inspected 7,825 party organizations, of which violations included losses due to embezzlement, corruption, and waste of VND 1,113 billion, leaving 1,493 billion VND out of accounting books, spending 970.145 billion VND incorrectly and recovering over 87 billion VND and other violations of 316.903 billion VND. Proposal to disburse over 87.312 billion VND, re-account 991.607 billion VND and assign the unit to handle 205.552 billion VND, of which 4.355 billion VND has been disbursed and recovered. Through inspection, there were 267 party members who committed financial violations, of which 40 had to be disciplined and 11 comrades had been disciplined [25]

The Inspection Committee examined 29,021 organizations' collection, payment, management, and usage of party fees at the start of the 12th Party Central Committee, as well as the financial activity of 2,693 party organizations in terms of budget revenue, spending, output, and business. Following inspections of six party organizations, the Central Inspection Committee suggested recovering about 112 billion VND from the budget and contributing more than 7 billion VND to the party budget; assigned units to consider and handle over 84 billion VND. The Inspection Committee of localities and units examined 2,687 party organizations for budget revenue and expenditure, production, and business, and 19,015 organizations for collection, remittance, management, and use of party fees; 122 organizations and 31 party members were found to have exceeded 386 billion VND in infractions, and they were asked to pay out and recover over 125 billion VND [26]. During the term, inspection committees at all levels regularly review and perform the task of inspecting party finances in association with preventing and combating corruption and recovering money and assets. In 2019, inspection committees at all levels looked at the production, business, and budgetary health of 3,163 party organizations, as well as the collecting, management, and usage of party fees at 33,604 organizations. 235 organizations were identified via inspection to have breached budget revenues, expenditures, production, and business to the tune of 396 billion VND, and they were asked to pay and reclaim more than 349 billion VND [27]. In the first half of 2012, inspection committees at all levels examined the budget revenue, expenditures, production, and business of 879 party organizations. They found 21 organizations to be in violation and demand payment, and they recovered nearly 2.5 billion VND. In 2021, Inspection Committees at all levels examined the revenue, payment, management, and use of party fees for 3,004 party organizations in terms of revenue, budget expenditure, production, and business (an increase of 23.7% compared to 2020) and 31,427 party organizations in terms of revenue, payment, and management of party fees (an increase of 10.7% compared to 2020) [28]. But it is still challenging to recover the assets of dishonest public officials.

According to the Party's summary, the financial transgressions of organizations and party members often fall under categories like disregard for management guidelines, use of state funds for capital projects, remuneration, and settlement. Site clearance, procurement of public assets, expenses for business trips, conferences, receptions, visits, and telephone calls: account for 60.8% of the total amount to be recovered; Violating regulations on party budget management in production, business, collection, payment, management and use of party fees, business travel, conferences, receptions, visits, phone calls...: accounting for 17.1% of the total amount to be recovered; Violating regulations on management and use of unit funds or contributions from collectives and individuals: accounting for 4.9% of the total violation amount to be recovered; Violations of regulations on management and use of other sources of money: accounting for 17.1% of the total amount of violations that must be recovered [29]. According to the Government Inspectorate's report, during the first six months of 2023, inspections uncovered 404 hectares of land and over 179,000 billion VND in economic violations, of which 148,000 billion and 14 hectares should be reclaimed. There were 27 instances where corrupt behavior by leaders was discovered, and 18 people received disciplinary action [30].

4.2.2 Some issues in supervising cadres in using public finance and economic development in Vietnam

Firstly, it is important to increase the effectiveness of supervising officials to combat corruption, consequences, and the issues of economic entities' truth, especially the private economy, in the government. According to the Papi Report 2022, the corruption control index in the public sector measures people's feelings and experiences about the effectiveness of preventing and fighting corruption at all levels of government. The four components of the Index include: Control of corruption in local government; Control corruption in public service provision; Fairness in recruiting human resources into the public sector; Determined to fight corruption of local authorities. Among them, the most notable trend is that the effectiveness of controlling corruption in the public sector of local governments at all levels will decrease in 2022, after continuously increasing in the period from 2015 to 2021. Although the anti-corruption campaign has been strongly implemented throughout the country, less than 75% of respondents in all provinces/cities thought that local authorities were serious in preventing and combating corruption. In 42 provinces/cities, this rate is below 50% . Besides, like the results of previous years, the situation of 'sharing expenses' to get a job in the state sector is still quite common in all provinces/cities. This problem is still common in poor provinces. Faced with the harassment of officials and civil servants, people only started reporting when the amount of money being solicited amounted to about 20 million VND to 43 million VND. This reflects the people's level of "tolerance" for corruption. Therefore, the requirement is to strictly inspect and supervisor officials, develop the effectiveness of anti-corruption for officials in the political system and senior officials at all levels; On the other hand, it is crucial to educate the official to be civil servants, self-control to prevent negative effects when working with common people.

Second, it is necessary to improve the effectiveness of supervising officials, highlight the responsibility of performing public duties and "untying" the private economy. In reality, this is a requirement for building democratic mechanisms and supporting the development of the private economy. The "Vietnam 2035: Towards prosperity, creativity, equity and democracy" report made the point that Vietnam's present institutions and structures continue to create difficulties to the private economy's activities. Currently, businesses in the private economic sector have obstacles when trying to acquire resources and face unofficial charges. In addition, these businesses also face difficulties in accessing information, capital, land and support from the Party and Government, especially the need for support in terms of human resources and capital. From Ho Chi Minh's perspective on strengthening supervision of cadres to improve their performance in serving the people, the requirement is to improve responsibility and set example of discipline, morality, and the dynamism of officials in doing duty, especially when working directly with people and businesses, to build businesses' truth in the Party's guidelines and the government policies. Solving this problem will clear institutional bottlenecks, innovate the national policy framework, minimize delays in implementing policies for the private economy, and support businesses in terms of capital and technology, investment opportunities in projects of providing public services. Therefore, a business environment will be built to ensure fair, equitable and healthy competition for the private economic sector, especially for small and medium enterprises.

4.2.3. Some solutions in supervising officials, preventing corruption of power, building a public and obvious political-legal environment creating motivation for Vietnam's economic development.

First, completing the Political Platform, Party Charter, Laws, State policy and regulations system, assigning strictly about controlling the power of officials. Regulations on preventing and combating negativity, declaring assets and income of officials and party members are fully regulated by the Party, contributing to limiting the situation of "internal distribution". But violations of regulations on management and use of state budget in capital construction, compensation for clearing the ground, procurement of public assets, party budget in production, business, collection, payment, and management the usage of party fees, business trips, conferences, visits, and telephone calls account for over 70% totally. The results of recovering finances and assets of corrupt officials are still difficult due to institutional limitations, leading to low efficiency. To solve this problem, Ho Chi Minh strongly emphasized and required the Party to resolutely eliminate the situation of "Black Funds" and "patronage" in localities and agencies by building a "Regime". State spending to create "binding" and close holes and loopholes to eliminate officials' private funds, funds that are beyond the control of the Party and State. At the same time, to provide an example and inspire people to imitate patriotism and provide financial support to the Party and state, the Party should also adopt regulations on the inspection and supervision of cadres and party members with regard to the practice of thrift, anti-waste, and patriotic emulation; Create the best conditions for party organizations, the media, and the public to monitor the use of officials' funds and public resources in order to develop a transparent and democratic work environment for officials by implementing regulations to do so. Moreover, the Party and State must develop a salary regime according to the job position and work performance of officials to prevent violations by officials.

Second, promoting the role of the Inspection Committee to improve the effectiveness of self-control of cadres in the political system. To ensure that the Audit Committee completes its political tasks, in addition to increasing the authority of the Audit Committee, the Party also needs to improve the power control mechanism in the political system, along with supplementing and amending regulations on rewards. and party discipline to protect the rights of officials, especially the Inspection Committee and officials doing inspection and supervision work. The Party needs to strengthen direction to improve the State's legal system so that the Inspection Committee has a legal mechanism to strongly and resolutely implement "requesting and recommending that party organizations and competent agencies amend and supplement, annul, and revoke documents that contravene the Party's regulations and State laws" contributing to minimizing the case of officials taking advantage of their position and authority to promulgate documents that contravene regulations, and building inspection institutions. It is important to Investigate and supervise officials scientifically and fairly, maintain the Party's order and discipline, prevent violations, wrongdoing, personal profiteering of party members, or collusion for group interests of the organization and party's members. The power of the People's Procuracy to inspect and supervise officials and party members in the political system needs to be strengthened, especially in the legislative and executive fields; The Procuracy needs to coordinate with Inspection Committees proactively and flexibly to early identify and prevent the corruption of power and seeking profit of officials.

Third, each officer establishes a personal reputation and communicates their obligations to the Party and the public; honestly and proactively declare their income and assets, as well as those of their family members; establishing a self-control plan, having measuring indexes, quantifying job quality to gauge one's own degree of accomplishment of tasks, and reporting to superiors honestly. According to specific measurement results each month and each year, cadre need to self-adjust for development. Besides, officials proactively learn and educate themselves about legal knowledge and warn themselves about the harm and results of corrupting power and profiteering from public finances. When organizing and implementing professional activities and performing tasks, be serious and know how to creatively apply guidelines and policies of the Party and State, and legal regulations in each situation, condition, and subject. Self-examination of legal requirements to determine whether one is acting legally compliantly, self-criticism to manage one's own conduct, optimal support for businesses in accessing finance and technology, and ensuring that rules, policies, and laws are applied fairly, seriously, and consistently.

Fourth, ensuring the independence of the judiciary. The Party's leadership and determine to build the National Judicial Council to protect party discipline, the Constitution, State law and judicial independence, and it is a valuable breakthrough solution for the Party to affirm its power and improve legal effectiveness in the fight against corruption of power. First, the law needs to have regulations on people's rights in building institution in organizations and operations of judicial agencies, combined with strengthening supervision of elected people and party unions of state-owned enterprises, the legal environment in private economy, especially receiving and resolving complaints and denunciations from citizens and degraded officials. Mechanisms and instructions need to be specific for the people to contribute, comment and receive people's feedback on judicial activities. Judicial independence must go along with a system of liability in the judicial system. First, it is necessary to train independent judges who depend only on the law with high promotions, long-term tenure, and high responsibility to prevent judges from being induced, threatened, or corrupted. At the same time, we need to build a team of truly talented judicial officers.

5. DISCUSSION AND CONCLUSION

According to Ho Chi Minh's ideology, supervising cadres in the usage public finances contributes to preventing corruption of cadres' power and educating cadres to work scientifically and willing to serve the people, therefore, the class problem can be solved by building a scientific and strict cadre control institution, granting economic subjects in society equal and democratic access, with the aim of building balanced institutions, appropriate political and legal corridors for economic development, encouraging private economic development, ensuring socio-economic activities within the proper framework, legality and efficiency society. However, currently, the situation of officials harassing and causing trouble for people and businesses in handling work has not been effectively prevented. In addition, self-inspection, and detection of corruption within agencies, organizations and units are still limited. Hence, to control officials in using public finances more effectively, the Party and

State must follow the principles of explicitness, openness, and objectivity in the performance of tasks of monitoring subjects to build professional, creative, and responsible groups, creating a strong motivation to promote sustainable development of Vietnam's economy.

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CYBERSECURITY ISSUES IN CASHLESS PAYMENTS IN VIETNAM

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Abstract: The article mentions the impacts of the fourth industrial revolution and digital banking on the development of non-cash payments at commercial banks. Research shows that non-cash payments are affected by cybersecurity issues in the new context, requiring changes to adapt. Analyzing the current situation, limitations and causes, the article mentions directions and solutions to improve quality and solve challenges to ensure that the digital banking development process is an issue for everyone, and with the Vietnamese banking industry.

Keywords: Non-cash payment, Cyber security

1. INTRODUCTION

In the context of the fourth industrial revolution, which is taking place increasingly strongly. Transforming into a digital bank is a sustainable development direction for Vietnamese commercial banks. Non-cash payment is an inevitable development trend, used by most Vietnamese people instead of cash payment. Therefore, applying digital technology to payment activities plays an extremely important role in helping banks compete and pursue development goals. However, an extremely painful problem today is the situation of property appropriation fraud targeting customers using digital banking services. To solve this problem, banks must always find ways to ensure maximum security, safety, and confidentiality for customers.

2. RESEARCH CONTENT AND RESULTS

2.1. Theoretical basis

Non-cash payment is a payment service activity performed by using payment methods/instruments to transfer money out of the account and money limit from the payer to the beneficiary's account. The way of mutual clearing of operations is through the payment service provider.

Non-cash payment appeared long ago in history. However, it only truly develops and is constantly improved in the market economy. Today, in any country, non-cash payments through payment intermediaries are widely applied, accounting for a large proportion of the total payment volume and tending to increase. Compared to cash payment, ATM is a payment method that brings many conveniences and outstanding advantages. With the development of digital banking, information technology, the emergence of new and modern payment means and services such as payment via internet, mobile phones, e-wallets, QR codes, wireless payments, etc. Contactless payment... makes payment processing activities increasingly convenient and easier for payment participants. However, the issue of network security has become a significant challenge.

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Cyber security is the practice of protecting computers, networks, software applications, critical systems, and data from potential digital threats. Organizations are responsible for data security to maintain customer trust and meet regulatory compliance. They use cybersecurity tools and measures to protect sensitive data from unauthorized access and prevent business disruptions caused by unintended cyber activity. Organizations implement cybersecurity by streamlining digital defense across people, processes, and technology.

Information technology security: Protect data where it is stored and when it moves across information networks. While cybersecurity only protects digital data, information technology security holds the responsibility of protecting both digital and physical data from unauthorized intruders. Cybersecurity is a subset of information technology security. Cyber security ensures that digital data on networks, computers and personal devices is protected from illegal access, attack, and destruction.

2.2. Status of non-cash payments and cybersecurity issues in Vietnam

With the close guidance of the Government, non-commercial payment centers in Vietnam have been developing very actively. According to a report by the State Bank of Vietnam, in 2020, the number of payment transactions via the Internet reached nearly 374 million with a value of more than 22.4 million billion VND (an increase of 8.3% in quantity and 25,000 billion VND). 5% in transaction value compared to the same period in 2019). The number of payment transactions via mobile phones also reached nearly 918.8 million with a value of nearly 9.6 million billion VND (an increase of 123.9% in quantity and 125.4% in value over the same period). last year).

Infrastructure and technology serving non-cash payments, especially electronic payments, continue to receive investment attention, improving quality, better meeting the growing payment needs of society and adapting to modern developments. international economic integration process. The interbank electronic payment system is operated safely, effectively, and smoothly. The automatic electronic clearing system serving retail payment transactions with real-time payment capabilities, multi-channel and multi-media transaction processing is being tested to be officially put into operation. Serving the needs of money transfer, retail payment transactions, and payment of utility services. According to statistics from the Payment Department, State Bank of Vietnam, as of August 2021, in Vietnam there are 77 organizations implementing payments via the internet, 45 organizations providing payment services via phone. mobile; 30 banks deploy QR codes, 90,000 points accept QR code payments; 37 organizations providing payment intermediary services (including electronic payment gateway services, collection and payment services, and e-wallet services); 34 organizations providing electronic payment gateway services; 9 organizations providing electronic money payment services; has installed nearly 19,600 ATMs (AGB, VCB, CTG, BIDV and TCB are the leading banks in the number of installed ATMs), 280,418 POS/EDC (led by banks: VCB, CTG, BIDV, AGB); 16.92 million e-wallets have been activated...

Payment channels: New, modern technology in payment such as applying fingerprint authentication, facial recognition, using quick response codes (QR Code), card information encryption, contactless payment, mPOS technology... is researched, cooperated, and applied by banks, especially payment by QR Code associated with promoting payment via mobile phones in accordance with the development trend in the world and Consumer behavior. Non-cash payment activities through new payment channels such as mobile phones and the internet have grown by leaps and bounds. After 4 years (from August 2016 to August 2020), the number of payments via mobile phones increased by 980.9%; Payment value increased by 793.6% (in which: BIDV, MBB, STB are the banks recognized to have the highest transaction value via mobile phones among Vietnamese commercial banks). Payment services (money transfer, phone top-up, online bill payment...) via the internet at banks are deployed to varying degrees. Payment via POS is mainly carried out by most large banks (VCB, CTG, MSB, STB...). Small banks such as VIB, TPB, EIB... but focus on developing electronic banking services, have POS equipment infrastructure systems invested in and distributed for use in many locations. POS payment sales are quite large. For payment via ATM, large-scale banks, leading in providing electronic banking services such as AGB, CTG, VCB, STB, MBB, TCB... are banks with a few items and Transaction value accounts for a high proportion.

The State Bank of Vietnam licenses the operation of organizations providing intermediary payment services, focusing on the features of phone top-up, payment via QR code, and payment of phone service bills. mobile phones, electricity and water bills, internet, financial loans... ATM and POS systems continue to receive investment attention and improve quality.

Non-commercial payment methods are constantly increasing. Account opening and use by individuals continues to increase. According to statistics, Vietnam currently has about 30 million people using the banking payment system every day, and the growth rate of mobile banking services in recent times is 200%. To date, there have been over 76 payment service providers deploying payment services via the Internet and 41 organizations providing payment services via mobile phones.

However, according to a survey by the Vietnam Information Security Association, more than 50% of cyber-attacks are aimed at financial institutions and banks. Meanwhile, according to statistics from the Department of Information Security (Ministry of Information and Communications) in the first half of 2020, this agency recorded 2,017 cyber-attacks on information systems in Vietnam; Of which, there were 805 phishing attacks, 788 defacement attacks and 296 malware installation attacks. These surveys also show that the banking industry is facing a few cybersecurity challenges: Hackers attack the banking data system through the banking partners; Directly attack the website, change the interface to extort money and get data; Penetrating the system to execute money transfer orders to appropriate information and assets of commercial banks and customers; setting up websites impersonating commercial banks to scam customers... Thus, all three entities participating in the digital banking space: banks, customers and affiliated partners of commercial banks can all become “gateways” for criminals. cyber attack

While commercial banks pay special attention to ensuring network security, their partners do not place much importance on this issue; and in many cases there is insufficient information security capacity and infrastructure. In fact, there have been cases where commercial banks were attacked just from promotional emails that they hired a third party to perform. If to overcome the commercial bank’s security system, hackers must have a certain level of skill, then attacks from banking service users are much simpler, with tricks... like hitting the heart. Greed and ignorance of customers. Many recent incidents have occurred in the form of customers being lured into logging into fake websites of commercial banks and declaring security information to receive gifts and money sent from abroad... Most recently, TCB discovered Fraudsters take advantage of the need to borrow money from people who have lost their jobs or have reduced income due to the Covid-19 epidemic, impersonating commercial bank employees and soliciting loans through a form they have devised: liquidating loan documents.

Many people are not aware that personal information is also an asset that needs to be protected. Because personal information such as identity card number, bank account number, phone number, or date of birth... they often easily leave on social networks, through purchases, Online shopping has become a guide for crooks looking for fraud.

2.3. Some limitations need to be overcome

Although there have been many positive changes in developing and promulgating policies to promote payment through banks for public services (taxes, electricity, water, tuition, hospital fees and social security programs), Developing payment means and infrastructure to serve non-cash payments... but the scale of non-cash payments is still limited compared to other countries in the region and the world.

During the period 2011 - 2020, the cash/GDP ratio in Vietnam increased from 13.3% to 19.84% (the global average is at 9.6%, the Asian region is between 5% - 10%.); The ratio of payment in cash/total means of payment is almost unchanged (fluctuating between 11.33% and 12.3%), not reaching the set target (by the end of 2020, the ratio of non-cash payment is less than 10% of total means of payment).

Crime in the fields of high technology and electronic payment has recently had complicated developments with new, more sophisticated behaviors and tricks. Therefore, measures to ensure security and safety for payment services based on high technology platforms need to continue to be of concern to banks, strengthening their control capacity.

2.4. Cause of limitation

Some main reasons leading to limitations in non-commercial payment methods in Vietnam are:

First: there are still shortcomings in the legal system controlling financial technology activities in the banking sector, especially with new financial services. The rapid development of technological advances has rapidly changed online payment methods, but legal regulations have not kept up. Currently, Vietnam does not have a specific legal framework for exploiting, sharing, and storing cloud computing data, blockchain and some online products; There are no regulations requiring commercial payment for transactions of great value such as real estate, cars...; There is no regulation on the minimum sales ratio that requires non-commercial payment for large-scale retail businesses.

Second: investing in non-cash payment infrastructure with modern technology is quite expensive, so commercial banks also need to consider and calculate to ensure operational efficiency. In addition, a part of the human resources team at commercial banks has not met the professional requirements of electronic banking services, does not have access to advanced and modern technologies, and has not mastered the knowledge of information technology.

Third: the non-cash payment infrastructure system in rural, mountainous and island areas is still small, people do not have access to modern payment services and utilities. Currently, on average, in rural and mountainous areas there are only about 2.2 transaction points/administrative area (the Northern mountainous region has only 0.7 transaction points/district); Meanwhile, this number in districts, towns and cities is approximately 40 transaction points. The number of installed ATMs is mainly concentrated in 5 big cities: Hanoi, Ho Chi Minh, Hai Phong, Da Nang, Can Tho (accounting for nearly 50%).

Fourth: The level of integration of banking infrastructure and applications with other industries and service fields also has limitations, requiring continued coordination to improve the efficiency and operating capacity of the systems. To apply electronic payments for public services (electricity, water, healthcare, traffic fees, etc.), relevant parties need to have a mechanism to share data and customer information, building an open programming application communication system (Open IPI) connecting with relevant ministries and branches to create a smooth payment mechanism. However, this problem has not been completely resolved due to information security requirements and problems in the way and ratio of income/cost allocation between suppliers and information sharing.

Fifth: people's cash usage habits, especially older consumers; Concerns about the level of safety in electronic payments, the costs to pay when accepting to use modern payment services (fees for using e-banking services, fees for purchasing hard token devices) ...) are also reasons hindering the development of non-commercial payment centers in Vietnam.

3. ORIENTATION FOR THE DEVELOPMENT OF RETAIL BANKING IN VIETNAM

Starting from the importance of non-cash payments, the opportunities brought by the 4.0 technology revolution, population situation and market demand, reducing the rate of cash payments, improving the quality of non-cash payments services is the trend. inevitable in the development of non-commercial payment centers in Vietnam. To achieve this goal, the following directions need to be implemented:

First: Continue to innovate and apply 4.0 technology achievements, prevent risks, and network security in non-cash payment activities. In the current strong digitalization of banking activities, in 2021 Vietnam currently has more than 97 million people, about 70% of the Vietnamese population uses the internet, nearly 60% of the population has social network accounts, on 5 million subscribers use smart phones, the trend of online shopping is increasing, especially since the emergence of the covid-19 pandemic...

Second: Continue to deploy and expand new, modern payment services such as QR code, mPOS, Ecom, card payment encryption technology (tokenization), contactless payment on mobile devices mobile wallets, mobile money... thereby contributing to gradually changing people's cash payment habits and increasing the non-cash payment rate.

Third: Promote non-commercial payment methods in the public sector and public administration. Review, reorganize, and improve the quality of the card acceptance device network; Developing non-commercial payment centers in rural, mountainous, island, and remote areas associated with the national strategy on comprehensive financial development.

4. SOLUTIONS TO ENSURE NETWORK SECURITY WHEN DEVELOPING CURRENT PAYMENT CENTERS

4.1. On the side of the State and the State Bank of Vietnam

Amend and complete the legal corridor, guiding documents, and detailed regulations on digital identification methods (digital ID), electronic user identification procedures (e-KYC), and operations management. E-banking operations are safe, effective and prevent risks. Clearly define the rights and responsibilities of the entities participating in payment, on that basis, control legal risks appropriately, in accordance with international standards and practices approved by financial institutions, recommended international currency, or commonly applied in many countries around the world. There are effective measures in monitoring, detecting, and handling fraud; Strengthen the work of ensuring security and safety in electronic payments. The State Bank needs to continue to improve the legal framework for new products and services; create a legal environment that promotes innovation of Fintech organizations, encouraging safe and effective Fintech solutions.

Adding regulations that large value transactions (such as 100 million VND or more) require commercial settlement; Large-scale retail businesses must ensure a minimum percentage of revenue paid by bank transfer according to regulations. This ratio can be determined differently according to the size of the enterprise, according to the business area and gradually increases according to a certain roadmap.

Promulgate a data sharing mechanism, build an open programming application communication system (Open IPI), complete the system connecting the electronic payment infrastructure of commercial banks with the infrastructure of tax authorities, Customs, and state treasury to serve the request for coordination of state budget collection electronically. Develop synchronous and unified national information communication and payment technology infrastructure among financial institutions and payment intermediaries.

Research and apply international standards and practices on information system security and safety into legal documents regulating IT application activities of credit institutions and payment intermediaries.

Applying an IT risk assessment framework according to international practices to improve the quality of inspection and compliance with safety and security regulations at credit institutions and payment intermediaries.

Supervise and urge credit institutions to complete the implementation of the Plan to apply safety and security solutions in online payments and bank card payments; Promote the implementation of the plan to convert magnetic cards to chip cards.

Direct credit institutions to strengthen their specialized information security apparatus. Continue to promote the activities of the banking industry's IT security incident response network.

Coordinate with authorities of the Ministry of Information and Communications, Ministry of Public Security, Ministry of National Defense, and organizations providing IT infrastructure services... to share information and support safety activities, cybersecurity of the banking industry.

Continue to promote communication work and raise awareness for officials and employees in the banking industry and the people in identifying and minimizing the risks of banking activities in cyberspace. Propagate, guide, and have a mechanism to encourage non-commercial payment for collection of taxes, fees, and public services through banks, encourage individuals, businesses... to pay periodic bills in the form of non-commercial payment, Promote payment of pensions and social insurance benefits through banks.

4.2. Regarding commercial banks and payment service providers:

Continue to innovate and apply modern technology in banking activities towards developing digital banking. Complete the bank's transaction processing process towards digitalization, automation, safety, and convenience.

Regularly update and apply advanced measures to ensure security and safety for the payment system.

Banks need to promote the development of internal security policies, password setting mechanisms, and develop post-disaster troubleshooting procedures; Focus on investing in tools and software programs to support information system security to minimize cases of system intrusion, data loss, malicious code attacks...

Developing non-commercial payments, especially electronic payment channels, requires each bank to have a large payment environment.

Developing a roadmap and plan to develop payment settlement services of payment service providers needs to target the poor, low-income people, rural residents, remote areas, and businesses. small and micro enterprises following the policy of comprehensive financial development.

Develop and apply modern payment and money transfer models that are easy to use and suitable for conditions in underdeveloped economic areas and disadvantaged groups.

To promote non-cash payments in rural, mountainous, island, remote and remote areas, it is necessary to strengthen the combination between banking and telecommunications based on using the existing networks of banks, post offices and organizations. Providing intermediary payment services.

Review, complete and organize the implementation of IT security policies and IT risk management policies in compliance with State legal documents and regulations of the State Bank of Vietnam

Develop a plan to complete and implement the tasks specified in documents of the State Bank of Vietnam

Develop a roadmap to apply international security standards for the system.

IT as well as online payment and card payment services (ISO 27001, PCI/DSS).

Strictly review the registration and activation processes for using e-banking services to ensure service provision to the right customers.

Deploy review, risk assessment and security solutions for the entire life cycle of an information system.

Equipped with systems to support electronic transaction monitoring, fraud investigation, gradually synthesize and analyze customer data and develop a set of rules to detect and prevent fraud early; Develop criteria and software to identify unusual transactions based on time, geographical location, transaction frequency, transaction amount, number of incorrect logins attempts or unusual signs. other.

Build a cyber security operations center to track, monitor and promptly prevent cyber intrusions and attacks. Regularly evaluate weaknesses and vulnerabilities of IT systems. Develop and deploy rehearsals of processes and scenarios to respond to network information security incidents.

Strengthen the IT apparatus at all levels towards specialization, mastering technology, and limiting dependence on external partners. Build a team of specialized information security officers who are ethical and disciplined to prevent collusion with cyber criminals.

Develop, update scenarios, and organize internal drills on responding to security and order incidents at least once a year.

Strengthen internal audit work to ensure the safety of professional operations and IT infrastructure.

Strengthen communication to customers about the tricks of cyber criminals and measures to protect personal information in using e-banking services and card payments.

Set aside a certain financial resource for investment in technical infrastructure and application of modern science and technology, including security technology.

Information sharing between banks also needs to be enhanced to limit the risk of being attacked. Because there are very simple vulnerabilities, you only need to warn each other to be able to handle the error, but there is currently no exchange mechanism or handling method to deal with emergency situations.

4.3. On the customer side

Absolutely do not provide confidential information about electronic banking services (access password, OTP, password to access personal e-mail address) to anyone and in any form (texting), answering the phone, revealing directly...). Personal information indicator unless proactively calling the hotline (1900545413) for assistance and the bank requires coordination in providing customer identification information.

Avoid visiting untrustworthy websites, or clicking on any links that ask to provide or update personal information and electronic banking service information. After finishing using the service or completing online payment transactions, you must log out of your account. Absolutely do not choose to save your Internet Banking login password on shared devices, public computers, etc.

Users need to protect and regularly change passwords to access electronic banking services, cards, e-mail, and password settings to ensure safety principles. Priority is given to using a personal computer with updated anti-virus software installed to access the bank's electronic banking services.

Regularly update new operating systems and software from suppliers, avoid updates from fake sources.

With credit cards: In addition to not letting others borrow the card and storing the card carefully, customers should not leave too much money in the ATM card or set the lowest possible limit for the credit card. In addition, cardholders should proactively deactivate Internet Banking services when they do not need to use them and reactivate them when needed; Register for SMS Banking service to promptly capture arising transactions. This is also an effective measure to protect your account.

5. CONCLUSION

Developing non-commercial payment centers is an inevitable trend in countries, of which Vietnam is no exception. To achieve this goal, it is necessary to synchronously apply solutions at both the macro and micro levels. Technology plays an important role in banks' long-term strategies to improve operational efficiency and manage risks. risks and thereby have more opportunities for development. Obviously, investing in technology is necessary, but above all it is also a matter of responding to security issues and enhancing network security. When solutions to minimize risks when using digital banking products and services, banks are interested in investing in; Improved people's knowledge will gradually eliminate people's fear when using banking products and services, thereby promoting non-cash payments.

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DEVELOPING CREDIT GUARANTEE ACTIVITIES FOR SMALL AND MEDIUM ENTERPRISES: INTERNATIONAL EXPERIENCE, CURRENT SITUATION AND RECOMMENDATIONS FOR VIETNAM

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Abstract: Accessing credit capital for small and medium-sized enterprises in Vietnam still faces many difficulties due to lack of collateral, information transparency as well as management quality. Credit guarantee was born with the goal of helping businesses access credit more effectively by providing debt repayment guarantees on behalf of businesses. This model has now developed in many countries around the world with positive impacts recorded, especially in Japan and Korea. The article focuses on analyzing the current situation of credit guarantee activities in Vietnam, thereby finding the causes, combining with international experience to propose policy recommendations.

Keywords: Credit guarantee, credit institutions, small and medium enterprises

1. INTRODUCTION

Basically, credit guarantee is an activity in which a guarantee organization confirms that it will replace the guaranteed party (borrower) to fulfill its obligations to a third party (lender). This activity has the participation of at least 3 parties: credit institutions (CIs), credit institutions (in Vietnam, credit institutions) and customers (small and medium enterprises - SMEs). After the Credit Union Fund has fulfilled the debt payment obligations to the Credit Institution for the customer, the customer will need to accept the debt and repay the Credit Union organization the amount paid by the Credit Union organization as well as related fees to guarantee.

Credit Code has a positive impact on all three main entities involved: SMEs, credit institutions, mainly commercial banks; Government and economy. (i) For businesses, credit guarantees help reduce guarantee transaction costs, increase insurance payout capabilities (including reducing transaction costs, increasing discount amounts and improving recovery levels); overcome problems in mobilizing capital for SMEs and be effective in stimulating growth; (ii) For commercial banks, risk sharing will help increase opportunities to expand lending capacity and create better relationships with businesses; (iii) For the Government, Credit Code is an effective tool to narrow the gap between supply and demand in the finance of SMEs, contributing to diversifying the financial system and market, and is a premise for mobilizing resources. power of other financial institutions and contribute to the country's economic growth.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

One of the pioneering studies on this issue is Beck and colleagues (2010). The author presented data on 76 credit guarantee programs in 46 developed and developing countries.

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The results showed that government has an important role in financing and management, but less in risk assessment and remediation. Thus, this is one of the (empirical) evidence of the formation of guarantee funds with the participation of the government. However, the way funds operate differs in different countries.

Later, some Vietnamese authors such as Vu Thi Phuong (2017) focused on analyzing and evaluating the current state of operations of the Credit Guarantee Fund to support SMEs in Vietnam during 2015 - 2017 based on the aspects of providing services for the enterprises and the number of services provided. Authors Dang & Chuc (2019), Dang Thai Binh (2020) also believe that SMEs account for a large number and play an important role in creating jobs and the development for a country. However, SMEs also encounter many difficulties, the most challenging being the difficulty in accessing capital. To help SMEs overcome this difficulty, many countries around the world use Credit Guarantee as an effective tool to support SMEs more easily in accessing capital and promoting development.

In his doctoral thesis, author Dang Thai Binh (2017) used quantitative research to evaluate the relationship between credit guarantee and financial indicators of enterprises and Hungary's macroeconomic indicators have shown that credit guarantee plays a positive role for financial institutions by helping to share risks with banks, also helping banks expand lending, reduce costs in the lending process and reduce banks' capital requirements. From a macro perspective, credit guarantee has a significant effect on stabilizing the economy and is a contributing factor to GDP growth and job guarantee.

Research by Ngo Thi Lan Phuong (2018) on perfecting the legal framework on the organization and operation of the SME Credit Guarantee Fund has evaluated the current status of the process of creating and developing the legal framework for establishment, organization and operations of the Credit Guarantee Fund for SMEs in Vietnam. On that basis, the topic has proposed solutions to improve the legal basis. However, the topic focuses on perfect legal solutions for credit guarantee funds for SMEs, not mentioning solutions for credit institutions and SMEs in creating the development of credit guarantee activities, so the comprehensiveness of the solution is not guaranteed. At the same time, the thesis has been implemented since 2017, so the effectiveness of the implementation process of *Decree No. 34/2018/ND-CP of the Government dated March 8, 2018 on the establishment, organization and operation of Credit Guarantee Funds for medium and small enterprises (effective from March 8, 2018)* has not been evaluated.

3. RESEARCH RESULTS

3.1 International experience in developing credit guarantee activities for SMEs

Japan and Korea are two countries that have built effective systems of credit guarantee funds, contributing greatly to the development of SMEs as well as the economy. In Japan, as of 2018, loans guaranteed by credit guarantee organizations accounted for more than 10% of the total value of loans to SMEs. While in Korea, credit guarantees cover 1/3 of SMEs, the value of guaranteed loans accounts for 15%.

In Japan

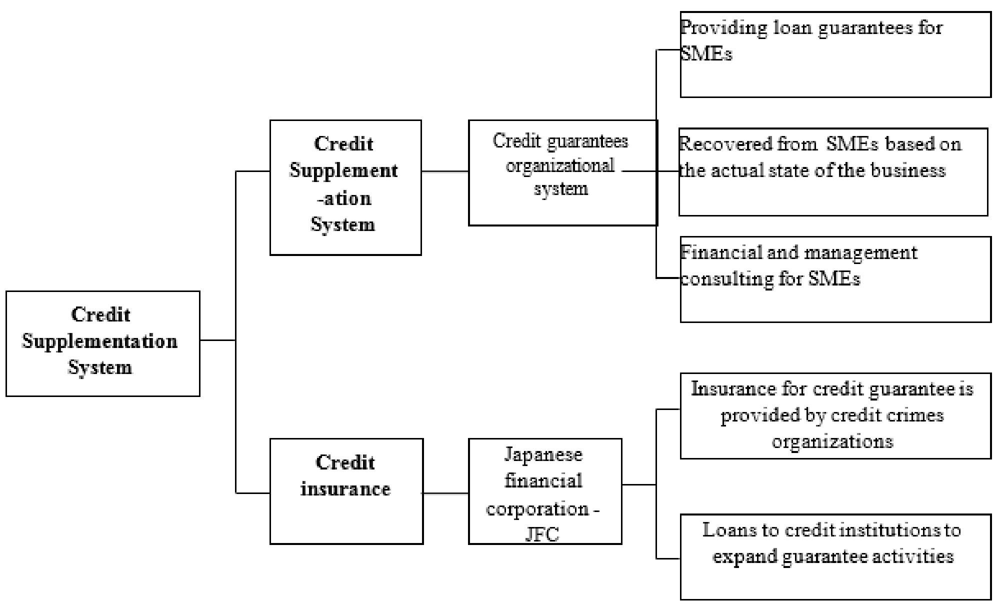
Japan is the leading country in solving capital difficulties for SMEs. Although it is a country with the world's leading economy, with thousands of economic corporations and multinational companies operating, up to 99% of all operating Japanese businesses are SMEs. SMEs in Japan mostly belong to traditional industries, but always have a combination of traditional national characteristics with modern techniques and technology. SMEs in Japan act as the backbone of the economy, creating jobs for about 70% of the total workforce, contributing to social stability.

Until 2018, of the approximately 250 trillion yen of outstanding loans to SMEs, guaranteed loans accounted for more than 10%, equivalent to 26 trillion yen.

Operational organization model

In Japan, the credit system is strictly organized in a common model for all relevant financial institutions. This model is called "Credit Supplementation System - credit support system". This system includes: Credit Guarantee and Credit Insurance.

Figure 1: Japan's credit support system



(Source: Ngo Thi Lan Phuong, 2018)

In the above system:

(i) The Credit Union carries out the activities of a system of guarantee organizations for SMEs to borrow capital from credit institutions, and at the same time provides financial and technical support to these organizations. The credit support system in Japan consists of a credit system operated by 51 companies established throughout Japan. The credit guarantee system and the credit insurance system work together to enable the credit replenishment system in Japan to fulfill the important task of facilitating the provision of business capital to SMEs.

(ii) Credit insurance, under the responsibility of Japan Financial Corporation (JFC). Japan Financial Corporation is a comprehensive policy-based financial institution wholly owned by the Government of Japan that reinsures secured debt provided by credit guarantee corporations.

Credit guarantee conditions

Enterprises are eligible for Credit Guarantee when determined to be small and medium sized. In Japan, the classification of businesses is based on two main criteria: charter capital and number of employees. The division also depends on the field of production and business activities.

Subjects of credit guarantee in Japan are expanded to most SMEs. In fact, according to the criteria, only businesses that satisfy the conditions for SMEs can be eligible for a guarantee. This increases support for businesses in this country. This is a very open and fair approach for businesses. The fact that businesses have different financial targets will determine the guarantee costs they pay to guarantee organizations.

Credit guarantee fee

The guarantee fee rate is determined as a percentage of the loan value and is determined by reviewing the risk guarantee database system for SMEs (CRD). The high or low guarantee fee rate depends on the credit risk level of businesses as assessed by the Credit Union organization. Accordingly, the guarantee fee will range from 0.45-1.9% with 09 different levels of normal guarantees.

Guarantee fees are paid annually or according to the contract signed between the SME and the guarantee organization. In case an SME cannot repay the loan from a credit institution and the credit institution must subrogate the right to pay on its behalf, the SMEs, instead of paying the guarantee fee, will have to pay the loan interest (on the amount paid by the guarantee organization). for credit institutions) with interest rates fluctuating between 14-15%/year.

About credit insurance

To create a legal corridor for insurance activities, Japan has issued the Law on Credit Insurance for SMEs (in addition to the Law on Credit Guarantees and the Law on Support for SMEs). Credit insurance mechanisms and processes are specifically stated in the content of the Law on SME Credit Insurance. After signing Credit Guarantee contracts with SMEs and credit institutions, Credit Guarantee funds can sign insurance contracts (for the guaranteed amount for SMEs). In case the guaranteed person fails to pay loans at credit institutions, credit institutions will notify the Credit Guarantee Fund, and the Credit Guarantee Fund will replace the right of businesses to pay loans to credit institutions. The value of these payments will then be covered by insurance at a rate of 70-90% of the value of the loan. The Credit Guarantee Fund will then recover the loans from businesses, and at the same time must be responsible for paying JFC an amount (equal to the amount received from the business multiplied by the percentage of insurance balance received after loan recovery).

In Korea

The number of Korean SMEs accounts for 99% of the total number of businesses (more than 3.5 million businesses), 88% of the total number of employees, and 1/3 of the total export output of the entire economy of this country. According to statistics, thanks to KODIT's credit guarantee, the number of SMEs receiving loans increased significantly, from 35.7% in 1975 to 76.7% in 2015. During the period 2017-2021, Credit guarantees in Korea continue to grow strongly. By the end of 2021, the accumulated guarantee value reached more than 66 billion USD, an increase of more than 1.5 times compared to 2017.

Up to now, the credit guarantee system for SMEs is divided into 3 main channels including: (i) Korea Credit Guarantee Fund (Korea Credit Guarantee Fund - KCGF, now KODIT): operating under the Law on Credit Guarantee Fund No. 2696 dated December 21, 2019. 1974 ; (ii) Korea Technology Credit Fund (KOTCH); (iii) Local Credit Guarantee Fund: established by local governments and operates according to their own resolutions. The guarantee system is very closely organized and managed from central to local levels. For example, the Korean Credit Guarantee Fund and the Technology Credit Guarantee Fund are supervised by the National Finance Committee, while the local Credit Guarantee Fund is managed by the SME management board.

Guarantee conditions

All profit-seeking business entities or their organizations are eligible to receive credit guarantees unless they are in ineligible industries including: (a) hotel business, entertainment condominium , (b) luxury restaurant business, (c) financial services, (d) real estate brokerage services. Ineligible companies include (a) companies that are inactive, (b) companies that are delinquent on bank loan payments, (c) companies that submit false documents, (d) companies that are regulated issued by the person responsible for payment under the guarantee.

Guarantee fee structure

Before 1998, KODIT still applied a fixed guarantee fee rate for borrowers, accordingly for SMEs it was 1.0% and for large enterprises it was 1.5%. However, after that point, KODIT built a guarantee fee system tied to the applicant's credit rating. The basic fee rate ranges from 0.5% to 3.0% of the guarantee amount calculated according to the respective rating of the applicant. The final fee is determined by adding or subtracting a certain percentage from the base fee, depending on the applicant's current situation or the type of guarantee product. For a large company, an additional 0.5% is added to the final fee.

Guarantee rate

KODIT calculates the weights according to the company's credit rating, guarantee cycle, and guarantee receipt period. However, KODIT also stipulates the maximum guarantee level for guarantees. Normally the guarantee rate ranges from 50-80%. The maximum guarantee level can be calculated according to revenue or equity. Accordingly, the maximum guarantee level ranges from 1/6 - 1/2 of annual revenue. Meanwhile, according to equity capital, the guarantee level is about 3 times the equity capital. In fact, the maximum guarantee is about 2.7 million USD (in special cases the guarantee can be up to 6.3 million USD). The average guarantee level reaches 180 thousand USD.

3.2 Current status of credit guarantee activities in Vietnam

In Vietnam, the Credit Guarantee Fund to support SMEs in Vietnam is currently implemented according to Decree No. 34/2018/ND-CP dated March 8, 2018 of the Government (replacing Decision No. 58/2013/QD-TTg dated March 8, 2018). October 15, 2013 of the Prime Minister on promulgating the Regulations on the establishment, organization and operation of the Credit Union Fund to support SMEs (Decree 34) is an off-budget state financial fund organized in the local, established by the People's Committee of provinces and centrally run cities; operating not for profit, preserving and developing capital; Perform the function of issuing credit cards to support SMEs according to the law.

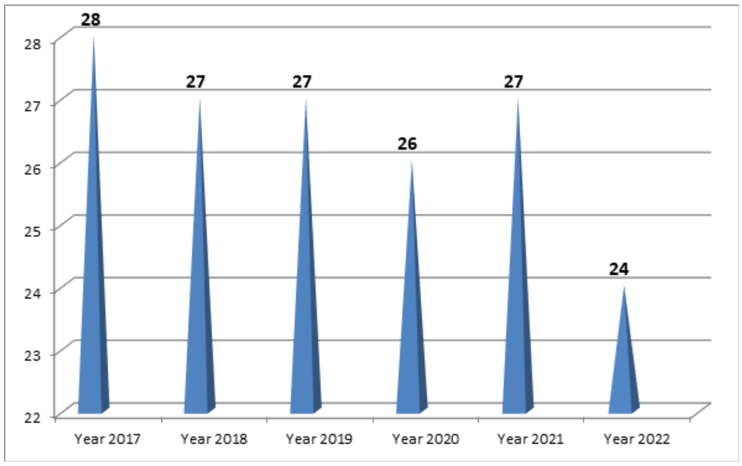
Some indicators reflect credit crime activities in Vietnam, specifically:

Regarding the number of Credit Union Funds

Since Decree No. 34 was issued, the Credit Guarantee Fund's operating model has been more clearly defined than before. Currently, the funds operate under the model of a one-member limited liability company with 100% charter capital held by the state. According to the report of Credit

Guarantee Funds, as of December 31, 2022, the whole country has 30 provinces and centrally run cities that have established Credit Guarantee Funds for SMEs. By the end of 2022, the number of Credit Guarantee funds in localities is 24 funds (Figure 2).

Figure 2: Number of localities establishing Credit Guarantee Funds or having credit guarantee activities over the years



(Source: Compiled from Credit Guarantee funds)

The Fund's operating method is chosen flexibly. Accordingly, there are 05 funds operating independently, 11 funds entrusting the local state financial fund, 8 funds assigning tasks to the local state financial fund.

Regarding the financial resources of the Credit Union Fund

The financial resources of the Credit Guarantee Funds are mainly support from the local budget to provide initial charter capital and additional charter capital. In addition to support from local budgets, the Credit Guarantee Fund's financial resources are supplemented from income from interest on deposits at commercial banks, trust capital from economic agencies and organizations or from investment activities on capital. principles of development and capital preservation. By the end of 2022, the total capital of the fund system will reach more than 1,570 billion VND.

Until December 31, 2022, a number of provinces and cities have paid attention to arranging local budgets to provide charter capital and additional charter capital to create more financial resources for the Fund. Of the total 24 Credit Guarantee Funds, 11/24 Funds (accounting for 40.7% of the total Credit Guarantee Funds) have a minimum charter capital of 100 billion VND. Besides, some localities have not met the minimum capital regulations, these funds have charter capital from 4 - 80 billion VND (accounting for 59.3%).

About Credit guarantee activities

The guarantee turnover of the entire fund system reaches 4,272 billion VND in the period 2002-2022, an average per year of 214 billion VND, so the average annual guarantee fund is about 9 billion VND.

The number of credit deeds/contracts issued in the period 2018-2022 is 2,146 units, with an equivalent amount of VND 2,614 billion, the number of valid deeds at the end of 2022 is 1,305 units, with a value of 2,614 billion VND. equivalent to 1,833 billion VND.

In fact, the guarantee activities of Credit Guarantee Funds reached their highest level during the implementation period under Decision No. 193/2001/QD-TTg, Decision No. 58/2013/QD-

TTg. From 2018 onwards, when Decree No. 34 was issued, Credit Guarantee Funds focused on organizational structure, supplementing charter capital, and implementing according to the provisions of Decree No. 34, so the operations of Credit Guarantee Funds reduce.

Some difficulties and problems

Firstly, support policies are not commensurate with the contributions of the system of SMEs and lack uniformity. In fact, in recent times the Government has recognized the contribution of SMEs in the economy, accordingly issuing many support policies, such as policies on credit, science and technology, and market development. However, policies are not really commensurate with the systemic contributions of SMEs.

The introduction of support policies but accompanied by (strict) conditions made the support policies ineffective. In fact, the 2% interest rate support policy, SME support fund, and Credit Guarantee fund for SMEs are all considered difficult to access for businesses. The fact that more than 55% of businesses surveyed have difficulty accessing credit is proof of the above statement (VCCI, USAID, 2023).

Another issue that also needs to be mentioned is that policies are not synchronized. Regarding the credit guarantee fund for SMEs, the lack of promulgation of regulations on credit insurance for guarantee activities makes this activity not closed, cohesive, and does not ensure uniformity and completeness. Therefore, when implemented, it does not bring maximum efficiency.

The experience of countries such as Japan and South Korea shows that, since the 60s and 70s of the 20th century, these countries have been aware of the large role of the system of small and medium enterprises, so the design of policies at highest level (Law) with synchronization, commensurate with the position of businesses. Guarantees are based on trust, capital is created from the budget as well as other mandatory and regular sources, making capital mobilization activities highly effective. In addition, the parallel development of the credit guarantee insurance system enables funds to deploy and expand business support activities.

First, there is a lack of effective capital mobilization mechanism, especially the lack of participation of commercial banks

Currently, according to regulations, the capital of the Credit Union Fund is formed from the local budget and other sources such as receiving support, aid, mobilization from credit institutions, and receiving management from localities. However, Decree 34 does not stipulate that credit institutions, businesses, professional associations and individuals contribute capital to the fund. Some credit institutions have previously contributed capital to the fund according to Decision 193 and Decision 58. Withdraw capital from Credit guarantee funds.

According to experience in Korea and Japan, financial resources for credit union organizations are provided directly from the Government, local authorities or indirect capital sources from credit union associations (in localities in Japan). Japan), insurance companies (Japan Financial Corporation). In Korea, capital sources for the operations of KODITs are specifically stipulated in the Law from 03 sources: State budget, contributions from credit institutions and from other organizations and individuals. Mobilizing capital for funds is legalized, making financial contribution regulations mandatory for credit institutions, so mobilized capital is also higher. In Korea, commercial banks contribute capital from loans with interest (mandatory). In 2022, capital from commercial banks will account for 70% of funds in this country.

The allocation of capital from localities is still limited. The reason is said to be due to some localities not being drastic in exercising their rights and responsibilities in developing and maintaining the fund's operations, the ability to apply Decree No. 34 is still limited...

Second, the model of organizing credit funds in localities causes funds to be dispersed, limiting the ability to concentrate capital

The organization of funds in localities makes the Credit Union Funds small. The modest scale and capacity of the Credit Guarantee Fund does not really meet the needs of SMEs in guaranteeing loans to serve production and business activities; The role of connecting capital with commercial banks has not yet been demonstrated.

In countries with effective credit risk fund models, this fund is often organized according to the central model (can be combined with regional and local models) such as Korea, Japan... This allows Funds can support large projects that have a high impact on the business community. In addition, the organization according to the central model will ensure professionalism in operations, and the quality of business appraisal and evaluation activities will be promoted and improved.

Organizing according to the local model makes it difficult for some localities (small localities with limited funding) to mobilize enough funding for the operating fund. Therefore, the guarantee fund organization model does not meet the capital requirements of businesses.

The limited ability to mobilize capital, along with local organization, leads to dispersed capital sources, making the guarantee value for businesses limited. According to a survey by Pham Tien Dat and colleagues (2023), up to 78.42% of businesses surveyed assessed that low guarantee value is a high level obstacle (level 4-5, the 2 highest levels in the survey). The level assessment scale is built) when they access credit, in which the proportion of businesses assessing this as a low level obstacle (level 1-2) is only 5.03%.

Third, the requirement to have collateral limits the access of businesses

According to regulations, the fund's guarantee must have collateral - while this is a limitation for SMEs. Compared to directly borrowing capital from banks, borrowing capital through the guarantee activities of the Credit Guarantee Fund requires SMEs to meet additional requirements in terms of documents, procedures and related fees.

According to the results of a survey by OECD (2021) and a survey by Pham Tien Dat and colleagues (2023), SMEs evaluate requiring collateral as a major obstacle in accessing credit. Up to 87% of businesses surveyed rated this obstacle at a high level (level 4-5). This makes it difficult for SMEs to access information. Some businesses responded that there was almost no information about the Credit Guarantee Fund. The proportion of businesses that had ever applied for a guarantee was only 17%.

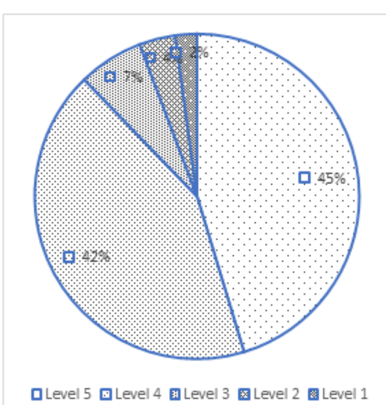


Figure 3: Assessment of SMEs on collateral issues

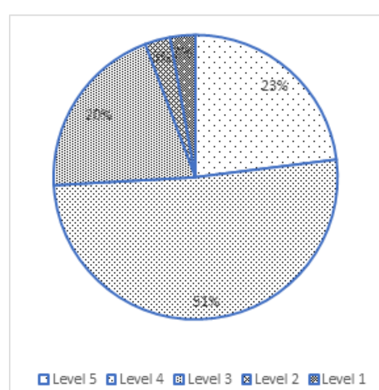


Figure 4: Evaluation of SMEs on consulting and support from staff

(Source: Pham Tien Dat et al, 2023)

Fourth, the guarantee fee regulations lack flexibility

Currently, the guarantee fee regulations are fixed, not based on the guarantee value, risk level of the guarantee, credit rating of the business, or field of operation of the business. This will discourage attracting businesses with financial potential and good financial capacity to the fund. At the same time, businesses are not encouraged to improve the quality of corporate governance to enjoy lower guarantee fees.

According to the experience of other countries (Japan, Korea), the regulation of guarantee fees is based on factors such as guarantee value, risk level or credit rating of businesses. The low risk level and high credit rating of the business mean lower guarantee fees and vice versa. This creates a driving force for businesses to improve their management and operations and contribute to the overall development of the country's economy.

According to the results of Pham Tien Dat and his colleagues (2023), the proportion of businesses evaluating high guarantee fees and lack of flexibility as obstacles in accessing credit at a high level (level 4-5) is 74.1. %, while the proportion of businesses that think this is a less important issue (level 1-2) is only 5.8%

Fifth, the quality of the fund's human resources is still limited.

Currently, human resources at the funds are still working part-time, the qualifications of staff are uneven, and experience in supporting credit crimes is limited. Especially skills related to assessment and appraisal of investment projects, credit appraisal, and financial reporting of businesses.

According to the results of Pham Tien Dat and colleagues (2023), the proportion of businesses evaluating consultants as not giving full and clear instructions on the guarantee process and appraisal activities accounts for 75.5%, while Only 8.6% of businesses think this has been done well.

4. DISCUSSION AND CONCLUSION

First, improve the ability to mobilize capital for funds

There are solutions to attract more participation from the non-budget sector, especially credit institutions, in creating capital for the fund. In the long term, it is necessary to research and build a legal framework at the highest level to create a premise for the operation of Credit Guarantee funds (Law level): Law on Credit Guarantee for SMEs. Accordingly, when creating capital of the Credit Union Fund to support SMEs, a certain percentage of the profits of commercial banks is deducted. This is the experience of some countries that have succeeded in developing this model such as Japan and Korea. In Korea, commercial banks will deduct 0.3% of the capital loaned to the economy to contribute to the fund.

In the short term, ensuring the fund's capital will be realized when interested localities arrange in their budget estimates to provide enough capital for the Credit Union fund; At the same time, strengthen inspection and supervision of the implementation and management of the credit fund, promoting local socio-economic development. Local governments need to have a proper awareness of the role of Credit Guarantee funds for local sustainable development. There needs to be more mechanisms to support commercial banks in contributing to the fund, as well as being active in lending activities to SMEs.

In addition, it is possible to allow the Credit Union Fund to mobilize capital from foreign funds to increase charter capital, thereby creating resources for the development fund and providing practical support to SMEs (through trust).

Second, aim to establish a model of Credit Guarantee fund focusing on national and regional scope

The establishment of a national Credit Guarantee fund will facilitate the consolidation of resources towards local funds such as branch systems and have mechanisms to supplement resources from reserve funds and refinance to increase capital scale. charter, helping the fund system operate more effectively. You can refer to the Korean Credit Guarantee Fund (KODIT) model to implement this fund.

This guarantee fund is unified nationwide and may be directly affiliated with the Government or a ministry or branch. Associations are the organizations closest to businesses, while 4.0 technology has allowed the collection of credit rating information, the results, and who can be guaranteed and guaranteed. to what extent.

Third, remove problems regarding guarantee conditions for collateral

Resolving these problems is an important prerequisite to promote credit crime activities. Accordingly, amendments should be considered in the direction of not requiring SMEs to use existing assets or reduce the proportion of mortgage value/total loan value to implement security measures at the credit guarantee fund.

Based on the reputation and credit rating of SMEs, funds can offer mortgage rates lower than the loan value. This will help businesses promote their ability to mobilize capital and remove difficulties for businesses.

Based on the reputation and credit rating of SMEs, funds can offer mortgage rates lower than the loan value. This will help businesses promote their ability to mobilize capital and remove difficulties for businesses.

This solution will also come with recovery risks. Therefore, setting up risk reserve funds and diversifying capital mobilization channels for funds is necessary to maintain the stability of capital sources of these funds.

Fourth, guarantee fee regulations are flexible.

The collection of guarantee fees is based on a number of factors, the important of which is related to the credit rating of SMEs and the credit profile of these businesses. Besides, it also depends on the funds' ability to mobilize capital. During operation, the collection of guarantee fees must be public and transparent for all SMEs when accessing the fund. For example, the fee is from 1.5-2.5% per year, there must be a maximum limit (2% is reasonable at the present time).

Fifth, improve the quality of the fund's human resources

Organizing retraining for the fund's human resources is very necessary. The person in charge of managing these funds must have management capacity and should not concurrently hold many different positions. Regarding salaries for employees, a special salary regime based on performance should be applied to encourage them in their work. In addition, it is necessary to organize forums/seminars to connect SMEs and banks to provide information and advice to businesses on products and loan procedures./.

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DETERMINANTS OF CAPITAL STRUCTURE OF LISTED PHARMACEUTICAL ENTERPRISES IN VIETNAM

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Abstract: Capital structure plays an important role since it contributes to the overall stability of a company. This study, thus, aims to analyze the firm-specific factors influencing the capital structure of pharmaceutical businesses listed on the Vietnamese stock market. This paper studied 12 pharmaceutical firms that have been listed on the Ho Chi Minh City Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX) in the period 2013 – 2022. Regression model analysis with panel data was used to find out the determinants of the company's capital structure in 6 independent variables (profitability, growth, size, tangibility, liquidity, and non-debt tax shields). Research findings have demonstrated a statistically significant negative correlation between profitability, growth, and liquidity and the capital structure measured by the debt ratio. Although it also decreases with non-debt tax shields, this variable does not have statistical meaning with the dependent variable. Size is the only variable with a positive correlation coefficient, but no statistical significance was found either. The results of the study can help these firms build a reasonable capital structure to enhance their intrinsic value.

Keywords: determinants, capital structure, listed pharmaceutical enterprises.

1. INTRODUCTION

The pharmaceutical industry actively contributes to the advancement of human health associated with the development of the society as a whole in Vietnam. According to the assessment of IQVIA Institute, Pharmerging Markets is a group of 17 countries with the highest growth in the pharmaceutical industry in the world and Vietnam is ranked in the 3rd group of 12 countries with a growth rate of 14% - just behind Argentina, Pakistan. In the long term, the pharmaceutical industry has a lot of growth potential due to the sizable of Vietnam's population and the rapid growth of the aging population as evidenced by more than 12% of the population in 2021 is the number of people aged 60 and over. Additionally, there is a proportional increase in overall health care spending and pharmaceutical use per person as customer incomes and awareness of health care issues rise. By 2031, Fitch Solutions estimates that Vietnam's healthcare spending might total $37.7 billion by 2031 and reach 2.1 million dong per person in 2026.

However, the outbreak has revealed that the urgent weakness of Vietnam's pharmaceutical industry today is the dependence on 80-90% of imported production materials, of which China and India are the two main suppliers. During the pandemic, the price of most raw materials has increased due to API shortage as well as the exorbitant transportation and distribution costs. Moreover, the complicated developments of the Covid-19 epidemic caused restrictions on movement, which hampered the progress of the cooperation between Vietnamese pharmaceutical enterprises and foreign partners. In addition, because of the ongoing conflict between Russia and Ukraine, some ingredients and drugs imported from Europe are at risk of shortage.

In general, the pharmaceutical sector in Vietnam has a great deal of potential for growth, but recent economic changes in the country, particularly the complicated COVID-19 pandemic, have had a significant impact on the capital structure of the pharmaceutical enterprises.

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Depending on the characteristics of each enterprise's position, the industry in which they operates, as well as the effects of macroeconomic fluctuations of the economy and culture, businesses need to determine what kind of capital structure is going to help them be successful and achieve their objectives. Determining whether or not a decision to use a loan or a company's equity is appropriate based on the relationship between the factors influencing the use of financial leverage and the capital structure, subsequently make recommendations for improving the effectiveness of using financial leverage, thereby increasing asset value for businesses.

2. LITERATURE REVIEW

It is undeniable that determining the firm-level optimal capital structure is one of the fundamental issues that must be faced and attracts a lot of attention from managers and scholars throughout the globe. As a result, several empirical researches on the factors influencing capital structure have been carried out over the years using various research methods with a variety of sectors and industries.

(Sikveland & Zhang, 2020) investigated the factors that affect the capital structure of all corporates in the highly cyclical Norwegian salmon farming industry. Based on a single panel data set over 14 years from 2001, they concluded that profitability has a positive effect on liquidity but a negative effect on short-term debt and total debt. They also further found that listed companies have a higher liquidity and less total debt than private companies, which helps them lessen their risk of bankruptcy but may result in lower profitability.

Despite being the same study in Norway but distinct from the study above in the aquaculture industry, the paper of (Marius et al, 2022) focuses on the capital structure of 5474 hospitality industry during the period of 2008– 2018. Regarding the industry's feature of seasonality, the research result revealed that it increases the proportion of long-term debt in the capital structure. Besides, the higher the geographical concentration of hospitality companies, the greater their dependence on short-term debt. More specifically, a region's high concentration of businesses intensifies the harsh rivalry that depletes cash and necessitates the use of short-term debt as a replacement.

In the Indian contex, the research of (Anshu et al., 2014) opted to analyse the key factors that affected the capital structure of listed companies between 2001 and 2010 that included both government and private sector firms. The authors have discovered seven out of ten independent variables through regression analysis that profoundly affect the leverage structure of 870 publicy listed corporations. These elements consist of profitability, growth, asset tangibility, size, cost of debt, tax rate, and debt serving capacity.

As opposed to the (Anshu et al., 2014)'s study, (Zahid et al, 2021) has demonstrated that Pakistan's manufacturing and service sectors do not perceive the tax rate to be a main contributor of capital structure. The study constructed a database of 30 companies and then analyzed through correlation and multi megression analysis. Furthurmore, the authors declared that the common point of both fields is that tangibility materially unfavorable associated with leverage. Taking into account the differences, leverage has an adverse impacts on profitability and growth in the manufacturing sector while it presents a non-significant positive effect in the service sector. In the manufacturing sector, size and leverage have a positive non-significant relation; nevertheless, in the service sector, they have a positive significcant relationship.

The same viewpoint was shared by (Zahid et al, 2021), (Miroslav et al, 2012), and (Huang and Song, 2005), which all supported the existence of a subtantial and negative association between profitability and leverage in their papers. (Miroslav et al., 2012) examined the capital structure of 3175 small and medium-sized enterprises (SMEs) from seven Central and Eastern European (CEE) countries during the period 2001–2005 whereas (Huang and Song, 2005) employed a sample of more than 1200 listed companies in China for a period of 10 years, between 1994 and 2003. Moreover, (Huang and Song, 2005) further confirmed that firm size, non-debt tax shield, and tangible assets rise in the same direction in tandem with leverage.

As in other countries, particularly in Russia, where (Maria, 2014) concentrated on financial capital structure in the pharmaceutical sector. This study has used data from 2006 to 2011 of 144 private pharmaceutical firms. The key findings proved that profitability, size, assets structure, and short-term liquidity are negatively linked to capital structure. Additionally, the stability of the macroeconomic system and institutional environment is another crucial external factor that influences the decision of capital structure.

Another study in the pharmaceutical industry with consideration of corporate governance of Pakistan-listed firms was carried out by (Saeed et al, 2014) over the period of 2004 – 2011. The results indicate that, aside from size and tangibility, the remaining five explanatory variables (profitability, growth, liquidity, earning volatility, non debt tax shields) relating to business characteristics, are at the capital structure-specific significance level. Besides, except than CEO duality, two corporate governance factors (CEO tenure and board size) have a sharply influence on the company's leverage.

In addition, numerous studies have been undertaken using Vietnamese evidence. In order to analyse the factors affecting capital structure of businesses in emerging markets, (Vo, 2017) applied the GMM estimator based on a dataset from companies listed on the Ho Chi Minh City Stock Exchange between 2006 and 2015. Although the positive growth opportunity coefficient is significant in the regression describing the ratio of long-term debt to short-term debt, it is not significant in regressions for both long-term and short-term leverage.

With aspect to tangible assets, (Vo, 2017) and (Dzung Nguyen, 2012) both proposed its opposite direction in relation to short-term and long-term leverage. To be more precise, it is positively correlated with long-term leverage and negatively correlated with short-term leverage. The contrary perspective, according to (Nguyen Thi Phuong Nhung, 2017), is that tangible ratios have a favorable impact on short-term leverage.

The factors influencing the capital structure of real estate enterprises are the subject of research by Nguyen Thi Phuong Nhung (2017). From 2010 to 2015, a sample of 34 real estate businesses registered on the Ho Chi Minh City Stock Exchange was gathered. The authors informed that real estate companies typically employ debt to finance their investments and also highlighted the significant positive effect of asset structure, which in the same vein as Tran and Ramachandra (2006). Both the long-term and the short-term debt ratio are negatively impacted by net income. The non-debt tax rate is useless for determining the short-term debt ratio but it aids businesses in lowering the long-term debt ratio.

(Dzung Nguyen, 2012) evaluated the capital structure components of 116 non-financial companies listed on the Ho Chi Minh Stock Exchange or the Hanoi Stock Exchange in the period

2007-2010 through the GMM approach. The findings exhibit that leverage is positively linked to profitability and liquidity while negatively linked to state ownership and growth. Similar to the directiom in tangibility previously indicated, firms size increases with short-term leverage and decreases with long-term leverage.

(Thu Minh Thi VU, 2020) concentrated on researching how corporate governance influences the capital structure selections of 336 Vietnamese companies registered on the Ho Chi Minh City Stock Exchange between 2015 and 2019. Then, the regression was established and tested by utilizing a variety of statistical method approaches, including the pooled OLS, the fixed effects model. This paper could not find any proof that management ownership and board independence are related to company capital structure. Besides, board size, state ownership, and concentrated ownership all positively affect the capital structure, but foreign ownership appears to have the opposite effect.

Regarding the pharmaceutical sector, (Thanh & Trang, 2021) obtained information of 23 pharmaceutical and medical corporations with shares are listed on the Ho Chi Minh Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX) between 2016 and 2020. The authors then ran a number of analyses on this data, including the Pooled OLS Model, Fixed Effects Model (FEM), Random Effects Model (REM), and Feasible Generalized Least Square Model (FGLS). The outcomes suggest that capital structure has a positive association with growth opportunity but it has a negative association with profitability, tangible assets, business size, and liquidity. Nevertheless, it is discovered that there is no statistically significant relationship between debt ratio and firm age and pluralist executives.

In conclusion, the determinants of capital structure have drawn the attention of numerous scholars worldwide, providing corpus of study across different areas and also producing a range of outcomes, sometimes even contradictory ones. The authors have evaluated various variables related to firm characteristics (profitability, growth opportunities, firm size, fixed assets, age, non-debt tax shield, liquidity) and corporate governance elements (CEO duality, CEO tenure and Board size). Moreover, they have taken into account various external factors, such as macroeconomic factors and industry-specific factors. Therefore, the different paper results could be a result of different industry traits, variable choices, temporal and spatial scales, or estimation analysis methods.

3. RESEARCH AND METHODOLOGY

This paper is an investigation into the components of the capital structure of businesses with shares listed on Vietnamese stock markets. To begin with, gathering information from the audited financial statements of the Vietnam-listed pharmaceutical businesses over the period of 2013-2022.

Based on previous studies, the following four techniques were used in this study to evaluate hypotheses: pooled ordinary least square (Pooled OLS), the fixed effects (FEM), the random effects (REM), and the feasible generalized least square (FGLS). The most appropriate regression method is determined by utilizing the Wald, Breusch-Pagan, and Hausman tests.

With the respect to research model, this study employed a linear regression model to evaluate the hypotheses regarding capital structure and determinants impacting it. In order to be consistent with the development situation as well as the features of pharmaceutical firms listed on the Vietnamese stock market and public information on the financial statements of these companies, this research has inherited, adjusted and given the following regression model: The dependent variable is the

Debt ratio (Total debts/Total assets)and the independent variables contain Profitability, Growth opportunity, Firm size, Tangible assets, Liquidity, Firm age, and Non-debt tax shields. Therefore, the detailed model is:

- ***Pooled OLS model***

$TD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 GROW_{it} + \beta_3 SIZE_{it} + \beta_4 TANG_{it} + \beta_5 LIQ_{it} + \beta_6 AGE_{it} + \beta_7 NDTS_{it} + \varepsilon_{it} + \mu_{it}$

- ***Fixed effects model***

$TD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 GROW_{it} + \beta_3 SIZE_{it} + \beta_4 TANG_{it} + \beta_5 LIQ_{it} + \beta_6 AGE_{it} + \beta_7 NDTS_{it} + \varepsilon_{it} + \mu_{it}$

- ***Random effects model***

$TD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 GROW_{it} + \beta_3 SIZE_{it} + \beta_4 TANG_{it} + \beta_5 LIQ_{it} + \beta_6 AGE_{it} + \beta_7 NDTS_{it} + \varepsilon_{it} + \mu_{it}$

In which:

TD_{it}: Capital structure of company i in year t

$PROF_{it}$: Profitability of company i in year t

$GROW_{it}$: Growth of company i in year t

$SIZE_{it}$: Size of company i in year t

$TANG_{it}$: Tangible assets of company i in year t

LIQ_{it}: Liquidity of company i in year t

AGE_{it}: Age of company i in year t

$NDTS_{it}$: Non-debt tax shields of company i in year t

$\varepsilon_{i,t}$: Stochastic error term of company i in year t

μ_{it}: Error term of company i in year t

The study has synthesized and offered hypotheses to examine the association between debt ratio and seven independent variables on the basis of capital structure concepts and findings from reviewing the available literature.

Profitability (PROF)

Profitability is reflected in this study is return on assets (ROA). Theoretically, profitability has a positive effect in the trade-off analysis and the opposite effect in the pecking order analysis. On the one hand, the trade-off argument suggests that profitable businesses should take on additional debt in order to safeguard their profits from taxes. Jensen (1986) and Williamson (1988) define debt as a management tool to ensure that managers pay out profits rather than expand their empires. On the other hand, pecking order theory states that an organization is more likely to replace debt with internal funds if it has substantial internal financing (i.e. retained earnings). The company will turn to issue bonds and equity if such capital is insufficient to avoid dilution control. Profitable firms hence typically use less debt in this situation. Despite the theoretical controversies, the majority of empirical investigations support the negative correlation between ROA and debt ratio: Titman and Wessels (1988), Huang and Song (2005), Miroslav et al (2012), Maria (2014), Saeed et al, (2014), Vo (2017), Sikveland & Zhang (2020), Zahid et al (2021), Thanh & Trang (2021). Therefore, the hypothesis is:

H1: Profitability has a negative relationship (-) with debt ratio

$$PROF = \frac{Net\ profits}{Total\ Assets}$$

Growth opportunity (GROW)

The direction of the link of the relationship between growth and capital structure is not consistent according to different theories. Under the agency cost model, financial covenants and restrictions put in place by lenders hinder organizations' ability to pursue investment opportunities, causing firms with high growth opportunities to neglect debt. In accordance with the trade-off theory, companies with higher prospects for growth tend to possess lower debt ratios since growth-oriented investments could pose a significant level of risk. However, it is discovered that there is a favorable correlation between capital structure and growth opportunity. This result is supported by pecking order theory, businesses with promising future growth prospects are probable to borrow more money. Several studies conducted in Vietnam indicate that firms finance their growth with debt: Tran & Ramachandran (2006), Biger và cộng sự, 2008), Vo (2017) and (Thanh & Trang, 2021). Therefore, the hypothesis is:

H2: Growth opportunity has a positive relationship (+) with debt ratio

$$GROW = \frac{Total\ Assets(t) - Total\ Assets(t-1)}{Total\ Assets(t-1)}$$

Firm size (SIZE)

The natural logarithm of the company's total assets is used to calculate its size. The pecking order theory proposes a negative one while the trade-off hypothesis predicts a positive association. With regard to the pecking order theory, larger organizations with less asymmetric information concerns have a tendency to own equity rather than debt, ultimately resulting in lower leverage. Agency theory, like trade-off theory, conveys a positive relation between size and agency costs, with large enterprises having higher agency costs than small firms (Jensen & Meckling, 1976). This theory holds that due to the conflict between shareholders and managers, large companies tend to take on greater debt as the terms of the loan agreement control the behavior of managers. In addition, larger companies are often more accessible and affordable for debt as a result of corporate diversification and the ability to derive tax benefits. Likewise, Rajan & Zingales (1995) also claim that large firms with better transparency from higher disclosure requirement have have a lower degree of asymmetric information leading to a lower financing cost. Hence, lenders prefer to to lend to larger enterprises given their higher credit ratings and perceived lesser risk and bankruptcy risk (Bevan ,2002). Most empirical studies confirm this positive relationship: Rajan & Zingales (1995), Huang and Song (2005), Tran and Ramachandran (2006), Biger et al (2008), Miroslav et al (2012), Saeed et al. (2014), Dung & Thanh (2019). Therefore, the hypothesis is:

H3: The size of firms has a positive relationship (+) with debt ratio

SIZE = Ln(Total assets)

Tangible assets (TANG)

Tangible asset is a variable reflecting the structure of assets of the enterprise, determined by the ratio of fixed assets to total assets of the enterprise. Based on the theory of agency costs and trade-off costs, owning a lot of fixed assets can assist it easier for firms to obtain loans because of their security. Thus lowering the creditor's risk of suffering such agency costs of debt. This implies a positive relationship between debt ratio and tangibility. Therefore, the hypothesis is:

H4: Tangible assets have a positive relationship (+) with debt ratio.

$$TANG = \frac{Fixed\ Assets}{Total\ Assets}$$

Liquidity (LIQ)

Short-term solvency plays a crucial function in terms of enhancing company value. In this study, the current ratio is utilized as a measure of liquidity. In accordance to the trade-off theory, businesses with high liquidity typically have greater debt ratios since they can guarantee their contractual obligations on time, which shows a favorable connection between liquidity and capital structure. In contrast to the trade-off theory, the pecking order theory reveals that corporations frequently favor using internal capital from retained earnings over external capital. This means that outside financing will not be required if corporations can generate more retained earnings with their assets sufficient for investment usage. Therefore, this shows that there is a negative relationship between liquidity and debt ratio. Therefore, the hypothesis is:

H5: Liquidity has a negative relationship (-) with debt ratio

$$LIQ = \frac{Current\ Assets}{Current\ Liabilities}$$

Firm age (AGE)

Based on the trade-off theory, younger firms may not be profitable enough to pay the cost of debt. In other words, this theory indicates that firm age has a positive effect on leverage ratio. In contrast, the pecking order theory suggests that older companies will use less debt than younger companies because these older companies have more time to attract, collect and accumulate funds. They are, thus, easier to finance at a lower cost because of their reputation and repayment history. REPORT Therefore, the hypothesis is:

H6: Firm age have a negative relationship (-) with debt ratio

Non-debt tax shields (NDTS)

Depreciation scaled by total assets is employed to define non-debt tax shields. Titman and Wessels (1988) and Thharmalingam et al (2016) have the same view that the non-debt tax shield has a negligible effect on leverage. However, according to a study by Saeed et al. (2014), non-debt tax shield is strongly connected with tangibility and also discloses a favorable correlation with leverage. Contrary to this conclusion, Wald (1999), Deesomsak et al (2004), Huang and Song (2005) and Biger et al (2007) provide evidence that leverage decreases with non-debt tax shields. The trade-off theory foretells that the primary rationale for choosing debt over equity is to cut down on corporation tax. However, firms can use non-debt tax shields such as depreciation to reduce corporate tax. Thus, a higher non-debt tax shield reduces the potential tax benefit of debt and hence it should be inversely related to leverage. Therefore, the hypothesis is:

H7: Non-debt tax shields have a negative influence (-) on debt ratio

4. EMPIRICAL RESULTS

Table 4.1: Descriptive statistics of variables

Variable	Obs	Mean	Std. dev.	Min	Max
TD	120	.3573629	.2275981	.0096549	.9706117
PROF	120	.0990183	.0696936	.0032114	.2693029
GROW	120	.1672888	.8371662	-.4475544	9.125333
SIZE	120	27.71113	.9494824	25.71591	29.90804
TANG	120	.1999885	.1177621	.0049418	.5719393
LIQ	120	2.78763	1.39697	1.01335	8.406104
AGE	120	9.225	4.253446	0	17
NDTS	120	.0230665	.0123341	.0007562	.0522423

The findings of the regression analysis are presented in this section. First, table 4.1 summaries statistics on capital structure and independent variables over the entire sampling period. Debt ratio is the dependent variable and seven independent variables including profitability (ROA), company growth (GRO), company size (SIZE), tangible assets (TANG), liquidity (LIQ) and non-debt tax shields (TAX). These attributes are obtained from 12 pharma companies listed on HOSE and HNX over a 10-year period from 2013 to 2022, i.e. 120 observations.

According to table 4.1, the debt ratio, i.e. total debt/total assets, of the firms in the sample ranges from 0.96% to 97.06% with an average of 35.74%. It appears these enterprises are unlikely to have a preference for utilizing debt or equity as a source of financing. The gap between the maximum debt ratio and the minimum debt ratio is 96.1%, indicating the diversity in capital structure among firms.

Analyzing the independent variables, it was discovered that the profitability, growth, and tangibility ranged significantly while the remaining potential determinants such as size, age, liquidity and NDTS did not. Specifically, the average value of profitability during ten year period is roughly 10%, with a range of 0.32% to 27%, indicating the significant variation in performance across companies. A substantial gap around 57% is shown in tangibility, with the average of approximately 20%. Most businesses possess considerable fixed assets, which renders them to enhance debt financing by using these fixed assets as collateral. Moreover, the average growth value of 0.167 displays the impressive growth rate of most companies over the study period due to the minimum growth value of –0.447% and maximum value of 9,125. This can be attributed to the robust rebound following the Covid epidemic. Meanwhile, the size and age ranges from are 25.71 to 29.09 and 0 to 19 respectively, along with the averages of 27.71 and 9.22. This insignificant difference results from the fact that the majority of the businesses in the data are medium- and large-sized businesses in the pharmaceutical sector. Furthermore, liquidity has a maximum value of 1.01 and a minimum value of 8.4, suggesting that the examined entities have generally acceptable current ratios and are much less probable to suffer from liquidity risk.

To ensure the effectiveness of the study, the VIF test was performed to test the phenomenon of multicollinearity. VIF value in the range from 1.07 to 3.26 and the mean VIF = 2.02 value which are lower than 10. Thereby, the regression model does not have multicollinearity.

For the purpose of ascertaining the determinants of the capital structure of listed pharmaceutical companies, this paper adopts three different methods to estimate the panel regression model including the pooled ordinary least square method, fixed effects, and random effects models.

Pooled Ordinary Least Square (Pooled OLS) model

Table 4.2: Regression result following Pooled OLS model

Source	SS	df	MS			
				Number of obs	=	120
				F(7, 112)	=	32.06
Model	4.11229952	7	.587471361	Prob > F	=	0.0000
Residual	2.05200956	112	.018321514	R-squared	=	0.6671
				Adj R-squared	=	0.6463
Total	6.16430908	119	.051800917	Root MSE	=	.13536

TD	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
PROF	-.5419064	.2320345	-2.34	0.021	-1.001653	-.0821597
GROW	-.0476575	.0152971	-3.12	0.002	-.0779666	-.0173483
SIZE	.0159662	.0181262	0.88	0.380	-.0199484	.0518809
TANG	-.5331891	.1748776	-3.05	0.003	-.8796866	-.1866916
LIQ	-.0938986	.0113726	-8.26	0.000	-.116432	-.0713653
AGE	-.0016855	.0039169	-0.43	0.668	-.0094463	.0060753
NDTS	-1.021546	1.816573	-0.56	0.575	-4.620853	2.577761
_cons	.3840498	.502675	0.76	0.446	-.6119364	1.380036

Based on the Pooled OLS model results, Prob > F = 0.0000 denotes the significance level of the F-test with the hypothesis H0 (the independent variables are zero), here the hypothesis H_0 is rejected and the model is statistically significant. Adjusted R-squared value of 0.6463 reveals that the model's independent variables account for around 64.63% of the variation in the dependent variable.

It can be seen in the regression table that four explanatory variables (PROF, GROW, TANG and LIQ) are all negative significant associated with the dependent variable at the 5% level because there are negative and less than 5% p-values. To be specific, the coefficients of PROF and GROW are -0.5419 and -0.0476 respectively meaning that when PROF or GROW increases by one unit, the company's TD reduces by 0.5419 units in terms of other factors remain unchanged. Similarly, when TANG or LIQ rises by one unit, the TD will decrease to 0.5331 units or 0.0938 units, respectively, regardless of other independent variables staying constant. On the contrary, there is no correlation between the dependent variable and the three variables (SIZE, AGE, and NDTS) that have p-values greater than 5%.

Fixed Effects Model (FEM)

Table 4.3: Regression result following Fixed Effects Model

Fixed-effects (within) regression		Number of obs =	120
Group variable: FIRM		Number of groups =	12
R-squared:		Obs per group:	
Within	= 0.2716	min =	10
Between	= 0.6054	avg =	10.0
Overall	= 0.5303	max =	10
		F(7,101) =	5.38
corr(u_i, Xb)	= 0.1323	Prob > F =	0.0000

TD	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
PROF	-.8438871	.3443532	-2.45	0.016	-1.526991	-.160783
GROW	-.0393707	.0150513	-2.62	0.010	-.0692285	-.0095129
SIZE	.0742854	.0479158	1.55	0.124	-.0207666	.1693375
TANG	.1507933	.2211526	0.68	0.497	-.2879139	.5895005
LIQ	-.0476558	.0119987	-3.97	0.000	-.0714581	-.0238536
AGE	-.0027959	.0054605	-0.51	0.610	-.0136281	.0080364
NDTS	-1.086926	1.828546	-0.59	0.554	-4.71427	2.540419
_cons	-1.457471	1.308929	-1.11	0.268	-4.054034	1.139091
sigma_u	.13248488					
sigma_e	.09942693					
rho	.63970664	(fraction of variance due to u_i)				

F test that all u_i=0: F(11, 101) = 9.69 Prob > F = 0.0000

When compared to OLS, the FEM outcomes reflect a certain difference. Compared to the OLS model, the FEM contains fewer statistically significant variables. In particular, TANG has no statistical significance with the dependent variable in the study model with a p-value of 0.497, which is in excess of 5%. Along with the SIZE, TANG also has a positive association with TD in the FEM analysis despite having a negative relationship with TD in the Pooled OLS model. With a coefficient value of 0.1507, it may be assumed that an increase in tangible assets will lead to a rise in the debt ratio of 0.1507 units under all other independent variables are kept constant.

The overall R^2 value of 0.5303 reports that all seven explanatory variables in the model contribute to 53.03% of the variance in the debt ratio.

Additionally, the correlations value between error terms and regressors (corr(u_i, Xb) = 0.1323) , showing that under the fixed effects model, errors $\mu_{it}\mu_{it}$ are associated with the regressors. Given the value of rho 0.6397, the differences between panels in the sample's sample account for 63.97% of the variance.

F-test is performed to decide between Pooled OLS model and FEM. The hypothesis H_0, which posits that all individual intercepts are zero (Fixed effects = 0), is rejected based on Table 4.3, where Prob > F = 0.0000 i.e p-value = 0.0000 < 5%. As a result, FEM is the preferred model.

Random Effects Model (REM)

Table 4.4: Regression result following Random Effects Model

```
Random-effects GLS regression                   Number of obs     =        120
Group variable: FIRM                            Number of groups  =         12

R-squared:                                      Obs per group:
     Within  = 0.2493                                         min =         10
     Between = 0.7381                                         avg =       10.0
     Overall = 0.6256                                         max =         10

                                                Wald chi2(7)      =      83.08
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =     0.0000
```

TD	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
PROF	-.9871753	.2641731	-3.74	0.000	-1.504945	-.4694055
GROW	-.048186	.0135732	-3.55	0.000	-.0747889	-.0215831
SIZE	.0383349	.0279023	1.37	0.169	-.0163526	.0930224
TANG	-.1336071	.1929453	-0.69	0.489	-.5117729	.2445587
LIQ	-.0627248	.011461	-5.47	0.000	-.085188	-.0402616
AGE	-.002648	.0043773	-0.60	0.545	-.0112273	.0059313
NDTS	-1.184681	1.768435	-0.67	0.503	-4.650751	2.281388
_cons	-.3458037	.7735465	-0.45	0.655	-1.861927	1.17032
sigma_u	.06918041					
sigma_e	.09942693					
rho	.32620266	(fraction of variance due to u_i)				

The random estimated findings depicted in Table 4.4, which are consistent with the FEM results, further proof that TD correlated with PROF, GROW, and LIQ instead of with SIZE, TANG, AGE, and NDTS. Additionally, FEM analysis exhibits that GROW and TANG have negative and positive effects on the dependent variable, respectively. However, opposite results is shown in the FEM which means that GROW has a positive effect and TANG has a negative effect on the debt ratio.

Table 4.5: Breusch and Pagan Lagrangian multiplier test

```
Breusch and Pagan Lagrangian multiplier test for random effects

        TD[FIRM,t] = Xb + u[FIRM] + e[FIRM,t]

        Estimated results:
                        |       Var     SD = sqrt(Var)
                ---------+-----------------------------
                      TD |   .0518009       .2275981
                       e |   .0098857       .0994269
                       u |   .0047859       .0691804

        Test: Var(u) = 0
                             chibar2(01) =    48.23
                          Prob > chibar2 =   0.0000
```

In this case REM is more effective than Pooled OLS because Prob > chibar2 = 0.0000 is less 5%.

Hausman test is applied in order to select an efficient in the panel model between FEM and REM. The Hausman test results below shows prob > chi2 = 0.0000 < α with α = 5%. Therefore, H_0 hypothesis is rejected and H_1 is accepted with the significance level of 5%. As a result, the panel data regression was analysed by the fixed effects model in this study.

Table 4.6: Hausman test

	Coefficients (b) re	Coefficients (B) fe	(b-B) Difference	sqrt(diag(V_b-V_B)) Std. err.
PROF	-.9871753	-.8438871	-.1432882	.
GROW	-.048186	-.0393707	-.0088153	.
SIZE	.0383349	.0742854	-.0359506	.
TANG	-.1336071	.1507933	-.2844004	.
LIQ	-.0627248	-.0476558	-.0150689	.
AGE	-.002648	-.0027959	.0001479	.
NDTS	-1.184681	-1.086926	-.0977556	.

```
                          b = Consistent under H0 and Ha; obtained from xtreg.
           B = Inconsistent under Ha, efficient under H0; obtained from xtreg.

Test of H0: Difference in coefficients not systematic

    chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)
            =  57.47
Prob > chi2 = 0.0000
(V_b-V_B is not positive definite)
```

Wooldridge test is applied to test the phenomenon of correlated errors through Stata command xtserial for the FEM with the relevant hypothesis:

From the outputs, with Prob > F = 0.0000, which means the p-value is 0.0000 < 5%, H_0 is rejected. Thus, the model has autocorrelation.

Heteroskedasticity is the phenomenon in which the residual plots have different distributions, and the variance values are not the same. The Modified Wald test is utilized to assess the the presence of this phenomenon for the FEM.

Following the Modified Wald test findings, reject H_0 and conclude that there is significant evidence of unrestricted heterokedasticity with prob >chi2 = 0.0000 < α (α = 5%).

To overcome these phenomenon (i.e autocorrelation and heteroskedasticity), this paper carried out Feasible Generalized Least Squares method (FGLS).

Table 4.7: Regression result following FGLS

Cross-sectional time-series FGLS regression

Coefficients: generalized least squares
Panels: heteroskedastic
Correlation: common AR(1) coefficient for all panels (0.7398)

Estimated covariances	=	12	Number of obs	=	120
Estimated autocorrelations	=	1	Number of groups	=	12
Estimated coefficients	=	8	Time periods	=	10
			Wald chi2(7)	=	200.26
			Prob > chi2	=	0.0000

TD	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
PROF	-.638583	.1298309	-4.92	0.000	-.893047	-.384119
GROW	-.0354914	.004889	-7.26	0.000	-.0450736	-.0259091
SIZE	.0073389	.0156517	0.47	0.639	-.0233378	.0380157
TANG	-.1209728	.0665437	-1.82	0.069	-.2513959	.0094504
LIQ	-.0582227	.0055341	-10.52	0.000	-.0690694	-.047376
AGE	-.0004988	.002833	-0.18	0.860	-.0060514	.0050537
NDTS	-1.047132	.7261005	-1.44	0.149	-2.470263	.3759988
_cons	.4057416	.4246821	0.96	0.339	-.4266201	1.238103

Regression results from the FGLS model in Table 4.11 exhibit that with significance level 5%, Prob > chi2 = 0.000 < 0.05, this model has statical meaning. Further, it also shows that PROF, GROW and LIQ have negative significant influence to the debt ratio. Whereas, the four remaining explanatory variables (SIZE, TANG, AGE and NDTS) have no statical meaning, indicating that there is no correlation between these components and the capital structure of the observed companies in this study. Further, PROF has a strongest correlation with the dependent variable due to the highest the absolute value of the correlation coefficient (0.6385). Therefore, the regression model is rewritten as follows:

$$\mathbf{TD_{it} = 0.4057416 - 0.638583PROF_{it} - 0.0354914GROW_{it} - 0.0582227LIQ_{it} + \varepsilon_{it}}$$

5. CONCLUSIONS

The principal objective of this study is to shed further light on internal forces driving capital structure decision of listed Vietnamese pharmaceutical firms with the profitability, growth, size, tangibility, and non-debt tax shields as determinants.

Empirical evidence reveals that pharma firms' debt ratio decreases with profitability, growth and liquidity and shows a statistically significant relation. In particular, corporations prefer internal financing over external financing to avoid cost asymmetries supported by the negative effect of profitability and debt level. In addition, companies with brighter growth opportunities and more liquid assets tend to use lower leverage. It can be reported that the empirical results on profitability and growth affirm the pecking order theory. However, although the coefficients of tangibility and non-debt tax shields support the trade-off theory, there is also no evidence to claim that these variables significantly impact the debt utilization of these investigated pharmaceutical firms. Therefore, the findings of this study show that implementation of the pecking order theory is more suitable to the context of listed Vietnamese pharmaceutical companies based on the relevant internal determinants.

To determine the optimal capital structure, it is better for pharmaceutical companies to put an emphasis on profitability, growth, and liquidity. Considering the inverse link between profitability and debt ratio, it follows that pharma firms with high profitability are frequently able to generate significant free cash flow from retained earnings. Therefore, they need to pay close attention to taking advantage of available domestic resources to lower import costs, promoting the use of science and technology to improve the efficiency of medicine production, and diversifying their product lines to enhance fertility. Besides, financial managers should balance the interests of shareholders and capital efficiency by taking the dividend payout ratio and retained earnings into account.

Although this study identified certain factors affecting the capital structure of companies, it still has some limitations that require updating, supplementing, and extending further investigations. Firstly, because the paper mainly focuses on pharmaceutical businesses listed on HOSE and HNX, the sample size and duration are relatively small compared to other studies in Vietnam.

Secondly, the decision on capital structure is not only a consideration of the firm's characteristics but also the combination of corporate governance and external variables. However, this study did not include firm-level governance factors (board size, state ownership, ownership concentration, foreign holding, etc.) and macroeconomic factors (GDP, interest rate, inflation, industrial elements, etc.).

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BUILDING MODERN NATIONAL GOVERNANCE CONTRIBUTE TO PROMOTING PRIVATE ECONOMIC GROWTH AND DEVELOPMENT

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Abstract: This article aims to analyze the birth of national governance, the principles and factors affecting national governance. Through the construction of a modern, effective national governance system, it will contribute to improving the state's governance capacity in creating a favorable business environment for all economic sectors, including the private economy growth and development. The article uses an interpretive method and uses data from the World Bank's survey research on global governance capacity.

Keywords: National governance, private economy

1. INTRODUCTION

At the 6th Central Conference, the 13th Party Central Committee issued Resolution No. 27-NQ/TW dated November 9, 2022 on continuing to build and perfect the Vietnamese socialist rule of law state in the new period. In which, national governance is considered one of the strategic solutions to meet the requirements of rapid and sustainable development of the country, becoming a high-income developed country with socialist orientation by 2045. Debates in Vietnam in recent times have shown that the proposed measures to build and perfect the socialist rule-of-law state have been fully understood, but efforts to build or apply these measures have not been fully realized has not yet yielded clear results. The basic reason is that Vietnam has not yet established a suitable and modern national governance environment, helping efforts to improve the rule of law go further and catch up with world standards. Therefore, perfecting the socialist rule of law state to create a favorable business environment for businesses in general and private businesses in particular will be difficult to succeed if not accompanied by strong improvement efforts governance of the country.

2. METHODOLOGIES

2.1. Research Methods

The study was conducted using research methods including: data analysis, data synthesis, comparison and contrast to clarify the current state of national governance in Vietnam as well as evaluate indicators this number. From there, propose solutions to exploit strong indicators and improve the quality of the remaining indicators.

2.2. Data

Secondary data is taken from reliable sources, mainly from World Bank reports on Global Governance assessment index, state-level scientific research works, and articles published in magazines specialized in administrative capacity and some research works published through the website.

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3. CONTENT

3.1 Modern, effective and efficient national governance - an important criterion of the rule of law

Building a modern, effective and efficient national governance system is an objective and indispensable requirement for each country in the development process. In Vietnam, this is also an important and urgent content in the process of building and perfecting a socialist rule-of-law State of the people, by the people, for the people.

Previously, governance or national governance was rarely mentioned. However, the idea of national governance was formed long ago in history, becoming a doctrine since the late 20th century and growing strongly in many countries around the world.

In the world, the concept of "national governance" has received special attention and much discussion since the late 20th and early 21st centuries until now and has gradually replaced the use of the concept "governance". Most scholars believe that the transition from governance to national governance represents a new trend of the 21st century, reflecting a major change in the perception and way of exercising political power in countries. The monopoly position of the state apparatus is challenged by new democratic institutions and subjects. In essence, this is a redistribution of power from the political elite in the state apparatus to the people, through the formation and development of social movements and organizations as well as the decentralization of power, decentralization from Central to localities.

Simply put, national governance is the process of making decisions and organizing the implementation of decisions to resolve political, economic, cultural, social, and environmental issues to ensure that the country sustainable development, in accordance with set goals. A good governance must ensure the full implementation of basic criteria: participation, consensus orientation, accountability, transparency, timeliness, effectiveness and efficiency, equality and does not exclude any subject and adheres to the rule of law.

When it comes to national governance, the state will play a prominent role as the subject that orients, leads and controls the movement and development of society in accordance with objective laws through setting out regulations. strategies, policies, planning, plans or providing directional information, linking subjects in society, so that these subjects can participate, choose and decide on implementation to achieve the ultimate goal the best. At the same time, the state also boldly transfers part or possibly all of the tasks that were previously undertaken by the state to other subjects in society through decentralization, decentralization, authorization, etc. legal.

According to the World Bank (WB), there are 6 indicators to evaluate the quality of national governance, including: Voice and accountability; political stability and Absence of Violence; Government effictiveness; Regulatory Quanlity; Rule of law; Control of corruption. Accordingly, good governance requires three elements: Power control mechanisms or rules that limit abuse of power in the public apparatus; Feedback from people and society on the effectiveness and efficiency of national governance; There is an equal competitive environment.

Openness and transparency are fundamental and indispensable signs in modern national governance. This not only ensures that the public apparatus operates effectively and that the monitoring mechanism is effective. Through which, social resources are mobilized and used effectively, contributing to creating a favorable business environment for benefit-seeking activities to be promoted.

3.2 Assess the current state of national governance in Vietnam

The process of building and perfecting national governance towards modernity, effective and efficient operations in Vietnam is always associated with the process of building and perfecting the people's socialist rule of law State, by the people, for the people. In order for the State to operate effectively and efficiently, it is first necessary to fundamentally transform the model, functions and tasks of the State in accordance with each stage of development. Through the process of construction and improvement, Vietnam's national governance capacity has made great progress, shown in the data in the following table:

Table: Assessment of Vietnam's national governance index period 2017-2021

Targets	2017	2018	2019	2020	2021
Voice and Accountabilily	10,34	8,21	11,59	11,59	13,04
Political Stability and Abssence of Violence/Terrorism	54,76	49,53	48,11	45,28	44,81
Governemnt Effectiveness	53,85	53,37	54,33	62.02	62,02
Regulatory	35,58	37,50	38,94	43,27	37,98
Rule of Law	55,29	52,88	52,40	48,56	48,56
Control of Corruption	31,25	37,02	33,17	42,79	47,12

Source: [5]

According to the data from the table, it can be seen that in the 5-year period 2017-2021, there are 2 indexes with strong increases: the Government Effectiveness Index and the Control of Corruption index. One index that increased slightly was the Regulatory quality. The 3 indexes that decreased in score were Voice and Accountability, Voice and Accountability, Rule of law.

At the same time, there is one index scoring above the average: Government effectiveness (62.02/100 points by 2021). The remaining indexes are all below average scores, especially the Voice and accountability have very low scores, 13.04/100 points

Vietnam's Control of corruption index is a highlight in the overall picture of national governance assessment, this index has increased from 32.25/100 points in 2017 to 47.12/100 points in 2021. Vietnam's Control of corruption score is higher than that of low-middle-income countries (33.98/100 points in 2021) and higher than that of upper-middle-income countries (44.44/100 points 2021) [5].

Along with this index is the Regulatory quality reaching 35.58/100 points in 2017 to 43.27/100 points in 2021. This result is due to a series of administrative procedures has been reduced, creating favorable conditions for people and businesses... The legal system, mechanisms and policies continue to be improved, people's participation and information transparency are given more importance, Indicators measuring the quality of public administration in localities are regularly evaluated. The World Bank's 2019 Business Environment Report ranked Vietnam 69th out of 190 economies (in terms of business environment), better than some countries in the region (such as Indonesia, Philippines, Laos, Cambodia, Myanmar, India) and improved compared to the ranking in the 2018 report (Vietnam ranked 68th). Especially the work of preventing and combating corruption has achieved many positive results in recent years.

Another indicator with a lot of progress is the Governance effectiveness in Vietnam, in which the most concentrated indicator is the strong innovation in the organization and operation of the government. Among the national governance assessment indexes, the Governement effectiveness index has seen major changes (increased by 8.17 points from 2017 to 2021), and is the index with the highest evaluation score in the 6 index (reaching 62.02/100 points in 2021). This index is also higher than that of high-middle-income countries (45.98/100 points in 2021) [5].

According to the results of the 2022 United Nations survey on value, Vietnam's e-Government Development Index (EGDI) reached 0.6787 points, classified as a group of countries with developed e-Government. EGDI is at a high level and higher than the average EGDI index of the world (0.5988), the Asian region (0.6373), as well as the Southeast Asian region (0.6321) [3]. In the Southeast Asia region, Vietnam continues to maintain 6th position out of 11 countries, maintaining the same position as in 2020. In 2022, 5 countries with higher positions than Vietnam have changed, including: Singapore, Malaysia, Thailand, Brunei and Indonesia.

After more than 30 years of innovation, despite many achievements in socio-economic development, the quality of Vietnam's national governance has also improved, but limitations still exist. Vietnam's national governance assessment indicators are only at an average level compared to the Asian region, higher than Laos, Cambodia, Myanmar and much lower than Singapore and Brunei. Documents of the 13th National Congress stated that we are only initially transitioning from "management" to "administration", so the level of governance still has certain limitations and inadequacies. Tools mainly serving administrative activities are not synchronized.

Specifically, World Bank evaluates aspects of governance such as Voice and accountability, the quality of Vietnam's regulations as very low (13.04/100 points) and with relatively slow improvement in about the last 5 years (10.34 points in 2017 and 13.04 points in 2021). Political stability and absence of violence is one of the important indicators reflecting the quality of national governance, but this index only reached 54.76/100 points in 2017, down to 44.81. /100 points in 2021 (below the average of 50/100 points). Our country's business environment still has burdens of administrative procedures, inspections and examinations by state agencies. Domestic enterprises are still bearing the burden of unofficial costs; not to mention duplication and harassment when handling administrative procedures.

Good regulations can help make the business environment more favorable and open, overcome market "defects" and ensure a fair competitive environment. However, a complex and overlapping regulatory system can also create burdens and hinder business activities of businesses; At the same time, it is a favorable environment for corruption and policy profiteering to arise.

The implementation of decentralization and decentralization of power between the Central and local levels has not been synchronous, thorough, and responsive to requirements, and has not fully promoted the role, responsibility, and initiative of the grassroots level, especially the local government in the field of economics, resource management, anti-corruption and negativity. The accountability of agencies within the state apparatus to the people is still formal in some places. Although the role of the information system and the press is given more importance, information processing and information responsibility in resolving some cases and matters are not clear, and some cases and matters are even not transparent.

3.3 Proposal to improve modern, effective and efficient national governance in Vietnam in the coming time

- Build an administrative apparatus that operates transparently and is accountable to the public.

Strongly apply and expand e-government and digital government in all areas to minimize and modernize administrative procedures, limit corruption, increase transparency and receive feedback from the people. Urgently collect and build an open database to increase people's access to information for the decision-making process; Unify the process of handling electronic administrative procedures, avoiding inconsistency between state agencies in the application of regulations.

Establish continuous dialogue mechanisms to monitor public administration and remove barriers and inadequacies that appear in the policy implementation process. It is necessary to create a dialogue mechanism through interactive websites and official web 2.0 tools of the Government, so that people can participate in the policy planning and criticism process to monitor public policy public policy and policy implementation process. On that foundation, build an e-democracy model, increasing opportunities for all individuals and communities to interact with the government, eliminating barriers of geography, social status and disadvantage factors other, bringing together individuals and communities previously excluded from this process.

Strengthen to ensure the principle of independent operation of departments, such as audit, inspection, central bank, statistics... in the state apparatus. Publicize audit and financial reports of ministries, branches and local authorities for people to monitor.

- Build an effective public service system.

It is necessary to reform the public service delivery model towards increasing the participation of the private sector and the community. Since the early 1990s, many countries around the world have applied the "New Public Management" model, emphasizing the need to streamline the state apparatus, promote market principles, and apply business leadership methods for public organizations and encourage private companies to participate in providing public services to reduce the burden on the government...

To satisfy the increasing and diverse service needs of the people, it is necessary to introduce market mechanisms and create a business-like government in the following directions: i) Empowering public service providers, ensuring giving these organizations high autonomy in terms of apparatus, people and finance; ii) Empower employees to increase employee enthusiasm and creativity; and iii) Empower customers as citizens to choose service providers, control and evaluate the quality and price of services.

- Improve the dispute resolution and adjudication system.

This helps create conditions for protecting property rights (including "hot" issues in Vietnam today such as land ownership and intellectual property), and conducting business bankruptcy procedures industry...Good governance emphasizes the spirit of respect for the law. Therefore, it is necessary to ensure that the principle of independent courts takes effect in practice. At the same time, it is necessary to change the perception of the court, considering it not only as a judicial agency but also as a justice protection agency. Besides, it is necessary to continue to diversify and expand services, such as lawyers, business consultants, arbitrators...

- Design an industrial policy that focuses on upgrading the technological base and developing the private economic sector.

To achieve the goal of shortened development, East Asian economies such as Japan, South Korea and Taiwan have undergone a process of "technological decolonization": starting with acquiring advanced technology from other countries. Developed countries, apply, gradually improve and combine with domestic science and technology; from manufacturing and assembling components, gradually innovating, improving capacity and developing high-tech technology.

It is necessary to grasp the start-up wave of technology businesses and have policies to help private businesses overcome barriers in capital, risk, human resources... to realize creative ideas in business projects. Develop a financial system that supports the absorption and application of technology and promotes innovation. The State needs to focus on building and perfecting policy mechanisms to facilitate the establishment and operation of Venture Capital Funds; implementing many forms of public-private partnerships, combining State support capital with private investment capital to provide finance for start-up businesses.

4. CONCLUSION

Despite achieving many achievements in socio-economic development after more than 30 years of innovation, Vietnam has still not established a suitable and modern national governance environment and the quality of national governance of the country Vietnam is improving very slowly. To improve national governance, Vietnam needs to: build an administrative apparatus that operates transparently and is accountable to the public; build an effective public service system; perfect the dispute resolution and adjudication system; design an industrial policy that focuses on upgrading the technological base and developing the private economic sector. This creates a favorable environment to promote Vietnam's economic growth in the coming period.

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UPAS L/C AT VIETNAM COMMERCIAL BANKS IN THE CONTEXT OF DIGITAL TRANSFORMATION

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Abstract: Industrial Revolution 4.0 with core elements of artificial intelligence, internet connection and big data has been opening up many methods and providing many means in digital transformation of the economy. in general and the commercial banking system in particular; In particular, Blockchain technology has become the foundation for the development of UPAS L/C in international payments. To clarify the content of the article, the author used the method of data collection and evaluation based on secondary data, combined with analysis to clarify some characteristics and current status of UPAS L/C implementation. in Viet Nam. On that basis, build and propose some solutions to deploy UPAS L/C at a higher level at Vietnamese commercial banks in the context of digital transformation.

Keywords: Commercial bank, L/C, UPAS L/C, Usance payable at sight L/C

1. INTRODUCTION

In the years 2012 and 2013, when the deferred Letter of Credit with immediate payment value (UPAS L/C - Usance Payable at sight Letter of Credit) was deployed as a pilot at some banks, commercial banks (commercial banks) in Vietnam, in the past few years, especially in the period 2020 - 2022 in the context of the Covid 19 pandemic, UPAS L/C has become one of the outstanding trade finance products. , attracting many business customers to use regularly in import and export trading transactions with international partners as well as domestic trade with domestic partners. Most Vietnamese commercial banks have deployed this trade finance product and have had certain effectiveness. However, in order for the implementation of UPAS L/C to progress further in the near future, it is necessary to identify potential risks and then have appropriate recommendations and implementation directions.

2. LITERATURE REVIEW

UPAS L/C has appeared since 2014. However, there is little research in Vietnam on this issue, because at that time the use of this payment method was still very limited. Only in recent years, this method has been used more and received the attention and discussion of a number of researchers.

The master's thesis of Le Thi Ha Thanh (2014) mentioned L/C UPAS product development solution at Saigon Thuong Tin Commercial Joint Stock Bank. The master's thesis has described an overview of the documentary credit method, which is the deferred L/C allowing immediate payment, as well as the current situation of applying this product at Thuong Tin Commercial Joint Stock Bank. Nevertheless, the research's contributions are still relatively limited on how to use UPAS L/C as well as analyzing the advantages and disadvantages of this method.

Dang Hoai Linh (2022) gave some recommendations in implementing UPAS L/C operations of commercial banks in Vietnam today, Banking Review. The study is based on the results of HSBC

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(2021) on the characteristics of UPAS L/C and the implementation process of the Joint Stock Commercial Bank for Foreign Trade of Vietnam. From there, the author evaluates the benefits and impacts of implementing UPAS L/C on importers, exporters as well as the relevant banking system.

3. RESEARCH METHODS

The study mainly uses secondary data from publications of the State Bank of Vietnam and some commercial banks. Regarding research methods, use economic statistics and comparison methods to make appropriate judgments and analysis.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Overview of UPAS L/C

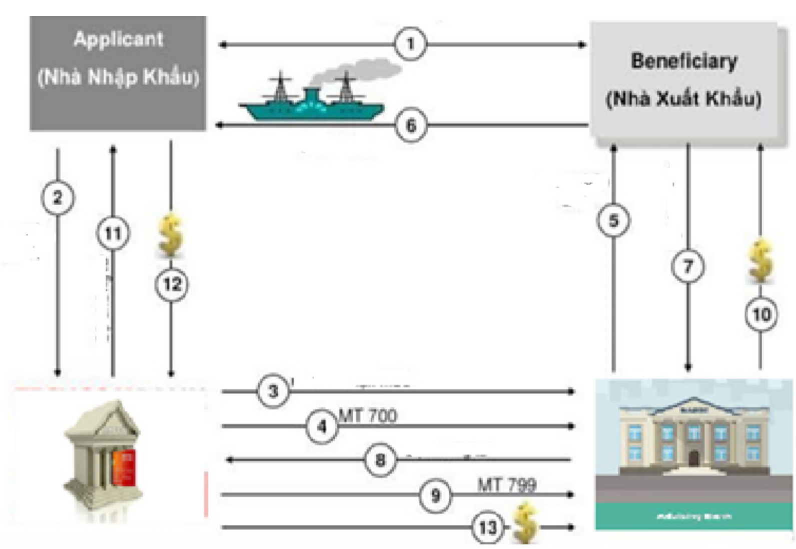
a. UPAS L/C concept

Currently, in international payment transactions, the form of Letter of Credit (L/C) is quite commonly used. Besides, the concept of UPAS L/C is no longer strange to the market and businesses, bringing many benefits to import and export customers with international partners as well as domestic trade with partners. domestic.

UPAS L/C is a deferred payment method of documentary credit, also known as a deferred letter of credit but can be paid immediately. This means that the seller (exporter) can receive immediate payment through capital advance from the bank and the buyer (importer) will have to bear the derivative interest rate for this early payment. This method really ensures security, avoiding some risks for the buyer such as the case of goods not being delivered as committed or the seller not delivering the goods. In fact, UPAS L/C also helps businesses as buyers reduce financial costs by 20 - 50%.

b. Payment process by UPAS L/C

Figure 1: Basic business process of UPAS L/C payment



Source: Author compiled from the UPAS L/C implementation process of some commercial banks

Step 1: The importer and exporter sign a foreign trade contract, including regulations on the use of UPAS L/C

Step 2: The importer opens a UPAS L/C at the issuing bank; The issuing bank, based on the L/C opening application, makes a decision to open a UPAS L/C

Step 3: The Issuing Bank contacts the Discounting Bank to check the discount limit applied to the specific UPAS L/C transaction

Step 4: Issuing bank sends MT700 to the discounting bank/Notifying bank

Step 5: After receiving the UPAS L/C notice, the Notifying Bank shall notify the exporter.

Step 6: The exporter proceeds to deliver the goods

Step 7: After delivering the goods, the exporter prepares a set of documents according to the requirements of the UPAS L/C and presents them to the advising bank/designated bank in the UPAS L/C (usually the discounting bank).)

Step 8: The discounting bank checks the documents and sends them to the issuing bank, and at the same time sends a request to accept payment to the issuing bank.

Step 9: Issuing bank sends MT799 to the discounting bank, notifying the documents of acceptance for payment and fees (if any)

Step 10: Discounting bank pays the exporter

Step 11: The issuing bank returns the documents to the importer

Step 12: On the bill of exchange maturity date, the importer pays the L/C value to the issuing bank

Step 13: The Issuing Bank pays the discounting bank or the Discounting Bank debits the Issuing Bank's Nostro account opened at the Discounting Bank (if any)

(Processes at commercial banks may be slightly different when separating/combining one or more steps)

c. Characteristics of UPAS L/C

- Firstly, regarding the applicable currency: UPAS L/C can be applied to all currencies agreed by the L/C issuing bank with the exporter or importer or with the correspondent bank.
- Second, about the term of UPAS L/C: this depends on the regulations of commercial banks; In practice there is usually a maximum term of 12 months
- Third, regarding the UPAS L/C payment method: businesses can choose to pay using their own capital or legal capital to comply with the requirements on the L/C. However, lending often requires collateral. In fact, the loan level applied at each bank is different, depending on the time level and depends largely on the value of the contract.
- Fourth, because it is issued with deferred payment terms, the issuing bank allows the discounting bank to immediately give the discount to the beneficiary.

Table 1: Comparison of L/C at sight with bank loan and UPAS L/C

Criterion	**L/C open loan with immediate payment**	**UPAS L/C**
When the beneficial is paid	Immediately upon presenting a set of valid document	Immediately upon presenting a set of valid document
The time when the L/C opener must make payment	Time of maturity of the loan to open L/C at sight	Bill of exchange maturity date
Source of payment to beneficiary	Capital from the issuing bank	Capital from discounted bank
L/C financing method	Bank loans	Equity capital
Service prices	-Fees related to international payment activities according to the bank's fee schedule -Interest	-Fees related to international payment activities according to the bank's fee schedule -Bill of exchange fee (significantly lower than loan interest)

Source: Author compiled from regulations on L/C payment of commercial banks

d. Multidimensional benefits of implementing UPAS L/C

- Firstly, benefits for importers

First, UPAS L/C helps importers pay for goods quickly and securely at a reasonable cost and is guaranteed by a third intermediary, Commercial Bank. Therefore, importers can avoid risks such as goods not as committed, not in the right quantity, quality...

Along with that, compared to traditional L/C, when using UPAS L/C, importers often receive lower prices, so the payment value by UPAS L/C is often smaller than the payment value by L/ C normally for the same lot. This legally reduces tax costs for importers (such as import tax, value added tax, etc.)

If using traditional L/C, businesses often have to borrow money from banks to pay L/C immediately upon receipt of documents or deferred L/C when payment is due. With UPAS L/C, the importer Exporters only have to pay service fees without having to take out loans, thus helping to improve debt repayment ability and assess the importer's debt level.

- Second, benefits for exporters

UPAS L/C is really a way to ensure that the importer will complete all contract costs. Because of the bank's participation, payment is guaranteed, even if the importer does not comply with the commitment, the bank will still pay. In addition, the contract implementation can take place immediately without any additional costs, helping the seller have capital to rotate production without having to borrow from banks or other credit institutions.

With the same benefit of being able to sell goods and receive payment immediately, exporters can sell goods at more competitive prices, instead of traditional L/C often having to wait 90 to 180 days, when the price is usually normal. tends to increase.

- Third, the benefits that commercial banks gain

Firstly, for the bank issuing UPAS L/C

The introduction of UPAS L/C helps diversify the bank's products and services, better meeting customers' foreign currency loan needs at reasonable costs. UPAS L/C also helps banks finance transactions for customers without having to spend capital, because the actual payment is made by the designated bank on the basis of the guarantee of the issuing bank.

Along with that, the issuing bank can benefit from the interest rate difference between the nominated bank's interest rate and the interest rate applicable to its customers. On that basis, the issuing bank has the conditions to maintain and expand market share, improve domestic and international payment reputation, increase service fees and international payment turnover.

Second, for designated banks

The designated bank will benefit by collecting service fees including acceptance and discounting of deferred drafts.

- Fourth, benefits to the economy

UPAS L/C has supported trade between domestic businesses and foreign businesses to take place more smoothly and safely, avoiding many risks compared to some other forms of L/C. In addition, this type of L/C also helps the exporter's production and operation process not be interrupted, because the money is made immediately without having to wait 90 or 180 days. Thanks to that, the speed of money flow in the economy has increased.

4.2. Current status of UPAS L/C implementation in joint stock commercial banks in Vietnam in the context of digital transformation

4.2.1. Some results were achieved

In recent times, the UPAS L/C product has contributed to diversifying trade finance products as well as international banking cooperation of Vietnamese commercial banks. Besides traditional products, UPAS L/C has contributed to diversifying choices and better meeting customer needs. The implementation of UPAS L/C is also becoming more and more complete, considering the following aspects:

Firstly, the legal corridor of UPAS L/C is increasingly being improved, specified in regulations in documents such as:

- Law on Credit Institutions dated June 16, 2010 and Law Amending and Supplementing a Number of Articles of the Law on Credit Institutions dated November 20, 2017
- Foreign Exchange Ordinance dated December 13, 2005 and Ordinance on amending and supplementing a number of articles of the Foreign Exchange Ordinance dated March 18, 2013
- Decree No. 70/2014/ND-CP dated July 17, 2014 of the Government detailing the implementation of a number of articles of the Foreign Exchange Ordinance and the Ordinance amending and supplementing a number of articles of the Foreign Exchange Ordinance
- Circular No. 21/2012/TT-NHNN dated June 18, 2012 of the Governor of the State Bank regulating lending and borrowing activities; buying and selling valuable papers with term between credit institutions and foreign bank branches; Circular No. 01/2013/TT-NHNN dated January 7, 2013 and Circular No. 18/2016/TT-NHNN dated June 30, 2016 on amending and supplementing a number of articles of Circular No. 21/2012/ TT-NHNN
- Circular No. 14/2017/TT-NHNN dated September 29, 2017 of the Governor of the State Bank regulating interest calculation methods in deposit receiving and credit granting activities between credit institutions and customers
- The State Bank and the Ministry of Finance have taken steps to tighten foreign currency loans, especially for businesses that do not have foreign currency revenues. That makes using UPAS L/C even more meaningful for businesses

Second, the number of banks and the number of UPAS L/C products have both increased

Currently in Vietnam, more and more commercial banks are deploying UPAS L/C products, including State-owned commercial banks and other banks. Products are also increasingly improved, perfected and diversified in both services and processes to better meet customer requirements such as: adding domestic UPAS L/C type (seller has can be paid immediately or after a certain period of time upon presentation of appropriate documents according to the requirements of domestic UPAS L/C); Deffered UPAS L/C (L/C installment payment/deferred payment/post payment) or has regulations allowing customers to pay before due date, diversifying financing structures with agent banks...; Modify the UPAS L/C product structure, not requiring import customers to accept bank debt on the date the sponsoring bank makes payment to the L/C beneficiary; Switch from collecting interest to collecting UPAS L/C service fees; Financing in JPY for UPAS L/C issued in USD; fixed UPAS L/C service fees with customers based on floating interest rates of sponsoring banks; Maximum support for document processing time, with simple and convenient procedures and a wide network of partner banks around the world...

One of the advantages of UPAS L/C for businesses is finding a reliable payment address to be proactive in business plans. As for banks, banks will earn UPAS L/C service fees with income equivalent to foreign currency lending services to customers, promoting international payment activities, foreign currency trading and other services. However, from a business perspective, this is really a good financial solution for import businesses that do not have foreign currency revenue, and can proactively operate production and business activities in a fluctuating economic context. and competition today.

Table 2: Blockchain application situation in L/C transactions of Vietnamese commercial banks

Bank	Transaction scope	Time
BIDV	International L/C transactions: L/C issuance stage	09/2020
HD Bank	International L/C transactions: L/C issuance stage	11/2020
Vietinbank	International L/C transactions: L/C issuance stage	11/2020
MB Bank	International L/C transactions: L/C issuance and presentation of documents prepared by the exporter	12/2020
Vietcombank	Domestic L/C transaction: L/C issuance stage, document presentation	12/2020

Source: Tran Nhi Quang (2021)

Third, some banks have pioneered the application of Blockchain in UPAS L/C payments

Blockchain is not a new payment method in commercial transactions but a new technology used in the process of implementing payment methods to bring about a difference for the better compared to transactions. previous tradition. Applying Blockchain in L/C transactions means performing L/C transactions on the Blockchain technology platform.

Theoretically, the L/C transaction model through Blockchain includes all parties as in a traditional L/C transaction but without the participation of SWIFT and courier companies because banks have information and payments can be exchanged on Blockchain and paper documents do not need to be transferred but instead are digital documents. The Government, Central Bank and ICC are also not involved in Blockchain but still play the role of promulgating legal regulations, supervision, support and advice. In addition, this model has the participation of a company providing Blockchain technology. These are large corporations with networks including a number of banks using Blockchain technology. Therefore, using Blockchain actually increases the speed of transactions. Unlike traditional L/C transactions performed on many different technology systems, all steps of an L/C transaction via Blockchain are performed on a single technology platform with the participation of all parties, each party plays the role of a node participating in the Blockchain network. If SWIFT technology and technologies used in traditional L/C transactions allow two parties to transmit information and perform transactions in pairs, Blockchain technology allows all participating entities to transmit information, monitor and control each other's transactions at any time. In a L/C transaction using Blockchain, the participating parties will agree on a smart contract. Smart contracts are programmed on Blockchain in accordance with the agreements specified in commercial contracts and the terms and conditions of L/C. L/C transactions on Blockchain make payments through the self-executing feature of smart contracts, smart contracts can also record the transfer of ownership.

In Vietnam, Military Commercial Joint Stock Bank is a pioneer in applying Blockchain in UPAS L/C payments since 2019. According to the bank's assessment, Blockchain is truly a technology that can change the speed, operation and cost savings compared to transactions using the traditional SWIFT system

4.2.2. Some problems in implementing UPAS L/C in Vietnam

Firstly, Vietnamese commercial banks themselves have not yet boldly transformed digitally

Applying Blockchain technology to perform L/C transactions in general as well as UPAS L/C in particular is the right direction in the current context of strong digital transformation. However, although Contour offered free of charge to many Vietnamese commercial banks, only 5 banks agreed to test this new technology in L/C transactions. L/C transactions on Blockchain have not yet completed all the steps in a closed L/C transaction process. Of the 5 transactions that have been piloted at banks in the first phase (and as of February 2021), only the L/C issuance and notification stage is done methodically on Blockchain. That shows that banks are not really interested in this issue. The application of Blockchain in L/C transactions has only completed the pilot phase and has not been widely deployed. There are no instructions on applying Blockchain technology to perform letter of credit transactions. Currently, in Vietnamese commercial banks, there is only MB system that applies Blockchain in a relatively comprehensive manner for L/C payments.

Second, credit risk in L/C payment

The maximum use of UPAS L/C is reducing customers' need for regular loans, especially for commercial banks that have excess capital but still receive funding with a total cost (all in fee) below the deposit interest rate. mobilize capital. Some commercial banks only collect fees like normal L/C, without adding the differential interest rate to compensate for the risk of late payment financing, or they collect fees but are not significant, lower than the interest rate. Regulate capital and mobilized interest rates at the same time.

Third, there is no specific legal corridor governing L/C transactions in general and UPAS L/C in particular on the Blockchain platform.

In particular, there are currently no regulations related to electronic documents while documents are the core point of this transaction. Along with that, the technology infrastructure has not created the necessary conditions for banks to boldly apply Blockchain technology in L/C transactions. Only when the Blockchain network is truly large enough to connect subjects in countries around the world can transactions proceed smoothly and completely. Vietnamese commercial banks themselves do not really believe in the ability to apply this new technology model and have not invested properly because the application is only in the testing phase and is not yet complete and still under consideration. Cost issues when deploying Blockchain applications in international payments and trade finance.

4.3. Notes when implementing UPAS L/C and proposed recommendations to ensure adaptation to the digital transformation context in Vietnam

4.3.1. Notes in implementing UPAS L/C at commercial banks

In the UPAS L/C payment process, there are regulations on interbank credit limits, so for UPAS L/C to operate, banks must first sign an agreement on the form of interbank credit. for the purpose of specialized financing for UPAS L/Cs.

Along with that, the issuing bank and the importer must have an agreement to issue UPAS L/C in accordance with the terms and conditions of the signed interbank credit limit and issuance fees. arising related to UPAS L/C. From a legal perspective, Vietnamese commercial banks when issuing UPAS L/C must fully comply with the content of Decision No. 711/2001/QD-NHNN dated

May 25, 2001 of the Governor of the State Bank on promulgate Regulations on opening letters of credit for import of deferred payment goods. In particular, in foreign trade contracts signed by exporters and importers, there must be payment terms stating whether to pay immediately or use UPAS L/C. This provision in the foreign trade contract serves as a basis for the importer to apply to the bank serving him or her to issue UPAS L/C.

4.3.2. Some recommendations are proposed to effectively deploy UPAS L/C in the context of digital transformation in Vietnam

Firstly, complete the legal basis for UPAS L/C payment activities; especially Blockchain application in L/C payments in general and UPAS L/C in particular

L/C transactions are mainly governed by international practices and customs of the ICC. Basically, L/C has a set of necessary rules regulating documentary credit transactions. To create a legal corridor for the application of Blockchain in L/C transactions, the ICC needs to focus on rules that ensure banks allow acceptance of electronic documents and data. ICC revised and released eUCP version 2.0 in July 2019 guiding the electronic presentation of documents under L/C along with additional instructions. In addition, the ICC has drafted a draft of the Uniform Rules for Digital Trade Transactions (URDTT) to provide rules and obligations related to the use of electronic documents for processing. manage digital trade transactions. That is an important legal basis for presenting and checking electronic documents in L/C transactions on Blockchain. Therefore, the ICC needs to update and complete the eUCP and officially release the URDTT. At the same time, ICC needs to produce clear guidelines on how to automate document checking using new technologies such as artificial intelligence, machine learning... In addition, support and regulations Legal regulations from the State Bank are also very important for the operation of Blockchain technology in international payment and trade finance activities in Vietnam.

Along with that, from the perspective of the State Bank, it is necessary to continue to stabilize monetary policy and control inflation. Implement a prudent, firm, proactive, flexible, and effective monetary policy using exchange rate, interest rate, credit growth, and priority order tools; Mobilize commercial banks to reduce lending interest rates in some priority areas. The State Bank also needs to consider controlling UPAS L/C issuance conditions to limit potential risks. There needs to be a mechanism to control issuance conditions more strictly, specifically: (i) the UPAS L/C deferred payment period is suitable for the customer's production and business cycle (no more than 180 days); (ii) the sponsored item is not prohibited goods according to the provisions of law; (iii) customers have internal credit ratings, no bad debts and debt group 2 or higher at credit institutions within the most recent 01 year; no bad debts, debts that have been resolved risks, debts sold to VAMC and other credit institutions in the last 2 years; The customer has no suspicious signs in the transaction, has at least 1 successful L/C transaction for the item, the partner requests to open the L/C within 1 year.

Second, applying Blockchain in L/C payments in general and UPAS L/C in particular requires a synchronized solution from many groups of subjects.

- In addition, the L/C transaction model on the Blockchain platform is only complete when two issues are resolved: (i) There is full and effective participation of participating parties based on the principle of consensus; (ii) Implement a complete closed L/C transaction process from L/C issuance, presentation and verification of documents to payment on the same Blockchain network. To overcome these two problems, there needs to be synchronized solutions from participating parties, which are:

- Vietnamese businesses need to proactively learn information about Blockchain and applications of this technology in L/C transactions. Besides, businesses need to boldly innovate traditional L/C transaction methods to transactions on Blockchain. To do so, businesses need to have a specialized department to carry out L/C transactions, which can proactively perform the information declaration and input data related to the transaction. The application of Blockchain in L/C transactions is suitable for large-scale businesses, which often choose to pay by L/C in foreign trade contracts and have a large level of commercial transactions.
- Vietnamese commercial banks need to boldly test and deploy widespread application of Blockchain in L/C transaction activities, and implement the following solutions: (i) Build a project to apply Blockchain in payment activities international and trade finance, which regulates how to operate, organize and manage support resources effectively; Start implementing with L/C transactions and then apply to other transactions; (ii) Introduce the L/C product on the Blockchain platform to customers, and conduct a survey on the level of understanding and demand of businesses about this new product; (iii) Invest in technology infrastructure, select and work with Blockchain technology supply companies; (iv) Disseminating knowledge about the application of Blockchain technology in L/C transactions to employees; (iv) Develop business processes and issue guiding documents for L/C transactions on the Blockchain platform.
- Stakeholders including customs authorities, transportation companies, insurance companies, and goods inspection and certification authorities need to boldly participate in L/C transactions on the Blockchain platform. To do so, these organizations need to research methods for issuing and circulating electronic documents as well as mechanisms for authentication and data security. Currently, some commercial documents have been issued in digital form such as electronic bills of lading (eB/L), electronic certificates of origin (eC/O) but are not yet popular in Vietnam. . The General Department of Vietnam Customs has also used a system for issuing electronic customs declarations for businesses. The problem is to find a way to connect all parties to a blockchain and issue electronic documents to this same system.

Third, some recommendations on the business side

Take timely action to overcome exchange rate risks

To prevent exchange rate risks, businesses can also choose banks with good trade financing capabilities and use derivative financial tools such as forward foreign currency trading and swap contracts. (SWAP), ensuring that import and export activities are scientifically planned.

Improve competitiveness

It is necessary to develop products and services of enterprises and increase export goods for export enterprises. For import companies, maximizing domestic resources, finding alternative partners, especially domestically, and gradually reducing dependence on imports will also help avoid exchange rate risks.

CONCLUSION

The strong development of the digital economy with many new technologies has been opening a potential door for changing international payment models and applying new products. Currently, Vietnamese commercial banks are increasingly implementing UPAS L/C on many platforms, thus requiring continued research; Especially when the L/C operation is always a complicated operation, especially for a new product like UPAS L/C.

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SUSTAINABLE INCOME ENHANCEMENT SOLUTIONS FOR LPBANK

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Abstract: *LPBank a relatively young joint-stock commercial bank, has identified its direction as being a market-responsive leader. To effectively compete with domestic and international counterparts, LPBank requires sustainable business solutions to increase income. This article provides an overview of asset and income scale growth, potential capital sourcing from organizations, credit quality, non-credit investment expansion, reducing reserve ratios, sustainable business solutions spanning management, operations, product and service diversification, cost minimization, and improving the quality of human resources.*

Keywords: *Income, Profit, Services, Digitization.*

Abbreviations: LPBank

1. INTRODUCTION

LPBank is one of the largest private joint-stock banks in Vietnam. To maintain a strong presence in the competitive market, LPBank needs to enhance its business efficiency by increasing its income to meet the standards of a regional and global financial institution. This requirement is crucial for LPBank 's survival in the market. Based on these actual business operations and demands, the research aims to assess the current challenges and, subsequently, propose solutions to increase income for LPBank.

To meet this requirement, in addition to the research abstract, the report will present (i) Introduction to the context, significance, objectives, and structure of the paper. (ii) A brief overview of the issue and previous research results. (iii) Methodology and the proposed research framework. (iv) Presentation of research results through textual descriptions and supporting data. (v) Discussion and conclusions that analyze the research findings, compare them with prior studies, and offer insights.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH EVALUATION

The topic of business efficiency has been extensively studied by numerous domestic and international scholars. For instance, research on the business efficiency of commercial banks has been undertaken, such as the thesis "Business Efficiency of Commercial Banks Post M&A" by Nguyen Quang Minh, defended in 2016 at the National Economics University; the thesis "Enhancing Business Efficiency of Joint Stock Commercial Bank for Foreign Trade of Vietnam" by Ta Thi Kim Dung, defended in 2016 at the Institute of Development Strategy - Ministry of Planning and Investment; and Lê Thị Thúy's study in 2020 on "Enhancing Business Efficiency at the Joint Stock Commercial Bank for Investment and Development of Vietnam," which was defended at the Academy of Finance.

However, in-depth research on solutions under the conditions of digital transformation for commercial banks has not been extensively explored. Furthermore, there has been no research

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conducted directly at LPBank on this topic. Through research at LPBank, proposed solutions for sustainable income growth can be applied to both LPBank and the entire system of Vietnamese commercial banks."

3. METHODOLOGY AND PROPOSED MODEL

To investigate LPBank 's income enhancement, several crucial methods were employed:

Historical Data Analysis: This involved studying LPBank 's income history and financial fluctuations to understand trends and underlying causes. Statistical analysis tools and techniques were utilized to evaluate data from 2015 to 2022.

Cost and Performance Analysis: This method Evaluated LPBank 's operational costs and identified strategies to minimize them.

Product and Service Research: exploring the development of new products and services to attract customers and generate additional income.

Risk Assessment: analyzed potential risks in its operations to ensure effective risk control measures.

4. RESEARCH RESULTS

Establishment by Collaboration of Business Entities and Visionary Leadership

LPBank was born from the exceptional vision of business leaders. LPBank was established in 2008 amidst the Southeast Asian financial crisis, thanks to the credibility and entrepreneurial potential of its founding shareholders. Leaders from companies such as Him Lam Corporation, Saigon Trading Group (SATRA), Tan Son Nhat Airport Services Company (SASCO), Postal Savings Service Corporation (VPSC), and other talented leaders played pivotal roles in LPBank 's rapid establishment and consolidation of its position. [4].

Period 2015-2022, LPBank has actively expanded its market share and diversified its business lines. Financial capacity meets operational requirements, and ensures liquidity, and profits after tax increases annually. LPBank 's relentless efforts resulted in numerous awards for its brand and technology.

Asset Rapid Growth but Unstable revenues

LPBank 's growth rate and asset quality increased rapidly but income appeared to be unstable. In 2022, LPBank 's total assets stood at VND 327,745 billion, three times higher than VND 107,587 billion in 2015. Asset quality remained stable, with a low non-performing loan ratio, consistently below 1%. LPBank 's credit risk management and asset quality control measures, including loan portfolio assessment and post-lending handling, have proven effective. In contrast, the banking industry witnessed a continuous rise in non-performing loans during 2015-2017. However, during this period, LPBank 's non-performing loan ratio declined. In 2022, LPBank 's total income, including interest income, increased by 120% compared to 2015, and post-tax profits surged by 157%. [3].

LPBank 's financial results increased and the trend shifted to income from services, but slowly. LPBank 's income exhibited substantial growth over the years, with 2022 income being 2.8 times that of 2015. Most of LPBank 's income is derived from interest. Total income sources experienced significant growth, with a 2.56-fold increase in 2020 compared to 2015. The proportion of income from service activities has been on an upward trend. In 2017, income from credit activities only accounted for 45.4% of total income, but this ratio declined in subsequent years, hitting its lowest point in 2018 and gradually increasing in 2019 and 2020. Income from service activities began to rise towards the end of 2015, but in 2020, it still accounted for only 3.5% of total income. [3].

Potential grows from limitations

Some of LPBank 's unstable business portfolios can be leveraged to increase income. LPBank 's efforts will yield greater results if it can address certain limitations. During the period from 2015 to 2022, LPBank faced persistent challenges that needed resolution. These included rapid credit growth, heavy reliance on lending for income, hidden credit risks, and some inefficient services. To achieve its goal of being among the top 5 largest joint-stock commercial banks in Vietnam and comply with Basel 2 banking regulations, LPBank must strategize and implement specific measures to enhance its business operations effectively.

In the period 2017-2022, there was a decline in customer deposits while bond issuance increased. This skewed structure indicates an imbalance. At the end of 2017, bonds accounted for 83.9% of LPBank 's funding, but by 2021, this figure had decreased to over. Additionally, Customer deposit stability remained higher than bond issuance on the market and borrowing from major credit institutions. The bond interest rates always exceeded average savings deposit rates. Efficient use of savings deposits was seen due to the alignment with deposit balance growth. Bonds, on the other hand, often constituted a large but difficult and immediately utilized funding source. The cost of bond issuance and utilization was consequently higher than savings deposit costs, leading to reduced income.

LPBank 's asset growth rate was not consistently aligned with its business activities in foreign exchange, securities, and non-interest income. In 2015, LPBank 's asset growth rate was 6.7%, but it surged to 31% in 2016. However, in 2018, this rate dropped to a mere 0.9%. Similarly, foreign exchange and gold trading yielded losses of over VND 10 billion in 2015 but turned into profits of VND 137 billion in the following year. Securities trading followed a similar pattern, with losses in 2015 and 2016 (VND 244 billion and VND 324 billion, respectively), but profits of VND 384 billion and VND 137 billion in 2017 and 2020, respectively.

Potential for capital sourcing from other organizations. Government debt grew by 253% in 2015 compared to 2014, but it was reduced by 95% in 2016. In 2017, it surged by 329%, but by 2018, it reached a growth rate of 452%. By 2020, government debt decreased to just 21%. Deposits and borrowings from other credit institutions also exhibited irregular fluctuations, with a 13% decline in 2015, and a 6.6% increase in 2019, followed by a significant 159% decrease in 2020.

LPBank has the potential to increase income if it stabilizes the quality of its loans and risk-prone debt groups. The State Bank of Vietnam regulates the provisioning and utilization of risk provisions according to asset classifications. [1]. Three groups of debt: requiring attention debt, substandard debt, and doubtful debt also have uneven increases and decreases to be set aside. The required attention debt increased by 181% in 2015 but decreased by 24% in 2018. The substandard debt saw a growth rate of 165% in 2018 but declined by 44% in 2019. The doubtful debt increased by 234% and 324% in 2018 and 2019, respectively. That leads to higher provision costs.

The opportunity to increase income is assessed based on the ROA ratio. ROA stands for Return on Total Assets, which is a metric that measures profitability. [2]. LPBank 's ROA witnessed fluctuations and instability, with positive growth in most years except for 2018 and 2020 when it recorded negative growth rates of 0.29% and 0.3%, respectively. However, ROA remained below 1% in all years, indicating that LPBank 's business efficiency has room for improvement.

The potential to expand income from LPBank 's non-credit investments is still substantial. Non-credit investments accounted for nearly 30% of LPBank 's total assets in 2015, but this percentage decreased to 0.1% by 2019 and eventually to 0% by 2020. This suggests that LPBank abandoned securities trading and investment activities, in contrast to other banks that continued to maintain significant proportions in this category. Therefore, income from investments could potentially be substantially increased.

The efficiency of LPBank 's business operations comes from reducing the reserve ratio. The cash balance portfolio at LPBank increased from 0.4% in 2015 but increased to 1.4% in 2020. This shows that the efficiency of capital use is not high. Because cash reserves are not a profitable asset, if this ratio increases, it will reduce income.

Appropriately managing credit growth at LPBank will lead to a reduction in provisioning costs for risk. LPBank 's rapid credit growth has been a hotbed of potential risk, which was often accompanied by increased risk costs and a decrease in future income. Addressing these limitations and fine-tuning various aspects of its operations can help LPBank unlock its full potential for income generation and sustainable growth. It can be said that the growth of lending in various economic sectors represents overheated growth. In 2016, the highest growth rate reached 41%. The relatively low growth rate of LPBank in 2018 and 2019 also reached 18%. This is a rather hot credit growth rate for LPBank compared to the general debt growth rate in the industry. The excessive increase in credit often comes with the cost of risk, which reduces future income.

Sustainable Business Operations solutions

LPBank aims to achieve sustainable business efficiency. To operate successfully, the LPBank Board of Directors and Executive Committee need to establish a clear business strategy. Strategy is the roadmap and development approach for a bank. Therefore, formulating a strategy is crucial as it determines the bank's success or failure. Building a strategy depends on financial capabilities, professional expertise, and the ability to engage with the right customer segments in the market. Once the strategy is defined, a guide system needs to be built to execute it, involving the entire workforce in the system's understanding. Moreover, processes and operations must be developed, monitored, and evaluated. Business process efficiency significantly impacts a bank's performance. Based on the above analysis, it is evident that business processes must align with modern, customer-friendly products and services, from card services and payments to new services such as advisory, investment, and customer information provision.

The LPBank Board of Directors is directing the bank's operations with flexibility and safety as their top priorities, ensuring income economic uncertainties, and complex disease outbreaks. They are committed to maintaining high levels of asset growth and income for LPBank. Additionally, LPBank is transitioning its model to follow modern trends in banking management. LPBank has shifted from a decentralized risk management model to a centralized one, spreading risk management throughout its entire structure. This centralized approach has reduced the potential risks associated with decentralized risk management. LPBank has adopted and implemented common credit risk measurement models to assess and mitigate risks effectively.

Simultaneously with solutions related to management, operations, and product services, LPBank needs to strongly implement information technology applications. LPBank has made significant strides in applying information technology. In its business operations, LPBank has actively integrated advanced software solutions. LPBank consistently ranks among banks with efficient technology applications. It has established and efficiently implemented an information technology infrastructure, offering various digital banking services such as E-banking, mobile banking, and e-wallets for both corporate and individual customers.

In its business operations, LPBank needs to prioritize the analysis, and forecasting of economic, social, and pandemics. However, analyzing the economic, social, and industry trends still faces limitations. Analyzing business trends of businesses helps LPBank determine business activities in the right direction. Accurate forecasting is vital, as incorrect predictions about macroeconomic factors like exchange rate fluctuations and interest rates can significantly impact business efficiency.

LPBank's business efficiency and income will come from effectively conducting internal inspection and control activities. One significant internal challenge at LPBank is that they haven't fully maximized the potential of their three lines of defense. The first line of defense consists of business units, sales, customer relations specialists, branches, and headquarters operations. The second line includes risk management, compliance, risk operation, and legal units. The third line is the internal audit department. Effective risk management depends on proper risk control implementation.

LPBank has identified the need to expand its investment activities and operating scale

To broaden investment activities, LPBank must review regulations related to investment activities, including the investment process, risk management for investment activities, the responsibilities of individuals and related departments in investment activities, and the reward and compensation for investment activities. LPBank also aims to diversify its investment channels. Investment activities at LPBank have declined significantly from 2015 to 2022. To expand investment activities, LPBank plans to invest in high-yield areas such as securities, bonds, and partnerships with economic organizations. LPBank also needs to explore opportunities to invest in financially strong businesses with growth potential to generate additional income.

Increasing the scale of shareholder equity and the safety ratio of the LPBank system is a priority for the LPBank Board of Directors and leadership. Shareholder equity, though relatively small compared to total assets and liabilities, is crucial for any banking institution. It acts as a leverage to protect against risks faced during operations, increase the scale of operations, and enhance the safety of the bank. According to Basel II standards, LPBank 's shareholder equity has been consistently increasing each year. However, LPBank also needs to take steps to increase its charter capital through share issuance or even mergers and acquisitions, as exemplified by the successful merger with the postal system. Additionally, the bank should consider timing its equity offerings in domestic and international markets to boost its income as its operations grow.

Expanding digital lending and credit risk management

The digitization of banking has opened up new avenues for lending. Commercial banks can leverage their digital platforms to streamline approval processes and initiate loans efficiently. Credit scoring, digital document submission, and online loan applications can reduce operating costs and enhance customer experiences. Banks can also explore peer-to-peer lending and online marketplace lending models to generate income from initial fees and interest income.

Credit risk management and improving loan quality to generate income from lending activities are ongoing priorities for LPBank. To achieve this, LPBank is standardizing regulations and processes for credit risk management. Regulations regarding customer segments, products, and business areas are being adjusted according to internal credit ratings. LPBank is also overhauling its lending process, clearly defining roles and responsibilities. The bank is transitioning from primarily managing loans based on size and category to risk management based on industry and customer. LPBank has developed an early warning system for credit risk at all times, providing timely updates and alerts for credit information, which helps maintain sustainable income.

Credit operations always generate non-performing loans, which are challenging to recover. LPBank has addressed non-performing loans by acquiring all bad debts from the Vietnam Asset Management Company (VAMC). Resolving non-performing loans primarily involves maintaining the quality of credit operations and improving the bank's financial capacity. LPBank focuses on the root causes when dealing with non-performing loans:

(i) For non-performing loans with objective reasons where customers have the potential to recover, LPBank restructures by adjusting repayment terms or extending loans, giving customers time to resolve financial difficulties. During the restructuring period, LPBank may also waive or reduce interest for customers.

(ii) For non-performing loans with objective reasons but no or limited recovery potential, LPBank identifies customers facing bankruptcy. The bank tries to recover the principal and interest in various ways.

(iii) For non-performing loans with subjective reasons, such as credit officers violating lending regulations or customers engaging in fraud or misusing funds, LPBank applies appropriate measures for debt recovery, from selling assets to legal actions.

(iv) LPBank uses risk provision reserves to cover loan losses. These provisions are established according to the regulations of the State Bank of Vietnam (SBV). After resolution, LPBank continues to monitor loans to ensure timely updates on credit information, allowing for low-risk, sustainable income generation.

LPBank is committed to maintaining high levels of asset growth and income, effectively managing risks, and adapting to modern trends in banking management. The bank is focused on developing clear business strategies, optimizing its workforce, enhancing customer-centric product offerings, and expanding investment activities. LPBank is also leveraging digital technologies and improving credit risk management to generate sustainable income and ensure its long-term success in the banking industry.

Diversifying Digital Banking Services

LPBank needs to provide a solution for diversifying its product and service offerings. Since its inception, LPBank has actively offered diverse products and services to the market. However, customer demands have continued to diversify, and LPBank 's products do not fully meet the needs of all customer segments. LPBank 's products lack differentiation and fail to impress in terms of delivery time and quality. LPBank has not fully explored opportunities with large, diverse potential customer segments. For corporate clients, LPBank should develop services tailored to each industry and business field, including suitable capital sources and lending products. They should also provide special incentives for large-scale, financially capable clients and foster and expand customer relationships. For individual clients, LPBank should focus on potential customers in rural and mountainous areas with transaction points. LPBank should also collaborate with investors to develop products for home, apartment, and land purchases, expand its study abroad and foreign exchange services, and create products tailored to each individual's business sector, supporting customers more effectively during the loan application process.

To diversify its product and service offerings, LPBank is expanding into digital lending, aiming to create a broader range of financial solutions. This expansion begins with credit operations, which encompass payment transactions and foreign exchange activities, thereby establishing customer relationships. Through partnerships with major retailers and public service providers, LPBank offers payment cards and bill payment services. These services provide LPBank with the necessary conditions to offer credit services.

One of the most effective ways for commercial banks to increase income in the digital age is by diversifying their digital banking services. While core services like savings accounts and checking accounts are essential, banks can expand their offerings to include asset management, investment advisory, and robo-advisory services. By providing a wider range of financial products, banks can attract a larger customer base and generate more income from fees. Although LPBank 's income from these services has increased over the years, it still constitutes a relatively small portion of its total revenue. Therefore, expanding and enhancing the quality of these services is essential for sustainable income generation.

Personalization is a key element of modern banking. LPBank can leverage data analysis and artificial intelligence to better understand customers' needs and preferences. By tailoring products and services to individual customers, LPBank can not only increase customer satisfaction but also cross-sell and upsell more effectively.

Provide Premium Digital Services. To serve high-net-worth individuals and businesses, LPBank can introduce premium digital services. These services might include dedicated relationship managers, exclusive investment opportunities, and specialized assistance. By charging fees for these services, LPBank can target wealthier customers and increase their income while providing added value.

Collaborate with FinTech Partners: Rather than viewing fintech companies as competitors, LPBank can collaborate with them to harness advanced technologies and services. Such partnerships can enable LPBank to offer advanced solutions like mobile payment platforms, digital wallets, and blockchain-based services. By integrating these technologies into its offerings, LPBank can attract tech-savvy customers and generate income through transaction fees and fintech partnerships.

To achieve this, LPBank needs to take several steps

Expand the Network of Agency Banks and Open Foreign Currency Accounts: Collaborating with agency banks can strengthen LPBank 's international relationships, particularly in terms of international payments, remittances, and borrowing relationships.

Ensure Information Security and Cybersecurity: LPBank must maintain and enhance its capabilities to ensure the security of information, data, and network security. As digitalization progresses, cybersecurity becomes increasingly crucial, as customers expect their financial data to be safe and secure.

5. DISCUSSION AND CONCLUSION

Discussion

Increasing income for a commercial bank is a multifaceted challenge. It involves a holistic approach that considers risk management, compliance, asset management, technology adoption, market strategy, customer relationships, economic factors, and the overall reputation of the bank. Additionally, it includes cost reduction, revenue maximization, and personnel development.

Minimizing interest payments on capital mobilization and operating Costs

The efficiency of a commercial bank business operation is heavily dependent on the cost of capital mobilization. Because capital mobilization constitutes a significant portion of the total capital for business operations, the associated expenses are substantial. Capital sourcing plays a pivotal role as an input factor in commercial bank business operations. To enhance business efficiency at LPBank, it is necessary to aggressively expand the acquisition of low-cost capital from various components of the economy to save on input costs. In addition to interest expense reduction, LPBank needs to diversify capital mobilization products that suit different customer segments. These deposit products should be diverse and secure for customers, such as linked deposit accounts with payment account and flexible savings accounts with varying deposit periods.

To effectively carry out capital mobilization, LPBank frequently assesses and compares its capital mobilization products with those of other commercial banks. Interest rates on time deposits are directionally competitive. The interest rate flexibility, dictated by market conditions, ensures LPBank ‘s stable market share of capital sources.

Operating costs also have a significant impact on the business results of commercial banks. Therefore, LPBank aims to enhance business efficiency by minimizing operating expenses. To reduce operating costs, LPBank considers cutting expenses related to salaries, administrative costs, and management costs without affecting business plans. These expenses need to be calculated with maximum efficiency.

Furthermore, LPBank minimizes contingency risk expenses. To limit provisioning for contingency expenses, LPBank needs to enhance credit quality. This includes improving customer access capabilities, strengthening the quality of credit assessment, monitoring, recovery, and debt resolution processes.

Enhancing the Quality of Human Resources at LPBank

The prerequisite solution for LPBank ‘s effective business operations is the quality of human resources. While LPBank has seen rapid workforce growth, the staff’s qualifications have not kept pace. Most employees hold bachelor’s degrees from domestic universities, with limited proficiency in foreign languages and information technology. Younger employees have struggled to apply diverse and extensive knowledge effectively.

To achieve sustainable operational effectiveness, LPBank must focus on enhancing the quality of its human resources. From training activities to fostering a culture of continuous improvement, the bank needs to encourage and reward competence and contributions from its employees.

LPBank should organize workshops and training sessions to improve professional and market analysis skills among its workforce. Practical experiences should be shared, and competitions can be held to motivate employees to learn and develop their skills further. Encourage knowledge sharing and skill enhancement through programs that facilitate interaction among employees across the organization. These programs help create a collaborative and knowledge-driven work environment.

Developing detailed job position descriptions for each role is essential. Additionally, LPBank should invest in high-quality training for newly recruited staff. Continuous training and refreshing the skills of recruits, standard practices in commercial banking.

While training is essential, LPBank should be mindful of its training costs. In-house training by experienced staff can be a cost-effective way to equip new employees with the necessary knowledge and skills. Furthermore, LPBank should consider other training methods, including basic job skills, task-specific training, and research activities.

LPBank should acknowledge that there is an opportunity for improvement in terms of knowledge and skill levels when compared to advanced banks worldwide. To bridge this gap, LPBank should aim to absorb industry-leading practices and technological expertise from external sources. International collaboration programs can facilitate this process and align LPBank ‘s leadership and employees with global banking trends.

Conclude

In the digital age, commercial banks must adapt and innovate to increase their income while remaining competitive. By diversifying services, enhancing personalization, embracing partnerships, expanding digital lending, offering premium digital services, investing in cybersecurity, and exploring open banking opportunities, LPBank can thrive in the digital service landscape. Success in this context demands a customer-centric approach and a willingness to embrace technological advancements. Ultimately, LPBank changes effectively will be well-positioned to increase income and sustain long-term growth.

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SITUATION OF CURRENT REGULATIONS ON FAIR VALUE IN ACCOUNTING

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Abstract: The Vietnamese accounting system was built in accordance with a market economy orientation from the 1990s until 2001. The Accounting Law and Vietnamese accounting standards both stipulated that historical costs were used as the basis for calculating costs. However, to ensure that Vietnam's accounting system is compliant and compatible with other countries' accounting systems, it is necessary to research and use other pricing bases in addition to the original price. Therefore, replacing the original price model with other pricing models such as: net realizable value, current price, fair value... is absolutely necessary, in which fair value should be calculated. Legalized by Article 28 of the 2015 Accounting Law and guiding circulars, accordingly, fair value has been officially applied in the Vietnamese accounting system since January 1, 2017. Research on the current situation of regulations on fair value aims to come up with appropriate solutions.

Key words: *fair value, accounting, current regulations.*

1. PROPOSAL

Since 2005, the International Accounting Standards Board (IASB) has officially implemented the project to build and promulgate an International Financial Reporting Standards System (IFRS) to replace the accounting standards system. current international standards (IAS), along with the implementation of this project, the IASB also made important changes in its approach to accounting and financial reporting in the direction of shifting from an accounting perspective based on historical costs and focusing on business accounting on revenues and expenses based on transactions to an approach based on the principle of recording assets and liabilities at fair value and recording revenue and expenses according to fluctuations in the value of assets and liabilities.

Fair value was first mentioned by the International Accounting Standards Board (IASB) in International Accounting Standard 16 (IAS 16) – Property, Plants and equipment that "Fair value is an asset assets that can be exchanged between knowledgeable, willing parties in a comparable transaction. Then the IASB published a draft Standard on the measurement of Fair Value - considered as the value that would be received when selling an asset or the value paid to transfer a liability in an organized transaction. .

In May 2011, the IASB released International Financial Reporting Standard 13 (IFRS 13) – Fair value measurement. According to IFRS 13, fair value is the amount that would be received to sell an asset or the amount paid to transfer a liability in a structured transaction between market participants at the measurement date. The concept of fair value in this standard emphasizes that fair value is determined on the basis of market price, not the enterprise. Therefore, the introduction of IFRS 13 on Fair Value is an important step forward, affirming the significance of fair value in improving the consistency of global financial information.

In Vietnamese accounting, fair value is used mainly in initial recognition such as: Initial

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recognition of fixed assets, revenue, and other income; initial recognition reports monetary items denominated in foreign currencies… Fair value was first defined in VAS 14 – Revenue and other incomes, in which fair value is defined as the value of assets that can be exchanged the amount or value of a debt voluntarily settled between knowledgeable parties in a comparable exchange.

In the amended and supplemented Accounting Law No. 88/2015/QH13, one of the important additional contents is the regulation of accounting principles related to fair value. This is considered a strong step forward, but the applicability is still patchy, there is no clear direction on the use of fair value, and it has not been specifically included in Accounting Standards.

2. RESEARCH METHODS

- Method of analyzing and synthesizing theories: Analysis refers to studying different documents and theories by analyzing them into parts to find out about the subject. Synthesis is to link each aspect and each part of information analyzed to create a new complete and profound theoretical system about the selacted subject.

- Classification method and theoretical systematization: Classification is the arrangement of scientific documents according to each aspect, each unit, each problem with the same nature and the same direction of development. Systematization is the arrangement of knowledge into a system based on a theoretical model to make understanding of the subject more complete.

3. RESULTS AND DISCUSSION

3.1. Current legal regulations on fair value in Vietnamese accounting

3.1.1. Regulations on the basis of price calculation in Vietnamese accounting

In Vietnam, from 2001 onwards, the Vietnamese accounting system mainly uses historical prices, except for cases of asset revaluation according to State regulations. According to the provisions of Clause 5, Article 3 of the Accounting Law 2015, "Original price is the initially recorded value of an asset or liability. The original price of the asset is calculated including the costs of purchasing, loading, transporting, assembling, processing and other directly related costs according to the provisions of law until the asset is put into a ready-to-use state". Accounting information reflected through historical prices ensures reliability due to reliable evidence (shown through accounting documents), thus being useful to information users in making decisions.

However, the use of historical prices in accounting at businesses in Vietnam also reveals some limitations, especially when there are large fluctuations of some assets on the market or in low-income economies. With high inflation, the existence of a large gap between the original price and the market price has caused the accounting information to incorrectly reflect the financial situation of the entity, then the actual asset value of the unit at the time The point of preparation of financial statements can be much higher than the value on the report or vice versa. Experiencing many changes and facing many challenges, the impact of the accounting environment, accounting under the historical cost model has revealed many limitations, requiring consideration and adjustment to suit specific conditions to improve High quality of accounting work and usefulness of information presented on financial statements.

3.1.2. Regulations on legal transactions according to the Vietnamese Accounting standards system

The Vietnamese accounting standards system includes 1 general standard and 25 specific standards, of which 13 standards require or allow directly or indirectly the application of fair value in accounting, 10 standards require requires the application of fair value in accounting when initially recording assets and liabilities, 6 standards allow the application of fair value in accounting when presenting and disclosing information on financial statements.

Regarding the concept of fair value in accounting, the accounting standards are different and inconsistent. In general, the definitions are not complete and clear, and the terms used cannot be fully explained, thus it shall be very difficult for users to apply when transactions related to legal transactions arise in accounting.

As currently the Ministry of Finance has not issued accounting standards nor circulars related to fair value in accounting, fair value is only mentioned in some standards to record initial transactions in cases where it is not possible to determine the original price. In fact, up to now, there are still many debates surrounding the use of legal values in accounting (the most debated issue is the reliability and method of determining legal values in accounting).

3.1.3. Regulations on fair value of other legal documents

In addition to the provisions of the Vietnamese accounting standards system, fair value in accounting is also stipulated in many other relevant legal documents including:

+ Circular 117/2005/TT-BTC dated December 19, 2005, the Ministry of Finance issued guidelines for determining market prices in business transactions between affiliated parties (effective from 2006-2009) .

+ Circular 66/2010/TT-BTC dated April 22, 2010, the Ministry of Finance issued guidance on determining market prices in business transactions between affiliated parties (replacing Circular 117/2005/TT- BTC mentioned above and effective from 2010 onwards).

+ On December 20, 2013, the Ministry of Finance issued Circular 201/2013/TT-BTC guiding the application of advance agreement on the method of determining taxable prices (APA) in tax administration.

+ Circular 78/2014 dated June 18, 2014 guiding the implementation of Decree No. 218/2013/ ND-CP dated March 26 of the Government regulating and guiding the implementation of corporate income tax law.

+ Circular 146/2014 dated October 6, 2014 of the Ministry of Finance guiding financial regimes for securities companies and fund management companies.

+ Circular 200/2014/TT-BTC dated December 22, 2014 of the Ministry of Finance on guiding corporate accounting regime.

+ Circular 210/2014/TT-BTC dated December 30, 2014 of the Ministry of Finance guiding accounting applicable to securities companies.

+ Circular No. 126/2015/TT-BTC dated August 20, 2015 of the Ministry of Finance promulgating Vietnam Valuation Standard No. 08 - Market approach; Vietnam valuation standard No. 09 - Cost approach; Vietnam valuation standard No. 10 - Income approach takes effect from January 1, 2016, replacing 6 valuation standards according to Decision No. 129/2008/QD-BTC dated December 31, 2008 of the Minister of Finance expires from the effective date of this Circular.

+ Official dispatch No. 12568/BTC-CDKT dated September 9, 2015 of the Ministry of Finance explaining the content of Circular 200/2014/BTC.

+ Circular No. 334/2016/TT-BTC dated December 27, 2016 of the Ministry of Finance amending, supplementing and replacing Appendix 02 and 04 of Circular 210/2014/TT-BTC dated December 30, 2014 on accounting guidance applicable to securities companies.

+ Decree 20/2017/ND-CP dated February 24, 2017 of the Government on tax management for enterprises with affiliated transactions effective from May 1, 2017

+ Official Dispatch 4196/BTC-CDKT dated March 30, 2017 on guidance on legal limits and calculating corporate income tax when applying legal limits.

+ Circular 41/2017/TT-BTC dated April 28, 2017 of the Ministry of Finance guiding a number of articles of Decree 20/2017/ND-CP.

3.2. Current situation of legal regulations on fair value in accounting

Circular No. 200/2014/TT-BTC guiding the corporate accounting system has a number of regulations on fair value, specifically:

- For trading securities:

Trading securities must be recorded in accounting books at their original cost, including: Purchase price plus (+) purchase costs (if any) such as brokerage, transaction, information provision, taxes, fees and banking fee. The original price of trading securities is determined according to the legal value of payments at the time of the transaction.

- Fixed assets:

Circular No. 200/2014/TT-BTC further clarifies VAS 03 on determining the original price of tangible fixed assets acquired through purchase, including: In case the purchase of fixed assets is accompanied by additional equipment and spare parts, it must be determined and recorded separate from equipment and spare parts at fair value. The original price of purchased fixed assets is the total costs directly related to bringing the asset into a ready-to-use state minus the value of equipment and replacement parts.

- For investments: In case of dissolution of a subsidiary and merger of all assets and liabilities of the subsidiary into the parent company: Recording a decrease in the book value of the investment; Record all assets and liabilities of the dissolved subsidiary at fair value at the merger date. The difference between the cost of the investment and the fair value is recorded in Financial Revenue or Financial Expenses.

- For revenue and expenses: "Revenue is determined according to the fair value of the amounts entitled to receive, regardless of whether money has been collected or will be collected." "Revenue must be recorded in accordance with its nature rather than its form."

Regarding the method of determining fair value in accounting, so far there has been no official and unified guidance on the method of determining fair value in accounting. Currently, the Ministry of Finance has issued Circular 126/2015/TT-BTC of the Ministry of Finance dated August 20, 2015 on promulgating Vietnam Valuation Standards No. 08, 09 and 10, which stipulates quite specific valuation methods such as market method, cost method, income method, however, how to apply these methods in accounting is still in consideration.

4. CONCLUSION AND SOLUTIONS

Application of fair value in the Vietnamese accounting system is considered as an important reform step in the process of integrating the accounting system with world accounting practices, ensuring the implementation of Vietnam's commitments to with signed bilateral and multilateral agreements. However, the application of fair value in accounting also poses great challenges for accounting policy makers as well as those involved in accounting work, training activities, and accounting practices. Therefore, we offer some ***proposals to improve fair value in accounting according to the roadmap to convert Vietnamese accounting standards to International Financial Reporting standards.***

4.1. The necessity to convert Vietnamese accounting standards to international financial reporting standards

Fair value according to international accounting standards

The International Accounting Standards Board (IASB) has mentioned fair value as a basis for calculating costs in accounting since the late 1990s, expressed through international accounting standards, such as: Assets , buildings and equipment (International Accounting Standard No. 16 - IAS 16); Investment real estate (IAS 40); Leases (IAS 17); Measurement and recognition of financial instruments (IAS 39),... Therefore, fair value is the basis for determining the value after initial recognition or fair value is the price at which an asset can be exchanged between parties with complete information in a completely arm's length transaction. However, some issued international accounting standards do not provide complete instructions on how to determine fair value. Some standards have detailed instructions but lack consistency in the relationship (specifically, are IAS 16 and IAS 17).

Therefore, in 2013, an independent IFRS standard was officially issued by the IASB to guide the measurement or determination of fair value, and at the same time promulgate requirements on the disclosure of fair value in financial statements. In IFRS 13 - "Fair value is the price that would be received to sell an asset or paid to transfer a liability in an arm's length transaction between market participants at the measurement date". According to the standard, it can be seen that fair value is the price determined on the basis of market price or transfer value without the assessment of the enterprise.

Fair value has the following outstanding aspects: (1) Specific assets and liabilities are the subject of measurement; (2) For non-financial assets, the basis for valuation must be appropriate for measurement; (3) The primary market for the asset or liability and (4) Valuation techniques must be appropriate for measurement, such as the availability of an input reference base that represents the assumptions for Market participants to use, when evaluating an asset or liability, the level of the fair value scale on which the inputs are classified.

In January 2021, Deloitte Vietnam published a publication converting Vietnamese accounting standards to international financial reporting standards, listing 10 standards requiring the application or allowing fair value in a number of specific case.

Table 1: Connection between IFRS - 13 and other standards

	Required	Allowed	Intepretation
IFRS 3- Business consolidation	x		The fair value at the acquisition date of the value of investments and assets and liabilities acquired.
IFRS 5 - Long-term assets held for sale and intermittent operations	x		Use fair value, deduct costs for sale, for groups of long-term assets for sale and assets to be liquidated.
IFRS 9 - Impairment in value	x		Fair value will be used with different types of financial instruments.

IAS 28-Accounting for Investments in Associates and IFRS 11 - Agreements	x		Enterprises have the right to evaluate investments in subsidiaries, affiliated companies and business cooperation activities at fair value.
IAS 16 - Tangible fixed Assets		x	Enterprises have the right to choose to re-evaluate assets at fair value.
IAS 19 - Employee Benefits	x		Determine the future benefits payable to employees determined at fair value.
IAS 36 - Asset losses	x		Use the fair value minus related selling expenses to determine the residual value.
IAS 38 - Intangible fixed assets	x		Enterprises have the right to reevaluate the fair value of intangible assets.
IAS 40 - Real estate investments	x		Right to determine the value of assets at their fair value
IAS 41- Agriculture	x		Biological and industrial assets are determined at their fair value

Source: Deloitte (2021) and data compiled by the author

Thus, IFRS Standard No. 13 on fair value determination has a major impact on the preparation and presentation of financial statements, including: balance sheet, comprehensive income statement, income statement. business operations and financial statement disclosures. In addition, IFRS 13 only applies to assets and liabilities whose values are determined at fair value.

Fair value according to Vietnamese accounting standards

Among the standards and regulations in Vietnamese accounting are mentioned in some accounting standards VAS 02, 03, 04 and VAS 14. Some main points are mentioned, such as: (1) Fair value is mainly used in initial recognition of: formation of fixed assets, revenue and other income, initial recognition and reporting of foreign currency monetary items, determination of business combination costs; (2) Fair value is used to evaluate after initial recognition of: revaluation of assets, revaluation of monetary items denominated in foreign currencies at the end of the fiscal year; (3) Fair value is used as a basis for recording asset price decline.

Table 2. Vietnamese accounting standards require the application of fair value.

Standards VAS	Subjects and contents
VAS 01- General standards	- Asets
VAS 03 - Tangible fixed assets	- Tangible fixed assets purchased in the form of exchange - Tangible fixed assets are sponsored or donated
VAS 04 - Intangible fixed assets	- Intangible fixed assets are formed from the exchange of assets related to the capital ownership of the unit - Intangible fixed assets are formed during the merger process. - Intangible fixed assets granted or donated by the state - Intangible fixed assets purchased in exchange for dissimilar assets
VAS 05 - Real estate investments	- Real estate investments - Revenue from the sale of investment real estate is recorded according to legal values - Present on the financial statements the following contents: Fair value of real estate investments at the end of the accounting year, preparing financial statements
VAS 06 - Asset leasing	Leasing financial asets

VAS 07 - Investments and affiliate companies	The purchasing an investment, any positive or negative difference between the original cost of the investment and the investor's equity share of the identifiable net assets of the associate is appropriately accounted with VAS 11
VAS 10 - Effects of exchange rate change	Non-monetary items of foreign currency origin are initially recorded at the fair value
VAS 11 "Business consolidation"	Business consolidation fees
VAS 14 "Other revenue and income"	Revenue: determined according to the fair value of accounts receivable or collected

Source: Data compiled by author

Vietnam has gradually updated its accounting work according to the fair value method (Accounting Law 2015), but up to now, the role of the fair value valuation basis is still quite inadequate and there is still no clear instruction. There are many limitations in standards and regulations related to accounting according to legal principles, such as: inconsistent concepts; the use of fair value for initial recognition instead of historical cost; There is a lack of specific standards regulating the measurement of fair value. Meanwhile, IFRS 13 provides 3 levels of determining fair value.

4.2. Orientation for applying fair value in accounting according to the roadmap for converting Vietnamese accounting standards to International Financial Reporting standards

Listed companies need to choose a transformation roadmap to ensure they complete their goals in the most favorable direction. Listed enterprises should study standard No. 13 from the beginning, choose a plan to apply legal regulations based on the actual status of the enterprise, important milestones and the destination of the implementation roadmap in sync with Decision No. 345/QD-BTC dated March 16, 2020 and accounting - auditing strategy for the period 2021 - 2030 of the Ministry of Finance.

Developing human resources for accountants and controllers through on-site training and online training, including: (1) Innovating content and training programs for chief accountants; Develop content and programs to periodically update professional knowledge and skills according to international practices. (2) Enhance the sense of discipline and professional ethics of accountants and controllers integrated with training programs to update specialized knowledge and professional skills. (3) Business leaders have remuneration policies, pay attention to high-quality accounting human resources, serve the needs of businesses in the context of increasingly deeper accounting integration and aim to apply comprehensively by 2025. (4) Promoting the role of professional accounting consulting organizations in the process of applying fair value, supporting businesses, including: consulting to identify key accounting issues that need to be implemented according to fair value, training sessions for accountants.

It is necessary to acquire international accounting practices, evaluate the results of implementing the accounting implementation roadmap according to legal regulations on the basis of provisions of accounting law. It is also important to reflects problems and difficulties in the process of implementing fair value accounting. In addition to current legal documents related to accounting, accounting regulations and standards in the context of international accounting integration need to be reviewed and strengthened to be appropriate and timely.

In addition, state management agencies need to introduce policies to encourage, give incentives, and support listed enterprises in training accounting human resources to achieve expertise, vision, and professional ethics. It is important t0 strengthen control activities to ensure compliance with accounting regulations from accounting standards to guiding documents.

Changing management thinking in accounting of managers: Leaders of listed businesses need to have certain knowledge in the field of accounting to control financial and legal risks stemming from accounting activities. Improve the understanding of accounting through consulting from accounting professional associations and consulting organizations, as well as regularly updating changes in accounting policies. In addition, managers need to invest in developing and changing accounting human resources in the entity in a systematic way to promptly adapt to changes and integration of accounting policies.

IFRS requires the application of many financial models to determine the value of assets and liabilities according to fair value, recoverable value, value in use, time value, intrinsic value, etc. Therefore, financial information provided on the IFRS platform will help listed businesses evaluate their financial situation at the time of reporting as well as help the Board of directors get better information for forecasting. It is necessary to report future operating results and cash flows, thereby providing a basis and tools to carry out management and operations in accordance with the actual situation.

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DIGITAL TRANSFORMATION OF TAX MANAGEMENT CONTRIBUTING TO PROMOTING THE ACTIVITIES OF ENTERPRISES IN VIETNAM

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Abstract: Digital transformation is an inevitable trend in the current period in both the public and private sectors. Especially since the Prime Minister approved the "National digital transformation program to 2025, orientation to 2030" in Decision No. 749/QD-TTg dated June 3, 2020, the issue of promoting digital transformation in the operations of agencies and organizations in the public and private sectors has become very urgent in the current period and in the coming time. Especially from the perspective of the public sector, the management activities of tax authorities not only ensures the correct collection of the full amount of revenue for the state budget but also makes an important contribution to creating favorable conditions and promoting the development for the private sector. This article studies the achieved results of digital transformation in the Tax authorities which contribute to a positive impact on production and business activities of enterprises, while also point out the challenges, and show some solutions to promoting digital transformation in tax management, aim to form conditions for the development of businesses in the coming time in Vietnam.

Keywords: digital transformation, tax management, business development

1. INTRODUCTION

Digital transformation is a global issue in the context of the strong development of the scientific and technological revolution. Digital transformation helps organizations in the economy quickly catch up with the current inevitable development trend, and not fall behind in the constant movement and change of activities in the socio-economy. This is an important issue that is recommended to be applied to governments and businesses in all departments because this can impact changes in the management of operating cycles within organizations. Organizations and units undergoing digital transformation will even impact relationships with partners outside the organization such as customers, individuals, and other organizations that have cooperative transactions. In particular, digital transformation will contribute to increasing the value and image of the units and organizations implementing the transformation, contributing to the general trend in the modern time.

The tax authority is one of the units that plays an important role in tax collection management for the state budget. In the context of the development of the 4.0 scientific and technological revolution, the tax authority has promoted the digital transformation process through administrative reform and information technology application to facilitate tax administration agencies as well as for people and businesses in implementing public services, contributing to promoting economic growth and social development. The positive impact of digital transformation applications in tax management is increasing transparency in tax administration through the shift to digital payment methods and administrative procedures being carried out openly and transparently. Through the use of digital platforms, it contributes to enhancing the reliability and flexibility of the tax system; maintain data security, promote tax registration, tax payment, payment and dispute resolution activities, clarify processes, ensure that all payments are traceable to meet deadlines taxpayers' expectations.

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The application of modern and advanced machinery and information technology contributes to shortening time and saving costs for taxpayers. The process of carrying out administrative procedures for people and businesses takes place anywhere, at any time instead of having to go to the headquarters of tax agencies. Digitizing tax declarations makes tax declaration activities easier and more convenient. This contributes to minimizing people's tax compliance risks. In particular, in the open economy, the implementation of digital transformation in tax management activities of tax authorities will contribute to bringing about a number of positive impacts, contributing to promoting the expansion of transactions commerce of businesses on the basis of minimizing procedures and documents that need to be stored, improving the quality of public services, and also creating favorable conditions for businesses to further promote digital transformation activities. Besides, it is more convenient for businesses to participate in international trade activities, save time and costs, thereby promote import-export activities in Vietnam.

2. LITERATURE REVIEW

In the trend of globalization, along with the strong development of the 4.0 technology revolution, digital transformation is considered an inevitable trend, a vital issue for countries, organizations, businesses and individuals in all over the world.

According to Demirkan and partner (2016), digital transformation is the profound and rapid transformation of business activities, processes, capabilities and business models to take advantage of changes and opportunities due to technological advances. According to Hess and partner (2016), digital transformation involves changes in digital technology that can bring new business models, create new products and services, or change the basis organizational structure to automating processes. These changes can be observed in the growing demand for Internet-based media, leading to changes in entire business models.

Necessary digital transformation activities are carried out in both the public and private sectors of the economy. From the perspective of the public sector, implementing digital transformation helps state management agencies promote the process of modernizing management, improving the quality of service to the people, and creating convenience for the people in administrative procedures, ensuring speed, convenience and accuracy in collecting and rendering information for management activities, contributing to improving management quality and efficiency. Many countries around the world have made significant efforts to exploit digital technologies to provide better services and eliminate gaps in taxpayers' tax compliance.

As is the case in Chile, digital transformation activities in tax administration in Chile are carried out on the country's existing digital ecosystems and the available capacity of the tax authorities. (Reyes – Tagle, Gerardo and partner, 2021). On the other hand, the practice of conducting digital transformation activities has shown that digital transformation in tax administration does not fundamentally change its nature and elements but involves procedural and potential issues. The capabilities of digital technology are demonstrated through the use of technology applications based on blockchain, big data, artificial intelligence, cloud technology, internet of things (IoT) as technological tools to organize tax relations and tax administration to improve the service quality and facilitate taxpayers' operation (Natalia Pantielieeva, 2022).

Thus, it can be seen that many countries have focused on digital transformation activities in tax management. Digital transformation not only meets the requirements of modernizing tax administration but also promotes digital transformation activities in businesses, creating conditions for the development of businesses in the open economy. It is important to realize that the process of digitalization and application of information technology to tax administration data processing requires countries to determine the current status of digital transformation activities, thereby promoting digital transformation to contribute to improving tax management efficiency and creating a favorable business environment for businesses in the coming time.

3. CURRENT STATUS OF DIGITAL TRANSFORMATION IN TAX MANAGEMENT OF TAX AUTHORITIES

The Tax authorities belong to the Finance sector, directly managing tax issues to ensure correct and sufficient collection of revenue for the state budget. In the Tax System Reform Strategy to 2030 approved by the Prime Minister, the goal has been determined: “Building a modern, streamlined, efficient and effective Vietnam Tax industry; The management of taxes, fees and charges is unified, transparent, in-depth and professional according to the risk management method, promoting the application of information technology, simplifying administrative procedures, reducing compliance costs; At the same time, the focus of tax management is based on the electronic tax platform and three basic pillars: complete, synchronous, modern and integrated tax management institutions; professional human resources, integrity, innovation; modern, integrated information technology, meeting tax management requirements in the context of the digital economy.” Therefore, the Tax authorities have always been ready and proactively deployed many digital transformation activities throughout the industry. The practice has shown that the General Department of Taxation is one of the state agencies that has performed excellent digital transformation in recent times.

In order to improve operational quality and create favorable conditions for taxpayers in fulfilling their tax obligations to the State. The Tax Industry has developed and upgraded many free applications for people and businesses recently. Typical applications include:

In the first place, the General Department of Taxation has maintained the website system of the General Department of Taxation to operate stably, fully and promptly provide legal policy information and tax agency activities. In addition, the General Department of Taxation has coordinated with professional units to enhance information disclosure on the websites of the General Department of Taxation and local tax departments. The Electronic Information Portal of the General Department of Taxation and the Electronic Information Portal of 63 local Tax Departments continuously update legal documents on taxes and new tax policies; Documents answering taxpayers’ problems; Write news and articles to reflect the activities of tax authorities, and at the same time closely follow and update information on the activities of the Tax industry on the website to let the business community and people know, which creates consensus in the society.

In 2022, the General Department of Taxation electronic information portal posted 907 news/ articles, 361 documents, 164 question and answer situations about Tax; On the websites of 63 Tax Departments, more than 53,000 news/articles/photos/videos/documents about tax policies and administrative procedures have been published and the industry’s outstanding activities are reelected as well.[4]

Secondly, the General Department of Taxation has provided online public services of electronic tax declaration, payment, and refund applications for business groups.

* Regarding electronic tax declaration: The electronic tax declaration system has been deployed in 63/63 provinces and cities and 100% of affiliated Tax Departments with 99.5% of

businesses participating in using electronic tax declaration services. According to statistical results by 2022, the number of electronic tax declaration documents received from January 1, 2022 to November 15, 2022 has reached 16,934,078 documents.[4]

* Regarding electronic tax payment: Coordinate with 55 commercial banks (which have completed connecting electronic tax payment with the General Department of Taxation) and 63 Tax Departments to deploy electronic tax payment services and propagate and mobilize businesses participate in using the service. In 2022, businesses paid taxes through 3,346,667 electronic tax payment transactions with an amount of over 765,817 billion VND and 55,853,591 USD.[4]

* Regarding electronic tax refund: On August 4, 2017, the system was expanded to provide services to taxpayers in 63 provinces and cities nationwide. Statistics in 2022, the total number of businesses participating in electronic tax refund is 7,938 out of 8,016 tax refund businesses, reaching a rate of 99%. The number of received documents is 18,627 out of a total of 18,732 documents, reaching a rate of 99.4%; The total number of refunded system documents is 17,603 with a total refund amount of VND 131,321 billion.[4]

In addition, the Tax Industry has implemented electronic invoices and electronic stamp management applications in tax administration to create a basic foundation for collecting information to meet management requirements in this situation, and at the same time promote the process of implementing digital transformation at businesses to adapt to the requirements of state management agencies.

Electronic invoices are digital documents which play an important role in recording economic transactions which are actually performed. Pursuant to the provisions of the Law on Tax Administration No. 38/2019 and Decree No. 123/2020/ND-CP, the Ministry of Finance has approved and issued decisions and official dispatches to organize and implement the application of legalization electronic application according to the 2-phase roadmap. In November 2021, the General Department of Taxation deployed phase 1 in 06 provinces/cities (Hanoi City, Ho Chi Minh City, Quang Ninh, Binh Dinh, Phu Tho, Hai Phong). In April 2022, the General Department of Taxation continues to implement phase 2 in the remaining 57 provinces and cities according to the roadmap approved by the Ministry of Finance. From now, 63 provinces and cities nationwide have officially deployed the electronic invoice system. As of December 12, 2022, the total number of invoices received and processed is more than 2.311 billion invoices, of which: Invoices with code: 618.32 million invoices; Uncoded invoices sent with full data to tax authorities: 666.52 million invoices; Uncoded invoices sent according to tax authorities summary table: 1,025.78 million invoices; Invoices by time they arise: more than 558 thousand invoices[4]. The implementation of electronic invoices creates a basis for forming a large data source to serve tax management activities, and through the management of electronic invoices, tax authorities can confirm invoices, the nature of the transactions and the corresponding value of the transactions, from which appropriate management decisions can be made. In addition to electronic invoices in general, businesses, households, and individuals doing business that pay taxes according to the declaration method provide goods and services directly to consumers according to the business model (shopping centers commerce; supermarkets; consumer goods retail; dining; restaurants; hotels; western medicine retail; entertainment services and other services) are selected to use electronic invoices initiated created from a cash register connected to electronic data transfer with the tax authority. The electronic invoice system with code initialized from the cash register has been officially deployed since December 15, 2022. As of June 2023, there have been 21.4

thousand businesses and individuals registered to use electronic invoices with tax authority codes created from cash registers.

In addition, the General Department of Taxation has completed the construction and implementation of an electronic stamp management system that meets the regulations of Circular No. 23/2021/TT-BTC. Accordingly, the electronic stamp management system meets contract management, management of import/export/sale of stamps on the electronic stamp system and reports. The electronic stamp management system connects to the electronic invoice system to support tax officials in creating electronic invoices with the tax authority's code when selling stamps.

The digital transformation process based on increasing the application of science and technology products in management activities has brought many positive results in tax management of tax authorities, while also creating many advantages for the operations of businesses, contributing to improving the operating environment for entities in the economy and enhancing national competitiveness. In recent times, many information technology applications have been introduced into the operating system of the Tax industry, reducing and simplifying many stages in the management process and creating more room to reform administrative procedures, creating more favorable conditions for businesses and people in fulfilling their obligations to the State Budget. In 2022, the General Department of Taxation has proposed to announce 01 reporting regime to replace 04 reporting regimes and abolish 03 reporting regimes; Review, reduce and simplify tax administrative procedures in 2022 according to the assigned tasks in Resolution 68/ND-CP dated May 12, 2020 of the Government, thereby cutting 70 administrative procedures (down from 304 down to 234 procedures), a decrease of 23% compared to the end of 2021. At the same time, continue to implement the integration of online public services levels 3 and 4 into the National Public Service Portal, specifically: completing Electronicize 103 procedures and integrate 97 procedures into the National Public Service Portal.

Thanks to the results of tax reform achieved, in the Administrative Procedures Compliance Cost Index (APCI) Report released by the Administrative Procedures Reform Advisory Council with support from the Development Agency The United States International has recorded quite positive opinions and experiences of businesses regarding the process of handling administrative procedures by state agencies, including tax authorities. The APCI 2022 report can be used as one of the measures of the effectiveness of administrative procedure reform efforts at the central level (policy issuance level) and local level. The APCI scores of the tax administrative procedures group over the years have been very high. Most tax administrative procedures are now 100% carried out electronically and compared to 2021, the proportion of businesses submitting online applications has increased.

On the other hand, Digital Transformation has helped the Tax industry perform propaganda functions, better support taxpayers, optimize the capacity of tax agencies to provide public services, and reduce tax compliance costs taxpayers, thereby contributing to improving the voluntary compliance of taxpayers in fulfilling their obligations to the state. As of 2020, the General Department of Taxation has completed the integration of 150 tax procedures into the Translation Portal. National Public Service at the address: https://dichvucong.gov.vn/, exceeding 161% (150/93 administrative procedures) according to the Plan in Decision No. 683/QD-BTC dated April 28, 2020 of The financial. At the same time, the General Department of Taxation has established an eTax System including 479 information channels to support taxpayers uniformly from the General Department of Taxation to 63 Tax Departments and 415 Tax Branches, operating regularly, continuously and smoothly 24/7[3].

The tax authorities' efforts in digital transformation activities have contributed to promoting digital transformation activities at businesses in Vietnam. In the 2022 Enterprise Digital Transformation Annual Report, an analysis of the readiness level of businesses (mainly small and medium enterprises) was conducted, showing that businesses in most industries are ready for the transformation change to digital environment. Businesses have made progress in applying digital technologies in marketing, distribution, and multi-channel sales to help increase experience and better customer care. Digital technology is also more commonly applied in some operations such as inventory management, production lines, and purchasing management. Many businesses have digitized data and standardized processes to move towards digital transformation on a broader and more consistent scale, contributing to improving production and business efficiency and business competitiveness.

However, in a world that is always moving and constantly changing, there are many factors that have greatly impacted the digital transformation activities of tax authorities. Technology changes at a rapid pace with the introduction of a series of new technologies such as blockchain, cloud services, API, Machine learning, computer vision, which will make some of the technologies currently applied by the Tax industry quickly become outdated if do not regularly update and upgrade applications. On the other hand, many new types of businesses are formed, exist and develop, especially the emergence of business activities of new products such as cryptocurrencies, e-commerce, and fintech, which have posed many difficulties and challenges for tax authorities in controlling activities and implementing appropriate tax administration for these target groups with specific activities.

In the process of implementing digital transformation, the Tax industry is also affected by many challenges within the industry. For digital transformation activities to be carried out effectively, a large enough data source is required. However, the current data of the Tax industry is still scattered and fragmented, the operating data is not timely, not flexible according to management needs and the synthesis, sending and receiving of reports has not been completed, which takes a lot of time and effort. In addition, the challenges in implementing investment, procurement and information technology infrastructure deployment processes throughout the industry are still bound by many processes and procedures, which are not flexible enough to meet the needs of the industry respond to the rapid change and development of technologies under the impact of the 4.0 industrial revolution. On the other hand, specialized human resources that are sensitive and meet management requirements in the new period and information technology human resources in terms of quality and quantity are also one of the big challenges for the Tax industry. The current information technology human resources in the Tax industry are very low compared to information technology human resources at tax agencies of some countries. The number of civil servants working in information technology at tax agencies at all levels of the Vietnam Tax sector by the end of 2022 reached about 1,420 out of a total of 37,000 tax sector civil servants (accounting for 3.84%) while this ratio in New Zealand it is 6%, in Australia it is 8% and in Singapore it is 12%[3]. So, mobilizing and supplementing information technology resources for the Tax industry is an urgent need.

Therefore, in order to promote digital transformation activities in tax management of tax authorities, it is necessary to be aware of the importance of digital transformation and the challenges posed to digital transformation, from which appropriate solutions for implementing digital transformation can be given throughout the Tax industry, in accordance with the digital transformation orientation set out by the Finance Industry and the Government.

4. DISCUSSION

With the goal of improving the quality of tax management, cutting management implementation costs and tax compliance costs, creating convenience and increasing satisfaction and high consensus for people and businesses in to fulfill tax obligations to the State, the Tax industry needs to determine the appropriate digital transformation orientation. Accordingly, the Tax Industry needs to continue providing digital tax services and electronic data to facilitate taxpayers, contributing to improving Vietnam's ranking in terms of tax simplicity and convenience. On the one hand, the application of artificial intelligence technology to tax management stages is an important direction in digital transformation of the Tax industry as clearly stated in the Tax System Reform Strategy to 2030. Accordingly, the General Department of Taxation The Tax Department needs to gradually research and test the application of AI technology in management stages, especially in analyzing taxpayers' compliance risks. On the other hand, the Tax Industry needs to build a data platform to serve tax management and smart tax services and deploy technical infrastructure to ensure safety and security for the Tax industry's information technology system following the digital transformation orientation of the Finance Industry.

With the motto of putting taxpayers at the center of management activities, promoting the implementation of digital transformation above will bring great efficiency in reforming tax administrative procedures and promoting the digital transformation process. The Tax sector in particular, actively contributes to implementing the National digital transformation strategy in general. Some solutions for digital transformation activities in tax management of tax authorities in the coming time as follows:

Firstly, pay attention to building big data because data is the heart of digital transformation. The Tax authorities needs to implement data management throughout the industry in the direction of: Completing mechanisms, policies, processes and standards to create a legal basis for creating, sharing and exploiting data throughout the industry; Implementing data infrastructure improvements based on building and operating an integrated data sharing platform, data analysis and processing platform, and shared data warehouse providing master data and reference data, serving timely and highly effective tax management decisions; Upgrading equipment infrastructure to have a large industry database storage facility.

Secondly, the Tax industry needs to aim to build a system that unifies all tax management applications, tax management content, and implements data convergence to make analysis, forecasts, and management decisions timely tax. This system requires the simultaneous application of specific existing digital technology platforms: have a big data platform to synthesize and analyze data, provide complete, accurate, and timely operating reports; Cloud platform helps the system easily work anytime, anywhere, on any device as long as the right person is authorized to use the system; AI technology platform helps the system work smarter and more efficiently and blockchain platform ensures safety, security and anti-counterfeiting.

Thirdly, it is necessary to always raise awareness and innovate the concept of developing digital human resources in the direction of ensuring quality and quantity to meet job requirements.

Fourthly, there needs to be coordination between the Tax sector with other agencies in the state management apparatus and with other agencies and organizations abroad on the basis of learning from experience, sharing, supporting and provide information for management activities.

Last but not least, Learn and exchange digital transformation experiences that have been successfully implemented in other countries on a number of topics that Vietnam has not yet implemented. Through the process of researching digital transformation experiences in a number of countries around the world, it has been shown that the digital transformation process in many countries around the world has made further and longer strides than Vietnam. Learning from foreign experiences will create many opportunities but also put a lot of pressure on the Vietnamese Tax industry, which needs to constantly strive to promote digital transformation to meet the requirements of the country's digital transformation strategy of government and more suitable for the international environment.

5. CONCLUSION

Digital transformation activities in tax administration cannot be implemented effectively in just a short time, but requires an implementation roadmap and the creation of important foundations so that when implementing digital transformation, it will be effective bringing positive results in management activities, bringing high consensus in implementation coordination among management objects. Digital transformation activities in tax management of the Tax agency, when there is appropriate direction and appropriate solutions in implementation, the tax management activities of the Tax industry will become increasingly modernized, which promotes transformation activities for other fields in the economy, aimsto implement the Digital Government according to the identified orientations of the Party and State, at the same time, creates conditions and opens up new opportunities for the development of the system businesses in the economy.

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FACTORS AFFECTING THE START-UP ECOSYSTEM OF THE PRIVATE ECONOMY

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Abstract: The research aims to examine the factors affecting the success of the private economy's startup ecosystem. The article combines qualitative and quantitative research methods with 346 survey samples indicating various factors and explaining the success of the private economy's startup ecosystem. The results also depict that success on the startup ecosystem has a positive impact from high to low level on 5 factors consisting of risk-taking culture; technological and industrial conditions; abundant capital, incubators and startup companies; and government support.

Key word: ecosystem, startups, private economy

1. INTRODUCTION

By 2023, Vietnam is expected to have more than 1,400 organizations being capable of supporting startups, including 196 co-working zones, 69 business incubators and 28 business promotion organizations established. There are 108 venture capital funds that consider Vietnam as a target market or have operations in Vietnam, of which 23 funds have Vietnamese legal entities and 23 purely Vietnamese funds. These numbers have continuously increased in recent years, which illustrate the active participation of the community in developing the startup ecosystem. According to the assessment organization Startup Blink, in 2022, this ecosystem of Vietnam was ranked 54th in the world, 12th in the Asia-Pacific region. A report by the World Intellectual Property Organization (WIPO) recognized that Vietnam was among the group of countries that had attained the greatest progress in the startup ecosystem over the past decade. The 2022 Global Innovation Index (GII) report published by WIPO also reveals that Vietnam ranked 48/132 countries and economies, holding 3rd place in Southeast Asia, after Singapore (7th) and Thailand (43rd).

With approximate 800 thousand active businesses, the private economy is contributing nearly 45% to the country's GDP, one third of state budget revenue, more than 40% of investment capital for the whole society, and creating numerous jobs for 85% of the country's workers. In addition, the private economy plays a vital role in Vietnam's international trade activities, accounting for 35% of total import turnover and 25% of total export turnover. Moreover, capital from the private economic sector contributes greatly to socio-economic development, increasing from 51.3% in 2016 to 59.5% in 2021. Apparently, promoting the strength of the private economy is a determination of the government to successfully build e-government, towards digital government and digital economy. However, the startup development environment in Vietnam still has many difficulties, especially investment policies, issues related to divestment, loans, capital and venture capital, making investors feel hesitate, and startups lose valuable

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business opportunities.

In reality, researching factors affecting the success of the private economy's startup ecosystem will remove strenuousnesses and promote the role of the private economy in the country's development.

2. RESEARCH OVERVIEW

Undoubtedly, entrepreneurship is becoming increasingly critical for economic development and innovation in the modern world (Krueger et al., 2000). Entrepreneurship is not just a simple idea, but also an important factor contributing to the economic development of each country, having a positive impact on the economy by creating new jobs, promoting innovation and enhancing competitiveness in the labor market (Barba-Sánchez et al., 2022). Previous studies illustrate that the private economic sector had a higher ability to start a business and their entrepreneurial intention could be predicted in advance (Krueger et al., 2000, Che, 2022). According to the Organization for Economic Cooperation and Development (OECD), the startup ecosystem is "a synthesis of formal and informal links between: startup entities; start-up organizations; relevant agencies and the startup process directly impact the local startup environment" (Mason, C. & Brown, R., 2014).

Dollinger (1995) believes that: entrepreneurship is the creation of a creative economic organization (or organizational network) for the purpose of profit or growth in conditions of risk and uncertainty. Scarborough (2012) clarifies that: entrepreneurship is the creation of a new business by an entrepreneur in the face of risks and uncertainties with the aim of achieving profits and growth by identifying opportunities and gathering the necessary resources to take advantage of those opportunities.

In reality, industrial Revolution 4.0, entrepreneurship and innovation are closely related to each other to help businesses boost up operational efficiency from product-oriented business models to new models oriented to creating and capturing new sources of value (Akbar, 2020). Actually, changes from the 4.0 Industrial Revolution affect all people, especially the young who are preparing to enter the labor market with many unique and trendy business ideas (Minhas, 2019). The 4.0 Industrial Revolution also opens up opportunities for startup ideas, increasing competitiveness, and reducing costs and working time (Chen and Tian, 2022; Fossen and Sorgner, 2021).

3. LITERATURE REVIEW

Apparently, a startup ecosystem is a collection of startups (playing a central role, leading and leading the startup ecosystem) and other stakeholders (playing a supporting role), including but not limited to supporting organizations, capital sponsoring organizations, large businesses, universities, service providers, etc. Those genres have an organic relationship, coexistence with sustainable development. In fact, the state has a crucial role in supporting and creating a legal environment for the startup ecosystem to develop. The strength of the startup ecosystem depends on the close "cohesion" of the components within the startup ecosystem.

In reality, the position and growth of private economic resources are increasingly being affirmed, especially in contributing to realizing the goals of industrialization and modernization, changing the "appearance" of the country, creating impression, enhancing Vietnam's position and reputation in the international arena. Therefore, forming a startup ecosystem for the private economic sector plays a vital role in the development of the national economy.

Based on the analysis of the origins of the startup ecosystem, the authors researched 6 factors that affect the success of the private sector's startup ecosystem, including: risk-taking culture; technological and industrial conditions; abundant capital, incubators and startup companies; government support.

3.1. Risk-taking culture

It is a risk-taking culture that is the foundation for the birth of new and breakthrough ideas, helping businesses develop new business activities and improve competitiveness in the market (Isenberg, 2010). Every investment opportunity always carries potential risks. In some investments, a certain type of risk may dominate, and other risks may be secondary. A full understanding of the major types of risk is necessary to take calculated risks and make informed investment decisions. Furthermore, Careful Risk Taking is about making the right decisions by maximizing opportunities while mastering risks. This requires businesses to find the appropriate level of risk that can be accepted within the company's risk tolerance, avoiding being too cautious or too careless, so that opportunities can be seized in the future, at the right time and bring the best results for enterprises, customers and stakeholders.

3.2. Techonological and industrial conditions

According to Reboud, Mazzarol, and Soutar (2014), leaders must invest or adopt new technologies quickly to keep up with the market. These tools enable sustainable innovation and ensure long-term solutions for companies. In addition, most of the goods and products created today are associated with scientific and technological achievements. Science and technology as a part of the business environment externally impacts the business model of an enterprise in two main aspects:

Initially, the speed of development of external science and technology expressed through invention and application into practice makes technology inside the enterprise quickly become outdated.

Secondly, science and technology are considered the main cause for the occurrence of potential competitors. These are business rivals that have substitute products or superior products to the products that the business is trading.

Apperently, the level of science and technology is a factor that greatly affects economic growth, determining changes in labor productivity and product quality. New technological inventions and inventions applied in production have helped workers relieve heavy and harmful labor and create rapid growth, contributing to promoting the development of the startup ecosystem of the private economic sector.

3.3. Abundant capital

With production and business activities in general, and startup activities in particular, capital plays an important, even core role in the ability to maintain and develop an enterprise. Nevertheless, starting a business means entering a business for the first time, which is a disadvantage for businesses in accessing loan capital. As åessult, creating loan capital to support startup models is significant to the survival of startup businesses (Reboud, Mazzarol and Soutar, 2014). There is no doubt that capital is a factor that plays an extremely crucial role in the production and business process of the private economy, making a major decision on expanding or contracting investment, or applying modern science and technology to the production and business process. Additionally, lack of capital is a difficult problem for the private economic sector. Especially in the context of international economic integration, businesses need to promote production scale and enhance quality to meet increasing market demands and upgrade competitiveness.

3.4. Incubator and startup companies

Deeb G., 2017 believes that incubator organizations and startup companies are further promoting interaction with each other; effectively utilize resources; attract the participation of startups, investors, consultants, service companies, startup support organizations, policymakers, universities and laboratories; bringing highly applicable research projects closer to businesses and customers. As a result, incubators and startups provide and can closely link components in the startup ecosystem to create powerful resources for creative startups. Moreover, constructive policies such as innovation incubators or many programs and solutions in finance, education, and environment can be imposed to create conditions for incubators to develop.

Undoubtedly, startup companies play an critical role in the startup ecosystem, they not only have financial support but also a wide range of other things. They bring a wealth of experience, mentorship and a vast network that can boost up the startups to the next level. In reality, startup companies with appropriate policies help private businesses overcome challenges such as scaling their business, expanding into new markets, and complying with regulations or standards.

3.5. Government support

Government can aid through effective policies to nurture the startup ecosystem, form cooperative programs and projects with ministries, branches and local agencies, to create favorable conditions for startup businesses, especially accessing capital, support on legal issues, procedures, etc. In fact, when the legal environment is guaranteed to create a level playing field, there is no longer discrimination between economic sectors, thereby creating driving force for economic sectors to develop. The private economic sector, when developed in a healthy competitive environment, creates incentives for all economic sectors to develop within the legal framework. At the provincial level, locally decentralized policies are extremely important in promoting or inhibiting private economic development. When the State promulgates policies, local governments are not only the place to concretize State policies but also to optimize those policies in accordance with their socio-economic conditions.

4. RESEARCH METHODOLOGY

Official research data were collected using a non-probability quota sampling method by region - the North, South, and Central regions of Vietnam, responding to the call for recent studies on geographic diversity. geographical location (Khai, 2015; Ha et al., 2019; Nguyen et al., 2019a; Van Huy et al., 2019). Additionally, enterprises participating in the survey came from the three largest cities representing three regions, including Hanoi, Ho Chi Minh Cit, and Da Nang. The authors chose these places because these locations include the majority of small and medium-sized enterprises.

Regarding the minimum sample size required for PLS-SEM analysis, Hair et al (2014) proposed a 10-fold rule to determine the minimum sample. The authors conducted a survey with 350 businesses, resulting in 347 responses, equivalent to a response rate of 99.1%. After checking the returned questionnaires, one questionnaire was not a valid questionnaire. The remaining 346 questionnaires were used for data analysis. Specific sample results are as follows: there are 125 businesses (accounting for 36.1%) in the Hanoi, 112 businesses (making up 32.4%) in Ho Chi Minh City and 109 businesses (accounting for 31.5%) in Danang.

In the study, SPSS and Smart-PLS software were used to process collected data, descriptive statistics, test hypotheses and the model's suitability with market information.

5. RESEARCH RESULT

In a socialist-oriented market economy, private economic development is a factor that not only ensures the maintenance of high GDP growth rates and creates revenue for the state budget, but also participates in tackling a series of social issues such as job creation, hunger eradication, poverty reduction, human resource development, and so on. The private economy continuously maintains a good growth rate, accounting for 40-43% of GDP; attracting about 85% of the workforce, making an important contribution to mobilizing social resources for investment in production and business development, economic growth, economic restructuring. Moreover, it help to enhance state budget revenue, create jobs, improve people's lives, and ensure social security.

The study's measurement model was evaluated using a repeated observed variable approach. In reality, the measurement scale of the first-order component variables (first-order latent variables) is expressed in the form of results, so when using PLS-SEM to evaluate the outcome measurement model, Hair et al. (2016) utilize 3 criteria to evaluate include: reliability, convergent validity and discriminant validity.

The data processing results in Table 1 indicate that all scales have Cronbach's Alpha coefficient greater than 0.7. The composite reliability (CR) of the scales is greater than 0.7 and the external loading coefficient of the scale is greater than 0.7. All observed variables are large at 0.7 except for variables VH2 (0.544) and NV4 (0.672). Hence, these two observed variables do not meet the required conditions and will be removed from the model.

Table 1. Results of appraising the outcome measurement model of the first construct

Observed variables	External loading factor (OL)	Cronbach's Alpha coefficient	Composite reliability (CR)	Average variance extracted (AVE)
Risk taking culture (VH)		0.782	0.875	0.706
VH1	0.923			
VH2	0.544			
VH3	0.923			
Technological and industrial condition (CN)		0.872	0.922	0.797
CN1	0.816			
CN2	0.905			
CN3	0.845			
Abundant capital (NV)		0.736	0.834	0.558
NV1	0.874			
NV2	0.742			
NV3	0.776			
NV4	0.672			
Incubators and startup companies (VU)		0.836	0.901	0.753
VU1	0.916			

VU2	0.842			
VU3	0.865			
Government support (CP)		0.754	0.859	0.670
CP1	0.771			
CP2	0.821			
CP3	0.862			
Start-up ecosystem (KN)		0.865	0.908	0.712
KN1	0.817			
KN2	0.872			
KN3	0.827			
KN4	0.857			

(Source: Result of data processing)

After removing the two observed variables VH2 and NV4 from the model, the model was tested again for the second time. Table 1 reveal the results after removing the variables. It is indicated that the observed variables have fluctuating external loading factors from 0.742 to 0.916 (all greater than 0.7). Moreover, composite reliability ranges from 0.842 to 0.94 (all greater than 0.8) and the average extracted variance AVE value of the observations is greater 0.5. Therefore, the measurement scales in the model are highly reliable and meet the requirements for convergent validity. Moreover, all observed variables are meaningful in the model.

Table 2. Results of appraising the outcome measurement model of the secondary construct

Observed variables	External loading factor (OL)	Cronbach's Alpha coefficient	Composite reliability (CR)	Average variance extracted (AVE)
Risk taking culture (VH)		0.782	0.875	0.706
VH1	0.923			
VH3	0.923			
Technological and industrial condition (CN)		0.872	0.922	0.797
CN1	0.816			
CN2	0.905			
CN3	0.845			
Abundant capital(NV)		0.736	0.834	0.558
NV1	0.874			
NV2	0.742			
NV3	0.776			
Incubators and startup companies(VU)		0.836	0.901	0.753
VU1	0.916			
VU2	0.842			
VU3	0.865			
Government support(CP)		0.754	0.859	0.670
CP1	0.771			
CP2	0.821			
CP3	0.862			
Startup ecosystem(KN)		0.865	0.908	0.712
KN1	0.817			
KN2	0.872			
KN3	0.827			
KN4	0.857			

(Source: Result of data processing)

The authors conduct bootstrapping analysis for the model with 5,000 repeated samples and PLS Algorithm analysis. Hence, the results in table 2 indicate that the VIF coefficients of the observed variables are all small (below the threshold of 5), so the situation of multiplicity does not occur collinearity between observed variables. Simultaneously, the Outer Weights p-value of the observed variables is less than 0.05, so these variables are statistically significant, except for the RR variable with p-value > 0.05. Nonetheless, the outer loading coefficients are all greater than 0.5, so the observed variable RR is still retained to evaluate the model (Hair et al., 2011). In other words, all observed variables are significant in the model.

Table 3. Result of appraising the causal measurement model of secondary constructs

Observed variables	VIF	Outer Weights	p-value (by OW)	Out loading
VH	3.739	0.242	0.007	0.805
CN	3.553	0.009	0.927	0.767
NV	2.326	0.317	0.002	0.87
VU	2.344	0.556	0	0.941
CP	2.212	0.324	0	0.868
YD	2.054	0.304	0	0.847

(Source: Result of data analysis)

6. CONCLUSION

The government aims to have 1.5 million private enterprises by 2025 and 2 million private enterprises by 2030. Therefore developing private economic forces, improving the business environment as well as stimulating entrepreneurial spirit with reform efforts and effective support, helping to “elevate” the position of the private economy in the country’s economy are increasingly emphasized. What’s more? The government is suggested to enhance the effectiveness of propaganda and dissemination of the Party and State’s guidelines and policies related to startups, thereby arousing trust and the spirit of creative entrepreneurship. It should build and form a creative startup culture, be willing to accept risks, cultivate the young generation’s aspirations, construct persistent will, and optimism to overcome all strenuousness and challenges. Moreover, promoting policies to support creative startup networks to connect startups with universities, research institutes, consultants, startup incubators, state and community support funds, venture capital funds and creating a brand and connect the startup ecosystem should be executed in reality.

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KNOWLEDGE SHARING IN VIETNAM VETERINARY MEDICINE MANUFACTURING AND TRADING ENTERPRISES

MA. Tran Van Dung[1]

Abstract: *The research purpose of the article is to identify activities related to knowledge sharing of Vietnamese veterinary medicine manufacturing and trading enterprises. Based on the research results, the author provides management implications to help business administrators as well as policy makers propose specific solutions to increase the effectiveness of knowledge sharing in organizations. To help improve the competitiveness of Vietnamese drug manufacturing and trading enterprises.*

Key word: knowledge, knowledge sharing, veterinary medicine

1. INTRODUCTION

In Vietnam, many studies are focusing on the issue of knowledge, knowledge sharing and knowledge sharing have occupied a central position in the fields of planning and management of organizations and institutions. Because right from the time of participating and integrating deeply into the world economy, managers and policymakers have seen that the vital resource for the sustainable development of every organization is knowledge. Moreover, the Industrial revolution network and fierce business competition have had a great impact on the resources, capabilities, strategies, missions and visions of production and business organizations, which are the principles for organizations to develop according to their depth. In reality, Vietnam's economic integration into the regional and world economy is increasingly deepening, which opens up many potentials and opportunities to promote the development of Vietnam's economy in general and the manufacturing industry in particular, especially in the field of veterinary medicine.

Apparently, the current veterinary medicine manufacturing industry in Vietnam is developing strongly due to the development of the livestock industry, increasing the demand for veterinary medicines. In addition, large quantities of veterinary medicine for livestock and poultry and the growing demand for pet raising increase veterinary medical examination and treatment facilities, which also contributes to the development of the veterinary medicine industry today. According to the newspaper of the Southern Center for Rural Policy and Strategy (SCAP), by the end of 2022, the total value of the veterinary medicine production industry in our country includes vaccines, chemicals, biological products... reached about 3,280 billion VND. In which, the costs for cultivating industries such as pigs, poultry and cows were about 2,140 billion, 920 and more than 200 billion VND respectively. Furthermore, according to the newspaper, next year, the cost of veterinary medicine will enhance due to the increasing need for livestock development. To attain such impressive numbers, the role of know-how, and knowledge plays a vital role for companies the production industry. Moreover, employees working in the veterinary medicine manufacturing industry have to come into contact with a lot of chemicals, bulky machinery, and even disease-causing microorganisms, etc. These are potential dangers that can cause serious health problems,

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risks at work such as poisoning, injury, and even death. Therefore, requiring safety training before performing work is necessary for this industry group to create the most comfortable and safe working environment for employees. Starting from the reality of the veterinary medicine manufacturing and trading industry, sharing professional knowledge is to manufacture the most competitive products and simultaneously sharing knowledge is to minimize risks for people. In order for each employee's knowledge to turn into an organization's intellectual asset that can be jointly exploited and used for common development, it actually requires a management mechanism for development, storage and sharing knowledge at the organization smoothly and synchronously.

Today's world is continuously being developed and shaped by new thinking and innovative approaches (Iebra Aizpurúa, Zegarra Saldaña, & Zegarra Saldaña, 2011). Additionally, in the perspective of some researchers, knowledge itself is being considered an essential element of an emerging knowledge society (Prieto & Easterby-Smith, 2006). Some researchers also emphasize the intangible value of knowledge. For instance, some scholars believe that knowledge is widely considered to add value to organizations rather than material things (Akhavan, Jafari, & Fathian, 2006). More importantly, knowledge is becoming increasingly critical in a competitive environment and becomes an important resource to help enhance the competitiveness of businesses (Nguyen Hoang Lap, 2014). In another aspect, knowledge creates competitive advantages for organizations in today's volatile and fiercely competitive market economy (Davenport & Prusak, 1998). Therefore, knowledge plays a vital role in contributing to achievements and progress in many areas in the overall development of an organization.

In addition, creating knowledge also belongs to the category of management and is a difficult task, but sharing knowledge also plays an vital role. Actually, sharing knowledge will help improve work efficiency with more knowledge that needs to be cultivated in life as well as in daily work. Because only having a lot of knowledge and solid knowledge can help people develop and perfect themselves. That is not the result of the work of a single individual, but the result of labor cooperation of an entire group of workers. Hence, each employee working in the industry needs to have a sense of cooperation, information sharing, and knowledge sharing with each other to be able to complete the job well and increase customer trust.

To further emphasize, author Grant (1996) affirmed that knowledge is the most crucial resource to implement an organization's strategy. Focusing on knowledge has many merits, including reducing time in the work process, reducing costs, improving customer service, adapting to change, creating a learning environment, thereby contributing to increased productivity and efficiency (Skyrme, 2003). These benefits demonstrate the importance of knowledge in gaining an advantage in a competitive environment. Therefore, knowledge sharing can be acknowledged as an important factor in organizational growth, employee improvement and it is vital for organizations to put in place all management strategies to implement a successful knowledge management system.

2. LITERATURE REVIEW

It is knowledge that is a difficult concept to define and measure. It is regarded as one of the factors that make organizations become successful and knowledge management becomes the most effective and important competitive strategy (Grant, 1996). According to Turban and Aronson (1998), knowledge is information that is organized and analyzed to make it easy to understand and apply to problem solving or decision making. Beckman (1997) defines knowledge as inferred from information and data to facilitate implementation, problem solving, decision making, learning and teaching. Furthermore, it is known as an intangible and valuable asset of businesses (Le, 2021).

Undoubtedly, knowledge sharing is a stage of the knowledge management process, especially tacit knowledge (Bouthillier & Shearer, 2002) and shareable knowledge (Bartol & Srivastava, 2002; Wang & Noe, 2010). In reality, sharing is a process involving a giver and a receiver, whereby resources are transferred from the giver to the receiver. In fact, knowledge sharing is the process of transferring, exchanging, or disseminating knowledge from one person/group of people to another (L. T. K. Le & Le, 2021). According to Nguyen Hoang Lap (2014), knowledge sharing is the process of transferring knowledge (especially tacit knowledge) from one person to another, at the individual level (exchange) or collective level (training, coaching). This is an important stage of the knowledge management cycle, ensuring the success of knowledge management, because due to it, tacit knowledge (accounting for the majority of knowledge resources) can be captured and shared to all people in the company. According to Gupta and Govindarajan (2000), knowledge sharing is the core foundation of knowledge management. It is critical because it creates links between individuals and organizations by shifting knowledge from the individual level to the organizational level. Thanks to it, knowledge is converted into economic value and competitive advantage for organizations (Hendriks, 1999). Von Krogh, Ichijo, and Nonaka (2000) said that knowledge sharing is also crucial in creating new knowledge values and leveraging them to enhance business performance.

In addition to knowledge sharing, work efficiency from the sharing process also needs to be considered. Efficiency in the knowledge sharing process is a decisive factor in the success of knowledge human resource management, giving organizations the opportunity to share and apply valuable new knowledge into practical innovation and create competitive advantage. Lei, Gui, and Le (2021) define monetary policy as the process of exchanging data, information, know-how, skills, experience, and professional knowledge among employees to help them complete their individual tasks well and obtain organizational goals. Thus, knowledge sharing is a key component of knowledge management, related to the process by which individuals in an organization share knowledge with other individuals (G.-W. Bock, Zmud, Kim, & Lee, 2005). In fact, knowledge sharing is a process by which individuals within an organization share knowledge, contributing to knowledge application, innovation, and ultimately the company's competitive advantage (Jackson, Chuang, Harden, & Jiang, 2006; Wang & Noe, 2010). In fact, organizations increasingly focus on building knowledge sharing mechanisms, seeing it as an effective competitive advantage. Along with the trend of globalization, the distance in time and space is gradually narrowing, the speed of information transmission is increasing, and the role of knowledge sharing becomes more important.

3. RESEARCH METHODOLOGY

Qualitative analysis was used to discover and interpret the research problem through in-depth interviews with workers and a number of a number of leaders in veterinary medicine manufacturing and trading enterprises with predetermined questionnaires. Qualitative analysis methods can be used from in-depth interview data using group discussions with questions parallel to quantitative questions. The results of qualitative analysis help answer research questions or hypotheses that cannot be answered by quantitative analysis. Questions for in-depth interviews use open-ended questions and "why" questions to help gather maximum information.

Table 1. Research sample statistics

Group	Quantity	Percentage (%)
Gender		
Male	242	50,9
Female	233	49,1
Total	475	100,0
Age distribution		
Under 30	114	24,0
From 30 to 40	235	49,5
Over 40	126	26,5
Total	475	100,0
Working position		
Staff	419	88,2
Manager	51	10,7
Company's leader	5	1,1
Total	475	100,0
Seniority		
Under 5 years	94	19,8
5 – 10 years	171	36,0
11 to 20 years	166	34,9
Over 20 years	44	9,3
Total	475	100,0
Educational level		
Post-graduate	137	28,8
University	248	52,2
College	90	18,9
Total	475	100,0
Types of enterprise		
State-owned	29	6,1
Private	286	60,2
Joint stock	160	33,7
Total	475	100,0
Place		
North region	66	13,9
Middle region	110	23,2
South region	106	22,3
South East region	107	22,5
South West region	86	18,1
Total	475	100,0

Source: SPSS analysis resul

4. RESEARCH RESULTS

According to the newspaper published by the Center for Southern Rural Policy and Strategy (SCAP), the total value of our country's veterinary medicine production industry (including vaccines, drugs, chemicals, biological products, etc. reached about 3,280 billion VND. Meanwhile, the cost of veterinary medicine for pig farming is about 2,140 billion VND, about 920 billion VND for poultry and 220 billion VND for cows. In the future, the cost of veterinary medicine will increase significantly due to the increasing need for livestock development. Regarding the field of veterinary medicine trading, the country currently has more than 17,700 stores and agents. Stores and agents all ensure facility requirements; Of these, 93.6% of establishments have certificates of eligibility to trade veterinary drugs. In the management of veterinary medicine trade, there is currently a lack of human resources with deep expertise in the field of veterinary medicine production, especially veterinary vaccines. The whole country does not have a clean animal farm or a separate center for testing veterinary drugs, so it is difficult to research and produce new vaccines.

In addition, inspection of veterinary drug trading establishments is still lacking in uniformity across localities; There are still violations in the veterinary drug trade, especially violations in the quality of veterinary drug products and product labeling that is not consistent with the registered content; Trading in smuggled veterinary drugs, banned drugs not on the list of permitted circulation... The cause comes from the awareness of human resources in the veterinary drug production and business industry. As a result, knowledge sharing activities are seen as an issue that businesses in the industry have paid great attention to in recent years.

Currently, in Vietnamese veterinary medicine production and trading enterprises, the issue of employees sharing knowledge with each other has not been studied much. Most employees are busy with work, so sharing experiences between employees at the unit may not happen much. Or there is knowledge sharing but employees are not aware that they are sharing, leading to low efficiency. To analyze and evaluate knowledge sharing activities in veterinary medicine manufacturing and trading enterprises, the author conducted a survey on a total of 500 employees working at Vietnamese veterinary medicine manufacturing and trading enterprises. The result was 498 votes, reaching 99.6%, after screening, the number of valid votes for analysis was 475 votes, reaching 95%.

Box 1. Interview with a middle-level leader in Y.S.P Vietnam Company Limited about corporate culture for knowledge sharing activities.

We have many ways to encourage and support employees in sharing knowledge. Initially, we organize regular internal meetings and events to create opportunities for employees to discuss and share ideas. In addition, we have a reward and recognition system for those who contribute significant ideas and knowledge. Employees who share knowledge are recognized and rewarded. We always focus on maintaining and developing this organizational culture. This starts with the recruitment process, where we select candidates who fit our values and organizational culture. Moreover, we organize periodic training and seminars so that employees can understand and participate in the organizational culture. Our company always comprehend employees' opinions and adjusts and improves organizational culture based on that.

PVS. Nguyen Van L., 48 years old, low-level manager at the Company.

Source: Interview from the author

Similarly, today the physical factor of Information Technology plays an extremely important role. Employees can learn independently through the network to broaden their knowledge and thereby exchange and share with each other to improve knowledge sharing activities. After conducting an interview with an employee at Ha Thanh Veterinary Medicine Nutrition Company Limited, the results indicate that Information Technology has a positive influencing role.

Box 2. Interview with a sales staff in Ha Thanh Veterinary Medicine Nutrition Limited Company about information technology infrastructure for knowledge sharing activities.

We have a robust intranet system that allows employees to share information and documents easily via internal email, internal applications, and even over the networkLAN. This helps us quickly access and share knowledge with colleagues without interruption. I would recommend that companies invest heavily in IT infrastructure that suits their needs. This includes using information management software, project management software, and building a reliable intranet system. Simultaneously, ensure that employees are trained to use these tools effectively.

PVS. Nguyen Linh M., 36 years old, sales staff at the Company.

Source: Interview from the author

Although the quantitative results do not depict a positive relationship between Knowledge Sharing Attitude and Knowledge Sharing Activities. Nonetheless, from the results of in-depth interviews, the results are somewhat different. This is also a new research hypothesis that needs to be conducted in future studies. The results in Box 3 show that a common attitude helps sharing activities become better.

Table 2. Appraise on knowledge sharing attitude

No	Assessment criteria	Average
1	Sharing my knowledge will help other members of the organization solve problems.	3,63
2	Sharing my knowledge will create new business opportunities for the organization.	3,55
3	Sharing my knowledge will improve work processes in the organization.	3,72
4	Sharing my knowledge will increase productivity in the organization.	3,58
5	Sharing my knowledge will help the organization attain its operational goals	3,50

Source: Results of analysis using SPSS 20.0

To truly take advantage of teamwork activities in sharing information and knowledge, the Unit needs to create working principles, as well as sharing within the group and between work groups. The principle in the working and sharing process of employee groups that needs to be respected the most is the respect of group members for each other, the attention to listening and receiving the opinions of each member in meetings, and exchanging knowledge and experience. To implement this well, throughout the process of group formation and operation, discipline and fairness in assigning work, expressing and criticizing opinions all need to be fully demonstrated.

Table 3 Appraise on group activities

No.	Assessment criteria	Average
1	Colleagues try to implement group goals	3,63
2	Colleagues always share work in group	3,70
3	I will do my job more successfully if I cooperate with colleagues in my team	3,62
4	My personal experiences can become big ideas when working in a team	3,60
5	Group members always listen to each other's opinions	3,72
6	The knowledge of each team member is combined to perform the job	3,64

Source: Results of analysis using SPSS 20.0

With the above results, an organization that wants to upgrade employee engagement with a veterinary medicine manufacturing company should take necessary steps to create opportunities for fun, entertainment and activities that help employees to be attached to each other and attached to the unit. As a result, it will create motivation for employees to easily and comfortably exchange and share knowledge at work with each other, helping the employee system have a solid foundation of knowledge to contribute to the development of both capability and knowledge system for veterinary medicine production companies.

Table 4. Appraisal on belief

No	Assessment criteria	Average
1	Colleagues will not take advantage of me when I share knowledge with them	3,44
2	I am sure that the knowledge I share with my colleagues will not be exploited	3,18
3	My colleagues are always honest when sharing knowledge with me	3,19
4	My colleagues are responsible and trustworthy when sharing knowledge with me	3,07
5	I believe that my colleagues will not take advantage of the knowledge I share with them to confront me	3,38
6	My colleagues often consult me at work	3,45

Source: Result of data analysis

In order to effectively carry out knowledge sharing, regularly organizing seminars and discussions is extremely necessary. This not only has a practical effect in sharing knowledge, but also contributes to positive communication and connection between staff. Vietnamese veterinary medicine production and trading enterprises should periodically conduct knowledge exchange sessions in departments, divisions, and in general for all Vietnamese veterinary medicine production and trading enterprises. Timing can be executed monthly, on the last Saturday and Sunday of each month, thereby creating a regular, continuous scientific activity schedule for employees.

Table 5. Appraise Corporate culture

No.	Assessment criteria	Average
1	Changes in the business you are working in are considered natural and necessary	3,63
2	The business you work for considers employees as valuable assets and always appreciates their dedication	3,70
3	The business you work for appreciates the experiments and discoveries of its employees	3,40
4	The business you work for encourages and values the diverse perspectives of its employees	3,51
5	Employees in your business always respect each other’s opinions and contributions	3,52
6	Problems are discussed openly and equally among employees	

Source: Results of analysis using SPSS 20.0

In reality, it is necessary to create a friendly working environment to increase the openness of employees such as: providing private spaces so employees can regularly exchange with each other, organizing community events so employees understand each other better, creating a comfortable working atmosphere to reduce stress for employees, stimulating employees to regularly come up with new ideas and think about problems from different aspects.

Table 6. Appraise about information technology

No.	Assessment criteria	Average
1	A fully equipped IT system will promote effective knowledge exchange and sharing	3,71
2	I feel comfortable and easy to apply available technology devices in the workplace to share knowledge.	3,66
3	At my company, the IT system supports and improves employees’ skills	3,55
4	My administrator proficiently uses IT to share knowledge with employees	3,51
5	Teamwork software system allows knowledge sharing among employees	3,75
6	The intranet system allows finding and sharing ideas and important documents	3,63

Source: Result of data analysis

Apparently, science and technology are increasingly developing. Information technology is one of the important prerequisites that determine the success of an organization's activities. For teaching at universities today, information technology factors have become more vital than ever. To appraise employee satisfaction with knowledge sharing at work in Vietnamese veterinary medicine manufacturing and trading enterprises, the author evaluates through table 7 below:

Table 7. Appraise about the managers' incentive

No	Assessment criteria	Average
1	Administrators believe that sharing knowledge with colleagues will benefit the organization and employees	3,29
2	Administrators strongly encourage creativity, innovation, sharing, and application of knowledge	3,34
3	Administrators always create the necessary conditions to support knowledge sharing among employees	3,12
4	Administrators respect and recognize employees' contributions when participating in knowledge sharing	3,34
5	Administrators are always committed to supporting knowledge sharing activities	3,55
6	Administrators are very actively involved in knowledge sharing activities	3,45

Source: Result of data analysis

5. CONCLUSION

Each individual and organization must always renew themselves to be able to develop personally and the organization can survive and be competitive. Hence, the role of knowledge sharing in this current period always plays a critical role. Knowledge sharing first originates from the university system and after graduating, students will become employees of organizations. In fact, sharing knowledge is also a way to cultivate knowledge. Research on knowledge sharing among employees at Vietnamese veterinary medicine manufacturing and trading enterprises is an urgent issue because with the development and vastness of knowledge treasures, the issue of knowledge sharing is seen as a useful way to help reduce difficulties and time consuming in learning and absorbing knowledge.

To truly take advantage of teamwork activities in sharing information and knowledge, the Unit needs to create working principles, as well as sharing within the group and between work groups. Without teamwork skills, it is easy to cause conflicts due to conflicting opinions among group members. At this time, creating consensus is very crucial for the group to work towards common benefits. In addition to conducting exchange sessions, Vietnamese veterinary medicine manufacturing and trading enterprises also need to have exchange sessions and collective activities among employees such as cultural and artistic activities and sports activities, entertainment. These collective activities are effective in creating good cohesion within the Unit. Undoubtedly, it is necessary to create a friendly working environment to boost up the openness of employees such as: providing private spaces so employees can regularly exchange with each other, organizing community events so employees understand each other better, creating a comfortable working atmosphere to reduce stress for employees, stimulating employees to regularly come up with new ideas and think about problems from many different aspects.

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THE EFFECT OF FDI INFLOWS ON PRIVATE INVESTMENT IN ASIAN DEVELOPING ECONOMIES

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Abstract: *Foreign direct investment (FDI) plays a crucial role in Asian economies because it brings physical capital, technology transfer, and creation of innovation,… to the host countries. Meanwhile, private investment is a necessary input in economic growth. Does FDI crowd out private investment? For the answer, this paper employs the system and difference GMM Arellano-Bond estimators to study the impact of FDI on private investment for a sample of 32 Asian developing economies from 2002 to 2021. The results indicate that FDI promotes private investment. Furthermore, economic growth increases private investment, while inflation and infrastructure reduce it. These findings suggest some implications for Asian economies' governments in attracting more FDI inflows to boost the private sector's investment.*

Keywords: FDI, private investment, Asian developing economies

JEL codes: E22, F21, F23

1. INTRODUCTION

The influence of FDI inflows on private investment remains a controversial theme among economists due to the crowd-in/crowd-out hypotheses. Inspired by Agosin & Machado (2005), a large strand of studies has tested this influence to determine complementarity/ substitutability between them. FDI inflows are an exogenous but crucial factor to both developing and advanced economies. The significant contribution of FDI inflows to the economy in host countries is expressed by technology transfer, know-how acquisition, innovation capacity, and capital accumulation (Agosin & Machado, 2005). Therefore, most developing countries, especially developing economies in Asia, are trying to adjust regulations and policies to attract more FDI inflows. Private investment is an endogenous factor in the economy. It has importance over the course of economic growth and development. Khan & Reinhart (1990) highlight its crucial role in promoting economic growth, creating more jobs, and keeping social stability.

Most developing countries have a low level of economic development and living standards. These economies do not have enough capital to promote economic growth, create more jobs, and improve people's income. FDI inflows are one of the solutions to make up for the lack of investment capital in these countries. Institutional reform and improvement for better access to FDI inflows are what most developing economies in Asia are looking forward to. Do FDI inflows positively affect private investment in Asian developing economies? This paper looks for the answer as a little contribution to the literature.

In short, developing economies in Asia need more capital to promote economic growth and development. Both FDI inflows and private investment contribute significantly to the economic goals of these economies. However, attracting more FDI inflows can adversely affect private investment. Given these facts, the paper applies the onestep and twostep GMM estimators to study the impact of FDI inflows on private investment for a panel dataset of 32 developing economies in Asia between 2002 and 2021.

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The paper has the following structure. Section 1 is the introduction that looks at the motivation, while Section 2 is the theoretical background and literature review that focus on the influence of FDI inflows on private investment. Section 3 is the empirical equation and data, while Section 4 is the result and discussion. The final section (Section 5) concludes and suggests some policy lessons.

2. THEORETICAL BACKGROUND AND LITERATURE REVIEW

2.1 Theoretical background

Given the relevance of the topic, depending on different conditions, FDI inflows have opposite effects on private investment. FDI inflows can enable private investment via cooperation opportunities. For example, foreign enterprises can carry out joint-venture projects with domestic companies. Furthermore, domestic companies can provide raw materials or do outwork for foreign investors; vice versa, FDI enterprises can transfer advanced technology to domestic companies. It is the crowding-in effect of FDI inflows on private investment (Agosin & Machado, 2005). By contrast, if FDI enterprises access domestic credit to finance their investment projects, high pressure will be put on domestic interest rates, which causes domestic companies to drop their business operations due to high interest rates. It is the crowding-out effect of FDI inflows on private investment (Delgado & McCloud, 2016).

2.2 Literature review

The topic "the effect of FDI inflows on domestic/private investment" is a main line of research in the literature. Some studies present that it is negative, while others indicate that it is positive. Furthermore, some studies provide mixed evidence about this relationship.

Szkorupová (2015), Eregha (2012), Mutenyo et al. (2010), Titarenko (2005), and Kim & Seo (2003) report that FDI inflows crowd out private investment. Wang (2010) indicates that FDI inflows hinder domestic investment, while cumulative FDI inflows increase it using the fixed effects model, random effects model, and GMM estimator. Meanwhile, Pilbeam & Oboleviciute (2012) note a crowding-out impact of FDI inflows on domestic investment for 14 EU countries between 1990 and 2008 using the onestep GMM estimator. Recently, Elheddad (2019) discovers that FDI inflows do not encourage private investment in six GCC economies from 2003 to 2013 using the fixed effects model and FE-IV estimator.

However, several studies note the crowd-in hypothesis for the FDI inflows – domestic investment nexus (Prasanna, 2010; Ang, 2010; Ang, 2009; Ndikumana & Verick, 2008; Tang et al., 2008; Desai et al., 2005). Al-Sadig (2013) shows that FDI inflows enhance private investment by applying the system GMM estimator for 91 developing economies over the period 1970-2000. The finding in this research confirms that the crowding-in impact of FDI inflows in low-income economies is conditional on the supply of human capital in host countries. Similarly, Munemo (2014) notes that the complementary nexus between FDI inflows and domestic investment depends strongly on the regulations of business start-ups in host countries for a balanced panel dataset of 139 economies from 2000 to 2010 using the twostep difference GMM estimator. In addition, he emphasizes that improving these regulations can promote this complementary nexus. In the same vein, Tan et al. (2016) note that FDI inflows crowd in domestic investment in the long run for 8 Asean economies from 1986 to 2011 using PMG estimation. Meanwhile, Boateng et al. (2017) provide evidence to confirm the crowding-in impact of FDI inflows on domestic investment for

16 sub-Saharan African economies between 1980 and 2014 by employing the fixed effects model, pooled OLS regression, and FMOLS estimation. Recently, Jude (2019) discovers that FDI inflows increase domestic investment for 10 Eastern and Central European economies from 1995 through 2015 by applying the onestep system GMM estimator. Lately, Nguyen (2021a) reports that FDI inflows increase private investment in the Southeast region of Vietnam between 2005 and 2019 by applying the panel quantile regression, difference GMM estimator, and FE-IV estimation.

Notably, some studies show mixed evidence on FDI inflows – domestic investment nexus (Ahmed et al., 2015; Onaran et al., 2013; Apergis et al., 2006; Agosin & Machado, 2005; Mišun & Tomšk, 2002). Lin & Chuang (2007) find that FDI inflows promote domestic in large enterprises and decrease it in the small ones from 1993 to 1995 and from 1997 to 1999 using Heckman 2SLS estimation. Meanwhile, Chen et al. (2017) note a neutral nexus between FDI inflows and private investment in China between 1994Q1 and 2014Q4 by applying the ARDL estimation. However, regarding the entry mode of FDI enterprises, they discover that joint-venture FDI inflows increase private investment, but wholly foreign-funded FDI inflows reduce it. More recently, Nguyen (2021b) notes that FDI inflows crowd in private investment in developing economies, but crowd out it in developed ones using the twostep difference and system GMM and PMG estimators for 25 developed and 72 developing countries from 2000 to 2013.

3. EMPIRICAL EQUATION AND DATA

3.1 Empirical equation

Following Al-Sadig (2013), we suggest the empirical equation as follows:

$$PIN_{js} = \theta_0 + \theta_1 PIN_{js-1} + \theta_2 FDI_{js} + H_{js}\theta' + \sigma_J + \tau_{Js} \quad (1)$$

$$PIN_{js} = \theta_0 + \theta_1 PIN_{js-1} + \theta_2 FDI_{js} + H_{js}\theta' + \sigma_J + \tau_{Js} \quad (1)$$

where j, s denote the country index, time index respectively. PIN_{js} is the private investment (% GDP), PIN_{js-1} is the initial level of private investment, FDI_{js} is the foreign direct investment, net inflows (% GDP). H_{js} is a vector that contains economic growth, inflation, and infrastructure (control variables). σ_j is fixed effects, τ_{js} is the error term, θ_i is parameters. Following the literature, we select and use economic growth (Erden & Holcombe, 2005; Dreger & Reimers, 2016; and Muthu, 2017), inflation (Ang, 2010; Wang, 2010; Delgado & McCloud, 2016), and infrastructure (Ndikumana & Verick, 2008).

Some severe problems in econometrics arise from estimating Equation (1). Firstly, inflation and economic growth may be endogenous regressors that may correlate with σ_j, leading to the endogenous phenomenon. Secondly, some unobserved fixed effects like culture and customs that exist in σ_j may correlate with the independent variables. Thirdly, the lagged variable PIN_{js-1} can lead to a high serial correlation. Finally, the panel dataset contains a large unit of economies (M = 32) and a short length of observation (L = 20). These problems can make the OLS regression biased. The random effects model (REM) and the fixed effects model (FEM) could not handle serial correlation as well as endogenous phenomena. The IV-2SLS estimator needs some suitable instruments out of independent variables in the empirical model. Following Judson & Owen (1999), we apply the system and difference GMM estimators.

Holtz-Eakin et al. (1988) are the first to propose the general method of moments (GMM) Arellano & Bond (1991). Two kinds of GMM estimators are developed: the difference and the system. The past values of persistent regressors in the empirical models do not provide information for their changes, making their lags become weak instrumental variables in the difference GMM estimator. Therefore, SGMM (system GMM estimator) is better than DGMM (difference GMM estimator) (Arellano & Bover, 1995).

For estimation, the twostep SGMM/DGMM (2SGMM/2DGMM) can be more efficient than the onestep SGMM/DGMM (1SGMM/1DGMM). However, employing 2SGMM/2DGMM in small research samples like our sample has a problem (Roodman, 2009). It is the instrumental variable proliferation that quadratically rises as the dimension of time increases, which causes the number of instruments to be larger than the number of panel units. The solution is to employ the thumb rule to keep the number of panel units more than or equal to the number of instruments (Roodman, 2009). The study uses Arellano-Bond, Sargan, and Hansen statistics to test the instruments' validity in the S-GMM. The Arellano-Bond test AR (2) searches the serial correlation of errors in the first difference, while the Sargan and Hansen tests detect endogenous phenomena.

3.2 Research data

The dataset includes private investment (% GDP), net FDI inflows (% GDP), real GDP per capita, inflation (%), and mobile phone subscriptions (per 100 people). These variables are collected from IMF and World Bank databases. The research sample consists of 32 developing economies[1] over the period of 2002 – 2021.

Table 1 shows the description of dataset, and Table 2 reports its descriptive statistics. Meanwhile, Table 3 notes the matrix of correlation and Table 4 indicates the stationary tests. The results in Table 3 present that FDI, economic growth, and infrastructure are positively associated with private investment, while inflation is linked negatively with it. Furthermore, correlation coefficients among regressors are lower than 0.8, which rules out the colinearity between them. Notably, the stationary tests in Table 4 show that private investment, FDI, economic growth, inflation, and infrastructure are stationary at the significance level of 1%, which ensures that all variables have integration of zero-order I(0).

Table 1. Data description

Variable	Definition	Type	Source
Private investment (PIN, %)	Gross fixed capital formation (% GDP)	%	IMF
FDI (FDI, %)	Foreign direct investment, net inflows (% of GDP)	%	World Bank
Economic growth (GDP, USD)	GDP per capita (constant 2010 US$)	log	World Bank
Inflation (INF, %)	Inflation, consumer prices (annual %)	%	World Bank
Infrastructure (MOB, value)	Mobile cellular subscriptions (per 100 people)	log	World Bank

Table 2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
PIN	640	26.456	9.589	3.498	70.105
FDI	640	3.950	5.736	-37.172	55.070
GDP	640	4532.721	4618.437	381.389	21458.39
INF	640	7.107	9.505	-18.108	154.756
MOB	640	77.589	48.683	0.080	191.031

[1] China, Sri Lanka, Armenia, Turkey, Pakistan, Thailand, Bhutan, Islamic Rep. Iran, Turkmenistan, Uzbekistan, Azerbaijan, Bangladesh, Iraq, Cambodia, Indonesia, Jordan, Kazakhstan, India, Kyrgyz Republic, Lao PDR, Kuwait, Mongolia, Myanmar, Oman, Malaysia, Nepal, Philippines, Qatar, Saudi Arabia, Tajikistan, UAE, and Vietnam.

Table 3. The matrix of correlation

	PIN	FDI	GDP	INF	MOB
PIN	1				
FDI	0.215***	1			
GDP	0.045***	0.008	1		
INF	-0.122***	0.046	-0.091***	1	
MOB	0.148***	0.027	0.475***	-0.1457***	1

Note: ***, **,* note significance level at 1%, 5%, 10% respectively

Table 4. Fisher type unit root tests

Variables	Augmented Dickey-Fuller test		Phillips-Perron test	
	Prob > chi2		Prob > chi2	
	Without trend	With trend	Without trend	With trend
PIN	99.303***	99.604***	73.798	48.898
FDI	146.904***	131.302***	149.858***	129.375***
GDP	101.003***	71.508	140.584***	62.410
INF	161.602***	147.611***	309.650***	279.937***
MOB	462.702***	182.215***	825.613***	76.872
Note: ***, **,* note significance level at 1%, 5%, 10% respectively				

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. The two-step GMM estimates

Table 5 presents the estimated results. The first and second columns in Table 5 show the results corresponding with 2SGMM and 2DGMM, respectively. In the estimation procedure, the paper detects the endogeneity of inflation in empirical equations, so it uses inflation as an instrumented regressor in gmm style and remaining regressors like private investment, FDI, economic growth, and infrastructure as instrumental variables in iv style. The results across empirical models show FDI inflows crowd in private investment. Besides, economic growth promotes private investment, while inflation and infrastructure reduce it.

The crowding-in impact of FDI inflows on private investment in this paper supports the "crowd-in hypothesis", which is similar to the previous studies like Nguyen (2021a), Jude (2019), Boateng et al. (2017), Tan et al. (2016), Munemo (2014), Al-Sadig (2013), Prasanna (2010), Ang (2010), Ang (2009), Ndikumana & Verick (2008), Tang et al. (2008), Desai et al. (2005). Asia is a region that has had a relatively high rate of economic growth in the past ten years. Most developing countries in this region need more capital to promote economic growth and development, so FDI inflows become one of the channels to attract capital. The horizontal and vertical spillovers of FDI inflows benefit the private sector in this region: (i) FDI investors can make joint ventures and cooperate with domestic companies to expand investment and production; (ii) The private sector can supply necessary raw materials for the production input of FDI enterprises; (iii) FDI enterprises can transfer advanced production and management technologies to help domestic enterprises improve productivity; (iv) FDI investors can help some domestic companies become auxiliary suppliers for their production activities. Therefore, FDI inflows crowd in private investment in Asian developing economies. This finding implies that governments in Asian developing countries should formulate and implement regulations and policies to attract more FDI inflows. However, in practice, some FDI inflows with outdated technology can cause harm to the natural environment, so these policies and regulations need to look at these problems.

The positive impact of economic growth on private investment stems from the fact that economic growth benefits the investment and production of the private sector: (i) Economic growth increases income, thereby increasing savings, which will be used for the private sector's investment; (ii) Economic growth increases the stimulus to consumption, which boosts the production of goods and services by the private sector; (iii) Economic growth offers good prospects for the private sector to expand investment and production to supply goods and services to the market. This finding can be found in Erden & Holcombe (2005), Dreger & Reimers (2016), & Muthu (2017).

The negative impact of inflation on private investment in this paper is consistent with Wang (2010) and Delgado & McCloud (2016). Inflation increases transaction costs and decreases business profit, reducing the private sector's investment. In addition, inflation increases the price level of goods and services, so it will reduce purchasing power, which causes production to decrease due to a decline in consumption. This result reminds governments in Asian developing countries should control inflation effectively to limit its adverse impact on the private sector's investment activities.

This paper discovers that infrastructrue reduces private investment. It can be explained partly for the case of developing economies. In developing countries, most infrastructure projects are financed by governments due to the large investment costs and long payback period (i.e., bridges, roads, telecommunications, etc.).

In addition to investment projects that bring general benefits to both people and businesses, there are still many investment projects that do not consult people and businesses, so the benefits of infrastructure projects do not serve people and businesses. It means that developing economies should improve the transparency of the institutional environment to ensure that the efficiency of infrastructure projects financed by governments does not adversely affect the private sector's investment.

Table 5. FDI – private investment: 2002 – 2021 (the twostep GMM estimator)

Dependent variable: Private investment (%)

Variables	2SGMM	2DGMM
Private investment (-1)	0.833***	0.340***
	(0.012)	(0.051)
FDI inflows	0.088***	0.569***
	(0.013)	(0.175)
Economic growth	0.006***	0.085***
	(0.000)	(0.018)
Inflation	-0.012***	0.006
	(0.002)	(0.010)
Infrastructure	-0.003***	-0.011***
	(0.000)	(0.003)
Instrument	32	20
Country/Observation	32/544	32/512
AR(2) test	0.189	0.123
Sargan test	0.101	0.620
Hansen test	0.785	0.613

Note: ***, **,* note significance level at 1%, 5%, 10% respectively

4.2 Robustness check

For the robustness of 2SGMM/2DGMM estimates, the paper applies 1SGMM/1DGMM to test. Similar to 2SGMM/2DGMM, the estimation procedures by 1SGMM/1DGMM also detect that inflation is endogenous, so the paper uses it as an instrumented regressor and the remaining variables as instrumental regressors in the empirical equations. The results are shown in Table 6. In line with 2SGMM/2DGMM estimates, Table 6 reports that FDI inflows crowd in private investment. Furthermore, economic growth promotes it. These results confirm the reliability of 2SGMM/2DGMM estimates.

Table 6. FDI – private investment: 2002 – 2021 (the onestep GMM estimator)

Dependent variable: Private investment (%)		
Variables	1SGMM	1DGMM
Private investment (-1)	0.817^{***}	0.085
	(0.022)	(0.196)
FDI inflows	0.107^{***}	0.983^{***}
	(0.034)	(0.220)
Economic growth	0.004^{***}	0.113^{***}
	(0.001)	(0.040)
Inflation	-0.008	-0.004
	(0.018)	(0.051)
Infrastructure	0.001	-0.014
	(0.001)	(0.011)
Instrument	32	21
Country/Observation	32/544	32/512
AR(2) test	0.104	0.116
Sargan test	0.110	0.479

Note: ***, **, * note significance level at 1%, 5%, 10% respectively

5. CONCLUSION AND POLICY LESSONS

Developing economies in Asia have enjoyed impressive economic growth rates in recent years. These economies need more capital to enhance domestic economic activities. Therefore, FDI inflows are always welcomed by these economies as a source of filling the capital shortfall. However, these inflows can have positive impacts on private investment due to the crowd-in effect. Given these facts, the paper studies the effect of FDI inflows on private investment for 32 developing economies in Asia over the period 2002 – 2021 by using the onestep and twostep GMM estimators. The results report that FDI inflows crowd in private investment. Besides, economic growth promotes it, while inflation and infrastructure reduce it.

The findings in this paper provide some policy lessons for developing economies in Asia. Accordingly, governments in these economies should:

(1) reform and improve regulations and policies to attract more FDI inflows. However, they should limit the low-quality FDI inflows with outdated technology, causing harm to the environment.

(2) promote economic growth through different solutions because economic growth benefits private sector investment and the whole economy as well.

(3) control inflation because inflation reduces private investment and increases living costs, which is harmful to the economy.

(4) reform regulations related to infrastructure development through public projects. Governments should collect people's and domestic companies' ideas before implementing these projects. Furthermore, people should be invited to monitor these projects.

Institutional quality plays a decisive role in the course of economic development in most countries. In particular, a good institutional environment can attract more high-quality FDI inflows. Therefore, future studies should consider the role of institutional quality in the FDI inflows – private investment relationship.

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EFFECT OF CORPORATE GOVERNANCE COMPOSITE FACTORS ON FINANCIAL DISCLOSURE TRANSPARENCY: EXPIRICAL EVIDENCE OF RESEARCH IN VIETNAM

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[2]*Abstract: The research examines the effect of corporate governance composite factors on financial disclosure transparency in Vietnamese listed firms based on three components that are Earnings Aggressiveness – EA, Earnings Smoothing – ES, and Loss Avoidance - LA. Based on 353 listed firms in HOSE and HNX during 2013-2021, this study conducts panel regression analyst to examine and evaluate this evidence. The outcome for this study demonstrated that corporate governance composite factors has significant relationship with financial disclosure transparency according to earning smoothing and loss avoidance models.*

Keywords: Loss avoidance; earning smoothing; earning aggressive; financial disclosure transparency; corporate governance composite factors.

1. INTRODUCTION

Some financial fraud scandals in the world, for example, Enron, Worldcom, Xerox, Tyco, Adelphia Communications, and BMY… made investors concentrate on corporate insider misbehavior that is relevant to information transparency (Chih et al., 2008), therefore, to improve information transparency and protect investor's advantages, the Sarbanes-Oxley was created (Sarbanes & Oxley, 2002). In Vietnam, the Bong Bach Tuyet, and Duoc Vien Dong financial fraud scandals are relevant to distorting financial information that influenced investor's beliefs.

The relevance and trustworthiness of corporate operation information are the features of information transparency (Bushman et al., 2004), and some previous evidence believed that information transparency is beneficial for corporations to improve effective markets and investment decisions, attract fund resources, and reduce conflicts based on (Nair et al., 2019). This evidence will examine financial disclosure transparency based on the level of trustworthiness, economic efficiency, and financial statements. Corporate firms have a responsibility according to legal policies, and requirements to maintain protection for investor advantages (Nair et al., 2019). The stock market had the most reflected in the Vietnamese corporate environment for 20 years of market development. However, the information transparency responsibility, especially the Vietnamese financial statement is still not concentrated accurately. As a result, Vietnamese corporate firms need to improve their responsibility to be more transparent in corporate information and create investor and partner beliefs.

Reducing conflicted individuals' misbehavior and improving the relationship between managers and investor advantages are monitored based on agency theory that researched conflict between managers and supervisors (Filatotchev & Boyd, 2009). Through the above research, many representative factors affecting information transparency when considered from different angles such as geography, economy, politics, and culture, will have different impacts on each group of representative factors, even the opposite. These studies all examined the impact of individual

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corporate governance characteristics (BOD size, independent board members, board financial expertise, audit committee size, and audit committee expertise) ...) on information transparency. At the same time, inheriting the research outcome of Carcello et al. (2006) on the representative factor of corporate governance affecting profit management, there are six characteristics: (1) the size of the board of directors, (2) the independence of the Board of Directors, (3) Size of the Control Board, (4) Independence of the Control Board, (5) Shareholder rights and (6) Organizational ownership. T. C. Hoang (2014) and Ngo Nhat Phuong Diem (2019) studied the composite factor representing the diversity of the Board of Directors affecting the quality of profits. Currently, in the world in general and Vietnam in particular, the topic of financial information transparency is not new, but there has been no research examining the impact of the composite factor representing corporate governance on transparency or transparency of financial information. Instead of that, previous studies only studied individual representative factors. Therefore, the new point of this study is that it is necessary to have a study on the representative factor of corporate governance that affects the transparency of financial information in the context of an emerging economy like Vietnam.

2. PREVIOUS EVIDENCE AND HYPOTHESIS DEVELOPMENT

Corporate governance was defined as the features of trustworthiness and responsibility to manage information and organizations, and there were some previous studies to demonstrate corporate governance factors and financial disclosure transparency (Agyei-Mensah, 2017; Ho & Taylor, 2013) . Other evidence believed that when corporate governance management is more effective, it could improve investor confidence when they make decisions to invest in corporate firms (Mohamed Saeed Al Mubarak & Mohammed Mousa Hamdan, 2016) . Besides, the lack of financial information transparency demonstrated weak corporate governance management, according to the agency theory explanation, which could demonstrate low effective corporate governance management (Salehi et al., 2022). Other evidence from Lemmon et al. (2003) concluded that corporate governance has a significant positive relationship with corporate information transparency. In addition, corporate governance could maximize distributed resources, improve market information disclosure transparency, and develop economics (Dhaliwal et al., 2011).

According to agency theory, the company valuation was improved by timeliness, and level of corporate information disclosure according to corporate individual and organizational responsibilities, the transparency for insider and outsiders' relationship was improved, and the conflict of information between investors and outsiders was reduced by good corporate governance based on corporate information transparency (Buallay et al., 2017). Besides, based on stakeholder theory, corporate insiders are limited to providing negative corporate information to reduce the effect on corporate stakeholders (Kothari et al., 2009). Buallay et al. (2017) concluded that corporate governance could reduce corporate conflicts. As a result, corporate governance has an essential influence on quality and financial disclosure transparency. According to information asymmetry, this theory demonstrates the relationship between insiders and outsiders based on their advantages for financial transparency information. It also concluded that there were some conflicts for advantages between insiders and outsiders based on financial information because insiders have expectations to share positive corporate information for companies when they have negative information to be attractive to investors (Habib et al., 2019). According to an explanation for corporate social responsibilities, good financial information could reduce conflicts between insiders and outsiders because of protecting information for investors (Al-Khonain & Al-Adeem, 2020). Stakeholder and corporate social responsibility theories demonstrated policies for corporate insiders to reduce conflicts between shareholders and corporate insiders, and it also improved corporate information through financial statements (Cui et al., 2018). Other studies believed that corporate social responsibilities are the policies that organizations and individuals have to respect to maintain accurate corporate information, especially in financial statements, and financial disclosure transparency was also the policy for social ethical responsibility to reduce individual misbehavior and individuals or organizational advantages (Cho et al., 2012).

In Vietnam, previous evidence by (Ho Thuy Tien & Hoang Manh Khanh, 2021) concluded that the BOD factor has a significant relationship with financial disclosure transparency. In detail, the BOD chairman duality has a negative relationship with financial disclosure transparency. To explain, when the BOD leader chairman has more roles in corporate firms, it cannot manage financial disclosure transparency effectively, and if the BOD chairman does not have more roles in corporate firms, it can improve financial disclosure transparency. Le Thi My Hanh (2015) demonstrated that the BOD factor positively had a relationship with financial disclosure transparency in Vietnamese listed firms. To detail, this evidence demonstrated the positive relationship between BOD independent members and financial disclosure transparency, or when the number of BOD independent members increased, it also improved financial disclosure transparency for almost all Vietnamese listed firms.

Some previous evidence believed that effective corporate governance is dependent on several members, expertise, and an independent BOD that are beneficial to reduce conflicts in management and improve financial disclosure transparency (Mathuva et al., 2019). The studies of Gulzar & Zongjun (2011) concluded that BOD that is not dual will improve financial disclosure transparency based on earning management measurement. This evidence also supports the belief that gender in the BOD or more women members in the BOD could improve earning management. According to Salehi et al. (2022), board independence and audit committee independence have a significant negative relationship with financial disclosure transparency. However, the expertise of BOD and audit committee members, and managerial ownership have a significant positive effect on financial disclosure transparency. Previous evidence by Siregar & Utama (2008) concluded that audit committees that had higher sizes, independence, and expertise could have good performance in management. Other evidence from Hamrouni et al. (2022) concluded that environmental disclosure had a significant positive effect on information asymmetric, and board size had a significant positive effect on environmental information transparency. However, gender diversification and board independence have a significant negative effect on information transparency. However, there was no consistency between the research outcomes of corporate governance factors and financial disclosure transparency, therefore, it was difficult to conclude this relationship. Based on research problems, this evidence will combine individual corporate governance factors in BOD and audit committee as composite factors that were BOD sizes, BOD independent members, BOD financial expertise members, BOD women members, BOD stability, BOD duality, audit committee sizes, audit committee independence, audit committee financial expertise, and audit committee duality to have a more accurate conclusion for this research, and this research also predicted the following assumptions:

- H1: Corporate governance composite factors have a significant positive effect on financial disclosure transparency.

3. METHODOLOGY

To examine the effect of corporate governance on financial disclosure transparency in Vietnamese listed firms, the quantitative research method is conducted based on STATA 16 software to analyze the panel regression model (Pooled OLS, fixed effect model (FEM), and random effect model (REM)). Choosing a suitable model is determined by Hausman and F-test examination to choose FEM, REM, or Pooled OLS, and Wooldridge and Heteroskedasticity to examine autocorrelation and variance errors after selecting suitable panel models.

3.1. Samples

This study collects samples from 353 Vietnamese listed firms from 2013-2021 that do not include financial services, banking, insurance, and securities listed firms because of different and special operations, and based on formula for financial disclosure transparency. They are also collected in financial statements and other financial information on www.vietstock.vn, and it is also maintained in continuous operation.

3.2. Research model

According to assumptions and previous evidence of Nair et al. (2019), this evidence proposals research mode to examine effect of corporate governance composite factors on financial disclosure transparency in Vietnamese listed firms based on this formula:

FINTPY = β0 + β1 BDit + β2 SIZEit + β3 DEBITit + β4 PROFITit + β5 ASSET + β6 AUDITit + eit

Where:

*** Dependent variables: FINTPY:** financial disclosure transparency. It was measured according to three components that are Earnings Aggressiveness – EA, Earnings Smoothing – ES, and Loss Avoidance – LA. Some previous evidence Filatotchev & Boyd (2009) and Nair et al. (2019) used these three factors to measure financial disclosure transparency. Therefore, higher earning aggressiveness, earnings smoothing, and loss avoidance could reduce financial disclosure transparency, and they are calculated based on these formulas:

- EA = (DA it - DCL it - DCASH it + DSTD it - DEP it + TP it)/ A it-1

- ES = standard deviation of net imcome/standard deviation of cash flow operation.

- LA: dummy variables that D=1 when the profitability is from 0 to 2%, otherwise, D=0.

Where:

ΔAit: Change in total asset of firm i-year t to year t-1

ΔCLit: Change in current liabilities of firm i-year t to year t-1

ΔSTDit: Change in short-tern debt of firm i-year t to year t-1

DCASHit: Change in cash of firm i-year t to year t-1

DEPit: Depreciation of firm i-year t

TPit: Taxes expenses of company i-year t

***Indepdent variables BDit**: Based on concept of corporate governance, the audit committee and Board of directors are two main components in corporate gorvernance. Therefore, corporate governance composites are calculated based on this formula for 10 corporate governance criteria in the board of director and audit committee factors according to dummy variables according to number of criteria that the company achieves in corporate governance, and previous evidence of Carcello et al. (2006) for audit committee factors, and Mathuva et al. (2019), Singh & Vinnicombe (2004) for the board of director (BOD) factors. Besides, for corporate board of directors, there are six factors that are board sizes, BOD independent members , BOD financial expertise members , BOD women members , BOD stability, BOD duality, and four factors in audit committee that are audit committee sizes, audit committee independence, audit committee financial expertise, and audit committee duality. The reason to choose these factors in corporate governance component is that they are simple factors in corporate governance characteristics, and can apply in Vietnamese corporate governance situations:

BD=BSIZE+BIND+BEXP+BWOMEN+BSGM+BCEODUAL+AACS+AACI+ACFS+ADIRSHIP

Where:

BOD factors:

BSIZE: BOD sizes that D=1 if firm i-year t has firm size lower than 50% average observations, and higher than 5 members, otherwise, D=0

BIND: BOD independent members that D=1 if independent members percentages are higher than 60% in BOD, otherwise D=0

BEXP: BOD financial expertise members that D=1 if BOD members had financial expertise, otherwise D=0

BWOMEN: BOD women members that D=1 if BOD has at least one women member, otherwise D=0

BSGM: BOD stability that D=1 if there is no change in BOD, otherwise D=0

BCEODUAL: BOD duality that D=1 if there is no duality, otherwise D=0

Audit committee factors:

AACS: Audit committee sizes that D=1 if audit committee size is higher than average BOD size, and have more than two members, otherwise D=0

AACI: Audit committee independence that D=1 if there is 100% indepdnent members in audit committee, otherwise D=0

ACFS: Audit committee financial expertise that D=1 if there is at least one audit committee member has financial expertise, otherwise D=0

ADIRSHIP: Audit committee duality that D=1 when there is no duality in audit committee, otherwise D=0

*** Control variables:** SIZE demonstrated firm size, calculated based on logarithm of total asset (Bhattacharya et al., 2005). DEBIT demonstrated leverage, calculated by total liabilities / total asset (Zamir & Saeed, 2020). PROFIT demonstrated financial outcomes, calculated by net income/ total asset (Hamrouni et al., 2022). ASSET demonstrated effective using asset, calculated by net revenue to total asset (Cheung et al., 2007). AUDIT demonstrated audit size, demonstrated by dummy variables that D=1 if financial statement is audited by BIG4 companies (Nair et al., 2019).

4. RESULT

4.1 Descriptive statistic:

Firstly, according to descriptive statistics in table 1, exactly 3177 observations or 353 listed firms were selected to research during 2013-2021:

	Observations	Mean	Median	Std	Max	Min	skewness
EA	3177	0.053	0.026	0.199	-0.908	1.67	2.06
ES	3177	1.063	1.104	0.208	0.58	1.279	-1.15
LA	3177	0.198	0.000	0.399	0	1	1.513
HDQT	3177	4.028	4.000	1.158	1	8	0.081
AUDIT	3177	0.286	0.000	0.452	0	1	0.945
SIZE	3177	27.572	27.557	1.582	23.322	33.691	0.239
DEBIT	3177	0.48	0.495	0.226	0.001	0.948	-0.169
PROFIT	3177	0.1	0.092	0.133	-1.733	0.982	-2.418
ASSET	3177	0.735	0.671	0.464	0	1.989	0.434

Table 1: Variable information

Firstly, financial disclosure transparency is measured by earnings aggressiveness (EA), earning smoothing (ES), and loss avoidance (LA). When the earnings aggressiveness (EA), earning smoothing (ES), and loss avoidance (LA) values are higher, they also decrease financial disclosure transparency. For earnings aggressiveness (EA), the average level of difference between some accounts in the balance sheet (DTotal asset - DCurrent liabilities - DCash and cash equivalent+ DShort-term debt – Depreciation + Corporate income taxes) is nearly 5.3% to total asset in the previous year. However, a few listed firms had higher financial disclosure transparency based on EA which is nearly -0.908 for minimum value, and the maximum EA is nearly 1.67 which demonstrates lower financial disclosure transparency in a few corporate firms. Next, for earning smoothing (ES), the average level of standard deviation for net income and cash flow operation is nearly 106.3%. However, a few listed firms had higher financial disclosure transparency based on ES which is nearly 0.58 for minimum value, and the maximum ES is nearly 1.279 which demonstrates lower financial disclosure transparency in a few corporate firms. Finally, for loss avoidance (LA), this factor is measured based on a dummy variable that D=1 if profitability is in the range of 0-2%, otherwise D=0. With nearly 0.198 in average value, almost all listed firms have differences in level of profitability, or D=0.

Corporate governance composite factors are measured based on 10 criteria including 6 BOD factors that are BOD sizes, BOD independent members, BOD financial expertise members, BOD women members, BOD stability, BOD duality, and four audit committee factors audit committee sizes, audit committee independence, audit committee financial expertise, and audit committee duality. Based on nearly 4.028 for average value, almost all Vietnamese corporate firms accepted only 4/10 criteria in Vietnamese corporate governance factors. However, a few listed firms accepted 8/10 corporate governance factors, other firms accepted only 1/10 corporate governance factors.

4.2 Correlation:

The result for the correlation between variables is listed in table 2:

Factors	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) EA	1.000								
(2) ES	-0.045**	1.000							

(3) LA	-0.074***	0.026	1.000						
(4) HDQT	-0.010	0.035**	-0.099***	1.000					
(5) AUDIT	-0.034*	-0.003	-0.064***	0.238***	1.000				
(6) SIZE	0.084***	0.043**	-0.005	0.221***	0.502***	1.000			
(7) DEBIT	0.057***	-0.011	0.251***	-0.074***	0.007	0.280***	1.000		
(8) PROFIT	0.165***	-0.045**	-0.264***	0.104***	0.085***	0.110***	-0.134***	1.000	
(9) ASSET	-0.082***	-0.046***	-0.152***	0.000	0.015	-0.185***	0.015	0.293***	1.000

*** p<0.01. ** p<0.05. * p<0.1

Table 2: Correlation outcomes

Firstly, in the earnings aggressiveness (EA) model, the corporate governance (CG) composite factors will have a negative effect on EA, or the CG composite factors will have a positive effect on financial disclosure transparency based on earnings aggressiveness (EA). Secondly, in the earning smoothing (ES) model, the CG composite factors will have a positive effect on ES, or CG composite factors will have a negative effect on financial disclosure transparency based on earning smoothing (ES). Finally, in the loss avoidance (LA) model, the CG composite factors will have a negative effect on LA, or CG composite factors will have a positive effect on financial disclosure transparency based on loss avoidance (LA).

4.3. VIF model:

	VIF	1/VIF
Firm size (SIZE)	1.693	0.591
Audit size (AUDIT)	1.425	0.702
Asset performance (ASSET)	1.202	0.832
Leverage (DEBIT)	1.192	0.839
Profitability (PROFIT)	1.184	0.844
Corporate governance composite factors (HDQT)	1.097	0.912
VIF average value	1.299	.

Table 3: VIF outcomes

According to the VIF result in this table, all six independent and control variables are accepted in EA, ES, and LA models, and the VIF average value is nearly 1.299 or in the range 1-2, and all these independent and control variables are not multicollinear.

4.4 Model selection examination:

The condition to choose a final model for EA, ES, and LA model is that it is chosen by Hasman and F-test examination. Besides, these models do not have mistakes in variance and autocorrelation errors. Table 4 demonstrates more information for the model examination.

Kinds of models	EA model		ES model		LA model	
	F-test/Chi-square	p-value	F-test/Chi-square	p-value	F-test/Chi-square	p-value
Hausman	85.94	<0.01	172	<0.01	42.85	<0.01
F-test	1.93	<0.01	0.46	1	3.54	<0.01
Heteroskedasticity	121.79	<0.01	11.22	0.0008	890.96	<0.01
Wooldridge	15.993	0.0001	92262.835	<0.01	21.271	<0.01

Table 4: Model selection examination outcome

Firstly, in the Hausman examination, because of a lower than 0.05 p-value, EA, ES, and LA models will choose the fixed effect model as the research outcome. Secondly, based on a p-value that is lower than 0,05, the EA and LA models will choose the fixed effect model as the research outcome. However, in the ES model, because of a higher than 0.05 p-value, this model will choose Pooled OLS as the research outcome.

After having a fixed effect model (FEM) for EA and LA models, and Pooled OLS for the ES model, the Heteroskedasticity and Wooldridge examination is conducted to examine the errors for each model after selection. Because of lower than 0.05 for Heteroskedasticity and Wooldridge examination, the fixed effect model for the EA and LA model, and Pooled OLS for the ES model have autocorrelation and variance errors. Therefore, the robust model is chosen for the EA, ES, and LA models to fix autocorrelation and variance errors.

4.5 Regression results:

Independent/ Control variables	EA model	ES model	LA model
CG composite factors (HDQT)	-0.004	0.006*	-0.016***
	-1.29	1.76	-2.78
Audit size (AUDIT)	-0.033***	-0.018*	-0.007
	-3.63	-1.86	-0.40
Firm size (SIZE)	0.007***	0.009***	-0.015***
	2.65	2.97	-2.63
Leverage (DEBIT)	0.062***	-0.032*	0.424***
	3.61	-1.78	12.48
Profitability (PROFIT)	0.322***	-0.082**	-0.56***
	10.03	-2.37	-5.76
Asset performance (ASSET)	-0.058***	-0.008	-0.095***
	-7.12	-0.85	-6.12
Constant	-0.144**	0.826***	0.59***
	-1.97	10.35	4.07
R-square	0.058	0.008	0.132
F-test	28.199	3.893	59.153
p-value	<0.01	0.001	<0.01
Observation	3177	3177	3177
Initial Durbin- Watson	1.556752	2.568653	1.116869
Final Durbin- Watson	1.777013	1.750643	1.803238

Table 5: Regression outcome (*, **, *: Significant at p-value=0.1,0.05, and 0.01)**

The outcomes for EA, ES, and LA models are listed in table 5 based on a robust model for FEM of the EA and LA model, and Pooled OLS for the ES model. Firstly, according to overall regression information, exactly 3177 observations or 353 corporate listed firms in HOSE and HNX in three models during 2013-2021. Because of a lower than 0.05 p-value, at least one independent and control variable could influence EA, ES, and LA. Next, based on R-square, the level of predicted variance relationship between control or independent variables and dependent variables is nearly 5.8% for the EA model, 0.8% for the ES model, and 13.2% for the LA model. Finally, according to Durbin – Watson value for the EA, ES, and LA model that is in the range 1-3, there is no autocorrelation for the EA, ES, and LA model based on a robust regression model.

Firstly, based on the earning aggressiveness (EA) model, the corporate governance (CG) factors will reduce earning aggressiveness (EA), or corporate governance (CG) factors will have a positive relationship with financial disclosure transparency based on reducing earning aggressiveness (EA) because of nearly -0.004 for the beta. To explain, when there are 100 items for corporate governance (CG) factors, nearly 0.4 corporate governance (CG) factors items will have a negative relationship with earning aggressiveness (EA). However, because of a higher than 0.1 p-value, corporate governance (CG) composite factors do not significant relationship with financial disclosure transparency based on earning aggressiveness (EA), or CG component factors will not influence earning aggressiveness (EA).

Secondly, based on the earning smoothing (ES) model, the corporate governance (CG) factors will have a positive effect on earning smoothing (ES), or corporate governance (CG) factors will have a negative relationship with financial disclosure transparency based on increasing earning smoothing (ES) because of nearly 0.006 for beta. To explain, when there are 100 items for corporate governance (CG) factors, nearly 0.6 corporate governance (CG) factors items will have a positive relationship with earning smoothing (ES). Besides, because of lower than 0.1 for p-value, the negative effect of CG composite factors and financial disclosure transparency according to increasing earning smoothing (ES) is accepted. It is explained that when corporate governance factors increased, it also increases earning smoothing (ES), or reduced financial disclosure transparency.

Finally, in the loss avoidance (LA) model, the corporate governance (CG) factors will reduce loss avoidance (LA), or corporate governance (CG) factors will be a positive relationship with financial disclosure transparency based on reducing loss avoidance (LA) because of nearly -0.016 for the beta. To explain, when there are 100 items for corporate governance (CG) factors, nearly 1.6 corporate governance (CG) factors items will have a negative relationship with loss avoidance (LA). Besides, because of lower than 0.01 for p-value, the positive relationship between CG composite factors and financial disclosure transparency based on reducing loss avoidance (LA) is accepted. It is explained that when corporate governance factors increased, it reduced loss avoidance (LA), or improves financial disclosure transparency.

4.6 Discussion

Firstly, the research assumption is concluded in table 6:

	EA model	ES model	LA model
H: Corporate governance composite factors have a significant positive effect on financial disclosure transparency.	Rejected	Rejected (Negative*)	Accepted (***)

Table 6: Hypothesis conclusion (*, **, *: Significant at p-value=0.1,0.05, and 0.01)**

Secondly, the prediction for the effect of independent and control variables on dependent variables is concluded in table 7:

Indepenedent/ Control variables	Expected outcome with financial disclosure transparency	EA model	ES model	LA model
Corporate governance composite factors (HDQT)	Positive	No relationship	Negative(*)	Positive (***)
Ausit size (AUDIT)	Positive	Positive (***)	Positive (*)	No relationship

Firm size (SIZE)	Positive	Negative(***)	Negative(***)	Positive (***)
Leverage (DEBIT)	Negative	Negative(***)	Positive (*)	Negative(***)
Profitability (PROFIT)	Positive	Negative(***)	Positive (**)	Positive (***)
Asset performance (ASSET)	Positive	Positive (***)	No relationship	Positive (***)

Table 7: Variable prediction outcomes (*, **, *: Significant at p-value=0.1,0.05, and 0.01)**

Firstly, according to the earning aggressiveness (EA) model outcome, the CG composite factors do not affect financial disclosure transparency based on earning aggressiveness (EA). To explain, there is a small proportion of corporate governance criteria in almost all Vietnamese firms. As a result, it could not influence earning aggressiveness (EA). It also explained that almost all BOD insiders do not concentrate on earning aggressiveness (EA) in financial statements. It also demonstrates the insider behaviors to create accounting that they still do not misbehave by aggressing profitabilities in financial statements. Besides, there is no difference in earning aggressiveness (EA) valuation, as a result, CG composites could not influence earning aggressiveness (EA). This outcome is not consistent with previous studies of Siregar & Utama (2008) that BOD and audit committee members have essential roles in influencing financial disclosure transparency, and it also does not accept the research assumption.

Secondly, based on earning smoothing (ES) model outcome, the CG composite factors will improve earning smoothing (ES) or will slightly decrease financial disclosure transparency. To explain, almost all CG members concentrate on firm net loss/ profit income, and outsiders will choose corporate firms that have good performance in financial strength to invest. Therefore, CG members will change or create financing accounts based on profitability to attract more investors. This result explains that individual and organizational behavior reduces financial disclosure transparency by changing accounts in financial statement and profitability to increase valuation for corporation, and they will attract more investors by having positive financial profitability performance, and managers in CG could not demonstrate the negative financial information to reduce attractive funds from outsiders (Hamrouni et al., 2022). This result is consistent with the information asymmetric (Hamrouni et al., 2022), which is explained that only insiders have more negative company information than outsiders, and there is conflicts between insiders and outsiders advantages, and it is also consistent with the explanation by Salehi et al. (2022) to demonstrate the negatively relationship between financial disclosure transparency and corporate governance components according to increase earning smoothing (ES). However, this outcome does not accept the research assumption, and it also does not support the explanation of Siregar and Utama (2008) that audit committee members have essential roles in managing financial disclosure transparency.

Finally, CG composite factors will increase financial disclosure transparency based on reducing loss avoidance (LA) in corporate profitability, or CG composite factors have negatively relationship with loss avoidance (LA). To explain, outsiders and corporate insiders concentrate on corporate financial situation. Therefore, financial statement is essential and useful to influence investor and insider behavior and decision because financial statement will reflect the financial health and corporate firm situation in the future, and CG insiders will manage financial statement more carefully to have more corporate situation information, and they have more responsibilities and policies to improve financial disclosure transparency. This outcome also demonstrated that corporate information has essential roles for insiders and outsiders to maintain operations, and it also provides the corporate financial health, especially the level of earnings according to the income statement. This outcome is accepted with stakeholder theory and corporate social responsibilities (Cho et al., 2013) that are relevant to individual and organizational roles to maintain financial disclosure transparency, and financial statement is advantage for insiders and outsiders to reduce conflicts information between insiders and outsiders, and protect investor advantages because of having more information from corporate financial statements. This outcome is also consistent with the research hypothesis, and some previous evidence of Mathuva et al. (2019) and Habib et al. (2018) that CG insiders have more important roles in financial disclosure transparency based on managing corporate information and individual advantages to reduce conflicts between insiders and outsiders, and according to social responsibility policies, the financial transparency information is also the requirement in corporate ethics to reduce individual misbehavior and improve shareholder beliefs (Cui et al, 2016).

5. CONCLUSION

The objective of this evidence is to examine the relationship between corporate governance (CG) composite factors and financial disclosure transparency based on three components that are earnings aggressiveness (EA), earning smoothing (ES), and loss avoidance (LA). Besides, based on panel data, there are exactly 3177 observations, or 353 listed firms in HOSE and HNX in this evidence during 2013-2021. The outcome of this evidence is that CG composite factors have a relationship with financial disclosure transparency based on the ES and LA models. However, CG composite factors do not affect earnings aggressiveness (EA). To detail, based on the ES model, CG composite factors increase net income differences or reduce financial disclosure transparency. In the loss avoidance (LA) model, CG composite factors reduce loss avoidance or increase financial disclosure transparency based on decreasing corporate loss avoidance (LA).

For research contribution, firstly, this evidence concludes that corporate governance insiders could change or increase differences in income in the financial statement or reduce financial disclosure transparency to create accounting in developing markets. This outcome also supports information asymmetric in that insiders have more power in having corporate information based on financial statements. Therefore, the first recommendation for this research is that corporate firms need to have suitable policies to reduce individual and organizational advantages to prevent corporate firms' misbehaviors that can change income differences in financial statements.

Secondly, the loss avoidance (LA) model outcome concludes the essential roles of corporate governance insiders on financial disclosure transparency and business reputation, especially the accuracy of financial statements and investor advantages to improve corporate insider responsibilities in corporate information based on stakeholder, agency, and corporate social responsibilities theory. Therefore, the recommendation for this evidence is that the social responsibilities and policies need to be improved and accurate for corporate governance structures to improve financial disclosure transparency.

However, the numbers of corporate firms and corporate governance factors are the limitations in this evidence, this research only concentrates on corporate listed firms in HOSE and HNX, as a result, some corporate listed firms in UPCOM or other Vietnamese listed firms are not included in this evidence, and this outcome is not eneralized and correlated for all Vietnamese corporate firms. Besides, some relevant corporate governance factors are not included in this research that are percentage corporate ownership, and other research for audit committee members. Therefore, the final recommendation for this research is that this study needs to improve and increase more Vietnamese corporate firms, and other factors in corporate governance to have more general results for the relationship between corporate governance factors and financial disclosure transparency.

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FACTORS AFFECTING THE PROFITS OF LISTED MANUFACTURING ENTERPRISES ON THE VIETNAMESE STOCK EXCHANGE

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Abstract: *The purpose of this study is to evaluate the factors affecting the operational efficiency of publicly listed manufacturing companies on the Vietnamese stock market during the period 2010-2022. With panel data of 1690 observations, the results indicate that the profitability ratio has been influenced by five factors. The most influential factors that positively affecting ROA must include Cashflow (coef = 0.947), while the other factors show statistical significance, but their coefficients suggest a relatively weak impact (debt, size, liquid, leverage). At a significance level of 1%, the research finds robust statistical evidence supporting the positive impact of both Cashflow and Size on Tobin's Q of manufacturing companies ($coef_{Size}$ = 774.658, $coef_{Cashflow}$ = 25407.03). The author has not found out any statistically significant evidence for the impact of debt, liquid, leverage on Tobin's Q. Furthermore, based on statistical results from the collected sample, the author observes that during the COVID-19 period from 2020 to 2022, 8.21% of manufacturing enterprises reported negative net income. Meanwhile, before the pandemic, from 2010 to 2019, 9.13% of the enterprises had reported negative net income. This ratio shows the ability of manufacturing companies on the Vietnamese stock market to adapt and respond to the difficult situation due to the pandemic.*

Key words: *Capital Structure, Firm Performance, Optimal Capital Structure, Profitability, Financial Leverage.*

JEL codes: G30, G31, G32

1. INTRODUCTION

In the intricate landscape of the national and global economies, manufacturing enterprises play a pivotal and indispensable part. Their role extends beyond merely producing goods and services, encompassing far-reaching influence on the development and progress of society as a whole. They are not merely business entities; they have become vital building blocks for constructing and sustaining economic prosperity. Manufacturing businesses are responsible for crafting value-added products from raw materials. They not only fulfill consumer needs but also contribute to industrial development, enhance quality of life, and drive technological innovation. By generating employment opportunities, manufacturing enterprises serve as a crucial source of income for millions of individuals worldwide. From producing daily consumer goods to pioneering cutting-edge technologies, they play a significant role in establishing a robust economic infrastructure. Simultaneously, through participation in the international market and exporting goods, they foster global cooperation, expand accessibility for nations, and foster global connections. It is evident that the role of manufacturing enterprises extends beyond product creation, encompassing the broader task of constructing a resilient and sustainable economic foundation.

In the unprecedented challenges posed by the COVID-19 pandemic, the role of manufacturing enterprises has become increasingly vital and indispensable, like never before. They have contributed not only to the economy but also to the safety and recovery of society. Amid the pandemic, maintaining the supply of essential products such as medical devices, food, pharmaceuticals, and chemicals has become incredibly crucial. Manufacturing enterprises have secured the stable supply of these products to meet the community's needs and aid in disease control efforts. For the reasons mention above, the author undertakes this study with the goal of investigating how financial factors

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have impacted the operational efficiency of manufacturing enterprises over the past decade. The findings of this research will serve as a scientific basis, offering additional statistical evidence to provide managerial recommendations within the realm of production and business.

2. RELATED LITERATURES

2.1. Empirical Review

Researches worldwide

Previous studies on the relationship between financial factors of businesses and their impact on efficiency have been conducted by various authors, leading to differences in the results presented. This can be exemplified by studies such as the one conducted by Onaolapo and Kajola (2010), which utilized a dataset comprising 30 non-financial firms in Nigeria during the period 2001 – 2007. Their findings provided evidence of the influencing factors on firm efficiency, represented by ROA and ROE ratio. The results indicated that when businesses utilize excessive debt and invest disproportionately in fixed assets, it leads to negative effects on efficiency. Conversely, businesses with advantages in terms of larger scale or strong growth rates tend to achieve better efficiency. Furthermore, the outcomes from the research conducted by Gatsi and colleagues (2013), utilizing regression analysis on data spanning from 2005 to 2012 with manufacturing firms listed on the stock market in Ghana, demonstrated statistically significant positive relationships between firm size and financial efficiency, as represented by the ROA variable. Due to the variability in these findings, it is evident that understanding the complex relationship between financial factors and business efficiency requires comprehensive investigation and analysis. However, there is no basis to conclude a relationship between liquidity and financial efficiency. On the other hand, when using a combined approach of both Tobin's Q and ROA coefficients to study the profit generation capability of listed companies on the Pakistan Stock Exchange during the period from 2001 to 2009. Khidmat & Rehman (2014) revealed that factors influencing profitability included the quick ratio, current ratio, debt-to-equity ratio with an inverse relationship, and debt-to-total-assets ratio with a direct relationship. Additionally, liquidity had a consistent positive effect and statistical significance on this dataset. Moreover, Durrah and et al. (2016) obtained similar results when conducting research to examine the correlation between liquidity ratios and financial efficiency indicators for companies listed in the food industry during the period from 2012 to 2014. The research results indicated a positive correlation between liquidity ratios and financial efficiency when using the representative variable of ROA. Many studies have also found a positive correlation between operational duration, operational scale, and company profitability, along with a reverse impact of the debt ratio (Minnema & Andersson, 2018; Owolabi & Obida, 2012; Lazaridis & Tryfonidis, 2006; Liargovas & Skandalis, 2010). Author Toraman et al. (2013) studied the effect of capital structure on the profitability of manufacturing firms in Turkey in the period 2005-2011. These authors also considered capital structure measures as long-term liabilities to total assets and as a proxy for firm performance as ROA. The results also showed that the debt ratio negatively affects firm performance in this sample. Simultaneously, Zeitun and Haq (2015) tested the relationship between debt ratios for the operation of 400 enterprises in Qatar, Oman, Kuwait, the UAE, and Bahrain from 2004 to 2012. The author also provided evidence that the debt ratio had a negative impact on firm performance and was especially large in the post-crisis period. Furthermore, the study by Salim and Yadav (2012) used measures of ROA, ROE, and EPS and Tobin's Q to measure the efficiency of 237 companies listed on the Bursa Malaysia stock exchange. The results also showed that there was a negative correlation between the debt ratio and the ratio of long-term debt to total debt on the representative variables ROA, ROE, and EPS, and Tobin's Q.

Researches in Vietnam

In Vietnam, research on the relationship between firm size and business performance has also garnered attention from researchers and managers. Notable studies include those by authors such as Toan (2016), who conducted research on the topic "Impact of working capital policy on return on total assets of real estate companies in Vietnam". The research results indicated that factors such as firm size, leverage ratio, and economic growth rate positively influenced business performance. On the other hand, factors such as average collection period, inventory turnover period, and cash conversion cycle showed negative impact on business efficiency. Furthermore, the study by authors Van & Nga (2018) was conducted on construction material manufacturing companies in Vietnam to explore the influence of working capital management on firms' profitability. The authors presented multiple research hypotheses and employed OLS, REM, and FEM models to elucidate the impact of factors as follows: inventory turnover period, average payment period, and firm size positively affected the return on total assets. Factors like average collection period, cash turnover period, debt ratio, current ratio, and fixed asset turnover ratio exhibited an inverse relationship with the return on total assets. Additionally, studies conducted by Nguyen (2020) and Thanh (2022) both showed consistent results indicating a positive relationship between firm size and business efficiency. Furthermore, there were also several studies that revealed a contrasting relationship between firm size and business efficiency, such as the research conducted by author Thuy et al. (2020). They investigated factors influencing the financial performance of companies listed on the Hanoi Stock Exchange during the period 2013-2017. The research results indicated that corporate income tax, company size, and growth rate had an inverse impact on financial performance. In a prior study by author Thuy et al. (2015), similar results were obtained. They conducted research on 230 non-financial joint-stock companies listed on the Ho Chi Minh Stock Exchange (2011-2013) across 14 industries. Other studies by authors Van & Nga (2018) focused on examining the relationship between business efficiency and the scale of construction companies listed on the Vietnamese stock market (2012-2016). The results revealed that firm size had no statistically significant effect. The authors explained that while larger firms might experience increased profitability due to their size, this increase might not be substantial enough to lead to a rise in the return on assets. Additionally, according to the study by Linh & Nga (2022), the impact of various firm characteristics on the profitability of consumer goods manufacturing businesses was examined. This research ROA and ROE as measures of profitability. The study utilized a sample of 79 listed companies on both the HNX and HOSE during the period from 2016 to 2020. The preliminary results indicated that the profitability of consumer goods businesses listed on the Vietnamese stock market is influenced by firm characteristics, particularly factors such as scale, financial leverage, and liquidity.

2.2. Theoretical Framework

Modigliani and Miller Capital Structure Theory (M&M)

According to Modigliani and Miller's (1958) capital structure theory, it postulates that in a perfectly competitive market, external capital conditions (debt obligations) and equity capital are equivalent. In other words, the value of a firm is independent of the number of shares issued by the firm and is based on the assets of the firm. The sources of this capital formation can come from either debt obligations or equity capital. The hypothesis proposed is as follows:

Hypothesis H_1: The relationship between Leverage and firm efficiency is inverse (-);

Liquidity Theory

Liquidity is a term used to denote the extent to which any asset can be bought or sold in the market without affecting its value. An asset with high liquidity is one that can be quickly sold in the market without a significant or minimal decrease in its price (often characterized by a high volume of transactions). Assets with high liquidity entail lower risk. According to Horne (1968), liquidity is described as the ability to realize the value of an accepted medium in exchange. The hypothesis proposed is as follows:

Hypothesis H_2: Liquidity has a positive impact on firm efficiency (+).

Free Cash Flow Theory

According to studies by Utami & Inanga (2011), once profit distribution decisions have been made by a company and a necessary amount of cash is held to sustain production and business operations, conflicts of interest may arise between the company's owners and its representatives. Corporate managers, who represent shareholders, are also shareholders of the company, creating a conflict of interest between the two parties due to their differing purposes for utilizing cash. The hypothesis proposed is as follows:

Hypothesis H_3: Cashflow has a positive impact on firm efficiency (+).

2.3. Research Methodology

2.3.1. Data Description

The study utilizes an unbalanced panel dataset consisting of 1690 observations collected from audited financial reports and stock trading information of 130 manufacturing companies listed on the Vietnamese Stock Exchange during the period 2010 - 2022. The author chose this timeframe to provide a better measurement of the economic situation after the global economic crisis of 2008. The author selected only those manufacturing companies that disclosed audited financial reports, as the research employs financial indicators representative of the characteristics of each company. Companies that did not disclose financial reports or did not provide complete information during this period were excluded from the study sample.

2.3.2. Research Design and Definition of Variables

Return on total assets (ROA);

According to a study developed by Kaplan and Norton (2001), during the business production process, companies aspire to generate profit by comparing their earnings to the invested assets, which helps assess the capability of generating profit from assets. This metric indicates how much profit, after taxes, a company earns from investing one unit of assets. The higher this ratio, the more efficient the utilization of assets, which contributes to enhancing capital efficiency.

Tobin's Q Ratio;

In 1969, James Tobin (1996) introduced the concept of Tobin's Q ratio. Tobin's Q idea was that if the market values a company higher than its physical value, it signifies that the company has promising growth prospects. Tobin's Q is widely used to assess the future value of a business. In 1944, a simple approach proposed by Chung and Pruiit (1944) provided an approximate calculation for Tobin's Q value using the formula:

Tobin's Q = (MVE + PS + DEBT) / TA (1)

Where:

MVE: Market Value of Equity

PS: Preferred Stock value

DEBT: Debt obligations to be repaid and book value of long-term debt

TA: Total Assets

Based on the theory and previous studies conducted by Salim and Yadav (2012); Durrah et al. (2016), the expected model to be applied to listed manufacturing firms in the Vietnamese stock market is as follows:

$$\textbf{ROA} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1 ROA_{i,t-1}} + \boldsymbol{\beta_2 Debt_{i,t}} + \boldsymbol{\beta_3 Size_{i,t}} + \boldsymbol{\beta_4 Liquid_{i,t}} + \boldsymbol{\beta_5 Cashflow_{i,t}} + \boldsymbol{\beta_6 Leverage_{i,t}} + \boldsymbol{\varepsilon_{i,t}} \quad \textbf{(Model 1)}$$

$$\textbf{Tob}\boldsymbol{Q_{i,t}} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1 TobQ_{i,t-1}} + \boldsymbol{\beta_2 Debt_{i,t}} + \boldsymbol{\beta_3 Size_{i,t}} + \boldsymbol{\beta_4 Liquid_{i,t}} + \boldsymbol{\beta_5 Cashflow_{i,t}} + \boldsymbol{\beta_6 Leverage_{i,t}} + \boldsymbol{\varepsilon_{i,t}} \quad \textbf{(Model 2)}$$

Table 1. Summary of variables in the model

Variables	Symbol	Measure	hypothesis	Reference source
Dependent variables				
Tobin's Q	TOBIN'SQ	see formula (1)		James Tobin (1969); Khidmat & Rehman (2014); Salim & Yadav (2012)
Return on total assets	ROA	Net income/ the average total assets		Salim & Yadav (2012), Onaolapo & Kajola (2010); Durrah et al. (2016), Hang & Linh (2020), Trung et al. (2022)
Independent variables				
Cashflow	Cashflow	Net Income after Tax and Depreciation Expense for the Period / Total Assets	+	Guariglia, 2008; Brush et al. (2000); Utami & Inanga (2012)
Liquid	Liquid	Short-term assets / Short-term liabilities	+	Gatsi et al (2013); Durrah et al. (2016); Thuy et al (2020); Thủy et al. (2015); Linh & Nga (2022)
Leverage	Leverage	Total Debt/ Total Assets	-	Zeitun & Haq (2015); Rehman & Khidmat (2014); Linh & Nga (2022)
Control variable				
Capital structure	Debt	Long-term debt/Total debt		Balakrishnan et al (1993), Majumdar (1997), Gleason et al (2000); Simerly & Li (2000)
Business Scale	Size	Ln(Total assets)	+	Onaolapo & Kajola (2010); Gatsi et al (2013); Minnema & Andersson (2018); Owolabi & Obida (2012), Lazaridis & Tryfonidis (2006); Liargovas & Skandalis (2010); Toan, B. N. (2016); Nguyen (2020); Thanh, B. V. (2022); Thuy et al. (2020); Thuy et al (2015).

(Source: Compiled by the author)

2.3.3. Methodology

In the analysis of panel data, various regression methods are employed to explore the relationship between the dependent and independent variables. OLS is the most basic and widely used method, aiming to identify the linear relationship between the dependent variable and one or more independent variables. The objective is to find the regression line that minimizes the sum of squared errors. Next, REM and FEM regressions are two significant methods for analyzing panel data, where each observation is tracked over time or space. Finally, the System GMM regression is utilized in analyzing panel data to address issues related to conventional regression outcomes. This method integrates both random and fixed effects in the regression model. SGMM is built on the theory of GMM estimation, where parameters are estimated to optimize the GMM objective function. GMM focuses on optimizing the conditions of expected parameter values for errors. SGMM has the capability to control the effects of both random and fixed factors in the regression model. It also helps reduce the bias in results caused by unobserved variations.

3. RESULTS AND DISCUSSION

3.1. Descriptive Statistics Analysis

Bảng 3.1. Descriptive statistics results

Variable	Obs	Mean	Std. Dev.	Min	Max
Roa	1,690	0.061	0.175	-3.350	3.919
TOBIN'SQ	1,513	16397.52	17178.73	400	141459
Size	1,690	13.641	1.518	9.821	19.767
Debt	1,690	0.129	0.175	0	0.943
Cashflow	1,690	0.089	0.179	-3.241	3.983
Liquid	1,690	2.292	3.285	0	42.987
Leverage	1,690	0.579	2.179	0.003	56.916

(Source: Compiled by the author)

The variables Roa and TOBIN'SQ have a wide range of values from -3.350 to 3.919, with a high standard deviation (0.175). This indicates significant volatility in asset profitability. Data analysis reveals that many businesses were affected by the COVID-19 pandemic, resulting in negative after-tax profits. The period of negative profits mainly occurred in the years 2020, 2021, and 2022, with the proportion of companies reporting negative profit periods was 8.21%. The number of companies with negative profit periods is quite low and not higher than the pre-pandemic period which was 9.31%. These results suggest that Vietnamese manufacturing enterprises demonstrate relatively good resilience against the impacts of the COVID-19 pandemic. Additionally, TOBIN'SQ has a relatively high average value (16,397.52) and a high standard deviation (17,178.73), indicating significant variation in fixed asset values across observations. This could reflect the diversity in the market capitalization scale of different companies. The size variable represents the average size of companies, with a relatively low standard deviation (1.518). The Cashflow variable represents the net cash flow from business activities, exhibiting considerable volatility and a relatively wide range of values. These results are understandable, as during the period 2020-2022, many companies were affected by the COVID-19 pandemic, leading to disruptions in production activities and significant changes in cash flow. Similar to cash flow, liquidity and financial leverage also exhibit a similar pattern.

3.2. Correlation Analysis

Table 3.2: Correlation coefficient matrix

	Roa	Tobin'sQ	Size	Debt	Cashflow	Liquid	Leverage
Roa	1						
Tobin's Q	0.216	1					

Size	0.013	0.358	1				
Debt	-0.135	0.081	0.347	1			
Cashflow	0.931	0.171	-0.016	-0.118	1		
Liquid	0.077	-0.029	-0.193	-0.075	0.025	1	
Leverage	-0.369	-0.112	0.133	0.176	-0.333	-0.482	1

The correlation coefficient matrix provides information about the correlation relationships between pairs of variables in the research data. Table 3.2 presents some noteworthy observations. The correlation relationship between Leverage and Roa is negative and quite substantial (-0.369). This indicates a significant negative correlation between a company's financial Leverage and ROA. Similarly, the correlation between Cashflow and Roa is very strong (0.931), indicating a highly robust relationship between Cashflow and ROA. In contrast to ROA, the correlations between Leverage and Cashflow with Tobin's Q are relatively weak. Moreover, the correlation relationship between Size and Tobin's Q is positive and quite strong (0.358). This suggests a fairly strong connection between the size Size and its Tobin's Q.

3.3. Regression Analysis

3.3.1. Multicollinearity test

Variable	VIF		1/VIF	
	ROA	Tobin's Q	ROA	Tobin's Q
Leverage	1.5	1.53	0.665449	0.653562
Cashflow	1.5	1.37	0.667635	0.728641
Size	1.18	1.18	0.849208	0.850742
Debt	1.12	1.17	0.890234	0.855019
Liquid	1.06	1.16	0.946456	0.860911
Mean VIF	1.27	1.28		

Multicollinearity testing is a crucial step in regression analysis, especially when there are multiple independent variables in the model. Multicollinearity occurs when two or more independent variables are highly correlated, which can affect the ability to distinguish the individual effects of each variable on the dependent variable. The results of multicollinearity testing in the research model indicate an average VIF of 1.27-1.28. The VIF scores for each variable are relatively low, suggesting that multicollinearity is not a significant concern for models 1 and 2.

3.3.2. Heteroskedasticity Test

White's test	P_value	Result
ROA	Prob> chi 2= 0.000	Homoskedasticity
Tobin's Q	Prob>chi 2= 0.000	Homoskedasticity

In a regression model, the variance of residuals plays a crucial role in ensuring the accuracy and reliability of regression estimates. When the variance changes unevenly, the residuals of the regression model are not evenly distributed and may impact the statistical significance and efficiency of regression estimates. This can lead to errors in assessing the confidence of regression coefficient estimates, standard errors, and hypothesis testing.

In this study, the White Test was chosen as a heteroskedasticity test. The White Test is a common test to check for the non-constant variance of residuals in a regression model. The White Test examines whether there is a correlation between the squared residuals and the independent variables. If the p-value of this test is low, it indicates evidence of variance heteroskedasticity. Through the heteroskedasticity test, it can be observed that the Prob> Chi^2 for both the ROA ratio and the Tobin's Q ratio are less than 0.01. Therefore, it can be concluded that there is heteroskedasticity in the variance of residuals, indicating that OLS, REM, and FEM estimates are no longer efficient. To address this issue, the author employs the GMM model.

3.3.3. Regression results and discussion

Table 3.2: Regression results

Variable	Tobin's Q-Model 2				ROA-Model 1			
	OLS	FEM	REM	SGMM	OLS	FEM	REM	SGMM
ROA(-1)				0.898*** (0.000)				0.011*** (0.000)
Debt	-1367.59 (0.586)	-11932.63*** (0.000)	-7927.126*** (0.002)	336.730 (0.706)	-0.015*** (0.000)	-0.003 (0.580)	-0.005 (0.232)	-0.015*** (0.000)
Size	4686.435*** (0.000)	13442.66*** (0.000)	9507.564*** (0.000)	774.658*** (0.000)	0.003*** (0.000)	0.003** (0.012)	0.003*** (0.002)	0.003*** (0.000)
Cashflow	26509.36*** (0.000)	5818.277 (0.225)	6831.279 (0.181)	25407.03*** (0.000)	0.935*** (0.000)	0.962*** (0.000)	0.956*** (0.000)	0.947*** (0.000)
Liquid	-105.383 (0.444)	-38.366 (0.760)	-14.463 (0.760)	30.542 (0,361)	0.001*** (0.000)	0.001** (0.04)	0.001*** (0.005)	0.001*** (0.000)
Leverage	-8782.663*** (0.000)	-5694.931** (0.032)	-7434.096*** (0.002)	915.643 (0.154)	-0.004*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)	-0.004*** (0.000)
_cons	-44748.39*** (0.000)	-161620.5*** (0.000)	-108287*** (0.000)	-10780.33*** (0.000)	-0.060*** (0.000)	-0.064*** (0.000)	-0.058*** (0.000)	-0.061*** (0.000)
N	1513	1513	1513	1391	1690	1690	1690	1560
R-sq	0.1720				0.972			
Prob > F		*** (0.000)				*** (0.000)		
Prob > Chi2			*** (0.000)				*** (0.000)	
AR(2)				0.128				0.952
Hansen test				0.143				0.127

(Source: Compiled by the author)

Hypothesis H_1, The relationship between Leverage and firm efficiency is inverse. The study did not find any statistically significant evidence of the impact of Leverage on Tobin's Q. Additionally, the inverse impact on ROA is very minimal. This result supports the M&M theory. The debt-to-asset ratio represents the proportion of debt to the total value of a company's assets. This ratio is commonly used to measure the level of a company's debt. In a perfect market environment, according to the M&M theory, this ratio does not affect the value of the firm.

Hypothesis H_2, Liquidity has a positive impact on firm efficiency. The study did not find any statistically significant evidence of the impact of Liquid on Tobin's Q. Additionally, the impact of Liquid on ROA is also very weak (coef = 0.004). This result is in line with the perspective of Gatsi et al. (2013). However, this finding stands in direct contrast to the findings of Durrah et al. (2016), Thuy et al. (2020), Thuy et al. (2015), and Linh & Nga (2022). When manufacturing firms own assets with high liquidity, it can raise investor concerns about investment efficiency, as easily tradable assets might cast doubt on long-term investment effectiveness. This reduction in investment capital in the company can lead to a decline in business efficiency.

Hypothesis H_3, Cashflow has a positive impact on firm efficiency. With a statistical significance level of 1%, Cashflow has a very strong impact on Tobin's Q (coef = 25407.03) and ROA (coef = 0.947). When companies hold a substantial amount of cash, it aligns better with the interests of the company owners. This profit stream is returned to the owners as dividends, increasing their income. Moreover, having a significant amount of free cash instills confidence that the company can meet debt obligations and enhances the company's borrowing capability. This finding is in line with the free cash flow hypothesis and is consistent with the research results of Brush et al. (2000) and Utami & Inanga (2011).

There exists an inverse relationship between Long-term Debt and firm efficiency. With a significance level of 1%, the debt structure has a relatively small inverse effect on the ROA of manufacturing firms (coef = -0.015). This result supports and is consistent with the research findings of Onaolapo and Kajola (2010), as well as Simerly and Li (2000). However, the study did not find statistically significant evidence of the impact of debt structure on Tobin's Q. This result aligns well with the M&M theory, which emphasizes that when a company chooses debt financing, such as using debt or equity, the value of the company remains unchanged. Recent research conducted in various countries suggests that the debt ratio appears to have a more cyclical nature compared to the risk-based equity ratio. Therefore, financial managers in companies should strive for an optimal level of adjustment while also noting that excessively high adjustment levels could significantly increase the risk of insolvency and financial costs. The findings indicate that companies with high financial leverage will face pressures on costs and the ability to optimize capital utilization. Hence, excessive use of debt can lead to reduced firm efficiency, aligning with the hypothesis on the debt ratio. The M&M theory has demonstrated, through counterexamples, that in a perfect environment, traditional financial methods such as increasing debt to reduce tax costs cannot provide a financial advantage to the firm.

There is a positive relationship between Size and firm efficiency. With a confidence level of 99%, there is statistically significant evidence indicating that Size has a very strong positive impact on Tobin's Q (Coef = 774.658). The research findings align well with and are consistent with the studies conducted by Onaolapo and Kajola (2010), Gatsi et al. (2013), Minnema & Andersson (2018), Owolabi & Obida (2012), Lazaridis & Tryfonidis (2006), Liargovas & Skandalis (2010), Toan (2016), Nguyen (2020), and Thanh (2022). When firm size is measured by the total assets of the company, a larger size indicates a higher total asset value, reflecting the strong financial capacity of the company. This allows the company to enhance product consumption and provide services to consumers. Conversely, size has a very small and insignificant impact on ROA.

4. CONCLUSIONS AND POLICY IMPLICATIONS

The results of testing the factors influencing the operational efficiency of manufacturing businesses show that the return on ROA is influenced by five factors in the study. The most influential factor on ROA is the company's cashflow. Although other factors have an impact, their effect is weaker. On the contrary, Tobin's Q is strongly influenced by both cashflow and size. Other factors were either weak or not found to be significant during the study period. A summary table of the research results is provided below.

Hypothesis	Model 1		Model 2	
	ROA	(+/-)	Tobin'Q	(+/-)
The relationship between Leverage and firm efficiency is inverse (H_1)	Accept	- (Weak)	Rejected	
Liquidity has a positive impact on firm efficiency (H_2)	Accept	+ (Weak)	Rejected	
Cashflow has a positive impact on firm efficiency (H_3)	Accept	+ (Strong)	Accept	+ (Strong)

The results of the descriptive statistical analysis of the research sample reveal that during the COVID-19 period (2020-2022), the proportion of manufacturing businesses reporting negative after-tax financial profit was 8.21%. This ratio is even lower than before the COVID-19 outbreak (9.13%). The research findings demonstrate the adaptability and resilience of Vietnamese businesses in challenging circumstances. Several positive factors may account for Vietnam's achievements, including

Adaptability: Businesses may have implemented adaptive measures and adjusted their business strategies to cope with difficult situations. This includes cost-cutting, enhancing operational efficiency, and finding ways to sustain revenue during challenging times.

Business strategy adjustments: Some businesses may have changed their business models, services, or products to meet new market demands in the context of the pandemic. This could lead to better profit retention.

Better risk management: Businesses may have implemented better risk management measures, such as entering into price-risk-reducing contracts or increasing inventory to ensure supply during challenging period.

Government support or economic stimulus package: Some businesses may have received financial support from the government or benefited from economic stimulus package during the pandemic**.**

However, in this study, the author only tested large-cap manufacturing enterprises listed on the stock exchange, small and medium enterprises or microenterprises were not covered by this study.

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THE INFLUENCE OF MACROECONOMIC FACTORS ON PRIVATE SECTOR INVESTMENT: EVIDENCE FROM VIETNAM

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Abstract: *This article analyzes the impact of macroeconomic factors on private sector investment in Vietnam during the period from 1996 to 2022 by applying an autoregressive distributed lagged (ARDL) model. Findings revealed that real GDP and credit to the private sector have a positive effect on the private sector in Vietnam. This demonstrates that higher GDP growth boosts confidence among private enterprises that they can afford to pay off loans and subsequently increase their investment demand. Additionally, transferring credit from the banking sector to the private sector is probably going to increase investment in that area. However, the cost of bringing money into the nation is increased by the real exchange rate. Private investment in Vietnam is discouraged by the country's high cost of production, which makes investments prohibitively expensive.*

Keywords: *private investment; private sector; private sector investment; private sector in Vietnam; ARDL.*

JEL codes: E22

1. INTRODUCTION

During the initial stages of the Doi Moi (1986) reform process, the government acknowledged the significance of restructuring the function of State-Owned Enterprises (SOEs) in order to diminish the prevalence of inefficient state production. This restructuring aimed to foster the advancement of the private sector, facilitate job generation, and stimulate economic growth. From as early as 1992, the primary emphasis of the initial reform endeavors was directed towards the equitization of state-owned enterprises (SOEs). So far, the private sector is an important contributor to Vietnam's economic growth. According to SBV (2022), the private economic sector now accounts for about 40% of GDP and attracts 85% of the labor force, contributing an increasingly important contribution to economic growth and restructuring. In Vietnam, private enterprises have surpassed the SOEs in terms of generating income for workers, and this gap is widening. The jobs created by private-sector enterprises have helped millions of workers move from lower-income jobs in agriculture to more productive jobs with higher wages. Vietnam has distinguished itself in the ranks of emerging market development, surging to middle-income status in just one generation, and cutting its poverty rate from 50 percent in 1990 to 2 percent in 2018. The country's robust and sustained economic growth was driven by open trade, sector liberalization, and an export-oriented growth model, in which the private sector played a leading role. With success comes confidence, and Vietnam set a goal of becoming a high-income country by 2045. With these results, thanks to the continued efforts of the Vietnamese government in the process of reform, the policy and legal environment for the private sector have been continuously improved.

Notwithstanding the commendable endeavors made thus far, the economy of Vietnam is confronted with constrained access to capital, subpar agricultural productivity, a deceleration in economic growth, elevated levels of inflation, and a substantial budget deficit. These factors

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collectively pose significant obstacles to the expansion of private sector investment, especially during the COVID-19 pandemic. Additionally, the growth rate of the private sector has tended to decrease in recent years because the quality of growth in the private sector is a serious problem.The private economy is mainly small and micro-scale, the level of technology, management, financial capacity, product quality and competitiveness are still low and lack of links with each other and other economic sectors. The capacity for international economic integration and competition is still limited, and the level of deep participation in regional and global value chains is still low. The paramount issue is that private enterprises in Vietnam are constantly in a shortage of capital to serve their business. Therefore, The Vietnamese government has implemented effective fiscal and monetary policies to support the positive growth of private enterprises.

In a nutshell, according to investment theory (Patnaik & Joshi, 1998), some elements that are thought of as shift factors in the investment function, such as liquidity constraints, demand conditions in the economy, public investment, the real exchange rate, macroeconomic uncertainties, and the cost of capital, can also have a significant impact on private investment by either stimulating or dampening it. Therefore, the goal of this study is to pinpoint the key factors that influence private sector investment in Vietnam.

2. LITERATURE REVIEW

Ghura and Goodwin (2000) use panel data from 1975-1992 to study private investment in Asia, Sub-Saharan Africa (SSA), and Latin America. Random effects estimation was preferred by econometric tests. The results, including pooled data from all 31 nations, confirm several empirical findings. Real GDP growth, government investment, financial intermediation, government credit reductions, and world interest rate drops boosted private investment in developing countries. Another intriguing finding is that educational improvement increases private investment. This study did not confirm prior studies' statistically significant negative impacts of foreign debt on private investment. The results for the complete sample of nations are not consistent across regions; real GDP growth enhances private investment in Asia and Latin America but not in the SSA. Additionally, government funding boosted private investment in SSA but not in Asia or Latin America. In Asia and SSA, private sector lending increased private investment, but not in Latin America. Additionally, government credit increases hurt private investment in SSA and Latin America. The negative consequences of external shocks were statistically significant exclusively in SSA, confirming that the region is vulnerable. Identical opinion, Ngoma et al., (2019) used panel data from 2000–2017 for 35 Sub-Saharan African (SSA) countries to analyze the macroeconomic determinants of private investment using pooled regression, fixed effects, and random effects models and the Panel Corrected Standard Error (PCSE) technique. Critical diagnostic tests showed that the data was stationary using unit root testing. More diagnostic tests showed heteroskedasticity, autocorrelation, and cross-sectional dependency in the fixed effects model. The discovered statistical issues were addressed using PCSE. In the SSA region, GDP, real interest rates, public investment, and inflation determined private investment. Similar, Bonga and Nyoni (2017) examined the causes of Zimbabwe's poor private investment over the previous 30 years. Their findings showed that GDP and public investment are Zimbabwe's biggest private investment drivers. The study suggested improving GDP, governmental investment, interest rate, and other macroeconomic factors to boost private sector investment.

Shijaku and Kalluci (2017) identify and evaluate the long-term determinants of bank credit to the private sector in Albania using a vector error correction mechanism (VECM). Bank credit can be adjusted to balance, according to estimates. The findings suggest lending enhances economic growth. Banking, financial intermediation, and financial liberalization would increase lending demand. Lower lending costs, less domestic government borrowing, and better bank credit would further encourage lending. The exchange rate also shows demand valuation and consumption smoothing effects. By used VECM, Abate (2016) investigated and analyzed factors affecting Ethiopian domestic private investment. They used annual data for VAR and VECM. They found that long-term governmental investment, real GDP, exchange rate, and credit have a positive impact on private investment. In the short term, exchange rates and inflation affected private investment positively and negatively. Thus, to enhance private sector performance, they suggested steps to increase real income and private investment. Basic infrastructure development, stable investment, macroeconomic and political stability, etc. Similarly, the study conducted by Onyeisi et al. (2018) investigates the impact of foreign remittance inflows on domestic loans in the private sector of Nigeria during the period from 1980 to 2015. The empirical analysis demonstrates that private sector domestic credit is influenced by several factors, namely international remittance inflows (IRIGWT), overseas development aid (ODAGNI), real GDP, inflation (INFL), and the exchange rate (EXR). The study employed co-integration and vector error correction techniques to estimate the models. The study found that the variable IRIGWT exhibited a statistically non-significant positive association with DCPS in the short-term. Conversely, the variable ODAGNI shown a statistically significant negative correlation with DCPS. Moreover, this study aims to investigate the impact of real gross domestic product (RGDP), exchange rate (EXR), and inflation (INF) on domestic loans to the private sector.

The macroeconomic factors influencing private investment in Nigeria were examined by Ayeni (2014), the ARDL (Autoregressive Distributed Lag) Cointegration technique was utilized in the study to examine whether there was a long-term link in Nigeria. The findings indicated that Nigeria's GDP, real interest rates, real exchange rates, inflation rate, and loans to the private sector have not been able to effectively contribute to or stimulate private investment since they all display indicators that are contradictory to expectations. However, the study recommended that in addition to enhancing the macroeconomic factors that encourage investment, the government should also foster a favorable political climate that encourages private sector investment. The ARDL co-integration method was used to examine a long-run equilibrium model of private investment between 1980 and 2019 in the Ayeni (2020)GIEPA, was formed to develop Free Zones in selected locations to enable investors to operate in a more macroeconomic friendly environment. Despite all efforts, the Gambia economy suffers from limited availability of foreign exchange, weak agricultural output, a slowdown in their major investment—tourism, high inflation, a huge fiscal deficit, and a huge domestic debt burden. This study identified the determinants of domestic private investment in the Gambia. The study employed the ARDL Co- integration method to analyze a long-run equilibrium model of private investment. Exchange rate, credit to private sector, external debts, Real Interest Rate, Real Exchange Rate, Inflation, among others were identified as exogenous variables. Findings show that high exchange rate increased the real cost of import especially capital goods thereby making investment very costly. Financing of huge debts also inhibited private investment in the Gambia. Aggregate Demand Condition, Real Interest Rate, Real Exchange Rate, Inflation all performed below expectation. Credit to the private sector has not contributed effectively to boost private investment in the Gambia due to insufficient credit. The study therefore suggests an exchange rate policy that will be favorable to reduce cost of imported capital goods. The Gambia should look inward for the supplying of raw materials locally or promote investment in the areas where the required raw materials are available locally as stated by the comparative advantage theory.”,”author”:[{“dropping-particle”:””,”family”:”Ayeni”,”given”:”Raphael Kolade”,”non-dropping-particle”:””,”parse-names”:false,”suffix”:””}],”container-title”:”Cogent Economics and Finance”,”id”:”ITEM-1”,”issue”:”1”,”issued”:{“date-parts”:[[“2020”]]},”publisher”:”Cogent”,”title”:”Determinants of private sector investment in a less developed country: a case of the Gambia”,”type”:”article-journal”,”volume”:”8”},”uris”:[“http://www.mendeley.com/documents/?uuid=5a15fe6f-125c-4a4a-b7d4-e52883b1f634”]}],”mendeley”:{“formattedCitation”:”(Ayeni, 2020 study on private sector investment in Gambia. A high exchange rate raised the real cost of imports, particularly capital goods, according to the findings, making investment highly expensive. The results demonstrate that a high exchange rate (REXR) raised the real cost of imports, particularly capital goods, making investment more expensive. EDT financing prevented the Gambia from attracting private investment. The real exchange rate (REXR), real interest rate (RINT), and inflation (INFR) are all below expectations. Due to a lack of credit, credit to the private sector (CRPS) has not significantly increased private investment (PINV) in the Gambia. As a result, the study recommends an exchange rate strategy that will help lower the price of imported capital goods. According to the comparative advantage theory, The Gambia should turn inward for the supply of raw resources domestically or encourage investment in the areas where the necessary raw materials are locally available. Besides, Verma (2007) examined investment’s endogenous effect. The study’s main goal was to conduct a unit root test to endogenously determine a time sense break. Long-term association was analyzed by ARDL (Autoregressive Distributed Lag) and short-term relationship using ECM. The study analyzed the association between each dependent variable and the other independent factors. GDP and GDP savings positively and significantly affect private investment. According to Sajid and Sarfraz (2008), they examined private investment and currency rate causality. Their study examined investment-exchange rate causality using cointegration and vector error correction. They found a long-term and short-term equilibrium link between private investment and exchange rate. Frimpong and Marbuah (2010) measured private investment determinants by time series econometric methods, coin-tegration, and error correction in an ARDL model. According to Frimpong and Marbuah (2010), the following factors have an immediate impact on private investment in Ghana: state investment, inflation, real interest rates, openness, real exchange rates, and constitutional law. They noted that real production, inflation, external debt, real interest rate, openness, and real exchange rate greatly affect private investment over time.

3. RESEARCH METHODOLOGY

According to Ayeni (2020), a relationship exists between total output, or revenue, and additional investment spending. In essence, this elucidates the rationale behind the tendency for a rise in national income to frequently provide a greater-than-proportional surge in investment expenditure. Moreover, the determination of investment in an economy is contingent upon the direction of change in economic activity rather than its absolute level. When there is a modification in the national income or output of an economy, it typically results in a corresponding alteration in investment. Based one the model of Ayeni (2020), author study GDP and five other explanatory variables affect private investment (PINV) in Vietnam. The data utilized in this study encompasses the time period from 1996 to 2022, as determined by the availability of relevant variables. The data included in this analysis were obtained from the World Bank Indicators during the year 2022. The model is clearly stated in the following manner:

$$PINV = \beta_0 + \beta_1 RGDP + \beta_2 CRPS + \beta_3 INFR + \beta_4 RIR + \beta_5 GNE + \beta_6 REER + e \quad (1)$$

Table 1. The definitions of variables

Variable	Description
lnPINV	Private Investment, lnPINV equal to the logarithm of private investment
lnCRPS	Credit to Private Sector proxy for liquidity constraints, lnCRPS equal to the logarithm of credit to private sector
lnGDP	Real Gross Domestic Product proxy for demand conditions in the economy, lnGDP equal to the logarithm of GDP
GNE	Government expenditure on investment proxy for Public investment, lnGNE equal to the logarithm of government expenditure on investment
EXR	Real Exchange Rate
INF	Rate of inflation (proxy for macroeconomic uncertainties/instability)
INT	Real Interest Rate (proxy for User Cost of Capital)

4. EMPIRICAL RESULTS AND DISCUSSION

The aim of the paper is to examine the relationship between microeconomic factors and private sector in Vietnam by employing a the ARDL model. The variables are presented in Table 1, and Descriptive statistics is given in Table 2. In order to achieve the research goal of the paper, there are employed all panel unit root tests available in EViews v. 12 for certain tests, as it is explained in the following section.

Table 2. The overview of descriptive statistics

	LNPINV	LNCRPS	LNGDP	LNGNE	LNEXR	INF	INT
Mean	24.15927	24.91945	25.36058	23.26583	9.782744	0.057722	0.107919
Median	24.30382	25.41953	25.38684	23.68878	9.744790	0.040846	0.100690
Maximum	25.47672	26.97063	26.73650	24.62740	10.05497	0.231154	0.201000
Minimum	22.59346	22.25010	23.92835	21.35973	9.308608	-0.017103	0.069600
Std. Dev.	1.010728	1.532390	0.990582	1.052842	0.224844	0.052412	0.033691
Skewness	-0.240006	-0.386702	-0.121742	-0.483070	-0.367572	1.762743	0.995508
Kurtosis	1.542751	1.774594	1.445068	1.818529	2.029347	6.593130	3.440145
Jarque-Bera	2.648235	2.362247	2.786735	2.620463	1.667929	28.50708	4.677606
Probability	0.266038	0.306934	0.248238	0.269758	0.434324	0.000001	0.096443
Observations	27	27	27	27	27	27	27

Before proceeding with estimation, it's also prudent to study the orders of integration of our series and ARDL estimation is not valid in the presence of I(2) variables, but does accommodate a mixture of I(0) and I(1) variables. This article use the Im, Pesaran, and Shin (IPS) test with a constant and trend on series in levels. Table 3 summarize these tests. Table 3 showed that INT, INF as integrated of order 0, whereas the remaining variables are identified as integrated of order 1. And we employ the ARDL and Bound Test to examine the model's long-term equilibrium.

Table 3. ADF test results

Series	Test for unit root in level			Test for unit root in 1st difference	
	t-Stat	Prob.		t-Stat	Prob.
LNPINV	-1.2789	0.6236		-3.8439	0.0076
LNCRPS	-2.3243	0.1723		-3.2559	0.0284
LNGDP	-0.4133	0.8928		-3.5591	0.0145
LNGNE	-1.913	0.3215		-5.4322	0.0002
LNEXR	-0.9805	0.7433		-4.6014	0.0013
INF	-3.0848	0.0403		-6.3167	0.0000
INT	-3.2682	0.0272		-6.2867	0.0000

The method starts by estimating the model with ARDL and then checking for cointegration between the variables. Table 4 presents the Bound Cointegration test's findings. Based on the findings presented in Table 4, it can be observed that the F-statistic, evaluated at a 5% threshold of significance, leads to the rejection of the joint null hypothesis pertaining to the lagged level variables. Specifically, this hypothesis concerns the coefficients' variable addition test, which posits that the coefficients are equal to zero. Moreover, the null hypothesis, which posits the absence of cointegration or a long-run link in the private investment model, is rejected based on the observed F-statistic value of 12.04, surpassing the critical value threshold set at the 1% significance level. showing the existence of a long-run equilibrium link in the model. Tables 5 and 6, respectively, give the long-run equation and the short-run dynamics or cointegrating equation.

Table 4. ARDL Bound Cointegration Test

Null Hypothesis: No levels relationship		
Test Statistic	Value	K
F-statistic	12.04	6
Critical Value Bounds		
Significance	I(0) Bound	I(1) Bound
10%	2.334	3.515
5%	2.794	4.148
1%	3.976	5.691

According to Table 7 results of the short-run model of private investment in the Vietnam, the coefficient CointEq(-1) is the auto-adjustable speed of ECM(-1) = -0.873847 and it's statistically significant at 1%. It is understandable that once there is some kind of change from macro variables or short-term fluctuations that will cause private sector investment to deviate from the long-term balance sheet, but in the next period (in this study is a year) then the value of these impacts tends to return to balance with a rate of adjustment of -87.4%.

Table 5. Results of the ARDL model of private investment in the Vietnam

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNPINV(-1)	-0.262801	0.299852	-0.876436	0.4145
LNPINV(-2)	0.288954	0.232221	1.244308	0.2598
LNCRPS	0.253402	0.163374	1.551059	0.1719

LNCRPS(-1)	0.346888	0.133444	2.599495	0.0407
LNCRPS(-2)	0.340678	0.126978	2.682967	0.0364
LNGNE	-0.567896	0.155903	-3.642628	0.0108
LNGNE(-1)	-0.082901	0.090500	-0.916030	0.3950
LNGNE(-2)	0.491948	0.150323	3.272605	0.0170
LNGDP	1.519888	0.378866	4.011674	0.0070
LNGDP(-1)	1.161629	0.269638	4.308107	0.0050
LNEXR	-2.088921	0.996514	-2.096229	0.0809
LNEXR(-1)	2.062356	0.703262	2.932558	0.0262
INT	6.590895	1.418163	4.647489	0.1035
INT(-1)	-8.896969	1.448007	-6.144285	0.1009
INT(-2)	3.154940	1.329673	2.372720	0.1553
INF	-0.966797	0.493515	-1.959001	0.0978
INF(-1)	-2.350770	0.501312	4.689236	0.0034
INF(-2)	0.704785	0.510933	1.379407	0.2170
C	13.41725	3.577542	3.750410	0.0095
R-squared	0.899859	Ramsey RESET Test		1.637607
Adjusted R-squared	0.899435	Breusch-Godfrey		4.109784
S.E. of regression	0.022542	Heteroskedasticity Test		1.788503
Sum squared resid	0.003049			
Log likelihood	77.17433			
F-statistic	2360.079			
Prob(F-statistic)	0.000000			

Table 6. Results of the Long-Run model of private investment in the Vietnam

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNCRPS	0.966237	0.292928	3.298547	0.0164
LNGNE	-0.163114	0.136811	-1.192259	0.2782
LNGDP	0.367880	0.405844	0.906457	0.3996
LNEXR	-0.027278	0.478450	-0.057014	0.9564
INT	0.871662	1.400073	0.622584	0.5565
INF	-2.144852	0.881110	2.434261	0.0509

Table 7. Results of the Short-Run model of private investment in the Vietnam

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNPINV(-1))	-0.288954	0.082055	-3.521461	0.0125
D(LNCRPS)	0.253402	0.163374	1.551059	0.1719
D(LNGNE)	-0.567896	0.155903	-3.642628	0.0108
D(LNGDP)	1.519888	0.378866	4.011674	0.0070
D(LNEXR)	-2.088921	0.996514	-2.096229	0.0809
D(INT)	6.590895	1.418163	4.647489	0.1035

D(INF)	-0.966796	0.493515	-1.959001	0.0978
CointEq (-1)	-0.873847	0.067406	-14.44741	0.0000

The results show the short-term relationship (Table 7) and the long-term relationship (Table 6) between private investment and macro-factors. Specifically, CRPS has no effect on PINV in the short term (0.253402), but CRPS has a positive effect on PINV in the long term (0.966237***). Private sector investment is anticipated to increase as a result of a rise in bank lending to the sector. This result identified that the credit given to the private sector by banks in Vietnam played an important role in promoting firms in the country because the financial market hasn't really developed. Besides, real GDP has a positive and significant short-term effect but no effect on private investment in the long term. This demonstrates that higher GDP growth boosts confidence among private enterprises that they can afford to pay off loans and subsequently increase their investment demand. In addition, the results in Table 6 showed that there is no impact of public investment (GNE) on private investment in the long term. Meanwhile, in the short term, GNE has a negative effect on PINV; this result shows public investment crowding out private investment in Vietnam.

The results showed that the real exchange rate exerted negative effects on private investment in the Vietnam economy in the short term. The results of this study are consistent with the Ayeni (2020), the real exchange rate has the potential to have a positive or negative impact on the volume of private sector investment. negatively since it is a factor in determining the actual cost of imports. Real costs for importing capital goods tend to rise when a currency is devalued, which lowers private sector profitability and causes a decline in investment opportunities. In contrast, real currency depreciation can boost investment in industries that produce items for the global market by boosting competitiveness and export volumes. As a result, the real exchange rate has a negative impact on private investment in Vietnam by raising the cost of imported capital goods, which lowers profitability and deters private investment. Furthermore, moderate inflation will help private enterprises alleviate the burden of input costs, supporting economic development. However, the exchange rate increases the real cost of imports, especially capital goods, thereby making investment in private companies very costly.

In this study, the Breusch-Godfrey Serial Correlation Lagrange Multiplier (LM) test is employed to examine the presence of serial correlation. The statistical software EViews-12 is utilized for this purpose. The null hypothesis cannot be rejected as the p-value, as indicated in Table 5, exceeds the significance level of 5%. This implies that the ARDL regression model does not exhibit any serial correlation. Furthermore, it elucidates that the outcomes derived using ARDL Regression are not misleading or devoid of meaning. Additionally, the Breusch-Pagan-Godfrey heteroskedasticity tests have been employed to detect heteroskedasticity in the ARDL regression model. According to the findings presented in Table 5, it was seen that the p-value associated with the R square is greater than 5%. In accordance with the decision rule, this indicates that the null hypothesis cannot be rejected. Moreover, the findings from the Wald test indicate the long-term influence of macroeconomic factors on the private sector in Vietnam. The Regression Specification Error Test (RESET) is applied for the ARDL regression model is appropriately or not. At a 5% significance level, it is impossible to reject the null hypothesis based on Table 5. Consequently, it is possible to conclude that the ARDL regression model is devoid of a specification error issue.. A recursive estimate was used to test structural stability in model ARDL. Two tests are used, the cumulative sum and cumulative sum of squares tests determine the ARDL model's structural integrity. Figure 1 shows the structural stability test results from EViews 12. If the Cumulative Sum (CUSUM) line lies between two critical lines at 5% significance, the result cannot reject the null hypothesis. Otherwise, the null hypothesis would be accepted. We cannot reject the null hypothesis, implying that the ARDL model is structurally stable during the research period.

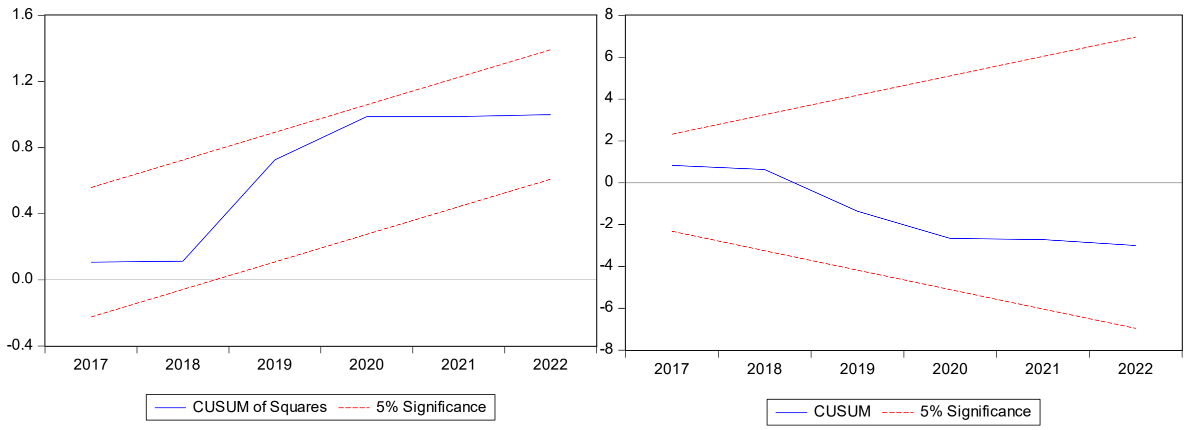

Figure 1. Structural Stability Test

5. CONCLUSIONS

This article uses the ARDL model to analyze microeconomic indicators affecting the private sector in Vietnam during the period from 1996 to 2022. The results showed that CRPS has a positive effect on PINV in the long term, GDP has a positive effect on private investment in the long term, public investment (GNE) is crowding out private investment, real exchange rate rates exert negative effects on private investment in the short term, and inflation raises input costs, therefore affecting private investment. The results showed the influence of macroeconomic factors on private sector investment in Vietnam.

The Fifth Central Conference, session XII, adopted a resolution on private economic development becoming an important driving force of the socialist-oriented market economy. The resolution is a new step forward, aimed at boosting the development of the private sector and the economy as a whole. Simultaneously, it demonstrates the consistent view of the party and the state on the private economy. The content of the resolution, if implemented effectively, will encourage the development of private economic forces and enable innovation as the basis for the release of productivity and creativity and the comprehensive promotion of the private economic role in all stages of the production value chain. Simultaneously, creating the strength and motivation for deeper integration and exploiting the economic components with better potential is a prerequisite for the adoption of technology, especially high-technology, into the fourth industrial revolution. For Vietnam to achieve feats as determined by the Fifth Central Conference and to facilitate economic growth, particularly through private investment, it is imperative to prioritize the management and monitoring of key macroeconomic indicators. Findings from this study identified that the credit given to the private sector by banks in Vietnam played an important role in promoting firms in the country because the financial market hasn't really developed. Therefore, the upgrading of financial markets will enable private enterprises to easily access foreign capital at a low cost, thus developing a sustainable private economy. In the meanwhile, moderate inflation will help private enterprises alleviate the burden of input costs, supporting economic development. The exchange rate, however, makes investing in private enterprises exceedingly expensive by raising the real cost of imports, particularly capital goods. It is necessary to implement an exchange rate policy that will lower the price of imported capital goods. As an alternative, Vietnam can turn to its own resources to supply raw materials or encourage investment in regions where the necessary raw materials are already locally accessible.

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EVALUATING ETF FUNDS PERFORMANCE IN VIETNAM STOCK MARKET USING SHARPE RATIO AND ECONOMIC PERFORMANCE MEASURE

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Abstract: The performance of ETF funds play an important role among capital stock market in Viet Nam. If those ETF funds are managed effectively, then pushing thousands of dollars investing into Viet Nam capital stock market. Using traditional and modern methodology as Sharpe ratio and Economic Performance measure respectively to eveluate ETF funds performance. The reason of using traditional method compared with modern method is because of without the normality assumption. Also, traditional risk measure methodology is based on first and second moment as mean and standard deviation; meanwhile, modern risk measure method examines third and fourth moment as well, in case of without normality assumption. Therefore, study the performance of domestic and foreign ETF funds in Viet Nam stock market to evaluate the effectiveness of ETF funds performance accurately by using modern method compared with traditional methods. This is a necessary factor for the Vietnam stock market to be upgraded to emerging market and attract investment capital.

Keywords: Mean-variance, AS index, Sharpe ratio, EPM, ETF funds, Performance

1. INTRODUCTION

Data from the Viet Nam State Securities Commission (SSC) shows that, as of November 2022, the SSC has licensed the establishment of 23 new investment funds (with a total charter capital mobilized of nearly VND 1,800 billion) and licensed public offerings for 4 investment funds, bringing the total number of licensed funds in Vietnam operating in the market to 87 funds, including 48 open-ended funds, 11 ETF funds, 01 real estate fund, 02 closed funds and 25 member funds. The total net asset value of securities investment funds as of October 2022 reached more than 73.4 trillion VND.

By the end of 2022, there are 44 fund management companies in operation with the total value of assets under management at the most recent time (November 2022) estimated at 546 trillion VND, down 9% compared to the previous year as 2021. However, the business activities of fund management companies are still maintained normally and profitable, many companies have mobilized to establish new securities investment funds, thereby contributing to stabilize and develop a healthy stock market with the leading role of institutional investors (SEC, 2023).

To survive and develop sustainably, to lead and attract individual investors to exist in the Viet Nam stock market, investment funds must demonstrate their management effectiveness. The total capital flowing into the stock market not only keeps the stock market stability, but is also the main factor to help Vietnam's stock market being upgraded (OECD, 2022).

To evaluate the performance of domestic and foreign ETF funds existing in Viet Nam stock market, this research focus on traditional method as Sharpe ratio and modern method as Ecomonic Performance measure as well.

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Based on Markowitz's (1952) portfolio theory, Sharpe (1964), Lintner (1965) and Mossin (1966) develop the capital asset pricing model (CAPM), in which variance is used for measuring total risk, and derive the Beta for measuring systematic risk. Afterall, standard deviation is used by Sharpe ratio to evaluate the performance of an investing portfolio. However, without the normality assumption, they are imperfect risk measures because they do not satisfy the monotonicity with respect to FSD (First-order stochastic dominance) and SSD (Second-order stochastic dominance). Thus, the systematic risk measure, Beta, derived from the mean-variance capital asset pricing model is questionable.

In recent literature, the economic index of riskiness, proposed by Aumann and Serrano (2008), (hereafter, AS index), is often used as a substitute for standard deviation in risk measurement. Unlike standard deviation, the AS index is monotonic to FSD and SSD. It also satisfies the duality axiom which asserts that people who are less risk averse accept riskier gambles.

In applying the AS index, Homm and Pigorsch (2012) constructed an economic performance measure (EPM), which generalizes the Sharpe ratio by replacing standard deviation. In studying the hedge with futures, Chen et al. (2014) proposed the optimal hedge ratio that minimizes the AS index instead of variance. Furthermore, Chen et al (2017) derive some new capital asset pricing models under some indexes of riskiness including the AS index.

The rest of this paper is organized as follows: In Section 2, previous studies related to risk measure are mentioned in the literature. Section 3 presents research methodology including AS index and EPM methodology which are applied for evaluating all ETF funds performance. Then, the result and discussion between them are compared in section 4. The final section will conclude.

2. LITERATURE REVIEW

Mean-variance strategy first introduced by Markowitz (1952), who defined the optimal rule for allocating wealth across risky asset and investors care only about mean and variance of portfolio's return in this setting. After that, many scholars have developed portfolio selection models with the same purpose to Markowitz in the equity context. Specifically, capitalization-weighted or value-weighted indexes is proposed for equity evaluation, defined as risk-based or smart-beta strategies. Besides that, other smart-beta strategies have developed as equally weighted (EW), global minimum variance (GMV), equal risk contribution (ERC) and maximum diversified (MD). Hitaj & Zambruno (2016)global minimum variance, equal risk contribution and maximum diversified ratio argued that those smart-beta strategies are work well in the equity context which is just one type of investment, and investors wonder know how these risk-based strategies implement under different types of investment instrument. An important investment vehicle ETF funds which combine characteristics of an open-end mutual fund and a stock. Most of ETFs have really low expense ratios and making them cost-effective way to diversify a portfolio (La et al., 2018). Therefore, the objective of this study is to analyze how these smart-beta strategies perform in case of ETF fund portfolio in Viet Nam capital stock market.

Traditionally, first and second-moment is used to measure risk and it is not suitable for different distributions as well as investment vehicles. According to the study of Martellini & Ziemann (2010) and Martellini, & Zambruno (2012) have argued that using two-moment portfolio allocation is not better than accounting third and fourth-moment portfolio allocation together. The study of Aumann and Serrano (2008) has defined the economic index of riskiness for a risky asset as the reciprocal of the positive risk aversion parameter of an individual with constant absolute risk aversion (CARA) who is indifferent between taking and not taking the risky asset. Also, all four-moment are accounted in this strategy.

The ordinary Sharpe ratio was introduced by Sharpe (1966) and widely used by practitioners. It is the ratio between average excess return and risk, where risk is measured as standard deviation of return. Since, there are dissimilar distributions following normality and non-normality. Therefore, using unsuitable methodology for each type of distribution convey incorrect valuation. Using Sharpe ratio as performance measure applied for different distributions are a serious issue. Sharpe ratio was useful for performance measure under normal distribution; however, using Sharpe ratio probably cause issues under non-normal distribution or under loss distribution. For instance, the Sharpe ratio result in wrong rankings in the Sharpe ratio paradox (Hodges, 1998) and the cases of manipulated Sharpe ratios (Goetzmann et al., 2002).

In the study of (Chen et al., 2019) related to modified Sharpe ratio, they introduce Modified or Instantaneous Sharpe ratio and compared with Ordinary Sharpe ratio which is proposed by Sharpe (1966). Using instantaneous Sharpe ratio as performance valuation, a portfolio with higher instantaneous Sharpe ratio will generate in higher expected utility for investors, since instantaneous Sharpe ratio equals the original Sharpe ratio plus half of the volatility of the fund. Similarly, if two portfolios have the same valuation of original Sharpe ratio, then the one with the higher volatility will rank higher according to the modified Sharpe ratio and this is true under dynamic portfolio theory (Chen et al., 2019). As a result, Chen et al. (2019) argued that using instantaneous Sharpe ratio as performance measure to compare two portfolio return, the higher volatility will result the higher expected utilities.

Importantly, Li (2010) has argued that expected utilities is regarding to volatility and based on market trend. Positive expected utilities with high volatility since uptrend market, and negative effect with high volatility since downtrend market.

Specifically, performance measure of low volatility high dividend index is studied in this thesis. If expected result shows that performance measure of low volatility high dividend index is higher than benchmark, the result is consistent with previous study.

3. RESEARCH METHODOLOGY

People do not always make decision related to uncertainty situation if they wonder maximizing expected utility of final assets. Therefore, expected utility plays as an important key for guide to behavior (Bell, 1982). As a result, Aumann and Serrano (2008) have proposed the economic index of riskiness, the AS index, which is axiomatically derived from the theory of decision making under risk. The two key axioms of this index are duality and positive homogeneity. The duality requires the risk index that reflects how less risk-averse individuals accept riskier assets. Thus, it satisfies the above monotonicity. Aumann and Serrano (2008) defined the economic index of riskiness for a risky asset as the reciprocal of the positive risk aversion parameter of an individual with constant absolute risk aversion (CARA) who is indifferent between taking and not taking the risky asset. Under their setup, the AS index must satisfy the following equation:

$$EU(W_0 + S_t - S_0) = U(W_0)$$

Where U is the utility function, is the initial wealth, is the price of the risky asset at time t. Assuming no cash dividend, is the absolute return of holding the asset for the time interval.

Aumann and Serrano (2008) constructed the index of riskiness by using an exponential utility function. Thus, the AS index of the risky asset, AS (S_t) is defined implicitly as follows:

$$Ee^{-(S_t - S_0)/AS(S_t)} = 1 \quad (1)$$

They proved that the AS (S_t) is a unique positive number, and any index satisfying the two axioms is a positive multiple of AS (S_t). Furthermore, they provided a closed-form solution of the AS index under normality. For other distributions, numerical methods are often used for computing the AS index.

Under normal distribution, the economic index of riskiness is equal to $\frac{\sigma^2}{2\mu}$. Constructing initial value of AS index, *AS*(S_0), to solve the equation (1) achieving the AS index:

$$AS() = \frac{3 * (kt - 3) - 4 * \mu * sw^2 - 6 * \sigma * sw + 9 * \sigma^2 / \mu}{18}$$

Where r_0 total return index, kt is kurtosis, sw is skewness, μ and σ are the mean and volatility parameters.

Auman and Serrano (2008) proves that any two indexes are positive multiples of each other since those index are satisfied those two axioms. By using exponential utility function, Aumann and Serrano (2008) proposed the index of riskiness for risky asset, AS (r_t).

The authors proved that the AS () is a unique positive number, and any index satisfied the two axioms is a positive multiple of AS (). In addition, they have developed a closed-form solution of the AS index under normality. Since, there are existing distinct distributions, so it uses numerical methods for computing the AS index (Homm & Pigorsch, 2012)variance and higher moments of the return distribution. It is equivalent to the Sharpe ratio if returns are normally distributed. Moreover, the two performance measures are asymptotically equivalent as the underlying distributions converge to the normal distribution. We suggest a parametric and a non-parametric estimator for the new performance measure and provide an empirical illustration using mutual funds and hedge funds data. Homm & Pigorsch, 2012.

$$EU\left(W_0\left(\frac{S_t}{S_0}\right)\right) = U(W_0)$$

The concept of economic index of riskiness, AS index, satisfy monotonicity, replacing for the use of standard deviation in risk measurement, since monotonicity violation by standard deviation. AS index is related to the concept of risk aversion, it allows decision maker to accept which of two investments are risker without considering specific function or preference order (Homm & Pigorsch, 2012)variance and higher moments of the return distribution. It is equivalent to the Sharpe ratio if returns are normally distributed. Moreover, the two performance measures are asymptotically equivalent as the underlying distributions converge to the normal distribution. We suggest a parametric and a non-parametric estimator for the new performance measure and provide an empirical illustration using mutual funds and hedge funds data. (Homm & Pigorsch, 2012. AS index generate the result of gamble properties in a single number of riskiness that make easier for comparison between portfolio (Homm & Pigorsch, 2012)variance and higher moments of the return distribution. It is equivalent to the Sharpe ratio if returns are normally distributed. Moreover, the two performance measures are asymptotically equivalent as the underlying distributions converge to the normal distribution. We suggest a parametric and a non-parametric estimator for the new performance measure and provide an empirical illustration using mutual funds and hedge funds data. (Homm & Pigorsch, 2012. To deal with the non-normal distribution, an economic performance measure (EPM) which is applied for performance measure, is developed by Homm and Pigorsch (2012). Instead of using standard deviation like Sharpe ratio, EPM divides the mean excess returns by AS index.

Under this above setup, the investment risk is a kind of additive risk. However, if the individual places the initial wealth in the risky asset, then the risk becomes a multiplicative risk. For a multiplicative risk, like Aumann and Serrano's approach (2008), Schreiber (2014) defined an economic index of relative riskiness for a risky asset as the reciprocal of the positive risk aversion parameter of an individual with constant relative risk aversion (CRRA) who is indifferent between taking and not taking the risky asset. Under his setup, the index of relative riskiness must satisfy the following equation:

$$EU\left(W_0\left(\frac{S_t}{S_0}\right)\right) = U(W_0)$$

The concept of first-order and second stochastic dominance are important and this property is not held by most other performance valuation. The advantage of using EPM is including the positive property of monotonicity with respect to the first-order (FSD) and second-order stochastic dominance (SSD). This property conveys the meaning that the mean is monotone with respect to stochastic dominance.

For example, assume there are 2 portfolios. X & Y, and excess return of X is , excess return of Y is .

If r^X FSD r^Y or r^X SSD r^Y then AS $r^X) <$ AS(r^Y) and E(r^X) ≥ E(r^Y)) and therefore, EPM (r^X) > EPM (r^Y)

The EPM generalizes the Sharpe measure by replacing the standard deviation with the AS index. Under the normality, the EPM is equal to twice of the Sharpe ratio squared. Thus, they produce the same performance rankings. However, they may rank investment performance differently if the investment return is non-normal. In Homm and Pigorsch (2012), EPM is defined as:

$$\text{EPM} = E(\tilde{r})/\ \text{AS}(\tilde{r}))$$

Where E($(\tilde{r})$) is the expected excess return of an investment portfolio, and AS $(\tilde{r})$ is the AS index of the random excess return.

4. THE EMPIRICAL RESULTS AND DISCUSSION

ETF funds including domestic and foreign funds are taking into exaime to evaluate the performance. We collect all existing ETF funds in Viet Nam stock market and its components as total return index monthly data from Datastream from January 2016 to December 2022. Some of ETF funds are closed and do not have complete data in the examined period, then are excluded. Based on the total return indexes, we calculate the log returns, and get 84 monthly returns for the index and each of its components. From Datastream, we employ the secondary market middle rate of 3-month Treasury bills as a risk-free rate. Thus, we can get the excess return for the index and the component stocks.

Table 1: Pearson correlation

Beta	MV	AS
MV	1	0.9973
AS	0.9973	1

Table 2: Kendall rank correlation

Beta	MV	AS
MV	1	0.9487
AS	0.9487	1

Peason correlation is satisfactory for testing a null hypothesis of independence between two variables but it is difficult to interpret when the null hypothesis is rejected. Meanwhile, Kendall's rank correlation is a nonparametric measure of rank correlation and it improves upon this by reflecting the strength of the dependence between the variables being compared.

The 2 different Betas are quite close to each other based on the correlation coefficients reported in Table 1 and 2. The correlations between two beta are 0.99 and 0.94 for Pearson correlation and Kendall rank correlation, respectively. Thus, it seems that the new risk measure as AS beta does not produce very different systematic risk measurement.

Table 3: four-moments of 18 component ETF funds in Viet Nam stock market

ETF FUNDS	mean	std	skewness	kurtosis	max	min
FOREIGN ETF FUNDS						
FUBON FTSE VIETNAM ETF	0.0221	0.1369	-1.6759	13.3500	0.3750	-0.9616
VANECK VIETNAM ETF	0.0081	0.0909	-0.2901	9.6908	0.5201	-0.4287
XTRACKERS FTSE VIETNAM SWAP ETF	0.0080	0.0883	-0.9666	6.3926	0.2457	-0.4576
ISHARES MSCI FRONTIER AND SELECT EM ETF	0.0101	0.0965	-0.2172	5.3836	0.3335	-0.3779
PREMIA MSCI VIETNAM ETF	0.0071	0.1099	-0.6404	5.7055	0.3948	-0.4865
ASIAN GROWTH CUBS ETF	0.0079	0.0631	-0.1729	4.0019	0.2044	-0.2278
DOMESTIC ETF FUNDS						
VFMVN DIAMOND ETF	0.0042	0.0633	-0.2458	4.7146	0.2329	-0.1984
VFM VN30 ETF	0.0070	0.0534	-0.0607	4.0564	0.2048	-0.1890
SSIAM VNFIN LEAD ETF	0.0031	0.0822	-0.6020	6.1760	0.2913	-0.3942
MAFM VN30 ETF	0.0122	0.0777	-0.2058	3.2533	0.2169	-0.2202
KIM GROWTH VN30 ETF	0.0069	0.0758	0.2332	4.4321	0.2940	-0.2089
SIAM VNX50 ETF	0.0058	0.1112	-0.9816	7.0387	0.2979	-0.6112
VINA CAPITAL VN100 ETF	0.0089	0.0503	-0.3681	4.1694	0.1420	-0.1772
SSIAM VN30 ETF	0.0073	0.1021	-0.6521	5.2651	0.3354	-0.4443
KIM GROWTH VNFINSELECT ETF	0.0098	0.0635	-0.4246	4.4117	0.2086	-0.2622
MAFM VNDIAMOND	0.0042	0.0761	-0.4543	4.0787	0.2158	-0.2905
VFM VNMIDCAP ETF	0.0100	0.0907	0.3507	4.1513	0.3633	-0.2666
IPAAM VN100 ETF	0.0090	0.0869	-1.1196	9.3524	0.3556	-0.5068

Table 3 lists the descriptive statistics of the index and its 18 component ETF funds returns. They include the first four central moments, the maximum, and the minimum of the 18 log return time series. 16 out of these series exhibit negative skewness, and all indicate a heavy tail with the kurtosis more than 3. Thus, the return series has a similar stylized fact in the financial literature.

The standard deviation, is quite large for all indices during examined period and the mean monthly returns of all ETF funds are positive. In general, all indices are showing higher negative skewness and higher positive kurtosis, indicating a leptokurtic distribution of returns which is indicates that a distribution of return has fatter tails than a normal distribution, i.e., it indicates a higher probability of very high and very low returns would be expected than the normal case. This departure from normality means that higher moments of the return distribution are necessary to describe portfolio behavior. When the skewness and kurtosis are significant, if we look at only the mean and variance under the normality assumption for the return distribution, we may underestimate the risk and this leads to obtain an inefficient portfolio (Gülder et al. 2011). Thus the mean-variance model proposed by Markowitz is inadequate for optimal portfolio selection problem and higher moments can not be neglected (Gülder et al. 2011). Some indice as MAFM VN30 ETF show normality distribution, but, at the same time, all other indices in the same period show an increased standard deviation, high kurtorsis and low skewness.

Table 4: Mean-Variance Beta, AS Beta, Sharpe ratio and EPM of all ETF Funds

ETF FUNDS	beta	AS Beta	Sharpe ratio	EPM	t-stat (one-tail)	Sharpe ratio p-value
FOREIGN ETF FUNDS						
FUBON FTSE VIETNAM ETF	1.0559	1.0223	0.01402	0.00008	-0.67938	0.7514
VANECK VIETNAM ETF	1.5273	1.5773	0.03158	0.00204	-0.5238	0.6591
XTRACKERS FTSE VIETNAM SWAP ETF	1.2760	1.3104	0.0421	0.004	-0.4193	0.8004
ISHARES MSCI FRONTIER AND SELECT EM ETF	1.5305	1.5245	0.0398	0.0018	-0.3589	0.7945
PREMIA MSCI VIETNAM ETF	1.3625	1.3660	0.0281	0.00304	-0.8138	0.7852
ASIAN GROWTH CUBS ETF	0.8212	0.8113	0.0348	0.00419	-0.7983	0.7963
DOMESTIC ETF FUNDS						
VFMVN DIAMOND ETF	0.6982	0.7038	0.01012	0.0012	-0.8938	0.1934
VFM VN30 ETF	0.6705	0.6589	0.02851	0.0032	-0.6238	0.2482
SSIAM VNFIN LEAD ETF	1.2782	1.2978	0.03561	0.0039	-0.5482	0.3528
MAFM VN30 ETF	1.0487	1.0263	0.03548	0.0028	-0.4983	0.4681
KIM GROWTH VN30 ETF	1.0171	0.9814	0.02891	0.00604	-0.5108	0.8705
SIAM VNX50 ETF	1.4026	1.3900	0.03158	0.00059	-0.6913	0.8809
VINA CAPITAL VN100 ETF	0.5713	0.5875	0.01062	0.00048	-0.7782	0.7906
SSIAM VN30 ETF	1.5903	1.6130	0.03158	0.00204	-0.5238	0.6691
KIM GROWTH VNFINSELECT ETF	0.6945	0.7087	0.0421	0.004	-0.4193	0.6854
MAFM VNDIAMOND	0.7173	0.7174	0.0398	0.0018	-0.3589	0.6605
VFM VNMIDCAP ETF	1.0537	1.0672	0.0281	0.00304	-0.8138	0.8704

Table 4 represent value of Mean-Variance Beta, AS Beta, Sharpe ratio and EPM of all ETF Funds examined in this study. The MV beta and AS index measure do not create very different rankings in term of systematic risk. MV beta accounts only first and second moment; meanwhile AS beta accounts all four moments. Most of the value of AS beta value of all ETF funds are higher than MV Beta value, meaning that the risk in ETF Funds performance is actually higher than accounting in cased of normality assumption.

The value Sharpe ratio and EPM method show not difference between both methods. The value of Sharpe ratio of all indices show overperformance among all ETF funds during examined period. However, none of those performance are statistical siginificance. Meanwhile, the value of EPM performance measure, show less effectiveness than Sharpe ratio; meaning the performance of all exaimed ETF funds perform not effectiveness. Reason explained for the measure compared between two methods above could be the reason of the capital stock market before and after Covid19 period. All mutual funds get lost since Covid19 hit the world. In the research related to ETF funds in Viet Nam stock market, show that first eight months of 2021, Việt Nam's stock market witnessed the largest value of foreign investors net selling. As of August 30, foreign investors net sold more than US$1.5 billion. Previously in 2020, they net sold about $1 billion. When foreign money flows out of the stock market, it may have moved to other investment channels, such as the bond channel, which is attracting capital flows quite well (Minh, 2021).

Since, the performance of ETF funds fluctuated, and not perform well, it directly not only affects investors' behaviour of putting their budget into stock market, but also it indirectly affect the rating of stock market. In the research of Guercio and Tkac (2008) proves that econnomically and statistically significant positive abnormal flow following rating upgrades, and negative abnormal flow following rating downgrades. As well, they found that investor punishment of performance declines, some of which is evident immediately in the month of the rating change (Guercio & Tkac, 2008).

5. CONCLUSION

The variance or standard deviation is often used as a total risk measure of portfolio returns. However, without the normality assumption, they are imperfect risk measures because they do not satisfy the monotonicity with respect to FSD and SSD. Thus, the systematic risk measure, Beta, derived from the mean-variance capital asset pricing model is replaced by AS index is a good choice for evaluating new risk measure. Moreover, the performance measure by EPM as modern method get higher advantages than Sharpe ratio in case of non-normality assumption. This is important factor hint for investors get knowledge putting their money into right ETF funds, protect themselves. Overall, pushing and maintaining Viet Nam stock market stability and chance to be upgraded into emerging market.

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SUSTAINABLE DEVELOPMENT OF THE PRIVATE ECONOMIC IN VIETNAM

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Abstract: The private economy is increasingly taking up a large proportion and playing an important role in the country's economic development. The socialist-oriented market economic model initiated and led by the Party in our country is increasingly perfected, whereby the private economy is increasingly growing in quantity, quality and scale. The results and contributions of the private economy to the economy are enormous in many aspects such as socio-economic development, job creation and promoting the establishment of new businesses. Besides, we can clearly see many remaining limitations in the private economy in our country such as the state's management methods, the technological capacity of enterprises... Through clarifying the definition of the private economy, the current state of the private economy in Vietnam, the article offers some recommendations and solutions for the sustainable development of the Vietnamese private economy.

Keywords: Private economy, sustainable development, Vietnam.

1. INTRODUCTION

During recent Party congresses, the private economy was identified as an important driving force of the economy and the State has made many appropriate policy decisions to encourage the private economy to continue to develop. In recent times, this economic sector has made certain contributions to the country's economy, but besides that, there are still many limitations. Labor productivity is still low, competitiveness is limited, product structure and industries are not diverse and not sensitive to the market. How can the private economy continue to promote its inherent strengths and overcome shortcomings and limitations, thereby contributing to achieving the country's socio-economic goals causing many concerns for the State and private enterprises themselves.

2. STUDY OVERVIEW

In Resolution No. 10-NQ/TW issued at the Fifth Conference of the Party Central Committee (Term XII 2017), the Communist Party of Vietnam affirmed that the private economy is an indispensable component in economy, making a major contribution to the country's development. However, the Resolution has not specifically summarized and updated the results achieved by the private economy by 2022 as well as the fluctuations in the period 2017-2022 when the Covid pandemic occurred.

Author To Ha, through the article Improving labor productivity through the digital economy published in Nhan Dan newspaper in 2020, affirmed that the contribution of increasing regional productivity and shifting labor structure to productivity growth labor, in the period 2011-2018, the individual economic sector made the largest contribution, accounting for 31% of labor productivity growth in the entire economy. The FDI economic sector has the second largest contribution, accounting for about 30%, and is increasingly important to overall labor productivity growth. The

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state economic sector has the third largest contribution, accounting for about 22%, mainly due to the sector's increased labor productivity in the recent period. However, in the article the author focuses on all three aspects of the private economy, the state economy and the FDI economic sector, so the role of the private economy in Vietnam's economic development has not been clarified.

OCED Organization for Economic Cooperation and Development in its 2021 Small and Medium Enterprises and Startups Policy Report in Vietnam has compiled data, provided an overview, assessment and policy recommendations to help businesses. It is more convenient for small and medium-sized businesses to start a business in our country. However, the research object in the report only includes a part of newly established private enterprises and does not cover previously established and operating enterprises.

Therefore, the authors decided to research and complete the article "Sustainable development of the private economy in Vietnam" with the purpose of clarifying the definition of the private economy and the current state of the private economy in Vietnam, on that basis, provide a number of recommendations and solutions for Vietnam's private economy to develop sustainably.

3. RESEARCH METHODS

To complete the article "Sustainable development of the private economy in Vietnam", the author used the following research methods:

- Data collection method: Research books, newspapers, magazines and websites related to the research issue to get an overview of the role and current situation of the private economy in our country.

- Data analysis and synthesis method: Analyze and evaluate the results achieved by the private economy in recent years and the shortcomings that need to be overcome, towards sustainable development of the private economy in Vietnam Male.

4. THEORETICAL BASIS

4.1. The concept of private economy

The private economy in our country was born and developed quite a long time ago in history, but up to now there are still some different views on the private economy. In other words, the current concept of the private economy still has many conflicting views and no specific unified definition has been given. Based on scientific, theoretical and practical bases, the private economy can be understood from the following angles:

From an economic perspective, "the private economy is an economic part of a country's economic structure system that is formed and developed based on private ownership of means of production as well as profits." personal benefit".

From the perspective of the subject Political Economy, "the private economy is an economic component in the multi-sector economic structure system during the transition period to socialism, based on ownership regimes." private means of production; The private economy is an important component of the national economy. Private economy is used to refer to economic sectors based on private ownership of means of production, including individual economies, small owners and private capitalist economies. Both economic sectors above belong to the same private ownership regime of means of production; However, the ownership scale is different."

Thus, both of the above concepts affirm that the private economy is an inseparable part of today's multi-sector economy, alongside the state economy and the FDI economy. The private economy develops based on private ownership of the means of production, and no matter what type of company it may be organized in or what field it operates in, it all aims to bring profits to its owners. enterprise.

4.2. The role of the private economy in Vietnam's economic development

Vietnam has experienced more than 30 years of economic recovery, including the private economy. From being constrained and prevented from developing, the private economy has now been recognized as an important role in economic development and identified as an important driving force of the economy. The private economy is identified as an indispensable component and needs to be promoted more strongly in the economic structure because the private economy has brought our country many significant economic achievements. The role of the private economic sector is shown in the following points:

First, the private economic sector contributes to awakening an important part of the country's potential, increasing internal resources, and participating in the development of the national economy. This role of the private economic sector is demonstrated through a number of points:

- The private economic sector has contributed to building appropriate production relations to promote the development of production forces. In political economy, "Productive force is the totality of material and conscious elements that create the power to transform the natural world according to the needs of human survival and growth. It is used in the production process of society through certain periods. Structurally, the Production Force consists of two basic parts: means of production and workers. Meanwhile, "Production relations include: ownership relations over the means of production, relations in the organization and management of the production process and relations in the distribution of the results of that production process. As objective economic relations that do not depend on human will, production relations are material relations of social life. The development of the private economic sector makes the ownership relations of our country's economy more diverse, not just limited to state ownership or collective ownership. The transformation of production relations has led to the transformation of management and distribution relations, making production relations flexible, consistent with the level of development of the production force, which is still low and develops unevenly. between regions and sectors across the country. Thereby, the potential of capital, land, labor, and production experience of all classes and ethnic groups is aroused and promoted, contributing to promoting the process of Industrialization and Modernization of the country. Through the development of the private economy, the people's right to mastery, first of all economic mastery, is promoted, which is the basis for expanding the people's mastery over politics, culture, society.

- The private economic sector makes an important contribution to attracting society's idle capital and optimally using local resources. With the characteristic of not requiring too much capital to establish, especially for small-scale private economic sector enterprises, all classes of people can participate in investing or establishing businesses. On the other hand, if additional capital is needed during operations to expand production and business, private enterprises can easily mobilize loans based on relatives and friends... Therefore, promoting various types of private enterprises is considered an effective means of mobilizing capital and using dispersed funds lying dormant in the population into private investment capital. Enterprises in the private economic sector are often small and medium-sized and are dispersed in most localities and territories, so they have the ability to use the potential of raw materials and labor. and experience in producing traditional local crafts.

- The private economic sector has contributed significantly to state budget revenue. Statistics show that the private economic sector's current contribution to the budget is still small but is on the rise. Compared to the contribution to the central budget, the private economic sector's contribution to local budget revenue is much larger. In addition to contributing to budget revenue, businesses in the private economic sector also make significant contributions to the construction of cultural works, schools, sports, roads, bridges, etc. charity houses and other welfare projects.

Second, the private economic sector has made important contributions to promoting growth and restructuring the national economy. Policies of many countries, including Vietnam, often give high priority to the state economic sector, so businesses in this sector are often concentrated in densely populated or economically developed places. . Localities in remote mountain, sea, and island areas have few state-owned enterprises, so they are underdeveloped and even more backward because of little investment in infrastructure such as roads, transportation, etc. private sector with the appearance of businesses in many different industries and fields, even in remote areas, with balanced development between regions, helping to exploit the potential and strengths of remote areas. to rapidly develop manufacturing and service industries, creating economic restructuring and shortening the gap in economic and cultural levels between regions. In general, the GDP growth rate of the private economic sector is steady and approximately equal to the GDP growth rate of the entire economy.

Third, the development of the private economy contributes to attracting a large part of the workforce and training new human resources for the labor market. If in the State economic sector, in order to be recruited, workers often have to have a high level of education and have to go through many complex examination rounds while the number of recruitment is not much, then in the private economic sector has a clear advantage in terms of job creation. The number of vacancies is high, some vacancies even only require applicants to have graduated from high school, so this area can attract a large, diverse, and rich workforce both in terms of quality and quantity. quantity as well as quality from manual labor to high quality labor in all regions of the country, in all strata of the population...

Besides creating jobs, due to the requirements to survive in a competitive market and aim for profit, private enterprises must always find effective measures to organize labor and management. best. Short-term and long-term training courses, organized domestically and internationally, are regularly held. Managers in the private economic sector also face the phenomenon of brain drain, because highly qualified workers often change jobs, so remuneration regimes are designed appropriately and labor techniques are used. The action is carried out very strictly. This has contributed to the training of a workforce with skills and industrial style. At the same time, through this process, the private economic sector is also considered a place to train and train future large business owners and is the initial economic basis for developing large businesses.

Fourth, the private economic sector contributes to promoting the country's international economic integration. In today's modern world, economic integration with the region and the world to attract investment capital and modern technology applied to promote the economy is an inevitable development trend for all countries, including Vietnam. In many forms to implement integration, meet the needs of rapid development, towards industrialization and modernization of the country such as the state joint venture with foreign countries, the state leasing land to foreign investment groups or Economic organizations and private economies enter into joint ventures and partnerships with foreign countries, the connection through the private economic sector is the most prominent and easiest way to implement. Also through that process, the private economy with its characteristics is to proactively innovate and choose appropriate technology to reduce production costs, expand markets, increase labor productivity, and improve quality. product quality... From there, the private economy contributes to promoting technology transfer, cooperation in training human resources and management experience. At the same time, it contributes to promoting Vietnam's trade development and rapid integration into the world economy.

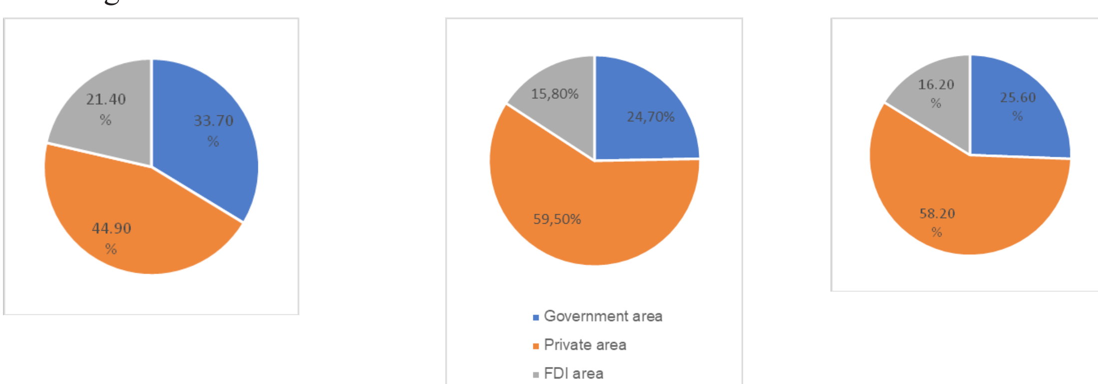
5. CURRENT STATUS OF THE PRIVATE ECONOMY IN VIETNAM

5.1. These achievements

- Contribute to socio-economic development

The private economy currently contributes positively to the gross domestic product with extremely impressive numbers. According to data from the Second Private Economic Forum (held April 2, 2023 in Hanoi), there are currently more than 786 thousand private enterprises, accounting for 98% of the total of more than 800 thousand enterprises; contributing an average of 46.4% of GDP each year in the period 2016-2021, in 2021 alone contributing 18.5% of total budget revenue.

In addition, the private economy also accounts for an increasingly large proportion of investment in the development of the entire society. The General Statistics Office's annual socio-economic situation report shows that there is a steady annual growth of the private economy increasing from 44.9% in 2020 to 59.5% in 2021 and 58.2%. % in 2022.



Year 2020 **Year 2021** **Year 2022**

Figure 1. Proportion of total social investment capital of economic sectors in the period 2020-2022.

(Source: General Statistics Office)

The private economy's revenue contribution from second place has risen to the top position, surpassing the State sector. The private economic sector's contribution to the State budget in the period 2010-2020 continuously increased, in 2010 it only reached 70 trillion VND, accounting for 11.9% of total state budget revenue; By 2015, it reached 129.6 trillion VND, accounting for 12.7% and increasing 85% compared to 2010. In recent years, this sector's contribution has increased rapidly. The private economic sector's contribution to state budget revenue is always higher than the growth rate of general budget revenue of the whole economy. In 2016, it reached 157.1 trillion VND, accounting for 13.88%; By 2020, it will reach 247.1 trillion VND, accounting for 16.36% and 3.5 times higher than in 2010, nearly 2 times higher than in 2015. On average each year in the period 2011-2015, the rate of increase in State budget revenue is water of the entire economy in the period 2011-2015 reached 11.6%, of which the private economic sector reached 13.1%; The budget revenue of the whole economy in the period 2016-2020 reached 8.2%/year, lower than 13.8%/year of the private economic sector. Overall for the period 2011-2020, the budget revenue growth rate of the whole economy reached 9.9%/year, of which the private economic sector reached 13.4%/year.

- Regarding the number of private enterprises

The 1999 Enterprise Law was born not only marking the Party and Government's interest in promoting domestic and foreign enterprises but also removing obstacles for businesses, reforming administrative procedures, from That has caused the number of newly registered businesses to increase sharply, including the number of private enterprises. If in the period 2006-2014, each year the country had about 70,900 newly established private enterprises, in the period 2015-2020, this number increased to 122,500 enterprises. The number of operating private enterprises has also increased significantly, for example in 2010 there were about 268,831 private enterprises operating, then in 2019 it increased to 647,632 enterprises and reached 786,000 private enterprises in 2022.

Year	2010	2015	2019	2021	2022
Private enterprise	268.831	427.710	647.632	694.200	786.000
Total number of enterprises nationwide	279.360	442.485	668.503	857.500	802.040
Proportion (%)	96,23	96,66	96,88	80,96	98

Table 1. Number of private enterprises in Vietnam in the period 2010-2022

(Source: General Statistics Office)

- Regarding the number of employed workers

The privatization process and the migration of workers from rural areas to urban areas have resulted in a surplus of workers in urban areas, while there is a shortage of workers in remote areas. Solving the labor surplus in urban areas is one of the major challenges facing our country's leaders. If previously the state economic sector created the most jobs, since 2016, this position belongs to the private economic sector (not including individual households and collectives). In today's economy, the private economy is the main force carrying out the mission of creating more jobs and income for a large number of workers. Most workers are working in the private economic sector (accounting for 85.8%); Workers working in the "State economic" sector account for 10.5%; The "Foreign-invested" sector accounts for a very small proportion (3.1%) (Labor and Employment Report 2022, General Statistics Office).

Type of economic	Total	% Male in total	% Female in total
Total	100,0	51,9	48,1
Government	10,5	55,1	44,9
Outside the state	85,8	52,0	48,0

There is foreign investment capital	3,1	36,1	63,9
Unknown	0,6	51,1	48,9
City	100,0	52,2	47,8
Government	20,9	53,7	46,3
Outside the state	73,7	52,6	47,4
There is foreign investment capital	4,8	38,4	61,6
Unknown	0,6	51,8	48,2
Countryside	100,0	51,7	48,3
Government	6,5	56,7	43,3
Outside the state	90,5	51,9	48,1
There is foreign investment capital	2,5	34,4	65,6
Unknown	0,6	50,8	49,2

Table 2. Employed workers divided by economic type

(Source: 2022 Labor and Employment Survey Report, General Statistics Office)

- Regarding labor scale

In 2020, up to 77.8% of non-state enterprises among the total number of operating enterprises with production and business results have less than 10 employees, much higher than the rate of 61.5% in 2010. Meanwhile, this rate in the foreign-invested enterprise sector is 1.2% and the state-owned enterprise sector is only 0.02%. The number of enterprises in the non-state sector with a scale from 10 to 199 employees accounts for 17.9%, lower than the rate of 33.2% in 2010. The proportion of enterprises with a scale of over 200 employees in the non-state sector After 10 years, the State has not improved, it is even lower than in 2010, in which the number of non-State enterprises with a scale of 200 to 299 employees accounts for 0.3% (in 2010 it accounted for 0.6%). and the scale of over 300 employees accounts for 0.4% of the total number of operating enterprises with production and business results (in 2010, it accounted for 0.8%).

	Business number		Portion (%)	
	2010	2020	2010	2020
Total	279360	684260	100	100
State enterprises	3283	1963	1,2	0,3
Non-state enterprises	268838	660055	96,2	96,5
FDI enterprises	7254	22242	2,6	3,2
Under 10 employees	173314	540747	62	79
State enterprises	91	103	0,03	0,02
Non-state enterprises	171938	532276	61,5	77,8
FDI enterprises	1270	8368	0,5	1,2
From 10 - 199 employees	98772	133964	35,4	19,6
State enterprises	1796	1069	0,6	0,2
Non-state enterprises	92838	122770	33,2	17,9
FDI enterprises	4138	10125	1,5	1,5
From 200-299 employees	2511	3156	0,9	0,5
State enterprises	280	188	0,1	0,03
Non-state enterprises	1678	2058	0,6	0,3
FDI enterprises	453	910	0,2	0,1
From 300 employees or more	4778	6393	1,7	0,9

State enterprises	1016	603	0,4	0,1
Non-state enterprises	2369	2951	0,8	0,4
FDI enterprises	1393	2839	0,5	0,4

Table 3. Number of enterprises by labor size and type enterprise

(Source: General Statistics Office)

- In terms of capital scale, in 2020, up to 18.5% of non-state enterprises with business capital of less than 1 billion VND out of the total number of operating enterprises have production and business results (the ratio of the year 2010 was 13.2%) and 51.9% had capital from 1 to less than 10 billion VND (the rate in 2010 was 60.2%). Meanwhile, this rate in State-owned enterprises is 0.002% and 0.02% respectively; In the FDI enterprise sector, it is 0.3% and 0.8%; Only 7% of enterprises in the non-state sector have business capital of 50 billion VND or more (this rate in 2010 was 4.5%). Thus, it can be seen that private sector enterprises are mainly small and micro-scale.

	Business number		Portion (%)	
	2010	2020	2010	2020
Total	279360	684260	100	100
State enterprises	3283	1963	1,2	0,3
Non-state enterprises	268838	660055	96,2	96,5
FDI enterprises	7254	22242	2,6	3,2
Under 1 billion VND	36838	128703	13,2	18,8
State enterprises	35	12	0,0	0,0
Non-state enterprises	36380	126625	13,0	18,5
FDI enterprises	423	2066	0,2	0,3
From 1 to less than 10 billion VND	170455	360670	61	52,7
State enterprises	404	120	0,1	0,0
Non-state enterprises	168310	354839	60,2	51,9
FDI enterprises	1741	5711	0,6	0,8
From 10 to under 50 billion VND	54676	137114	19,6	20,0
State enterprises	911	371	0,3	0,1
Non-state enterprises	51500	130921	18,4	19,1
FDI enterprises	2265	5822	0,8	0,9
From 50 billion VND or more	17391	57773	6,2	8,4
State enterprises	1933	1460	0,7	0,2
Non-state enterprises	12633	47670	4,5	7,0
FDI enterprises	2825	8643	1,0	1,3

Table 4. Number of enterprises classified by capital size and type enterprise

(Source: Statistical Yearbook)

5.2. Limitations of the private economic sector

Firstly, limitations and weaknesses of mechanisms and methods of state economic management, especially state management in private economic development.

The system of mechanisms and policies on private economic development still has many shortcomings, lacks synchronization, and is not close to reality; limits the transparency of the business investment environment, thereby hindering the development of the private economy. Specifically: Administrative procedures are still complicated; Connecting procedures for businesses is still inadequate; There are also inconsistencies between the Investment Law, Land Law, Bidding Law... or are not consistent with reality, slowing down the investment and development process of the private economy. In addition, many private enterprises want to enter the market but have not met the prescribed conditions or do not clearly understand these conditions, so they are hesitant. According to preliminary statistics from the Central Institute for Economic Management Research (June 2023), there are more than 3,500 business conditions corresponding to 243 conditional business investment industries. However, business investment conditions are regulated in a general and unclear manner. This creates barriers to market entry, limits competition and has adverse impacts on private enterprises, especially small and medium-sized enterprises because many industries and business investment conditions do not meet standards. Criteria for necessity specified in Article 7 of the Investment Law.

Secondly, lack of linkage in the private economic sector leads to limitations in fully participating in regional and global value chains.

The connection and cooperation of private enterprises is still weak, clustering is still high, mainly focusing on a number of fields and industries with quick capital recovery such as real estate services, restaurants, and hotels. On the contrary, in the field of agriculture and new rural construction, very few businesses invest. The general situation in small and medium-sized private enterprises, including large economic corporations, is that they have not been able to deploy other forms of "soft" linkages through agreements and cooperation in the use of brands, services, research results on the application of science and technology in the current sharing economy.

Participation in the global value chain production network in our country is still low compared to economies of similar scale in Southeast Asia. Research by the Asian Development Bank Institute (ADBI) shows that only 36% of Vietnamese enterprises participate in production networks (including direct and indirect exports) compared to 60% in more developed economies, such as Malaysia and Thailand; 21% of small and medium-sized enterprises (SMEs) participate in the global value chain compared to 30% of Thailand and 46% of Malaysia. This shows that Vietnam lacks "leading" businesses to fully participate in the global production and value chain while the supply chains in the economies of Thailand and Malaysia are few. fragmented and SMEs are more likely to benefit from the spillover effects of foreign investment, technology transfer, knowledge transfer and productivity improvements.

Thirdly, private enterprises are always in a state of shortage of capital and business cash flow, especially for medium, small and micro enterprises.

Business capital of private enterprises is often formed from two sources, internal and external. If internal capital is the capital contribution and shares of investors and business owners, external capital is often formed through the loan process. Reality shows that private enterprises do not have time to grasp information or are hindered by administrative procedures, so it is often difficult to access support resources from the State. To have capital to invest in production and business, these businesses must independently access bank finance. However, this is not easy because credit institutions' lending principles are often based on collateral or unsecured loans.

In the "Provincial Competitiveness Survey 2022 (PCI 2022)" of the Vietnam Federation of Commerce and Industry, the biggest difficulty for private enterprises is accessing credit. Specifically, in 2022, access to credit has become the biggest concern for 55.6% of businesses, a continuous increase from 34.8% in 2019, 40.7% in 2020 and 46.7% in 2020. 9% of 2021. The proportion of businesses accessing credit has tended to decrease recently (Figure 2). Many private enterprises are established but lack business capital, leading to losses, temporary suspension of business, and even dissolution and bankruptcy often occur.

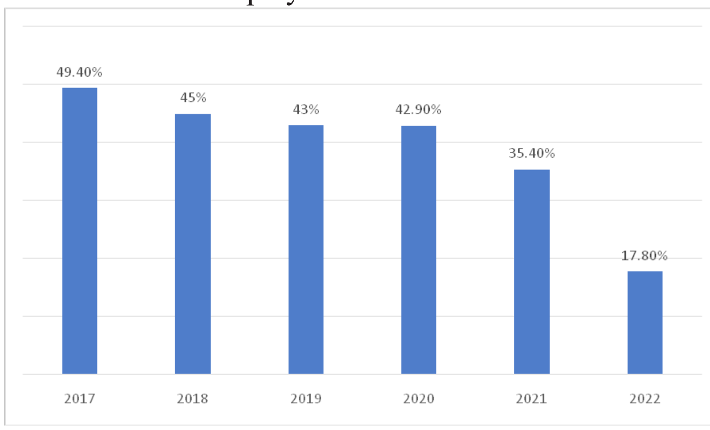


Figure 2. Percentage of businesses accessing credit in the period 2017-2022.

Fourthly, the quality of human resources in private enterprises does not meet requirements.

Human resources here include both the management qualifications of business owners and the qualifications of workers in enterprises. While private business owners are often less trained through professional schools, they apply management based on experience and emotion. Therefore, they often do business in a predatory and predatory way, over time creating a barrier to business development because it is no longer suitable for the current integration and market economy conditions. The situation of many ghost businesses being set up, even though they have registered their business, still hire incompetent people to take on the position of CEO.

Not only the management levels but also the qualifications of workers in private companies are not high. There are people who are accepted to work because they are related to other people in the company while having no qualifications or experience. The percentage of employees who want to stay long-term in private companies is often low. Most of them see the company as a place to learn and if they have the opportunity to get higher salaries in other companies, these people are willing to leave.

Fifthly, the technological capacity of businesses is still outdated.

According to the assessment in the Policy Report on small and medium-sized enterprises and startups in Vietnam by the Organization for Economic Cooperation and Development OCED, the costs for research and development of Vietnamese businesses have not improved much. If in 2008, the score of this index was 3.6/10 (ranked 42/134), increasing to 3.8/10 in 2010 (ranked 27/133), then in 2017 the score was only at 3.8/10 in 2010 (ranked 27/133). 3.5/10 (ranked 49/138). The investment rate of businesses in technological innovation accounts for only 0.3% of revenue, much lower than countries such as India (5%), Korea (10%),.. Outdated technology leads to low labor productivity, production capacity, and competitiveness in both quality and price of the private sector, and even businesses - the most capable entities of the country. The private economy is still very limited while competition is a fundamental factor to ensure survival and development, and is a vital factor for private enterprises in the current period. The labor productivity growth rate of the private economic sector is still low, only equal to 34% of the labor productivity of the state-owned enterprise sector and about 69% of the labor productivity of FDI enterprises.

6. SOME RECOMMENDATIONS AND SOLUTIONS FOR VIETNAM'S PRIVATE ECONOMY TO DEVELOP SUSTAINABLY

To help overcome the above limitations and inadequacies, many of the following solutions need to be implemented synchronously:

Firstly, perfecting synchronous and consistent mechanisms and policies, creating a favorable investment and business environment for private economic development. Ministries, departments and branches need to research and amend inconsistencies between the Investment Law, Land Law, Bidding Law... in order to create consistency between these laws. At the same time, review the issued business investment conditions to eliminate cumbersome, non-specific conditions that are not appropriate to the actual situation, creating favorable conditions for informal business units transformed into a corporate legal entity.

Secondly, create a favorable environment and conditions for business households to voluntarily join forces to form cooperative organizations or operate under the enterprise model, and encourage the private economy to contribute capital and purchase capital. shares of state-owned enterprises when equitized or the State divests capital. Through policies to promote the development of all forms of production and business links, providing goods and services along production networks and market value chains between the private economy and the state economy, the centralized economy. Foreign-invested entities and enterprises, the State can create a widespread spread of advanced technology and modern management, increase added value and expand consumption markets.

Thirdly, allocate development resources effectively, ensuring the private economy has equal access to development resources. Regarding administrative procedures, the State needs to consider simplifying and eliminating cumbersome procedures and bureaucracy. Credit programs and packages need to be built appropriately with reasonable interest rates. In addition, strengthen the activities of the Small and Medium Enterprise Development Fund, thereby creating a source of long-term capital with reasonable interest rates for private sector enterprises to invest in supporting industries, agricultural value chain and create connections between banks and businesses. Re-evaluate the operations of the Credit Guarantee Fund, fundamentally reform the operating method of this fund system.

Fourthly, improve the management level of business owners and the level of workers. Private enterprises usually operate for profit and are operated and managed by the business owner. Therefore, business owners first need to change their perception and get rid of the notion that they only need to manage based on experience. Short-term and long-term training courses on business administration not only provide modern management methods and past lessons of many large businesses in the world, but also explain the causes of the collapse of empires. leading, but also a place to connect ideas and exchange for future administrators. Through the knowledge learned, private business owners will adjust, recruit and use human resources in the company appropriately, and have strategies to train and retain workers. Workers themselves also need to maintain a positive attitude to learn because knowledge is limitless, especially in the age of information technology. If they do not update, they will become outdated.

Fifthly, about technological innovation. In order for business activities to bring about the desired efficiency in the period of deep integration into the region and the world, private enterprises in Vietnam need to attach importance to technology factors. Not only do we focus on product quality, but the packaging also needs to be scientifically and eye-catchingly designed. If the products of private enterprises are not innovated, not competitive enough, and cannot survive, they will be knocked out of the market. Miliket instant noodles product is a typical example. Although it has existed for a long time in the market, it does not have a suitable business and promotion strategy, so it gradually has its market share taken over by other brands. When mentioning instant noodles, Vietnamese people immediately think of Hao Hao noodles, a brand that appeared on the market after Miliket but with a smart communication strategy and advanced technology has helped this brand rise to the top. To overcome obstacles in the process of technological innovation, it is necessary to have progressive thinking and appropriate operating policies from the unit itself and to take advantage of help from the State as well as other businesses.

7. CONCLUSION

In parallel with the growth of the Vietnamese economy, the private sector not only increased in number of businesses but also improved significantly in quality of operations, bringing many achievements and contributions to the economy. society. However, for the private economy to develop sustainably, the Party and State need to have more policies and support to create a favorable business environment, access to resources, and create momentum for the private economy. continue long-term development, operate equally, cooperate, and compete healthily. In addition, businesses themselves also need to proactively apply modern technology, attract and retain qualified workers... towards the goal of sustainable development.

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THE ROLE OF MANAGEMENT ACCOUNTING WITH RISK MANAGEMENT IN THE NEW ERA OF ENTERPRISES

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Abstract: The fluctuations in economy, politics, society, science and technology, epidemics and natural disasters in the world have put businesses in front of more difficulties and risks than ever before. To solve difficulties and manage risks requires the participation of many parties within the organization of each business. A well-developed business in addition to having abundant financial resources, the role of management accounting in risk management in enterprises in the new period is very important. The article focuses on reviewing the capacity development of modern management accounting to be able to take on an important role in the enterprise's risk management system. On that basis, the article concludes on the importance of management accounting with risk management in enterprises in the new era.

Keywords: management accounting, risk management, new era

JEL code: M41

1. INTRODUCTION

In the fierce business environment after the Covid-19 pandemic, businesses face more difficulties when they have to cope with many old and new crises. Globalization, competition, epidemics, climate change, and many other unusual factors have put the world in a VUCA state (Deepti Sinha & Sachin Sinha, 2020):

- Volatility: Constant, strong volatility
- Uncertainty: Uncertainty/Instability
- Complexity: Complexity
- Ambiguity: Ambiguousness, hard to predict

In order to adapt, businesses need to find and operate appropriate business strategies and and tactics. In an effort to succeed, managers have also realized the important role of risk management, thereby deploying many solutions to identify and handle risks. Management accounting with its natural characteristics has formed the capacity to meet the requirements of managers in risk management operations. The main purpose of management accounting is to inform management in their business decisions. As the organization's operations are becoming more and more complex, the requirements of managers for management accounting are also increasing. The active role of management accountants in risk management has been acknowledged by the International Institute of Management Accounting (IMA) in its latest updates. When revising the Management Accounting Competency Framework in 2018, in order to adapt to the change in management activities of enterprises, IMA added a number of new competencies which required management accountants to must develop the ability to participate in the risk management of the organization. Accordingly, management accounting and risk management are complementary functions and support the decision-making process of business leaders (Rasid et al, 2014).

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In order to find out the role of management accounting in risk management in enterprises, the article focuses on 3 contents: (i) Understanding types of risks and risk management in enterprises; (ii) The development in the capacity of management accountants to meet the enterprise's ability to participate in risk management; (iii) The role of management accounting in risk management. The final section concludes and gives some directions for future research on this topic.

2. RISK AND RISK MANAGEMENT

In the process of production and business, economic entities will often face risks from internal and external factors. It is the possibility of one or more events occurring that negatively impact the achievement of the organization's intended objectives (COSO, 2013). Thus, according to this definition, risks include both directions: threats that threaten the effective operation of enterprises and opportunities that if enterprises do not promptly seize appropriately, they will lose their advantages.

According to Nguyen Huu Anh et al., (2021), common types of risks include:

Strategic risk: It is the possibility that an organization's current strategy will prove ineffective in the face of fundamental shifts in the operating environment. The risks leading to instability in the strategy can come from changes in economic, political and social policies, in the legal system, the development of the economy, changes in technology, changes in the preferences of customers, competitors, etc. These changes can put businesses at a disadvantage. For example, new technologies can reduce a business's ability to create value, demographic changes can reduce demand for specific goods or services, competitors' low pricing policies can cause businesses to reduce their market share, etc. Some events can bring great opportunities that cause businesses to lose their advantages if they don't grasp and adjust their strategies accordingly. For example, a change in the tax structure can open up new markets, the withdrawal of competitors can create opportunities for new customers, etc. Regardless of whether uncertainties are favorable or unfavorable, the Adjusting the current strategy is something that the top managers of the business must consider.

- Operational risk: this is the possibility that functional activities in the enterprise will be unstable due to internal factors such as faulty operations, equipment failure, loss of staff, inefficient use of resources, ... or due to some external factors such as natural disasters, epidemics that hinder normal production and business activities, power cuts by the local power department, weather, environment, culture, etc. Risks Risks of this type cause the functional activities of the business not to operate as intended

- Financial risks: Although nearly all risks affect the financial parameters of the enterprise, these group risks mainly refer to those that directly affect the cash flow of the enterprise and cause financial loss. Transactions of a financial nature such as buying and selling investments, borrowing and lending, etc. have potential financial risks. Commonly seen risk factors causing this group of risks can be mentioned as: volatility in the stock market, fluctuations in interest rates, exchange rates, debt solvency, debt recovery ability, …

- Compliance risk: when the enterprise fails to timely grasp and comply with the provisions of the government's legal system, in the signed contracts or in the commitments between the enterprise and a party. related, compliance risk arises. Compliance risk also includes situations where the regulations, rules and regulations of the business are not followed, causing consequences. Risks are inevitable and cannot be eliminated, but identifying, analyzing and responding to risks to improve the likelihood of success in operations is what businesses need and should do.

Risk management is an activity best done before disaster strikes. When an incident occurs, it is often too late to start handling it. With the growing amount of risk in business, it is essential for businesses to adopt a proactive approach to measuring and managing risk in all its forms.

According to COSO, risk management is a process, carried out by the board of directors, management and other personnel of the organization, applied during strategy setting as well as throughout the entire organization. organization, designed to identify potential events that may affect the organization and manage risks within its risk appetite, thereby providing reasonable assurance regarding the achievement of its objectives. organizational goals (COSO, 2017). According to the above definition, risk management has the following characteristics:

- Risk management does not seek to eliminate risk but seeks to maintain a level corresponding to risk appetite

- Risk management is a continuous process, throughout the enterprise, not a single action of a single individual or department.

- Risk management is a culture, a practical capacity associated with a specific process.

The question is, does risk management really bring good results for businesses? In a 2008 study, Beasley and colleagues also came to an affirmation of this relationship when they said that risk management has made businesses increase risk awareness such as: risk identification, the origin and causes of risks arise and develop from which to deploy corresponding solutions in both action strategy and routine functional activities. This sequence of actions has improved operational efficiency and reduced the cost of capital. Lawrence et al (2008) also came to the same conclusion that the application of risk management techniques really has a positive effect on performance.

Thus, it can be said that risk management is an indispensable part of an enterprise's work during its operation. This job requires the participation of all components in the business, including management accounting. However, one question is whether management accounting have the capacity to meet this requirement.

3. THE CAPACITY AND ROLE OF MANAGEMENT ACCOUNTING IN ENTERPRISE RISK MANAGEMENT IN THE NEW ERA

3.1. Capacity development of management accountants.

Management accounting was born and accompanies managers in managerial decisions. As business activities fluctuate and gradually become complex, the needs of managers also evolve, posing more difficult problems for management accountants, requiring management accountants to develop new skills. equivalent capacity. The development history of management accounting also shows that the role and function of management accounting has changed along with the change in the business environment to meet the increasing requirements of managers. Specifically, in their 2012 study, Kim Langfield-Smith, Helen Thorne, and Ronald W. Hilton presented a model from the International Federation of Accountants (IFAC) that shows the timelines that show maturity. in the way that management accounting serves managers in the enterprise:

-Before 1950s: Management accounting mainly operated as pure techniques for cost identification, cost determination and financial control.

- The period from 1950 to 1965: During this period, management accounting took a step further when it started to participate in management decisions at a low level. Management accounting developed additional techniques that could provide information for business planning and control. Management accounting were able to analyze management decisions in terms of data collected, processed, and analyzed. At this stage, management accounting also had the capacity to design and operate techniques for assessing management responsibility through the responsibility accounting system.

- Period from 1965 to 1995: Management accounting took a further step when participating in strategic level activities when developing methods of operating process analysis and cost management.

Post-1995: Management accounting have developed competencies to contribute to the creation of added value for the business by using strategic and tactical level techniques such as performance reports, competitor analysis CA competition, CC core competencies, RM risk management, SM strategy mapping, SWOT analysis, VCA value chain analysis. These tools and techniques have helped management accountants create value by assisting managers in the efficient use of resources.

Thus, over time, management accounting has evolved to be able to handle complex situations. Currently, management accounting has integrated its methods and tools and integrated

3.2. The role of management accounting in enterprise risk management in the new era

The maturity of management accounting makes the definition of management accounting changed. Most researchers and related organizations agree that: Management accounting is the process of identifying, measuring, collecting, processing, analyzing and providing economic and financial information to support operations. management activities, advising managers at all levels to make decisions to solve problems related to planning, organizing, implementing, leading and controlling business activities. This definition has shown the role of management accounting in accompanying managers in strategic decisions as well as daily operations.

The relationship between management accounting and risk management in enterprises has been studied by many scholars in different aspects. Tunc Kose, Safak Agdeniz (2019) asserted that management accounting has a significant position in enterprise risk management. Bento et al (2018) argued that with professional experience and training in how to measure, report and analyze the financial and non-financial impact of decisions, management accounting has a special position specifically to play an important role in the establishment of the ERM system. Culasso, F., Broccardo, L., Giacosa, E., Manzi, L.M. - Truant, E. (2016) also said that management accounting integrated with risk management system is a potential trend.

The International Management Accounting Organization (IMA) has also pointed out the core competencies that management accountants can now undertake:

Strategic Management: The competencies needed to envision the future, lead strategic and tactical planning, guide decisions, manage risk, and monitor performance;

- Reporting and control: The competencies required to measure and report an organization's performance in compliance with relevant standards and regulations;

Technology and analytics: The competencies needed to manage technology and analyze data to enhance organizational success;

- Business and operational acumen: The competencies required to contribute as a cross-functional business partner to transform the operations of the entire enterprise;

Leadership: The competencies needed to collaborate with others and inspire teams to achieve organizational goals;

- Professional values and ethics: The competencies required to demonstrate the professional values, ethical behavior and legal compliance required for a sustainable business model. (IMA Management Accounting Competency Framework, 2018)

As can be seen, risk management and related control measures are natural parts of management accounting's core competencies, helping management accountants fulfill their roles. With professional experience and training in how to measure, report, and analyze the financial and non-financial impact of management accounting decisions, we are uniquely positioned to take a leadership role in establishing risk management system (Bento et al., 2018). This is an important role of management accounting in shifting risk management from reactive measures to proactive measures.

According to the IMA. (2014), Enterprise Risk Management: Frameworks, Elements, and Integration, management accountants take an active role in the following risk management categories:

- Acting as a leader in the risk management system, supporting the change from discrete risk management activities into an integrated and unified system;

- Help resolve conflicts between advocates of risk management systems and traditional risk management methods;

- Explain to others in the organization the risk management process;

- Provide managers with an understanding of the organization's risk management framework and processes;

- Support senior managers as well as operational managers in analyzing and quantifying the risk tolerance level and risk tolerance of the organization for each of them;

- Support the implementation of the risk management system in the financial function;

- Provide information to support managers in risk identification;

- Carry out comparative studies for use in risk determination;

- Collect best practice information on risk management practices;

- Assist in quantifying the impacts and likelihood of certain risks on the risk map;

- Assist in identifying and estimating the costs and benefits of different risk elimination or mitigation solutions, and training managers in risk response;

- Design reports to monitor risks and develop financial and non-financial metrics to evaluate the effectiveness of risk mitigation actions;

- Advising managers on the integration of the risk management system with the balanced scorecard and budgeting process;

- Participate in the development of business continuity plans (crisis management);

- Advising on risk disclosure in annual reports;

- Acting as a pioneer in combining corporate governance with risk management

Without the involvement of management accountants in risk management activities, risk management is often just a costly compliance activity. (Culasso, 2016)

4. CONCLUSION

Management accounting provides information that reduces uncertainty in management decisions by means of management accounting tools such as the theory of constraints, lean manufacturing, balanced scorecard, etc. Management accounting has insight into the organization and the industry. With the new competencies identified by the IMA, the role of management accounting is enhanced within an organization. These competencies will support enterprise risk management. However, in order for management accounting to be able to support and integrate into the enterprise's risk management system, scholars need to conduct many studies for different types of enterprises in terms of ownership. ownership, capital size, industry, etc., in accordance with the risk appetite of that organization.

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DEVELOPMENT OF CENTRAL BANK DIGITAL CURRENCY IN CHINA – RECOMMENDATIONS FOR VIETNAM

PhD. Nguyen Thi Lien[1], MAc. Vu Thi Thuy Dung[2], MAc. Vu Hai Ha[3]

Abstract: *Digital transformation is taking place strongly in all sectors of the economy. Banking has been a fast-paced field of digital transformation in recent years. From the application of scientific technologies to non-cash payments with the introduction of a series of methods such as bank transfer, QR code scanning... to the application of Blockchain technology to establish a central bank digital currency (CBDC). CBDC is not a choice, but it is an inevitable trend for all countries in the digital era, moving towards a complete replacement for physical fiat money. In 23 cities of varying sizes including large and small and 15 regions, China has been studying and implementing CBDCs. China has encountered both achievements and setbacks during the implementation process; these are all beneficial lessons for Vietnam - which is currently in the process of studying CBDC.*

Keywords: digital transformation, digital money, central bank...

1. OVERVIEW

The digital currency of Central Bank Digital Currency (CBDC) is a digital currency issued by the Central Bank (CB) in each country and used as a substitute for cash and coins in the future.

According to the International Monetary Fund (IMF), more than half of the world's central banks are researching or developing digital currencies. The period 2019-2022 is an explosive period of research and application of CBDC. There are disparities in the research and application of CBDCs among nations. For instance, in the US, a leading developed country in digital technology, it was not until 2019 that the US announced the focus on CBDC research after debates between the US Treasury Department and the US Federal Reserve (FED), until 2023, the US is still in the research stage. Therefore, to replace fiat transactions in the economy and become the first Asian nation to use CBDC, China is revealed as one of the nations that has accomplished the study and begun applying CBDC. China published a CBDC study in 2014, launched a pilot application with 15 key cities in 2022, and now plans to implement CBDC across the country by the end of 2023 while merging research into a cross-border digital currency system (mBridge).

Vietnam is in the research phase of CBDC. China is a country that has implemented CBDC applications and is comparable to Vietnam in terms of its economy and political system. It is crucial to draw lessons from China's study and application of CBDC.

2. THE SITUATION OF CHINA'S CENTRAL BANK'S DEVELOPMENT OF DIGITAL CURRENCY AT THIS POINT

2.1. The process of developing a legal framework as well as pilot implementation for the development of CBDCs in China

The Chinese central bank's digital RMB ("e-CNY" in customary international use) is a legal tender in digital form issued by the People's Bank of China – PBOC. E-CNY is operated by the

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People's Bank of China (PBOC) and its system of designated commercial banks. The value of e-CNY according to China's currency law is equivalent to that of banknotes and coins, in the national currency block structure, e-CNY is positioned at M0 (Cash in circulation).

a. The phase of launching the research

The People's Bank of China established a special team in 2014 to conduct an in-depth study on subjects such as: Digital currency issuance framework, core technology, digital currency issuance and circulation environment, as well as relevant international experience. In particular, the establishment of the National Central Digital Currency Research Institute is proposed to be built.

b. The phase of finalizing and summarizing the research

In January 2017, the Digital Currency Research Institute in Shenzhen Province under the People's Bank of China was established.

In late 2017, the People's Bank of China convened a number of commercial banks and tech-related institutions to jointly conduct research and development on the digital RMB system under which the Chinese digital currency would be referred to as DC/EP. On the basis of two-tier operation compliance, cash substitution (M0), DC/EP essentially finished the top-level design, standard development, functional research and development as well as debugging during commissioning and starting to implement the general experiment.

c. The phase of implementing the pilot application

In August 2019, the Central Committee of the Communist Party of China and the State Council agreed to a policy of supporting digital currency research and other cutting-edge Shenzhen-based applications. At the end of 2019, e-CNY was meticulously designed for pilot testing in Shenzhen, Xiong'an, Suzhou, Chengdu and the project was applied at the 2022 Winter Olympics and the 2023 Asian Games hosted by China.

In 2020, China synchronized many eCNY implementations in particular: in April 2020, the Central Bank's Digital Currency Research Institute provided feedback on an internal test of the central bank's digital currency. According to the Central Bank's Digital Currency Research Institute, the current online DC/EP information is a test bed in the technology research and development process, the plan to put the official e-CNY into circulation shall be approved as soon as possible. By October of the same year, six additional test areas were added including Shanghai, Hǎinán, Changsha, Xian, Qingdao, and Dalian.

The People's Bank of China's Research Office announced at a press conference in April 2021 that the digital RMB would be used primarily for more sophisticated domestic retail payments, with consideration for use in cross-border payment transactions when the time is appropriate and in line with market demand.

Besides, on 16 July 2021, the PBOC released the "White Book on the R&D Progress of China's Digital RMB", detailing some important notes on the Digital RMB. Publications are released both online and in written copies, free for the public to read and consult.

The PBOC formally stated on April 2, 2022, that the pilot program e-CNY would be expanding to include Tianjin, Chongqing, Guangzhou, Guangdong, Fuzhou (including the Binh Dam Comprehensive Test Site on the Fujian District Binh Dam Island), and Xiamen in addition to the current pilot areas. The Asian Games host cities in particular shall serve as important trial locations.

China Construction Bank launched an asset management service area in the trial regions in June 2022 to facilitate the usage of the digital RMB for asset management product purchases.

China has examined e-CNY extensively and initially introduced it into applications, replacing cash and coins throughout the nation. The Law on Cybersecurity of China and the distinctive ideology of socialism are both followed in the development of strategies, procedures, and plans for the use of e-CNY in China.

2.2. China's most recent pilot program implementation method for CBDCs

China has been the first nation to experiment with the application of CBDC on a national level in the context of comprehensive economic innovation, showcasing the distinct socialist-oriented economy. On top of that China has been researching e-CNY for 5 years (2014 to 2019), with a pilot program starting in 2020.

In preparation for the pilot on a narrow scale, the PBOC has repeatedly published posts explaining the advantages of e-CNY as well as the commitment of the government and the central bank to implement "anonymous controls" – controlling all trading activities but ensuring confidentiality of transaction information.

With such thorough preparation, e-CNY has initially entered into the daily transactions of the Chinese people.

a, Number of e-wallets using e-CNY and Volume of e-CNY transactions via e-wallet

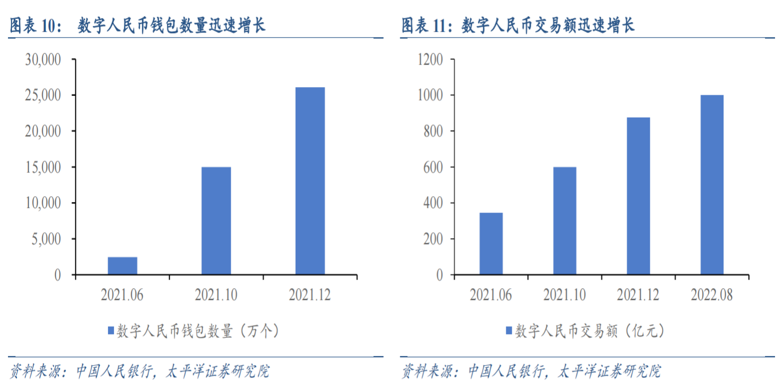

Figure 2.1. Number of e-wallets using e-CNY

Unit: 10,000 wallets

Source: Pacific Securities Research Institute, People's Bank of China

Figure 2.1 shows that in 2021, the official year for synchronized deployment of e-wallets, the number of e-wallets utilizing e-CNY has increased significantly and rapidly. In June 2021, the number of e-CNY integrated e-wallets was installed to about 50 million wallets, by October 2021, this number had increased to 123 million wallets, an increase of 2.4 times compared to June. As of December 2021, the number of e-wallet users for payment had reached 261 million, accounting for 28.89% of the number of people currently using mobile payments (according to China's 2021 Mobile Payment Users Report, about 903.6 million people). A number of initiatives in pilot destinations, together with numerous significant online shopping platforms, are being used to achieve this aim.

Along with the increase in the number of e-wallets, the volume of transactions using e-CNY through e-wallets also achieved impressive growth.

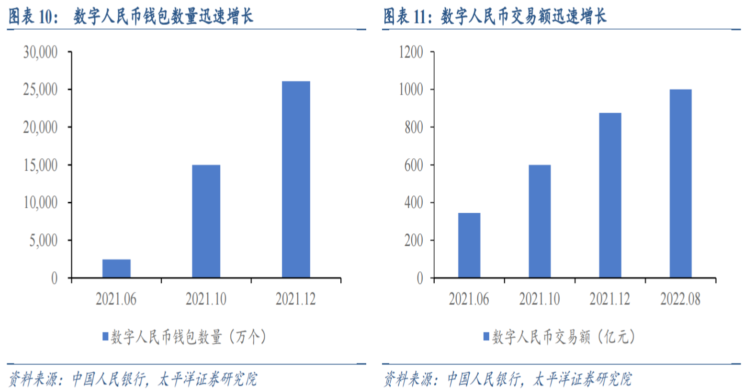

Figure 2.2. Transaction volume via e-wallet using e-CNY

Unit: 100 million RMB

Source: Pacific Securities Research Institute, People's Bank of China

In June 2021, the transaction volume reached 35 billion RMB, by October 2021, the cumulative transaction volume surpassed 60 billion RMB. In December 2021, with many shopping incentives at the end of the year, the cumulative number of transactions reached 87.56 billion RMB and by August 2022, e-CNY reached a new transaction milestone when it exceeded 100 billion RMB.

b, Programs and activities that promote e-CNY trading

Activities and events that promote e-CNY trading conducted in Beijing and pilot cities include:

- Series of e-CNY development activities through the "Red Packet" program:

The number of e-CNY transactions has increased substantially as a result of a number of innovative programs to boost consumption, the most widely recognized of which is the "Red Packet" program with the ability to exchange purchases for free cash.

The Guangdong-Hong Kong-Macao Great Bay Area, a set of measures to encourage domestic consumption, the Shenzhen Local People's Government, and the People's Bank of China recently announced the experimental e-CNY red packet, which shall be available starting in October 2020. The "lottery numbers" that make up the red packets are distributed. A total of 47,573 people out of the 50,000 winners received successful packets and used them for 62,788 transactions totalling 8,764 million RMB. A total of 901,000 RMB worth of digital wallet recharges were made by some lottery winners. The event drew more than 3,000 entrepreneurs from the Luohu - Shenzhen area.

In December 2020, the city of Suzhou in conjunction with the People's Bank of China conducted a "red packet" event. 96,614 winning citizens received red packets, accounting for 96.61% of the total number of winning citizens and 536 people participated in the "dual offline" payment experience. The amount of red packets consumed was 18.9682 million RMB, accounting for 94.84% of the total red packets distributed. There are more than 10,000 offline merchants supporting the use and the amount of red packets consumed online is 8,4782 million RMB, accounting for 44.70%. "Digital RMB" was selected into the "Top Ten New Words in Chinese Media 2020 " published by the National Language Resources Monitoring and Research Center for Minority Languages. The e-CNY e-wallet at this time has appeared as an APP and users can only download the APP. Thus the payment methods include swiping up to pay, swiping down to receive, and users can choose to scan a code or be scanned to pay.

Shenzhen launched a pilot "red packet" program for residents from April 10 to April 23, 2021. The trial customers shall be expanded by 500,000 people. This pilot program is primarily focused on "using the digital RMB for achieving the consumer discounts," with a total discount of 10 million RMB.

In February 2021, Beijing launched the digital RMB red packet presetting activity "Wangfujing Ice and Snow Shopping Festival" and released 10 million digital RMB red packets to individuals in Beijing to stimulate domestic demand and encourage Chinese to shop for Tet. By June 2021, Beijing had issued an additional 200,000 digital RMB red envelopes, each containing 200 RMB.

Also in June 2021, Shanghai, Changsha and many cities in the pilot plan continued to launch a round of these activities to the residents. Shanghai issues 350,000 digital RMB red packets in the amount of 55 RMB per bag and Changsha issues 300,000 digital RMB red packets in the total amount of 40 million RMB at 100 RMB and 200 RMB.

In April 2022, the event "Inauguration Red Packet" was launched in Chongqing city – one of the largest tourist cities in China. The event was co-sponsored by Meituan, China's largest online sales platform for food and shopping services with Bank of China, China Construction Bank and other executive institutions. The aim is to further stimulate the inclusive value of e-CNY, while accelerating the dissemination and promotion of e-CNY in Chongqing, and the expectation of promoting the recovery of offline consumption in Chongqing after the impact of 3 years of the Covid 19 epidemic.

- Application for payment of tickets, public transport fees by e-CNY

On June 29, 2021, Suzhou Railway Line 5 officially went into operation and all station ticket vending machines shall support digital RMB app scan code payment, which is the first case of joining the e-CNY payment app. Baweitong Technology Co., Ltd. is responsible for upgrading ticket machines on other routes and testing the stability of the payment interface of the official app " Suehang ". In 2023, Suzhou Railway Line 1-5 will enable digital RMB payments for ticket purchases.

On 28 June 2021, Chengdu completed the system construction and pre-testing using the "Tianfutong App" for digital RMB payments for buses and subways.

On June 30, 2021, Beijing Railway started testing out the swiping experience for the entire road network's digital RMB payment channel. In addition to online ticketing on the Yitonghang App, Beijing Railway Transport added apps that support offline ticketing, digital RMB cards, ticket replacement, and top-up on August 1, 2021. This is an updated version of the Yitongxing app, which began accepting payments over a digital RMB gateway on June 30. The app will substantially improve the passengers' digital travel experience by recognizing the entire coverage of the digital RMB at rail transit gateways and ticketing payment scenarios.

- Application for payment of gasoline purchase and payment of daily transactions by e-CNY

In March 2022, 20,000 gas stations across the country upgraded their e-CNY payment functionality. In Hǎinán, e-CNY is combined with the promotion of new energy vehicles, and e-CNY has been fully integrated into various payment issues including car deposits and prepayments. At the point of sale of Hǎinán Automobile in Qiónghǎi Shì city, Hǎinán, Qiónghǎi Shì residents are paying a deposit to buy a car through a digital wallet under the guidance of an employee without paying any intermediary fees.

From April 2022, residents of Zhejiang province can use e-CNY to pay taxes and social security-related activities. The e-CNY is also accepted to pay for public buses for ten routes in Guangzhou and public subways at 125 stations in Ningbo city. In April 2023, all government employees in the city of Changshu in Jiangsu province shall receive their salaries in the form of e-CNY.

On May 3, 2022, Hǎinán province launched a campaign to discount all tax-free shopping with e-CNY and plans to issue 10 million consumer coupons in May to assist in promoting the tax-free consumer market in remote islands after the recovery. The digital RMB issued by Hǎinán this time is shown in the form of consumer coupons, vouchers with denominations of 30 RMB, 300 RMB and 500 RMB respectively through the e-CNY wallet.

- Promote research on e-CNY payment applications

On May 8, 2021, the digital RMB was connected to Alipay and three secondary wallets such as Ele.me and Hema.

On November 5, 2021, the updated version of the digital RMB (iOS 1.3.43 Beta), China Merchants Bank was added to the bank's e-wallet interface.

In January 2022, the Digital RMB App (Beta) was launched in major Android app stores and the Apple AppStore. The Business Management Board of the People's Bank of China held the 2022 Working Conference online and via video to summarize the work in 2021, analyze the current economic and financial situation and implement the key tasks in 2022.

On January 4, 2022, the Digital RMB App (Beta Version) was upgraded from version 1.3.46.83 Beta to version 1.0.1.0 which has been put on the shelves of Android app stores and is available for download. On January 5, 2022, residents of 11 e-CNY test zones, including Beijing, Shanghai, and Shenzhen, were able to select the e-CNY APP (test version) that had been put on the shelves of the Android and IOS Apple app stores.

On April 5, 2022, the digital RMB iOS/Android version (beta version) was updated to version 1.0.8, with a size of 107.5 MB, bringing some stability improvements.

In 2022, China continues to maintain a strict Zero Covid policy, which affects the consumption activities of the citizens. However, it is clear from a number of e-CNY implementation activities that the Chinese government has made enormous efforts to integrate e-CNY into every day business transaction. With a flexible combination of banks, local authorities, online shopping platforms (Meituan, Taobao, 1688...) and payment application companies including Wechat and Alipay, e-CNY is no longer an unfamiliar concept for Chinese people, especially for young people in China – the generation always wants to be updated with new trends in payments.

The e-CNY tendency is predictable, given that the strategy to implement e-CNY into the economy is based on the Chinese government's spending incentives. Incentives to use e-CNY will decrease over time as citizens begin to adapt to the use of digital currency.

In November 2021, the Hǎinán Provincial People's Government Office issued the "14th Five-Year Plan for the Construction of the International Tourism and Consumer Center in Hǎinán Province". The proposed plan accelerates the promotion of the digital RMB pilot, while adding exchange and payment service points for foreign currencies and the RMB.

On April 15, 2022, the Chongqing Locak People's Government held a meeting to mobilize and carry out the city's e-CNY pilot work, marking the full launch of the Chongqing e-CNY pilot.

2.3. Evaluate the development of CBDCs in China

In fact, China has had some initial success in getting its citizens to utilize e-CNY. The following are some examples of China's utilization of e-CNY:

- China has always been consistent with the goal of developing CBDC – represented by e-CNY. In fact, consistency in research has helped China achieve its goal of testing e-CNY as soon as possible, surpassing scientific powers such as the United States, Germany or Canada. In particular, many countries around the world have abandoned CBDC research to study parallel directions with digital currency such as polling people or studying cross-border currency.

- In order to conduct applied research for the introduction of e-CNY into the economy, China has invested in the establishment of the national central digital currency research institute, a unit focusing on top-notch human resources in monetary finance and information technology. During the same time, 74 e-CNY-related inventions had been sent to China by the end of August 2019.

- China applies the e-CNY management model according to the 2-tier model: The first level is that the PBOC will play a senior management role for the underlying technology chain such as encryption and digital, data storage, cloud computing and cybersecurity. The second level is the system of designated commercial banks and large procurement payment platforms. The involvement of large commercial banks mainly lies in the storage and transfer of data, and also involves the authentication of the identity and digital wallets of customers using them. Party payment platforms include Wechat and Alipay payment operations, offline POS machines, ATMs, and other payment devices. Through these two levels, e-CNY transactions shall be transmitted directly to the citizens.

Figure 2.3. Units participating in the e-CNY trading system

Source: Pacific Securities Research Institute, People's Bank of China

Figure 2.3 shows that the introduction of e-CNY into the economy is a combination of many related units. In particular, the PBOC acts as the top management level. Banks participating in the system have been expanded compared to 2019 including: Industrial and Commercial Bank, Traffic Bank, Industrial Bank, Construction Bank, Binh An Bank, Post Office Savings Bank... Major platforms involved in creating shopping habits with e-CNY for people: Meituan, Taobao, 1688, Bilibili...Besides, electricity and water payment systems in 15 cities and 23 pilot areas are also required to pay with e-CNY. The supporting software platform is delivered to many large companies in China, including software company Kelan Software Sunlight.

- China has achieved impressive growth in both the number of e-transaction wallets and the volume of transactions during the pilot phase. The number of e-CNY trading wallets has sometimes increased to 2.46 times. This is an unexpected increase for the PBOC.

- In general, China has close links with local authorities where e-CNY is piloted, especially in the implementation of programs to encourage procurement and stimulate consumption in these localities.

- In addition, China promotes the involvement of prominent procurement platforms in expanding the usage of e-CNY. The e-CNY app was introduced in 15 test cities in January 2022 since the large majority of Chinese consumers purchase everyday items using their smart phones. The next phase for the central bank is to collaborate with widely acknowledged trading platforms to reach current customers. In fact, ninety-three percent of mobile payments in China are supported by Tenpay (WeChat) and Alipay (Ant Group).

- China has asked for the strong involvement of commercial banks in the application of e-CNY. China's central bank has delegated much of its responsibility for deploying the e-CNY to China's state-owned banks, the backbone of China's financial system. In 2022, the Industrial and Commercial Bank of China added a "smart exchange function" to its mobile banking app so that customers could automatically convert digital CNY wallet balances into bank deposits. More than 40 employers in Hǎinán province used the Bank of China's (BOC) digital RMB service to pay wages. China Construction Bank began accepting digital RMB to buy asset management products. Agricultural Commercial Bank announced that it has issued its first digital RMB 500,000 loan ($73,986). These banks hold leverage over millions of individuals and thousands of companies both inside and outside of China, so this is important for the widespread adoption of e-CNY.

- China has been successful in paying for e-CNY on public transport such as buses, railways and subways. The adoption of e-CNY is based on the fact that Chinese citizens are familiar with previous non-cash forms of payment.

In addition to the achieved results, the development of e-CNY in China is also facing many problems such as:

- Anonymity control factor for e-CNY transactions: one of the things to know about e-CNY published by the PBOC in the white paper on e-CNY has emphasized that the PBOC will implement anonymity control for all e-CNY transactions. This raises concerns about people's privacy when they make purchases. Although e-CNY applies many technologies, including a digital certificate system, digital signatures and encrypted storage to prevent double-spending, illegal copying and to achieve irreversible transactions. However, information disclosure is a frequent occurrence in the age of technology development, so if there is a breach in the data system of e-CNY, it is really a great danger to national currency security because every expenditure as well as transaction information of the people will be made public, even illegal trading.

- China has not been able to apply e-CNY to the number of elderly people in society. In fact, China is witnessing a rapid aging of the population, however, the number of elderly people accessing and proficiently using e-CNY e-wallets is still limited, and they do not want to change their consumption habits.

Through the successes and limitations in implementing e-CNY in China, it can be seen that China has gained more achievements in bringing digital currency into the economy, opening the era of replacing cash completely in the future. China's lessons and experiences can be applied and should be studied and learned by many countries.

3. RECOMMENDATIONS FOR VIETNAM IN CBDC DEVELOPMENT

According to the overview diagram of CBDC development, Vietnam is currently in the research phase. The phrase digital currency is mentioned in Decision 942/QD-TTg dated June 15, 2021 on Approving the e-Government development strategy towards the Digital Government for the period 2021 - 2025, orientation to 2030, and Decision 1813/QD-TTg on the scheme for developing non-cash payment in Vietnam for the period 2021-2025. The State Bank is assigned by the Prime Minister to act as the focal point and coordinate with relevant ministries and agencies in studying and proposing the national digital currency mechanism. In addition, the Prime Minister assigned the State Bank of Vietnam (SBV) to coordinate with the Ministry of Justice, relevant ministries and agencies to study and propose mechanisms and policies on national digital currency in the period of 2021 - 2025.

The development of CBDCs in Vietnam, if based on experience from China, needs to be synchronized between SBV and related entities. Therefore, some recommendations for the development of Vietnam's CBDC are proposed as follows:

- SBV needs to quickly establish an In-depth Research Committee on Digital Currency. From the time of having the policy of developing e-CNY to the time of building and perfecting human and material resources to establish the Research Institute on e-CNY, it took 3 years, and then 2 years to perfect all theoretical bases on e-CNY. The SBV was based on China's experience in deploying the research department, on which it quickly issued detailed regulations on digital money, thereby deploying propaganda to the people to gradually grasp the term digital money.

- The Government needs to promote the development of Vietnam's own social networks. One of the positive factors in the transmission of regulations as well as consumer incentive programs by CBDC in China is the help of the social network Weibo. Weibo is the largest social network in China founded in 2009. By the end of 2022, the number of active accounts on weibo has reached 593 million users, second only to Douyin (a platform similar to Tik Tok in Vietnam). With the government's management of Weibo, especially individual users (requiring weibo users to use the main phone number to register), the government will control transactions on weibo as well as comments from the people. In Vietnam, 2020 is the year of the explosion of social networks founded by Vietnamese people. As of 2022, the number of social network users included Mocha with 12 million members), Gapo with 6 million members and Lotus with 2.5 million members. The number of users of Vietnamese social networks is still very modest when compared to Facebook, Zalo and Tik Tok in operation. Therefore, in order to implement CBDC, Vietnam needs to develop long-term strategies for the development of its own social network.

- The government needs to promote the development of e-commerce platforms founded by Vietnamese people. According to the ranking of e-commerce platforms (multi-industry) popular on social networks in 2022 in Vietnam, the next leading rankings are Lazada, Tik tok, Tiki and Sendo. According to the report on the e-commerce industry in 2022, Shopee is nearly 73% of the total sales of 4 brokers, corresponding to about 91 trillion. Lazada ranked second, accounting for 20% with revenue of 26.5 trillion. The problem is that the three largest trading floors are not established by Vietnam. Although, in the applications of large commercial banks such as Agribank, electronic trading floors have been implemented right at the banking application associated with VNshop, however, transaction sales have not been officially announced. The Ministry of Industry and Trade also built an e-commerce platform through the Department of E-commerce and Digital Economy. Recently, the Ministry of Industry and Trade, based on Decision 645/QD-TTg dated May 15, 2020 of the Prime Minister approved the National E-commerce Development Master Plan for the period 2021-2025) assigned to the Department of E-commerce and Digital Economy to implement the Scheme to build a unified e-commerce platform in 63 provinces and cities. However, the implementation of this activity has not shown high efficiency.

- The government must encourage the use of non-cash payment systems for local markets and public transportation, particularly buses. In the period 2020-2022, although affected by the Covid epidemic, in the risk there will be opportunities and the greatest opportunity created during this period is that people are required to use non-cash payment methods such as bank transfer, card payment and QR code scanning. After the pandemic was repelled, Vietnamese people are now gradually accustomed to using cashless. This is a potential platform for wider adoption of locations for bank account payments. However, the rate of cash use in the population is still high, especially since the public bus system (except Vinbus) has not yet applied online payment. This is a huge limitation in the application of digital currency technology in payments.

4. CONCLUSION

Digital currency of central bank is a mandatory trend that needs to develop in the future, on the one hand, limiting the negative impact of cryptocurrency transactions, on the other hand, improving the efficiency of macroeconomic financial management, anti-corruption and transnational money laundering. China is one of the first countries to pilot the application of CBDC into practice. Through China, there are many recommendations that can be proposed for research as well as piloting CDBC in Vietnam in the coming time.

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BUSINESS VALUATION IN ACQUISITION AND MERGER OF START-UP BUSINESSES IN VIETNAM

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Abstract: *In recent years, the startup movement in Vietnam has developed strongly, along with the need to determine business value to call for investment capital, mergers and acquisitions (M&A). , business transfer... increased. To know the value of a business and thereby determine the amount of capital needed to mobilize in an M&A transaction, valuing a startup business is an indispensable activity. However, startups encounter many difficulties when valuing businesses to raise capital through M&A. This article analyzes and evaluates the current situation of M&A of startups and valuation of startups in M&A to identify limitations, thereby proposing a number of recommendations and solutions to improve the effectiveness of business valuation. startups in M&A in Vietnam.*

Keywords: *Business valuation; GHOST; Innovative startups; creative start-up.*

I. INTRODUCTION

In Vietnam, since Decision No. 844/QD-TTg dated May 18, 2016 approving the Project "Supporting the national innovative startup ecosystem until 2025" was issued, Innovative Start-up activities in Vietnam have grown strongly, especially with the emergence of large companies in the fields of E-commerce and Fintech. Vietnam's digital economy is forecast to have the fastest growth rate in Southeast Asia, at 31% in the period 2022 - 2025 (According to reports by Google, Temasek and Bain & Company).

Accordingly, the rate of start-up businesses in Vietnam is about 20 businesses/1 million people, more than countries such as Indonesia (2,100 businesses/260.6 million people); China (2,300 businesses/1,378.6 million people) and India (7,500 businesses/1,330.6 million people) (VCCI, 2019). This shows the potential for Vietnam to become a promised land for creative startups on the basis of perfecting the policy framework and focusing on building factors to promote this activity.

Statistics from the Ministry of Science and Technology show that, from 2016 until now, large cash flows have been flowing into Vietnamese startups. The number of investment deals in Vietnam is increasing, but the number of deals under 1 million USD accounts for the majority. The number of deals receiving investment with a capital of more than 10 million USD is still very small. This shows that startups are being considered a boost for M&A activities in Vietnam in the coming time, when the demand for capital and capital calling rounds is strong. Many companies in the technology sector mobilize from a few hundred thousand to 1 million USD. This segment also attracts many investment funds, most of which come from abroad. The 5 startup fields attracting the most investment capital are financial technology (Fintech), e-commerce (E-commerce), technology-based tourism startups (TravelTech), and education startups. Technology-based education (Logistics and Edtech).

Faced with the rising trend and need for capital raising by startup businesses through M&A, the question for them is how much their business is worth in order to inform the parties in need

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(investors).) buy (invest capital) and the parties come to an agreement and agree on the final price. This is the issue of startup business valuation in M&A that the author is focusing on researching below: basic theories of business valuation in M&A; Current status of M&A of startups and valuation of startups in M&A; Limitations of startup business valuation in M&A and solutions to improve the effectiveness of startup business valuation in M&A.

II. CONTENT

1. General issues about business valuation in mergers and acquisitions of start-up businesses.

1.1. Start-up businesses and mergers and acquisitions of start-up businesses

According to Clause 2, Article 3, the Law on Support for Small and Medium Enterprises defines creative start-up enterprises: "Creative start-up small and medium enterprises are small and medium-sized enterprises established to implement ideas on the basis of exploiting intellectual property, technology, and new business models with the ability to grow rapidly" (National Assembly, 2017).

According to Zhang & Yang (2006), a startup is an individual who owns or co-owns a new business based on the application or creative application of science and technology to bring about change. innovative and called innovative startups.

Thus, creative startups or start-ups can be understood as small and medium-sized enterprises, in the early stages of business development, established based on the implementation of innovative technologies. Unique and creative business ideas with the hope of creating big changes in the existing market, achieving high economic efficiency and thereby earning profits. The concept of a creative start-up enterprise under Vietnamese law is a start-up as commonly understood in the world.

In essence, a startup has all the characteristics of a regular business, but focuses on innovation in business models, having new ideas, creating new products with innovative technologies. new technology, new customer segments and new market approaches; Successful people often have the tendency and ambition to explore and dominate a new market segment. From there, they create great influence on both domestic and international markets. However, start-up businesses often have a foundation that is not really solid, so they often have difficulty raising capital. The biggest limitations and challenges for startups are lack of resources for development and lack of strategic direction (Freeman and Engel, 2007).

Mergers and acquisitions (M&A) of startups is a form of direct investment when a number of investors come to a startup business that is operating smoothly to contribute capital, buy shares of the business, or contact With start-up businesses that are losing money, they are forced to offer cheap prices to become controlling shareholders, invest in technological innovation, improve corporate governance, and gradually bring business back to normal and move towards profitable business. interest. Compared to the form of investing in building a new business, which takes time to research the market, complete procedures for granting Investment Certificates, and deploy projects, M&A has an advantage because investors look to businesses Startups can bring them profits. Startup M&A also has all the characteristics of corporate M&A activities in general.

1.2. Purpose of buying, selling and merging start-up businesses

Innovative startups in Vietnam are growing strongly, so when startups reach the growth stage, scale expansion is inevitable (Freeman and Engel, 2007; Arena et al. , 2018; Smirat, 2018).

However, the biggest limitations and challenges for startups are lack of resources for development and lack of strategic direction (Freeman and Engel, 2007). According to research by VCCI (2018), 80 - 90% of startups fail because they do not have enough capital and resources for production and business activities.

Accordingly, attracting capital is one of the key and challenging issues of startup businesses. During the growth phase, startups can mobilize capital through forms such as finding opportunities to raise capital from large enterprises; individual investors; venture capital investment company; borrow from credit institutions or commercial banks; M&A, IPO implementation... (Arena et al., 2018; Smirat, 2018). In particular, start-up M&A is a very popular form today to solve capital problems for start-up businesses - the engine of start-up M&A.

Accordingly, the purpose of startup M&A demonstrates the following aspects:

- Start-up businesses can overcome difficulties in capital during the growth period. According to Patzelt et al. (2007), many startups cannot generate capital, technology and management organization from internal resources, so alliances with other partners or M&A are A good way for startups to have resources to maintain and expand production and business activities (Danzon et al., 2004). Investment capital for start-up businesses often comes from large economic corporations, they support capital for start-up businesses through financial investment or other forms, because this is a beneficial cooperation model. for both sides. Start-up businesses have more capital to grow and contribute to promoting the overall development of the corporation. Large economic corporations can also develop quickly through M&A transactions and become an effective divestment channel for startups (NIC, 2023).

- Besides solving capital sources, startup M&A helps businesses meet human resource requirements, corporate governance levels, use of technology, and expand investment relationships while building trust with customers. with investors, increasing the chance of successfully raising capital for subsequent projects. Next, start-up businesses can promote their images and brands to customers, potential investors and expand public relations; Reduce management, marketing, research and financial costs.

- Startup M&A aims to help businesses overcome legal difficulties in establishing new businesses in new markets. These benefits are diverse and extend to business areas such as brand recognition, licensing, supply chain management and logistics... (Maxfield Brown, 2017).

Startup M&A also serves the purpose of startup investors, along with founders and other leaders in startups, often recouping their investments when they sell the startup. to larger, more established companies in order to exit; or they take startups public, using the startup's accumulated profits to reinvest in the business and pay founders and employees.

1.3. Forms of mergers and acquisitions of start-up businesses

- Contributing capital to a business: The normal capital contribution process is to contribute charter capital for a limited liability company or buy issued shares for a joint stock company. The goal is to increase the company's charter capital.

- Buying back capital contributions or issued shares of company members or shareholders: This is a form of direct capital contribution to the enterprise, it does not increase the charter capital of the enterprise. However, it can change the capital or share ownership structure of the business.

- Business merger: This is a form used when combining one or several companies into another company. It is carried out on the basis of transferring all assets, rights and obligations of the merged company to the receiving company. The merged company will cease to exist, the merged company will inherit all assets, rights and obligations of the merged company.

- Business consolidation: A form of two or more companies combining to form a new company. All of the above companies will cease to exist and form new companies on the basis of inheriting all assets, rights and obligations of the merged companies.

- Business separation: A specific form used for limited liability companies or joint stock companies, it helps achieve the goal of business control through the process of reducing business size.

1.4. Business valuation in mergers and acquisitions of start-up businesses

According to W. Sealrooke (University of Portsmouth, UK), "Valuation is an estimate of the value of specific property rights in monetary form for a clearly defined purpose".

Lim Lan Yuan (Faculty of Construction and Real Estate, National University of Singapore) said that, "Valuation is a science of estimating the value for a specific purpose of a specific asset, at a point in time. determined, taking into account all the characteristics of the asset as well as considering all the underlying economic factors of the market, including the types of investment options.

A business is considered a type of asset (according to Vietnamese Accounting Standards), so business valuation is also the general asset valuation of the business. Therefore, "business valuation is the process of estimating business value according to a certain method. It is the process of determining the actual value of a business at a time according to the market price in order to create a basis for carrying out related transactions such as purchase, sale, consolidation, merger, separation or dissolution. can cause business bankruptcy" (Bui Van Van, Vu Nan Ninh, 2015).

Startups are also a subset of the system of businesses. Accordingly, startup business valuation in M&A is the estimation of the existing and potential value of a startup business at a time in order to carry out a startup M&A transaction.

Valuing start-up businesses in M&A is not simply a calculation technique to determine the value of the business, but also contains many general economic and technical contents, including legality, sociality and feasibility. art (Scott Moeller & Chris Brady, 2009). From the perspective of business investors, the basic standard for estimating business value is first of all the value of income that can be brought from the business's activities in the future, not just the price. current value of the business's assets. Therefore, in business valuation there will be many accepted valuation methods and in most cases, each method brings a different result (Andrew J. Sherman, Milledge A. Hart, 2009). For a startup business, the assigned value does not necessarily correspond to the actual revenue it generates in the early years. Instead, company leaders and investors can consider a company's potential value based on the profits it is expected to generate. Valuing startup businesses in M&A will also apply different methods and methods during the implementation process.

1.5. The role of business valuation in startup M&A

Every operating business needs to pay attention to its business value to measure operational efficiency, growth rate and as a basis for orienting future activities, as a basis for implementation. acquisitions, mergers, capital contributions, capital raising...

Since startups may aim to grow by selling, or merging with other businesses, it is important to be ready for potential selling opportunities. Even if they don't want to sell their business, they should know how much their business is worth.

However, determining the value of startups can be more complicated than large enterprises due to lack of management information systems, lack of reference information, lack of experience, etc., so startups need to Learn clearly about startup business valuation to avoid risks.

During the process of contributing capital to a business, the parties often encounter conflicts in determining the exact value of the business as the starting value for negotiations in negotiations or sales negotiations. According to research, up to 70% of M&A deals fail from the beginning simply because of mispricing the business value. This is a big loss for businesses due to not fully understanding the importance of business valuation.

Therefore, valuation in business merger and acquisition transactions is considered the first step in the entire M&A process. As for business owners, valuation helps them accurately determine the actual value and development potential of the company to avoid over- or under-pricing, making it difficult to attract suitable investors. For investors, valuation plays an even more important role because it helps investors evaluate the appropriate investment level and feasibility of M&A transactions.

2. Current status of business valuation in M&A of startups

2.1. Current status of mergers and acquisitions of start-up businesses in Vietnam

Start-up business development is a new point in Vietnam's current economic picture and is taking place more and more vibrantly. For a startup business, every factor from idea, market, product, environment... is important. However, the decisive factor in the survival and development of businesses is capital. Investors have an additional investment portfolio (can be considered venture capital) which is investing in start-up businesses. Carrying out M&A of startups is also meeting the capital needs of businesses or investors. M&A deals in startups are not large, but they have great potential and basis to show that this will be a promising investment channel. The capital market is an important premise that creates breakthrough growth for startups.

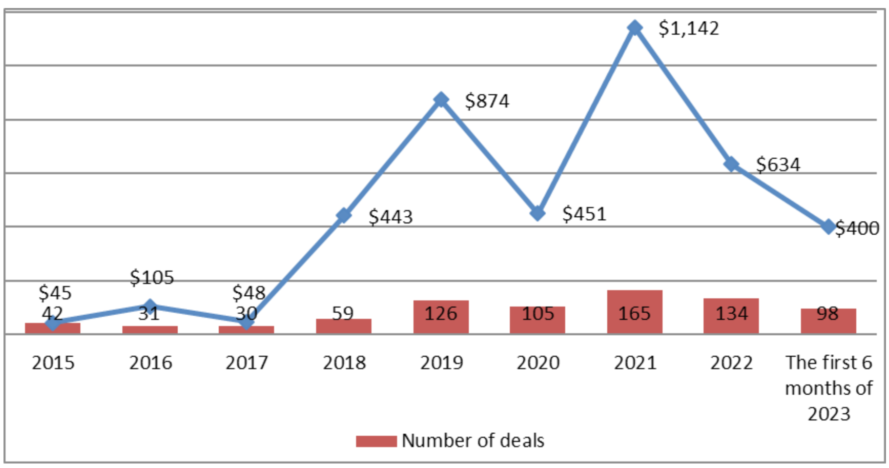
However, start-up businesses are small in scale and have a short operating time, so getting loans from banks will be very difficult. Some businesses that have been operating for more than two years have still not been able to access capital sources for many different reasons. Therefore, start-up businesses can call for capital from many forms such as: Capital from economic corporations and large enterprises; Venture Capital Fund; capital from angel investors; Equity capital is invested by one or more founders; Capital from the Government's start-up support fund; research and development funding; preferential loans, the Government's Credit Guarantee Fund, projects, programs and tax exemption, reduction and incentive policies; Commercial bank loans; Issuing shares or listing shares on the open market (IPO), ...

Startup M&A can be divided into two main types: First, both investment, control and operation for people with expertise or management capacity plus strong financial resources. Second, simply invest financially, even venture capital, and let the original founders manage. The first type is not easy to find because there are too many criteria to meet; Meanwhile, the second type, although it has a lot of potential, is in an extremely cautious state.

Accordingly, to obtain capital to maintain and develop operations, startup businesses have called for capital from many different channels from investors. In the period 2015 - 2023, investment capital in Vietnamese startups will fluctuate over the years. In the years 2015-2016, growth was at a very low level in terms of number of deals and total investment value. M&A deals in the startup world in 2018 were also very exciting, such as Grab acquiring Moca, Sea acquiring Foody and Giaohangtietkiem, PropertyGuru acquiring Batdongsan.com, Vntrip merging Atadi, Scroll investing in Cat Dong (currently operating CungMua .com, NhomMua.com, Shipto.vn), Yeah1 invested in Netlink and many other agreements.

Investment capital in startups in Vietnam in 2021 reached nearly 1.54 billion USD, in 2022 and the first 6 months of 2023 there was a sharp decrease. According to the 2023 Technology Innovation and Investment report published by the National Innovation Center and Do Ventures Venture Capital Fund, investment capital in Vietnamese startups in 2022 reached 634 million USD, down 56% compared to the previous year. last year. In the first 6 months of 2023, the capital will only range from 350-400 million USD.

Figure 1: Venture capital for startups in Vietnam in the period 2015 – 2022



(Source: Research by Do Ventures, NIC, and Cento Ventures)

The report "Emerging Giants in Asia-Pacific 2022" published by HSBC Bank and KPMG Company, Vietnam is one of the countries with the youngest and most dynamic startup environment in Asia. ASIAN. The report "Vietnam Open Innovation Panorama" in 2022 said that Vietnam's startup ecosystem has jumped from 5th to 3rd position among the top 6 economies in ASEAN, just behind Indonesia. and Singapore. The growth is specifically shown through both the rate of capital poured into the market and the number of active investors and startup investment funds. In particular, the following industries: E-commerce, financial technology, medical technology, educational technology, online media and digital solutions for businesses are forecast to create breakthroughs in attracting investment. (Le Do, 2022).

Among the capital attracted from start-up M&A forms, capital from domestic and international angel investors and venture capital funds is the main source of investment for startups in Vietnam. According to the National Innovation Center, in 2022 Vietnam will have 134 investment deals with a total capital of 634 million USD (down 56% compared to 2021). Vietnam ranks third in the number of deals and fourth in the scale of capital invested in private enterprises in Southeast Asia. Among the fields calling for the most capital, financial services has a 248% increase in capital compared to 2021, retail services ranked second although the amount of investment capital in this field decreased by 57%, followed by health and education. According to Do Venture Venture Capital Fund, businesses that have raised Pre-A and Series A rounds (raising capital from 10-50 million USD) tend to grow. Vietnamese funds lead the scale of capital injection (total capital of 287 million USD), followed by Singapore, North America and Korea.

Venture Capital Fund: According to statistics from the Ministry of Science and Technology, there are currently about 40 venture capital funds operating in Vietnam. Typical foreign funds are IDG Ventures Vietnam, Cyber Agent, Mekong Capital, DFJ Vina Capital, ESP Capital, Innovatube, many domestic venture capital funds have been established and operate such as: SeedCom, FPT Ventures, CMC Innovation Fund , VPBank Startup, VIISA, ESP, VSV, 500 Startups Vietnam... These investment funds are willing to invest capital if the business has a foundation of equity capital. However, in reality, this capital source is still very limited due to the low level of prestige and trust of businesses.

Angel Investors: Since 2017, the activities of angel investors in Vietnam have begun to be more systematic and professional, through connecting and forming a number of clubs. , investment networks for startups such as VIC Impact, Hatch Angel Network, iAngel Vietnam or Angel4us.

In addition, capital is also mobilized from economic groups and large businesses conducting M&A or IPO, such as Fossil Group, which once acquired Vietnam's Misfit. Large corporations invest in purchasing potential startup projects, occupying a high ownership ratio to gain control. From there, with experience in management and capital, the purchased startups will be part of the product and service ecosystem of large enterprises and continue to develop in that ecosystem. Regarding the IPO format, Yeah 1's deal with a value of 103 million USD is the only known successful startup IPO deal since 2013 in Vietnam.

Thus, M&A activities of startups in Vietnam in recent times have been diverse and relatively exciting, concentrating domestic and foreign capital sources for development in the startup sector. However, for successful transactions, the valuation of startup businesses is also an issue that needs to be considered to focus and mobilize capital more effectively.

2.2. Current status of business valuation in mergers and acquisitions of start-up businesses

Valuing startups in M&A is always necessary, because startups are often small and medium-sized enterprises, they can aim to develop through forms such as sale and joint venture. or merge with other businesses, so valuing (estimating) their business value is very important. However, valuing startups can be more complicated than large, long-standing businesses because startups have fewer financial years, lack a management information system, lack reference information, and are difficult. to know how big a brand can become (Doan Thi Thanh Huong, 2020).

Therefore, to value businesses in M&A, in reality, different methods and projects are used to value (estimate) the value of startup businesses. Some methods for valuing startups in M&A that have been commonly used for capital raising deals in recent times are:

- Comparable method (Comparables method)

This is the most common method for valuing early-stage startups. Accordingly, investors will find a business similar to the business they are valuing, then use that business value as a measure for valuation.

According to this method, parameters between similar startups that can be compared can be used, such as MAU (Monthly Active User), GMV (Gross Merchandise Value).), or MRR (Monthly Recurring Revenue),...

For example: 02 startups X and Y have similar business models and products. In particular, business Business Y has 100,000 active users, twice as many as X, so comparing according to this user, Y's valuation is 6 million USD.

This method has the advantage of being highly convincing, because it is based on benchmark - a common standard on the market; Using standards of previous businesses, proven by the market; Simple, easy to understand, does not rely on complex calculations, avoids "fraudulent" tricks when pricing.

However, the disadvantage of the method is that the information is incomplete; If the startup is pricing as the first model in the market, there will be no similar businesses to compare; Businesses are not exactly the same, so the valuations obtained are often only relative; In addition, this method is based on market benchmarks, so if the market is in a bubble state (valued higher than real value), the valuation will be the same, or vice versa.

To get the most accurate valuation figure possible, valuers often take benchmark data from many similar companies, and benchmark according to many different indicators (MAU, MRR, GMV,...). From there, a reasonable valuation range can be determined for negotiation between the startup and investors.

- Scorecard method (Scorecard method)

According to this method, valuers will list 5-7 evaluation criteria with different weights, then evaluate each criterion compared to businesses in the industry and calculate the total to calculate the coefficient. final valuation. Next, take the average valuation of startups in the same market and at the same stage and multiply (x) by the valuation coefficient.

For example: A start-up business has an average valuation of a Starup in the same market and period of 3 million USD. The criteria used for evaluation and evaluation indicators are as follows:

Table 1: Criteria and coefficients for evaluating start-up businesses according to the scoreboard method

TT	Criteria	Weight	Relative comparison ratio with other businesses	Component coefficient
	(1)	(2)	(3)	(4)=(2)x(3)
1	Founder/Team Quality	30%	150%	0,45
2	Market size and potential	25%	130%	0,325
3	Quality/differentiated products	15%	120%	0,18
4	Competitive ability in the market	15%	70%	0,105
5	Marketing/distribution strategy	10%	60%	0,06
6	Customer feedback	5%	50%	0,025
	Total	100%		1,145

(Source: Reference from foreign venture capital funds)

=> Target startup valuation = 3 million USD x 1.145= 3.435 million USD

- Venture capital method

According to the method, investors (venture capital funds - Venture Capital) always seek a certain rate of return on investment capital through investing capital in startup businesses. Additionally, according to some industry standards, an investor may assume that the startup can be resold for a price within a certain period of time (such as $200 million over 7 years). Based on these two inputs, investors can easily determine the maximum price they are willing to pay when investing in a startup after adjusting for dilution.

For example:

+ Estimated startup value after receiving investment capital (post-money valuation): Investors believe that the startup can be resold at a valuation of 200 million USD after 7 years. With the expected profit rate, the return on investment capital is 20 times. Accordingly, the startup value after receiving investment capital (post-money valuation) is 200/ 20 = 10 (million USD)

+ Estimate the startup value before receiving investment capital (pre-money valuation): This value can be calculated by subtracting the amount of money the investor plans to invest in the startup from the post-money valuation. Suppose the investor plans to invest 2 million USD in the startup, accordingly the pre-money valuation is 10 - 2 = 8 (million USD)

+ Adjustment for dilution effect: Is the investor's ownership percentage becoming smaller when the startup receives additional investment capital from other investors. A startup can go through many rounds of funding, after each round of funding, the ownership ratio of existing investors in the startup becomes smaller (because the scale of the business becomes larger.) Suppose the investor Investment estimates the dilution rate to be 30%, the startup's pre-money valuation after dilution is 8 x (100% - 30%) = 5.6 (million USD).

- Berkus valuation method

This is a method commonly used to value startups that have no revenue and the basic valuation is based on the startup's development. It is priced based on recent developments. The highest value is 2 million USD (or in many cases up to 2.5 million USD). The valuer only needs to add 0.5 million USD for each additional stage of startup development.

According to this method, the value of a startup business will be based on the monetary value of 5 factors: business idea, applied technology, quality of management, strategic relationships, and implementation ability. products and sales.

- Discounted cash flow method (DCF Method)

DCF is the method often considered to help most accurately evaluate the intrinsic value of a business. However, because the DCF model is based on many assumptions and parameters that are included in the valuation model during the calculation, every time those parameters change, the business value also changes. Therefore, DCF is often more suitable for businesses that have stable revenue, or can be estimated with acceptable accuracy, and is not suitable for businesses that do not have revenue, or revenue unstable. According to this method, the business value is predicted by the future cash flows of that business and then discounted to the present time. The main approach of the DCF method is to consider business value as the total present value of future cash flows that the business can bring to its owners (and all investors who have invested in the business). If the business operates normally, after the 5th year onwards, the business will continue to generate cash flow. Most early-stage startups have very low cash flow, or even no revenue. Therefore, the valuation obtained from this method is often very small. Predicting the discount rate is also not easy, because it is difficult to accurately predict data such as inflation rates, financial crises, or epidemics. Therefore, the discounted cash flow method is usually only applied when valuing start-up companies that have reached a certain maturity, have clear, stable, and large enough revenue.

- Multiples Method (Multiples Method)

Revenue multiple valuation is the most common method used to determine the value of a company. It provides a useful metric when comparing companies with different profit levels but similar margins, products, markets, and competition.

Example: A software company chooses the revenue multiple method because they believe it will take many years before they become profitable.

Therefore, this method is often used by technology companies in practice because many technology companies do not operate for profit. However, the lack of profits does not represent the true profit potential of those companies.

The multiples method is simple to use, can be compared to other startups, requires much less information but makes strong assumptions about the level of comparability. The multiple method is a valuation method that complements other methods.

Valuing a startup company is an almost mandatory job if those business owners need to call for investment capital. In general, valuing a startup business at any stage in the development process also faces certain difficulties.

However, to increase value and accurately determine the value of a startup company, business owners need to pay attention to two important factors:

+ Percentage of realizing the business owner's business plan: The more experience the business owner has in starting a business, the more experience in the field he or she pursues is appreciated.

+ At the time of valuation, what growth rate has that startup achieved in terms of performance indicators (KPI) corresponding to the field of operation of that business.

With the methods of valuing startups in M&A commonly used in practice today, there have been many successful valuation and capital raising deals. According to the Department of Science and Technology Enterprise and Market Development (Ministry of Science and Technology), Vietnam has about 3,800 startups and 11 startups are valued at over 100 million USD. Currently, there are more than 200 investment funds operating in Vietnam and more than 100 business promotion organizations and incubators (ictvietnam.vn, 2022). Currently, Vietnam has 4 unicorns (valued at over 1 billion USD), including: VNG, VNPay, Momo and Sky Mavis. In 2021, investment capital in startups reached a record capital of 1.35 billion USD, thereby making Vietnam the most attractive startup place in the ASEAN region. For example: The deal that made a strong impression on the market was Tiki's successful capital call of 258 million USD.

2.3. Restrictions on valuation activities in mergers and acquisitions of start-up businesses

Currently, M&A activities of startups in general and valuation activities of startups in M&A in particular in Vietnam still have the following limitations.

- Vietnam does not have a separate law on M&A and M&A in startups; The legal framework is still incomplete. Regulations related to M&A activities of businesses in general only stop at establishing the formality of M&A activities. There are no documents guiding clear and specific start-up M&A procedures and processes, while legal documents have different regulations, making business mergers and acquisitions difficult to establish. transaction, status of each buyer and seller, management consequences after purchase...

Many issues directly related to startup M&A that Vietnamese law has not yet specifically regulated such as auditing, valuation, taxes, consulting, brokerage, security, information, and dispute resolution mechanisms. .. Meanwhile, M&A is a commercial and financial transaction, requiring specific regulations, a market mechanism to offer and buy businesses, prices, provide information, transfer and establishing ownership, transferring legal status, shares, stocks, financial obligations, employees, brands... (Nguyen Manh Thai, 2009).

- The system of legal documents on startup M&A is not centralized and unified on a common law but is also scattered across many documents. In fact, an M&A transaction with a business in Vietnam is governed by many different laws: Enterprise Law, Investment Law, Competition Law, Securities Law, Environmental Law, Price Law, Housing Law land; Not to mention circulars and decrees that can be issued at any time and the time to complete and go through legal procedures is more than two years, so the time to complete investment licensing procedures has not yet been determined. shorten. Foreign investors must go through at least three licensing steps, including applying for investment approval, updating the Business Registration Certificate and applying for an Investment Registration Certificate to open an investment capital account. direct. The entire process can take anywhere from 3 months to 6 months, not including the time to obtain the necessary sublicenses to operate.

The Government has provided legal and institutional support including the 2017 Law on Support for Small and Medium Enterprises; Programs and projects such as "Project to support the national innovation startup ecosystem until 2025", "Project to support women's startups in the period 2017 - 2025", "Project to support students startups"... However, new programs only support when the business has been established and have been operating for a while, and cannot support the entire development process of the startup.

- Regarding accessing capital from banks and credit institutions: Startup businesses have difficulty accessing capital and credit support policies from credit institutions and traditional capital mobilization channels because Commercial banks' lending standards for start-up businesses are difficult to meet, only meeting business efficiency standards (Tran Thi Binh An and Nguyen Nhi Quang, 2020). According to VCCI statistics, only about 30% of start-up businesses have access to bank capital, because of the potential risks in business start-up loans, commercial banks are not really interested in start-up businesses. . Currently, very few banks design loan products specifically for startup activities, but mainly view startup capital as a loan need to meet the purpose of establishing a business.

- Regarding business valuation: Currently, there are no specific regulations or instructions on valuation of start-up businesses in M&A. Business valuation in general is being guided in a number of legal documents on valuation such as Price Law No. 11/2012/QH13 issued by the National Assembly on June 20, 2012 and Valuation Standards No. 12 on business valuation issued in Circular No. 122/2017/TT-BTC issued by the Minister of Finance on November 15, 2017. However, currently, there is no separate legal document regulating business valuation or startup business valuation in M&A. M&A deals take place mainly because the parties involved agree on price, so the price set is often subjective and inaccurate.

There are many methods used to value startups in M&A, depending on each specific startup so investors can choose the appropriate method. However, these methods have not been specifically regulated in the separate Law, while general business valuation methods specified in Standard No. 12 according to Circular 122/2017/TT-BTC are not appropriate. with the reality of start-up businesses (Discounted cash flow method, asset method).

Approaching and convincing potential investors (buyers) is often not easy, and start-up businesses not understanding how investors evaluate and evaluate business value can potentially lead to failure. Capital mobilization was unsuccessful. Regarding methods, traditional valuation approaches (such as discounted cash flow - DCF or market comparison) are difficult to apply in startup business valuation.

- Regarding information transparency: Investors often have little information about market prospects, risks related to products and the capabilities of startup founders. This has created a barrier that makes M&A activities in the startup sector not really vibrant, and this challenge is also one of the factors that increase risks for M&A activities.

Finding information in Vietnam is difficult due to the lack of available search tools, as well as the level of reliability and information database. Therefore, the review process is mainly based on documents provided by the seller related to legal, tax, financial and operational aspects of the target investment company. Startup businesses (sellers) are mostly young, lack experience in M&A deals, and are not ready to share information, leading to difficulties in performing reviews, as well as prolonging the implementation process. presently. In such cases, investors will spend a lot of time explaining to the business seller the lists of information, required documents and the purpose of referencing those documents.

3. RECOMMENDATIONS AND PROPOSED SOLUTIONS TO IMPROVE THE EFFICIENCY OF BUSINESS VALUATION IN MERGERS AND ACQUISITIONS OF STARTUP BUSINESSES IN VIETNAM.

On the part of the Government

- Build and complete the legal framework and support from the Government for M&A of startups.

Accordingly, it is necessary to establish an agency to manage or monitor the unified law enforcement of M&A activities, as well as be responsible for providing unified professional guidance for M&A activities.

It is necessary to develop, amend, supplement and unify the law on valuation of start-up enterprises in separate M&A and resolve problems in relevant Laws. Specifically:

+ Issue a Decree or Circular guiding the Competition Law, which clearly stipulates and explains a number of terms (such as "Relevant market") to be able to determine whether an M&A activity falls under the case of concentration. economic center or not.

+ Develop a unified and unique list of industries/fields with restrictions on capital contribution ratio of foreign investors or other investment conditions.

+ Regarding the ownership ratio of foreign investors, conditional investment fields for foreign investors need to be handled in a separate document guiding the implementation of the amended Investment Law.

- There are legal, administrative and tax support policies for startup-related activities that need to be applied. State conditions and policies need to be reformed in the direction of reducing capital barriers, simplifying administrative procedures, and creating openness in investment mechanisms and policies; Apply tax incentives for research and development activities, encouraging innovation in businesses.

- The Government needs to improve the investment environment, making it transparent and competitive; improve investment policies through a combination of various market liberalization measures, such as reducing conditional business lines and removing requirements for duplicate approvals and licenses Assembling each other is causing many difficulties.

- Promote administrative procedure reform and modernization in the financial sector, with a focus on taxes, customs, and the State treasury, contributing to improving the business environment and encouraging startups; At the same time, improve the competitiveness of the economy through organizing the implementation of the Government's resolutions on administrative reform, improving the business environment, and developing businesses in the direction of expanding the application of information technology. information, modernize management methods, expand the scope of electronic tax refunds, electronic invoices and electronic customs systems.

- There needs to be specific and unified regulations on valuation methods for startups in M&A; There needs to be a unified guiding document on enterprise valuation to serve the M&A process, avoiding the situation of self-negotiation on enterprise value as at present. Regulations on business valuation must ensure the correct determination of business value according to Accounting Law and the brand value of the business. From there, ensuring the transparency of the M&A market, avoiding abuse of power by managers and executives of businesses participating in M&A.

On the side of start-up businesses

- There should be measures to minimize the level of investment risk assessed by investors, such as providing truthful information about past business performance as well as vision, strategy and plans. Future; market analysis information... At the same time, start-up businesses need to share with investors their market positioning assessment and business model in relation to other operating businesses. in the same ecosystem and value chain.

- Need to be better equipped with financial knowledge, M&A knowledge and business valuation to be able to successfully access and call for investment capital. Promoting startup finance from both the supply and demand sides will ensure greater success of startups, promoting Vietnam to become a startup nation, gradually building a digital economy in the future. context of the Industrial Revolution 4.0. In addition, start-up businesses should proactively make their books and financial reports transparent. That is beneficial for the healthy development of businesses, creating convenience for businesses when performing M&A.

On the side of commercial banks and credit institutions

- It is necessary to specifically design credit product packages for start-up businesses in accordance with specific conditions and standards to control risks.

- Providing capital with the principle of "investment in establishing a company" with the following criteria: Indicators to evaluate financial efficiency: stable growth, revenue growth due to dominating or opening new markets, In a clearly segmented market, human resources must clearly demonstrate plans to manage and operate a company in a systematic and orderly manner.

- It is necessary to loosen the conditions on financial capacity or credit rating for start-up businesses and focus on assessing the feasibility of the business plan to suit the characteristics of the target audience. this customer.

III. CONCLUSION

Despite the volatile global investment environment, Vietnam remains a favorite destination for investors thanks to its strong economic growth and highly skilled young workforce. Therefore, the trend of startups is increasing, the need for capital is greater and M&A activities of startups are also becoming more and more exciting. Businesses in the current landscape need to focus on the fundamental aspects of the business, use capital wisely with a strategic approach, and continuously adjust operating strategies according to changes. of the economic environment. Besides, it is also necessary to improve the efficiency of startup business valuation in M&A to raise capital safely, effectively and most appropriately.

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THE IMPACTS OF BUDGET DEFICIT ON ECONOMIC GROWTH IN COUNTRIES: CONSIDERING THE ROLE OF PUBLIC GOVERNANCE

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Abstract: This paper investigates the impacts of budget deficit on economic growth, considering the role of public governance. Using panel data of 120 countries from 2002 to 2019 and quantile regression techniques, findings show positive impacts of budget deficit, public debt, public governance, the interaction between budget deficit and public governance and a negative impact of inflation on economic growth. The level of impacts vary at different percentiles. The higher percentile, the stronger impact of the budget deficit on economic growth. In contrast, at the 0.1 and 0.25 percentiles, the higher the inflation rate, the more it restrains economic growth.

Keywords: Budget deficit, economic growth, panel data, quantile regression.

JEL classification: G28; H60; O47

1. INTRODUCTION

The state budget is the financial source that helps the government perform the functions and tasks of the state. Balancing the budget helps to stabilise the macro-economy, distribute and use resources effectively, and ensure fairness in society. However, because the economy is always fluctuating, the government has to adjust collections and expenditures accordingly to regulate the economy, so the balance of budget revenue and expenditure is only relative. When government expenditures are larger than collections, budget deficit will be a result. The government always concern the budget deficit problem because of its impact on the economy and other areas of society. According to the economic growth model of Cobb-Douglas (1946) ($Y = AK^{\alpha}L^{\beta}R^{\gamma}$), economic growth is influenced by the input factors of production, including: Labor (L), productive capital (K), natural resources (R) and science technology (A). Although there is no factor in the model for the government, it can be seen that the government's administration of fiscal policy will greatly affect the input factors. In other words, in the process of spending management, if the government spends on human capital, spending on investment capital and spending on science and technology, it will contribute to promoting economic growth. However, there is still no absolute confirmation on whether the impact of budget deficit on economic growth is positive or negative at the country level because there are many different opinions on this correlation. Furthermore, previous empirical studies also show that the impacts of budget deficits on economic growth are not the same across different countries. This relationship is divided into three main viewpoints (Bernheim, 1989): (1) The first viewpoint is that budget deficit has a positive effect on economic growth (Keynesian); (2) The second viewpoint is that budget deficit has a negative impact on economic growth (Ricardian theory); (3) The last is that budget deficit has no impact on economic growth in the long run (Neoclassical theory). This paper investigates the following main question: how does the budget deficit affect economic growth and whether the different impact of the budget deficit on economic growth in each country is resulted from the operating mechanism of the

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government in different countries or in other words, the institutional difference? To date, to the best of the author's knowledge, there is no empirical study examining the effects of budget deficits on economic growth that consider the role of public governance. Besides, although empirical research on the impact of budget deficit on economic growth has many different points of view and methods, the authors have not found any empirical evidence that the compares this effect when using two methods: ordinary least squares with fixed effects model (OLS – FEM) and percentile regression with 0.1; 0.25; 0.5; 0.75 percentiles.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Theoretical framework

- Keynesian theory is presented in Palgrave Macmillan's book "An Overview of Employment, Interest and Money" (1936). According to this theory, budget deficit has a positive effect on economic growth. Keynes argued that the state budget is an effective government tool to stimulate private investment as well as consumption. The State affects the economy through pump priming that increase private investment, increase personal savings, overcome crises, decrease unemployment and stabilise the economy. Domar (1944) also demonstrated that consecutive budget deficits are also not negative impacts when the economy grows positively. The author also state that it is a usual state of budget deficit when government spending exceeds government revenue. Kurayish Ssebulime's research (2019) shows the similar results. In addition, Saud Ghali Sabr (2021) believes that the budget deficit has a positive effect on economic growth in the short run and this effect is not strong.

- Racardian theory is presented in "Principles of Political Economy and Taxation" book published by John Murray (1817). According to this theory, a prolonged budget deficit will force the government to find another sources to cover it. Whether the government borrows or collects taxes to compensate, people still have to reduce spending to save money and pay taxes. Such declining spending will refrain economic growth in the future. There are some studies that have the similar viewpoint. (Awe & Funlayo, 2014; Hashibul Hassan, 2014; Mansoor Arjomanda, 2016; Fahmida Ahmad, 2017; Todorova, 2019; Haile, 2020; Shamsideen Adewale Yusuff, 2020; Rummana Zaheer, 2021)

- Neoclassical theory (Solow, 1999) states that budget deficit only affects economic growth in the short run. According to this theory, every individual has a personal spending plan. Government borrowing that covers the budget deficit will shift the tax burden to the future. Thus, individuals who do not currently bear the tax burden could increase their spending. An increase in spending reduces savings and hence interest rates must rise to balance capital markets. This rising interest rates results in a decline in private investment. Therefore, the budget deficit has a negative impact on economic growth in the short run. However, according to modern economists, this impact is only the result from the jostling effect and happens in the short run. In the long run, the government will not be able to intervene in the economy through financial policies. There are some studies that follow this viewpoint (Nayab, 2015; Karadeniz, 2021).

2.2. Literature review

Previous empirical studies research the impacts of budget deficit on economic growth in individual countries or groups of countries by using different methods. Research results show that the impact of budget deficit on economic growth in different countries is different.

Some studies follow the view that budget deficit has no negative impact on economic growth. Kurayish Ssebulime (2019) uses data in the period 1980 - 2016 in Uganda with cointegration method, error correction model and Granger causality pairwise. This research result shows that the budget deficit causes severe inflation in Urganda and thereby negatively affects the economy. However, it only happens in the short run and in the long run the budget deficit limits inflation through the regulation of money supply and exchange rate. Saud Ghali Sabr (2021) studies effects of the budget deficit on economic growth in both short and long run in Iraq in the period 1980-2018. Using autoregressive distribution lagged model (ARDL), he shows that the budget deficit has a positive effect on economic growth although it only happens in the short run and is not strong.

Some studies follow the view that budget deficits have a restraining impact on economic growth: Awe and Funlayo (2014) studies the short-term and long-term effects of budget deficit on economic growth in Nigeria in the period 1980 -2011. The OLS regression results show that there is a relationship between budget deficit and economic growth. Using the Johansen cointegration technique to investigate the long-term effects of budget deficits, this research founds that there is a significant long-term relationship between budget deficits and economic growth in Nigeria. The results from error-correcting model show that there is a negative relationship between budget deficit and gross domestic product. Using the same method, Hashibul Hassan (2014) studied the impact of budget deficit on economic growth in Bangladesh in the period 1976 - 2012 and find the similar results. Using the STAR model, Rummana Zaheer (2021) also finds that the budget deficit has a negative impact on economic growth in a single country at the threshold of 5.67% by using data in Pakistan in the period 1972 – 2014. Matandare et al (2018) examines the relationship between public debt and economic growth in Zimbabwe by using Ordinary Least Square (OLS) with 1980 to 2016 time series data. The study found that there is a negative significant relationship between external debt and economic growth in Zimbabwe for the period under study. With the same research topic, Yusuf1 and Aziza Said (2018) had similar results when considering the impact of public debt on economic growth in Tanzania for the period 1970 to 2015. However research using co-integration and Vector Error Correction Mechanism (VECM) and Approach to examine the relationship between public debt and economic growth and granger causality test to examine the causal relationship between variables. VECM estimates show that there is a negative relationship between public debt and economic growth in Tanzania in terms of research time. Several studies have investigated the impact of budget deficits on economic growth within a group of countries. For example, there are some studies by Mansoor Arjomanda (2016) with data from ten selected countries in the MENA region (including Egypt, Iran, United Arab Emirates, Jordan, Kuwait, Lebanon, Morocco, Oman, Syria and Tunisia) for the period 2000-2013, Todorova (2019) uses data from 17 European countries: Bulgaria and new members of the European Union (Cyprus, The Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Romania, and Croatia) during 2015 as well as the Balkan countries (Serbia, Turkey, Greece, North Macedonia) in the period 2007 -2018. The panel data regression results show that the budget deficit has a negative impact on economic growth. And some studies have the same results (Fahmida Ahmad, 2017; Haile, 2020; Shamsideen Adewale Yusuff, 2020)

Some studies follow the view that budget deficit does not have any impact on economy in the long run. Nayab (2015) investigates the impact of budget deficits on economic growth in Pakistan from 1976 to 2007. The author uses cointegration technique, VAR model, vector error correction model VECM and the results show that budget deficit does not affect economic growth. In the same opinion, Karadeniz (2021) studies data in the period 1994 - 2019 in 14 developing countries (including Antigua and Barbuda, Meksika, Endonezya, Pakistan, Hırvatistan, Panama, Jamaika, Paraguay, Kolombiya, Romanya, Kosta Rika, Sri Lanka, Malezya, Şili). The results show that the budget deficit has a decreasing effect on the economic growth rate.

Some studies follow the view that governance has a great influence on the economic growth of a country. Acemoglu et al. (2019) uses an annual panel comprising 175 countries from 1960 to 2010 to study the impact of the democracy on economic growth. Research results show that democracy has a significant and robust positive effect on GDP and democratizations increase GDP per capita by about 20% in the long run. This can be seen the role of institutions in promoting economic growth. Jalilian et al. (2007) explores the role of state regulation using an econometric model of the impact of regulation on growth. The results based on two different techniques of estimation suggest a strong causal link between regulatory quality and economic performance. The authors mentioned a set of six aggregate indicators developed by the World Bank. They think that the indicators are normalized with higher values denoting better governance. The six indicators provide a subjective assessment of the following aspects of a country's quality of governance: Voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, control of corruption.

3. RESEARCH METHODOLOGY

3.1. Research models

Based on the research of Awe and Funlayo (2014) and Mansoor Arjomanda (2016), this paper uses the following models to investigate the impact of budget deficit on economic growth when considering the role of public governance in countries. The model is specifically built by the authors as follows:

$$gdp_{it} = \alpha_0 + \alpha_1 inf_{it} + \alpha_2 deb_{it} + \alpha_3 def_{it} + \alpha_4 go_{it} + \alpha_5 (defxgo)_{it}$$

Where:

gdp_{it}: Economic growth for country i in year t (GDP per capita – constant 2010 US$)

inf_{it}: Inflation for country i in year t (%)

deb_{it}: Public debt for country i in year t (%GDP)

def_{it}: Budget deficit for country i in year t (% GDP)

go_{it}: public governance for country i in year t

def x go: interaction term between budget deficit and public governance.

ε_{it}: error term

3.2. Data

In this paper, the authors use data from 120 countries in the period 2002 – 2019. Data are extracted from the World Bank World Development Indicators (WDI), Worldwide Governance Indicators (WGI), and IMF World Economic Outlook (WEO) databases.

There are two main sources of institutional data. The first is The Worldwide Governance Indicators (WGI). This is a project which reports aggregate and individual governance indicators for over 200 countries and territories over the period 1996–2020, for six dimensions of governance: Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption. They are measured by public and business perceptions on various aspects of the institution. The second is Corruption Perceptions Index - CPI). It is used to measure corruption perceptions in the public sector in various countries around the world. However, the authors selected six dimensions of governance because we want to consider the impact of each indicator and it's not just about corruption. Moreover, the institutions in each country are different, so it is convenient to consider each indicator separately to make policy implications suitable for each country.

Table 1: List of used dependent, independent and interaction variables

No	Variables	Sign	Measurement	Source	Hypothesis	Research
Dependent variable						
1	Economic growth	gdp	GDP per captia (constant 2010 US$)	World Bank Development Indicators (WDIs)		Matandare, & Tito (2018), Yusuf1 and Said (2018)
Independent variable						
2	Inflation	inf	The annual change in percentage of consumer price index (CPI)	The World Economic Outlook (WEO) from IMF database	-	Hashibul Hassan (2014); Mansoor Arjomanda (2016); Karadeniz (2021);
3	Public debt	deb	Total public debt (% GDP)	IMF (Historical Public Debt Database)	+	Ahlborn and Schweickert (2018); Saungwemea and Odhiambo (2019)
4	Budget Deficit	def	The potion of the total of government lending/net borrowing (% GDP)	IMF	+	Domar (1944); Saud Ghali Sabr (2021)
5	Regulatory quality	go1	Regulatory quality captures the perception of government's ability to formulate and implement sound policies and regulations that permit and promote private sector development.	Worldwide Governance Indicators (WGI), World Bank (WB)	+	Jalilian et al. (2007)
6	Rule of law	go2	Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	WGI, WB	+	Jalilian et al. (2007)
7	Voice and Accountability	go3	Voice and accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media	WGI, WB	+	Jalilian et al. (2007)

8	Control of Corruption	go4	Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	WGI, WB	+	Jalilian et al. (2007)
9	Government Effectiveness	go5	Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	WGI, WB	+	Jalilian et al. (2007)
10	Political Stability	go6	Political Stability measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.	WGI, WB	+	Jalilian et al. (2007)
Interaction variable						
11	Interaction between budget deficit and public governance	def x go	Budget deficit x public governance		+	

RESEARCH METHOD

The authors use a multivariate regression model on panel data with the OLS method and fixed effects model (FEM). However, the Breush-Pagan test results show that the variance of the FEM model is not heterogeneous. Therefore, it is appropriate to use percentile regression to study the performance for many different percentiles. The percentile regression method was first introduced by Koenker and Bassett in 1978. Instead of using the OLS method to estimate the parameters of the mean regression coefficient, Koenker and Bassett (1978) proposed estimating the regression parameters coefficient of each dependent variable on each percentile in such a way that the sum of absolute differences of the regression function at percentile τ of the dependent variable is minimal. The advantage of this method is to investigate in detail the impact of independent variables on the dependent variable on each percentile. Due to the limitation of the article and the nature of the research sample, the author chose the basic percentiles for analysis, including the 0.1; 0.25; 0.5 and 0.75 percentiles.

3. RESULTS

3.1. Descriptive statistics

Table 2 shows that most variables have positive mean except def and go3 variables. The negative mean of def variable shows that budget deficits are quite common in countries. The go3 variable captures public governance policy related to voice and accountability. This negative mean of go3 variable shows that countries implementing this policy have not really been thorough. The gdp value ranges from 208.075 USD to 100,000 USD and has an average value of 15,207.03 USD. The inf value ranges from - 60.4964% to 100.254% and has a mean value of 5.113075%. The def value (measured as a % of gdp) ranges from - 35.4 % to 43.3 % and has an average value of -1.88244 %. Six dimensions of governance are measured by public and business perceptions on various aspects of the institution. Estimate of them gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5. A value of (-2.5) represents the lowest level of perception of different aspects of the institution and a value of 2.5 represents the highest level of perception of different areas of the institution in each country. It can be seen that the level of perception of the variable go1 is the highest among 6 components of go with maximum and minimum values of 2.469 and – 1.722 respectively. This shows that the governments of countries are very aware of the need to increase investment in the private sector. Countries also have a high sense of corruption control but do not pay enough attention to Voice and Accountability. This is shown through the results: go4 variable has the highest mean (0.189092), go3 has the lowest mean (-0.05902) amongst 6 components of go.

Table 2: Descriptive statistics for all used dependents

No.	Variable	Obs	Mean	Std. Dev.	Min	Max
1	gdp	2160	15207.03	20224.99	208.075	100000
2	inf	2160	5.113075	6.81069	-60.4964	100.254
3	def	2160	-1.88244	5.155491	-35.4	43.3
4	deb	2160	53.62795	43.79242	0	558.119
5	go1	2160	0.083426	1.05644	-1.722	2.46999
6	go2	2160	0.144269	1.013291	-2.078	2.43698
7	go3	2160	-0.05902	0.946102	-2.1808	1.75519
8	go4	2160	0.189092	0.95138	-2.344	2.26054
9	go5	2160	0.086027	1.012207	-1.838	2.1003
10	go6	2160	0.094707	0.919852	-2.233	1.801

3.2. Multivariable correlation analysis

In Table 3, the correlation coefficients between all independent variables do not show autocorrelation among the inf, def, deb, go variables. The correlation between the variables budget deficit (def) and the public governance related to voice and accountability (go3) is the highest (0.1651) that is much less than 0.800. Hence, these correlations are satisfactory to run regression (Wooldridge, 2013). The correlations between the components of public governance show the combination of components in the implementation of public governance policy. Besides, it can be seen that budget deficit (def) is positively correlated with governance variables and the degree of correlation is different. This suggests that an increase in institutional values can lead to an increase in the budget deficit. Since then, it will inhibit economic growth if the variable def has a negative impact on economic growth and will promote economic growth if the variable def has a positive impact on economic growth. The governance variables also have a positive correlation with public debt (deb) except for the variables go3 and go4. Thus, if the deb variable has a positive effect on economic growth, the increase in the value of the institutional variables go1, go2, go5, go6 will promote economic development but will inhibit economic growth if increasing value of go3, go4.

Table 3: Correlation coefficient matrix for independent variables

	inf	def	deb	go1	go2	go3	go4	go5	go6
inf	1								
def	-0.0601	1							
deb	0.048	-0.3084	1						
go1	-0.3346	0.1494	0.0156	1					
go2	-0.3632	0.1201	0.0219	0.9401	1				
go3	-0.2991	0.1651	-0.0676	0.7783	0.7444	1			
go4	-0.4051	0.1236	-0.0399	0.8981	0.9415	0.7264	1		
go5	-0.3659	0.12	0.0193	0.9605	0.9597	0.7936	0.9325	1	
go6	-0.3369	0.0162	0.0641	0.8078	0.8044	0.676	0.8353	0.8428	1

3.2. Regression results

3.2.1. OLS regression (FEM) results

The results of OLS regression (FEM) of Model are shown in Table 4. The results shown in Table 4 shows the level and direction of the impact of these variables but especially consider the role of public governance when including the interaction terms between budget deficit and public governance in model. However, in order to examine the impact of these variables on the economic growth at different percentiles in detail, the percentile regression results of Model are shown in table 6 .

Table 4: OLS regression (FEM) results: The impact of budget deficit on economic growth when considering the role of public governance.

Independent variables	go1	go2	go3	go4	go5	go6
inf	-57.6	-2.257	-352.2***	78.65**	23.17	-184.9***
	[-1.61]	[-0.06]	[-7.10]	[1.96]	[0.65]	[-4.06]
def	470.3***	580.1***	644.4***	623.6***	535.9***	1112.7***
	[9.86]	[11.88]	[9.66]	[12.06]	[11.30]	[18.24]
deb	39.67***	41.10***	64.63***	65.45***	40.67***	45.10***
	[7.20]	[7.23]	[8.28]	[10.95]	[7.44]	[6.44]
go1	15876.7***					
	[67.17]					
defgo1	382.7***					
	[8.66]					
go2		16500.7***				
		[64.03]				
defgo2		468.2***				
		[10.20]				
go3			13161.6***			
			[34.62]			

defgo3			537.2***			
			[9.23]			
go4				17378.2***		
				[58.83]		
defgo4				492.0***		
				[9.56]		
go5					16902.2***	
					[67.88]	
defgo5					483.7***	
					[10.99]	
go6						15501.7***
						[44.42]
defgo6						626.0***
						[10.49]
_cons	12683.5***	11559.2***	15039.5***	9059.7***	12237.8***	14423.5***
	[31.66]	[27.69]	[26.80]	[20.02]	[30.69]	[28.34]
N	2160	2160	2160	2160	2160	2160

*Note: ***, **, * Coefficients are significant at 1%, 5%, 10% levels, respectively.*

The regression coefficients of def are shown in Table 4. These coefficients show the degree of impact of def on gdp are different when considering the role of public governance at significance level (1%). The results show that the budget deficit has a positive effect on economic growth and is strongest when considering the role of go6 and the lowest when considering the role of go1. This shows the important role of institutions in contributing to increasing the positive impact of the budget deficit on economic growth. As a result, the different impact of the budget deficit on economic growth in each country is resulted from the operating mechanism of the government in different countries.

3.2.2. Percentile regression results

➢ Percentile regression results: The impact of budget deficit on economic growth when considering the role of public governance

Table 5: Percentile regression results: The impact of budget deficit on economic growth when considering the role of public governance

	go1	go2	go3	go4	go5	go6
0.1 percentile						
inf	-58.56**	-51.36**	-45.18***	-16.72	-82.90***	-82.42***
	[-2.28]	[-2.23]	[-4.12]	[-1.29]	[-3.03]	[-6.45]
def	122.6	201.6***	93.46**	106.8***	331.3***	99.06**
	[1.59]	[3.76]	[2.25]	[3.54]	[3.32]	[2.33]
deb	7.384***	10.48***	-0.507	17.40***	8.564**	1.653
	[2.58]	[3.34]	[-0.41]	[8.53]	[2.45]	[0.61]
go1	5499.0***					
	[10.15]					
defgo1	198.8*					
	[1.93]					

go2		6064.4***				
		[16.01]				
defgo2		240.9***				
		[3.54]				
go3			1359.1***			
			[8.80]			
defgo3			97.34***			
			[4.84]			
go4				6709.0***		
				[19.90]		
defgo4				161.0***		
				[3.30]		
go5					6592.8***	
					[8.78]	
defgo5					354.2***	
					[3.49]	
go6						5353.5***
						[12.46]
defgo6						216.3**
						[2.08]
_cons	3898.4***	3590.1***	1856.0***	2301.1***	4336.5***	2822.2***
	[9.88]	[15.31]	[10.61]	[19.65]	[9.13]	[17.53]
0.25 percentile						
inf	-110.4***	-60.73**	-166.5***	10.59	-113.2***	-140.8***
	[-3.24]	[-2.20]	[-5.57]	[0.38]	[-3.80]	[-6.37]
def	318.5***	399.3***	339.4***	356.1***	479.3***	318.2***
	[6.24]	[8.74]	[5.75]	[7.22]	[9.35]	[4.39]
deb	16.46***	22.32***	7.432**	32.02***	28.77***	15.13***
	[2.87]	[6.94]	[1.98]	[5.02]	[5.06]	[2.99]
go1	9792.6***					
	[17.10]					
defgo1	369.3***					
	[4.88]					
go2		10364.1***				
		[23.83]				
defgo2		445.3***				
		[4.80]				
go3			4690.6***			
			[13.26]			
defgo3			308.6***			
			[5.35]			
go4				9934.4***		
				[22.26]		
defgo4				379.6***		
				[5.32]		
go5					10521.4***	
					[29.44]	
defgo5					424.3***	
					[5.66]	

go6						7132.5***
						[12.61]
defgo6						309.9***
						[2.98]
_cons	7507.1***	6250.7***	5793.7***	4118.5***	7033.1***	4791.8***
	[21.99]	[28.60]	[18.29]	[13.09]	[24.05]	[14.83]
0.5 percentile						
inf	21.35	33.46	-279.7***	62.94**	95.01**	-184.9***
	[0.94]	[0.97]	[-4.60]	[2.42]	[2.15]	[-3.44]
def	476.5***	624.8***	753.8***	646.6***	601.1***	1223.2***
	[6.03]	[8.09]	[9.82]	[8.47]	[11.97]	[9.33]
deb	46.45***	48.05***	71.53***	76.87***	57.33***	77.57***
	[4.96]	[7.49]	[5.06]	[8.08]	[7.46]	[6.54]
go1	14952.8***					
	[40.98]					
defgo1	286.0**					
	[2.48]					
go2		13721.8***				
		[34.00]				
defgo2		379.8***				
		[5.11]				
go3			8932.6***			
			[17.11]			
defgo3			511.9***			
			[5.41]			
go4				14176.0***		
				[28.44]		
defgo4				364.0***		
				[3.97]		
go5					14869.0***	
					[32.75]	
defgo5					303.7***	
					[3.92]	
go6						11750.2***
						[16.70]
defgo6						606.3***
						[4.06]
_cons	11263.6***	9348.6***	9895.0***	6425.1***	10297.1***	9412.3***
	[30.13]	[24.37]	[15.06]	[13.82]	[26.42]	[12.78]
0.75 percentile						
inf	31.73	34.53	-309.4***	121.9***	120.4***	-19.43
	[1.22]	[1.09]	[-4.06]	[3.04]	[3.31]	[-0.27]
def	620.7***	702.7***	984.9***	688.5***	633.2***	1452.7***
	[9.38]	[8.20]	[4.42]	[7.38]	[6.63]	[14.28]
deb	57.70***	57.84***	124.6***	64.36***	38.29***	64.60***
	[9.77]	[5.40]	[7.07]	[6.66]	[5.77]	[5.02]
go1	16244.1***					
	[41.51]					

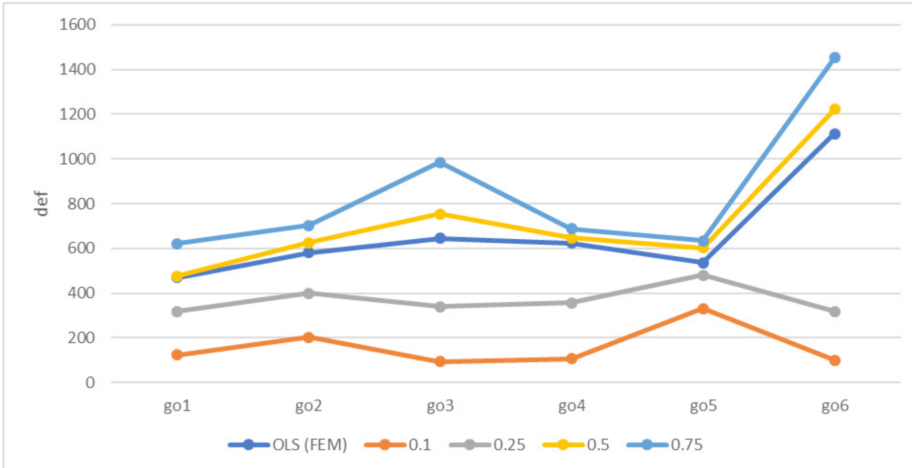
defgo1	236.0***					
	[3.01]					
go2		16585.5***				
		[36.52]				
defgo2		364.9***				
		[2.95]				
go3			13928.7***			
			[17.37]			
defgo3			429.5**			
			[2.33]			
go4				18150.7***		
				[33.18]		
defgo4				385.0***		
				[3.09]		
go5					17313.7***	
					[47.78]	
defgo5					374.2***	
					[4.38]	
go6						16620.9***
						[42.36]
defgo6						683.7***
						[8.58]
_cons	16484.8***	15893.6***	19463.9***	14251.7***	17213.1***	21039.0***
	[30.50]	[23.32]	[14.60]	[17.48]	[29.05]	[26.51]
N	2,160	2,160	2,160	2,160	2,160	2,160

*Note: ***, **, * Coefficients are significant at 1%, 5%, 10% levels, respectively.*

Table 5 show that the budget deficit (def) has a stronger positive impact on economic growth at significance level (1%) at the 0.25, 0.5, and 0.75 percentiles when considering the role of public governance. These results show the role of public governance in the impact of budget deficit on economic growth. In other words, countries have different public governance, the impact of budget deficit on economic growth is different. Countries with good public governance will promote economic growth, conversely, countries with poor governance will restrain economic growth.

The regression coefficients of def at the percentiles in Table 5 are shown in Figure 1. These coefficients show the degree of impact of def on gdp are different in other percentiles when considering the role of public governance. The dark blue dotted line represents the overall impact of def on gdp when considering the role of public governance, which is the result obtained from the OLS method (FEM) in Table 4. The impact of def on gdp is positive and statistically significant at all percentiles. Also, the higher the percentile, the stronger the impact of def on gdp when considering the role of public governance. The yellow line at the lowest position shows the impact of def on gdp at the 0.1 percentile and the blue line at the highest position shows the impact of def on gdp at the 0.75 percentile.

Figure 1: The regression coefficients of def in the percentiles when considering the role of public governance



4. DISCUSSION

The results of the study show that there is a difference in the level of impact of the factors on economic growth between not considering and considering the role of public governance in the two OLS methods (FEM) and percentile regression.

✓ Regarding analysis results by OLS regression (FEM): When considering the role of public governance, the results are quite similar in terms of the impact of factors on economic growth: budget deficit, public debt and public governance are positively correlated with economic growth. However, the degree of impact of these factors on economic growth has changed when considering the role of public governance. Budget deficit, public debt and public governance all have stronger economic impacts at 1% significance level. In addition, the interaction variable between budget deficit and public governance has a positive coefficient at the 1% significance level that are consistent with 6 components of public governance. These results confirm that public governance play a very important role in the impact of budget deficit on economic growth. In other words, if a country has good public governance, the budget deficit will have a very strong impact on promoting economic growth. The impact of inflation factor is still only statistically significant with components go3, go4, go6 although the level of negative impact has increased. Thus, with considering the role of public governance, the OLS (FEM) analysis results show a good impact of fiscal deficit, public debt and public governance on economic growth. This conclusion supports Keynesian theory when it emphasises the role of the government. Keynes believes that the state budget is the most effective tool to help balance the economy and increased government spending will contribute to promoting economic growth. There are some studies that have the same opinion. Domar (1944) also proves that consecutive budget deficits also do not negatively affect when the economy grows positively. Woodford (1990) argues that with higher public debt, the government uses public debt to invest in infrastructure that increases the flexibility of the private sector and hence can increase economic efficiency. Therefore, it can be seen that with a reasonable policy of public debt, investment in infrastructure will gradually solve capital demands, thereby improving the production capacity of the economy. However, when regression using OLS (FEM), we only see the overall impact of the factors on economic growth and do not see that the impacts of these factors are different in percentiles. We can only see these impact through the results from the percentile regression.

✓ Regarding analysis results by percentile regression: When considering the role of public governance at the percentiles, the positive coefficient for interaction term between budget deficit and public governance shows that the better public governance, the stronger the positive impact of the budget deficit on economic growth in all percentiles. At the different percentiles, the role of each public governance component is also different. At the 0.1 percentile, the level of impact of the interaction variable between budget deficit and government efficiency (go5) is highest among 6 components of public governance. This means that, at the 0.1 percentile, the quality of government policy plays a major role in increasing the positive impact of the budget deficit on economic growth. However, at the remaining percentiles, there is a change in the roles of public governance factors. Specifically: at the 0.25 percentile, the role of public governance is mainly played by the rule of law (go2), at the 0.5 and 0.75 percentiles it is political stability (go6). This result strengthens the support for Keynesian theory. It shows that public debt and budget deficit have a positive impact on economic growth. Ahlborn and Schweickert (2018) tested the long-term relationship of public debt and growth, and similar studies (Saungwemea & Odhiambo, 2019) also provided similar results.

5. CONCLUSION AND POLICY IMPLICATIONS

5.1. Conclusion

The study uses data from 120 countries around the world to investigate the impact of budget deficits on economic growth when considering the role of public governance. The authors use panel data regression to identify factors affecting economic growth as well as consider the role of public governance. Besides, percentile regression is also implemented to analyse in detail the impact of the factors on economic growth at different percentiles.

The research results show that the OLS method (FEM) only shows the overall impact of factors on economic growth, while percentile regression shows in detail the impact of factors on economic growth at different percentiles. The results of the percentile regression will help policymakers make appropriate policies corresponding to the percentile of economic growth in their country. However, both of the two methods share the same results that economic growth is affected by budget deficit, inflation, public debt and public governance. In which, the fiscal deficit, public debt and public governance have positive effects on economic growth, while the inflation has more negative effects on economic growth than positive ones. Besides, the interaction variable between budget deficit and public governance has a positive coefficient, demonstrating the role of public governance in this relationship. Specifically, the better the country's public governance, the stronger the positive impact of the budget deficit on economic growth. The level of impact of factors on economic growth is also changed at different percentiles. Inflation has a significantly negative impact on economic growth at 0.1 and 0.25 percentiles. The higher the percentile, the stronger the impact of the budget deficit on economic growth, holding all other factors constant. But at different percentiles, the role of public governance components in promoting the positive impact of the fiscal deficit on economic growth is also different.

5.2. Policy implications

Based on the research results, the authors propose some suggestions as follows:

The percentile regression results show that there is a difference in the level of impact of the factors according to the percentile of economic growth. Thus, in order to promote economic growth, it is necessary to pay attention to the factors corresponding to the percentile of each country. At all percentiles of economic growth, countries should increase state budget spending on necessary items such as key investment spending, consumption stimulus spending, public goods and services spending. Especially at the higher percentile, the more attention should be paid to government spending because at the higher percentile, the stronger the positive impact of the budget deficit on economic growth. In other words, the budget deficit is just a normal phenomenon of the government spending a lot on the economy to promote economic growth and development. The increase in government spending must be reasonable and manageable because the government has to borrow to cover the budget deficit when the budget deficit increases. This will lead to an increase in public debt. According to the research results, public debt has a positive effect on economic growth, but this effect tends to decrease at the 0.75 percentile. Thus, governments when making spending policies need to have a connection with the public debt situation and the level of economic growth to have an appropriate spending balance. For countries with economic growth at the 0.1 and 0.25 percentiles, government do not only increase budget expenditure but also control inflation to limit the restraining effects of inflation on economic growth.

The research results also show that the budget deficit has a positive impact on economic growth. In addition, different countries having different public governance will lead to different degree of this impact. The better public governance country has, the more it promotes the positive impact of the fiscal deficit on economic growth. Conversely, a country with poor governance reduces this positive effect. Therefore, countries do not increase state budget spending but also need to pay attention to their public governance policies. At different percentiles, the role of public governance components in promoting the positive impact of the fiscal deficit on economic growth is also different. Therefore, countries need to focus on public governance components that have a key role corresponding to their country's percentile in order to have a suitable adjustment.

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HETEROGENEOUS DEPENDENCE BETWEEN GREEN FINANCE AND CRYPTOCURRENCY MARKETS: NEW INSIGHTS FROM TIME-FREQUENCY ANALYSIS

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Abstract: The current study aims to empirically investigate the lead-lag associations between major cryptocurrency markets and green finance measured in terms of green bonds. For empirical estimation, the wavelet analysis and spectral Granger-causality test are utilized to analyze the daily data, covering the period from 2018 to 2023. The results show that the correlation between the returns of the green bond market and cryptocurrencies is not stable over time, which rises from the short- to long-run horizon. However, the co-movements between these assets tend to be different and, in some cases, strong, especially during recent financial crises. Furthermore, the Granger causality test demonstrates the existence of a bi-directional causality between the prices of these cryptocurrencies and green bonds. These outcomes have implications for portfolio managers, investors, and researchers concerned with investment strategies, portfolio allocation, and the possible diversification benefits of making better green bond market decisions.

Keywords: Green bonds, cryptocurrencies, wavelet analysis, causality.

JEL classifications: G10, G11, G15.

1. INTRODUCTION

Climate change has become one of the most severe concerns confronting the world in recent decades, necessitating a worldwide agenda for green and sustainable development in the future (Gozgor and Karakas, 2023). The question of whether green bonds would be used as a method of hedging in the context of financial risk management has grown increasingly relevant as their popularity in the financial markets grows (Udeagha and Muchapondwa, 2023). Since the introduction of this new way of banking and investing, public interest in crypto currencies has grown significantly. Due to their success and ability to diversify, cryptocurrencies have drawn in investors from all around the world (Patel et al. 2023). Since then, there has been a growing interest in investigating the influence these financial innovations have on the global environment in the direction of a climate-resilient economy (Ye et al. 2023b).

Institutional and individual investors can also diversify their portfolios with green bonds and cryptocurrencies (Yadav et al. 2023). The need for safe haven securities and the diversification of portfolios have long been important elements of investment strategy. Among the alternative investments are cryptocurrencies and green bonds (Haq et al. 2023; Ye et al. 2023; Hung, 2023). Investors and portfolio managers utilize these investment alternatives for hedging to lower risk due to their safe haven features. This paper examines the lead-lag relationship between green bonds and the main cryptocurrency markets in light of the increased demand for environmentally conscious investments in financial markets and the need to allocate financial resources for green initiatives.

Our motivation is that participants in cryptocurrency and sustainable financial markets have a variety of investment horizons and goals, which necessitates not only differentiating between social and financial returns due to environmental effects but also using a wavelet analysis to draw conclusions in a time-frequency space. The scholarly research on hedging shows potential distinctions between traditional cryptocurrencies. Additionally, during the past five years, the hedging and diversification functions of Bitcoin and other cryptocurrencies have grown (Ren and

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Lucey, 2022; Sharif et al. 2023); nevertheless, the hedging and diversification functions of green bonds with sustainable cryptocurrencies are still underutilized (Zhang and Umair, 2023; Ye et al. 2023a). We examine the leading and lagging roles of all asset types to answer these concerns.

To the best of our knowledge, no prior articles have looked at the intercorrelation and co-movement between crypto markets and green bonds, despite the fact that many studies have looked at the relationship between green and conventional financial markets, such as the stock, energy, and precious metals markets (Lee et al. 2023; Arfaoui et al. 2023; Huang et al. 2023). This study attempts to address a gap in the literature by analyzing the interplay between green markets and the key cryptocurrencies (Ethereum (ETH), Bitcoin cash (BCH), Ripple (XRP), Bitcoin (BIT), and Ethereum Operating System EOS) in recent crises (COVID-19 outbreak and the Ukraine invasion).

Accordingly, this study explores the causal causality and lead-lag linkage between the green bond market and cryptocurrency indices using a time-frequency analysis. The primary goal of this study is to determine differences in the pattern of the green-crypto nexus over recent crises (the COVID-19 pandemic and the Russia-Ukraine war) and to give a clear picture of the complex, time-varying, and multiscale relationships of green bond markets and cryptocurrencies. Hence, the current work investigates the multiscale links between the green bond index and the cryptocurrency markets. Our research provides straightforward insights into the financial implications of introducing green bonds, as well as the possible advantages they offer over other green financial vehicles. Therefore, we contribute to new strands of literature on green bond markets by investing in their relationship with key cryptocurrencies.

This article contributes to the related literature in several ways. Firstly, the present study expands understanding by examining the dynamic co-movements between cryptocurrencies and green financial instruments within the context of sustainable finance. Prior studies have concentrated on traditional cryptocurrencies, which is consistent with increased environmental and financial concerns in the presence of particular and ambiguous shocks—that is, the COVID-19 pandemic and the Ukraine invasion. Secondly, the co-movements of green bonds and cryptocurrencies are time-dependently analyzed in the study. Instead of passive investors, who are more concerned with the long-term success of their portfolios, active investors, like huge investment banks, are more focused on the short term. Investors from various groups, therefore, have various risk management. A simultaneous evaluation of the strength of co-movements across various frequencies and the size of this strength over time is possible thanks to the wavelet analysis. We therefore use wavelet techniques in this investigation, more specifically continuous wavelet transformation and wavelet coherence. The evaluation of the time-varying co-movement among the researched variables is made possible by the wavelet coherence and cross-wavelet plots. We also check the robustness of the results using spectral Granger causality test. Thirdly, this study improves our understanding of the interplay of sustainable investment markets by taking into account the specific dynamics and intercorrelations among these financial factorsIt also helps to provide a more sophisticated understanding of portfolio diversification, risk management, and investment strategies in the context of sustainable finance.

The research is divided into five sections: Section 2 presents the related literature. Section 3 represents methodology and data. Section 4 shows the empirical results. Section 5 concludes the study.

2. LITERATURE REVIEW

Many studies have previously looked at the cryptocurrency markets from different perspectives, including their function as hedges (Gozgor and Karakas, 2023; Yadav et al., 2023), safe havens (Huang et al., 2023; Yadav et al., 2023; Ren and Lucey, 2023), particularly during the COVID-19 crisis (Sharif et al., 2023), and diversification from conventional financial markets (Abakah et al., 2023; Patel et al., 2023). Due to the significant energy use involved in most of the cryptocurrency mining and transactions, traditional energy assets have been frequently taken into account in the literature that currently exists on the relationship between cryptocurrencies and other assets. Although the green energy sector has grown significantly in recent years, little research has been done on the relationship between cryptocurrencies and the green energy markets (Sharif et al., 2023).

Despite the fact that the green market has seen a significant increase in recent years, there has been little literature on the relationship between green markets and cryptocurrencies. Siddique et al. (2023) examine the relationship between cryptocurrency, carbon, and green markets and provide evidence of strong intra-class connectedness clusters with little interconnectedness among the markets. Similar findings are made by Zhang and Umair (2023), who also find important dynamic spillover effects between carbon markets and renewable energy stocks as well as between green bonds and renewable energy stocks. According to Gozgor and Karakas (2023), the returns on US Treasury bonds and the US dollar are inversely correlated with the returns on green bonds.

Huang et al. (2023) use a TVP-VAR model to investigate the dynamic interlinkages between green markets and Bitcoin during the COVID-19 outbreak. The authors put forward the idea that green assets will continue to serve as an efficient hedge for Bitcoin regardless of the pandemic. Arfaoui et al. (2023) document that green bonds have the least integration with other financial markets, which points to their importance in helping investors diversify their portfolios. For the American, European, and Asian markets, Sharif et al. (2023) examine the intercorrelations and spillover effects between green economy indices, five clean cryptocurrencies, and five black cryptocurrencies. They show that, compared to dirty cryptocurrencies, the overall correlation between green economic indices and clean cryptocurrencies is higher. According to Haq et al. (2023), there will be a moderate short-term (positive) and long-term (negative) co-movement between the markets for green bonds and sustainable cryptocurrency. Ye et al. (2023b) look into the role of asymmetries in identifying the association between blockchain technology and green investment in the global environment. They show that assuming symmetric and weak coherence relationships between blockchain technology and green investment in the global environment leads to biased and misleading findings that do not reflect the real-world scenario.

While the available research has yet to identify obvious linkages between crypto markets, green investments, and sustainable equity, their nexus can be seen in a number of studies. Lee et al. (2023) suggest the three investment tools interact in various market situations. The findings indicate a high tail dependence between green bonds, sustainable stocks, and cryptocurrency. Patel et al. (2023) demonstrate that the magnitude of spillovers and relative roles of each cryptocurrency and socially responsible investments change during the war. Abakah et al. (2023) point out that the blockchain market has considerable adverse effects on the environment that could cause financial assets that support the ecosystem to experience shocks. Yadav et al. (2023) explore the nexus between the green bond, energy, crypto, and carbon markets. It was discovered that Bitcoin has the least connectivity compared to other asset classes, whereas the energy market has the best connectivity. Ye et al. (2023a) examine the impact of asymmetries in influencing the relationship between blockchain and green investment and conclude that there is an asymmetric relationship between crypto currency and biofuel usage in the short and long run. Udeagha and Muchapondwa (2023) look at how economic development impacts green finance and financial technology for the BRICS countries and reach the same finding that environmental sustainability is enhanced by green finance. Yadav et al. (2023) demonstrate the prevalence of long-run spillovers from green bonds to renewable energy and the cryptocurrency market. The findings of Lorente et al. (2023) reveal that the green bond and clean energy markets are inversely related to the GPR at the extreme 10th and 90th quantiles.

The aforementioned discussion leads us to the conclusion that the body of knowledge regarding the connection between green bond markets and cryptocurrency markets is rapidly expanding. Prior research, however, says nothing about examining the time-frequency characteristics of this nexus. As a result, this article aims to close the gap in the existing literature.

3. METHODOLOGY

Cross wavelet transform (XWT), wavelet coherence (WTC) are utilized in this work to show how the domestic variance and covariance of two examined variables change in time-frequency space, as well as the lead-lag interactions between them. This section provides a quick overview of wavelet techniques.

Continuous wavelet transform (XWT)

$W_x(s)$ denotes the XWT which allows us to estiamte the joint behavior of time series for both frequency and time. The wavelet is given as:

$$W_x(s) = \int_{-\infty}^{\infty} x(t) \frac{1}{\sqrt{s}} \psi^* \left(\frac{t}{s} \right) \tag{1}$$

where * shows the complex conjugate and s is the scale parameter which determines whether the wavelet can detect higher or lower elements of the series $x(t)$, possible when the admissibility condition yields.

Wavelet coherence

WTC is efficient in estiamting the localized interconnection between indicators in a time and frequency domains. The cross-wavelet of two series $x(t)$ and $y(t)$ can be written as:

$$W_n^{XY}(u,s) = W_n^X(s,\tau) W_n^{Y*}(s,\tau) \tag{2}$$

where the scale is s, u presents the position, and * demonstrates the complex conjugate. The WTC can be written as follows:

$$R_n^2(s,\tau) = \frac{|S\left(s^{-1} W_n^{XY}(s,\tau)\right)|^2)}{S\left(s^{-1} |W_X(s,\tau)|^2\right) S\left(s^{-1} |W_Y(s,\tau)|^2\right)} \tag{3}$$

where S connotes smoothing process for both time and frequency simultaneously. $R_n^2(s,\tau)$ is in the range $0 \le R^2(s,\tau) \le 1$.

4. DATA

This study aims to explore the time and frequency relationship between green financial instruments and major cryptocurrency markets for daily data from August 1, 2018, to August 30, 2023. The S&P Green Bond Index was used as a proxy to represent green financial instruments (GF). The performance of international green bonds, which finance environmentally friendly projects, is measured by the S&P Green Bond Index (Husain et al., 2023). For cryptocurrencies, we employed five cryptocurrencies, which were gathered from the website www.coindesk.com, are Ethereum (ETH), Bitcoin Cash (BCH), Ripple (XRP), Bitcoin (BIT), and Ethereum Operating System (EOS). Existing studies utilize these markets for green and cryptocurrencies' representations. For details, see: Arif et al. (2021), Husain et al. (2023), Hung (2023) and Siddique et al. (2023).

The daily data for the geen bond index is collected from the S&P Global website (https://www.marketplace.spglobal.com/) while cryptocurrencies are extracted from the link www.coindesk.com. We convert index prices into logarithmic first differences as a proxy for returns.

The dynamic prices and returns are shown in Figure 1, which provides evidence of fluctuations and volatility clustering in the market under investigation during different timeframes. More importantly, the peaks of prices and volatility can be seen from January 2020 in all markets, suggesting that COVID-19 remarkably impacted the green bond and cryptocurrencies markets.

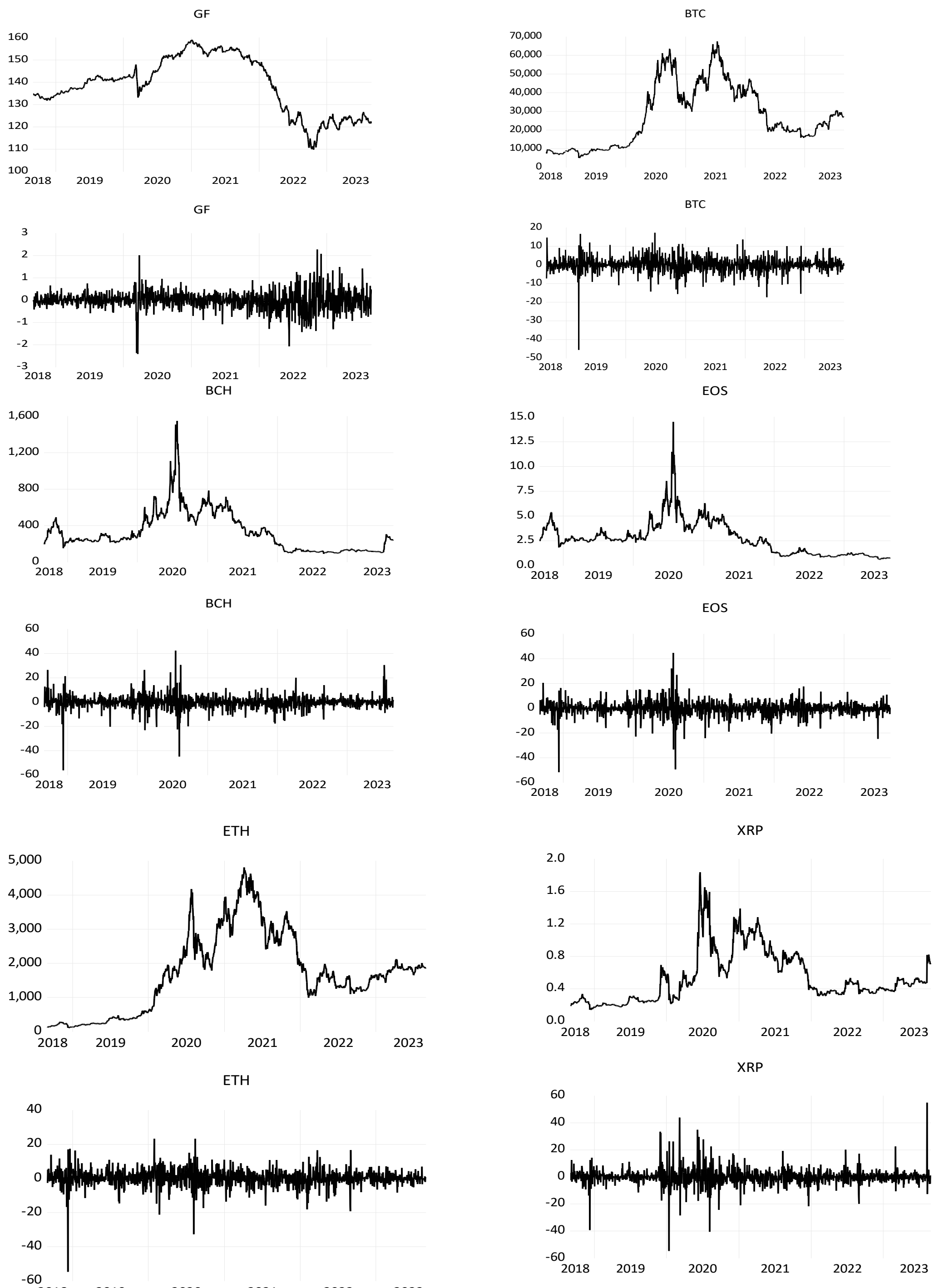


Figure 1. Daily prices and returns of GF, BTC, BCH, EOS, ETH and XPR market indices

The descriptive statistics for the return series are represented in Table 1. The mean return for all selected cryptocurrencies is positive, while green finance has a negative value during the sample period. According to the standard deviation, BCH, ETH, EOS, and XRP are more volatile than the GF and Bitcoin markets. The coefficients of skewness and kurtosis indicate that all markets have a leptokurtic distribution. In this regard, the findings of the Jarque-Bera test uncover that the examined series do not have a normal distribution. In addition, the ADF unit root test suggests that GF and all cryptocurrency returns are stationary.

Table 1. Descriptive statistics of sample return data

	GF	BTC	ETH	BCH	EOS	XRP
Mean	-0.007422	0.092798	0.204377	0.012944	0.096108	0.100785
Maximum	2.271737	17.19993	23.23139	42.39830	44.72424	54.95832
Minimum	-2.409932	-45.55871	-54.70192	-56.12829	-51.70109	-54.74531
Std. Dev	0.408307	3.733022	4.862004	5.571933	5.873120	6.074729
Skewness	-0.189252	-1.386594	-1.357431	-0.533642	-0.776129	0.425061
Kurtosis	7.794214	22.09335	18.62057	19.68429	16.70413	21.65015
Jarque-Bera	1254.681***	20194.38***	13636.96***	15163.12***	10319.03***	18908.89***
ADF	-29.89807***	-38.01121***	-38.90268***	-39.71634***	-41.56888***	-38.34687***

Notes: ADF is the computed statistics of the Augmented Dickey and Fuller unit root test. *** significant at 1%.

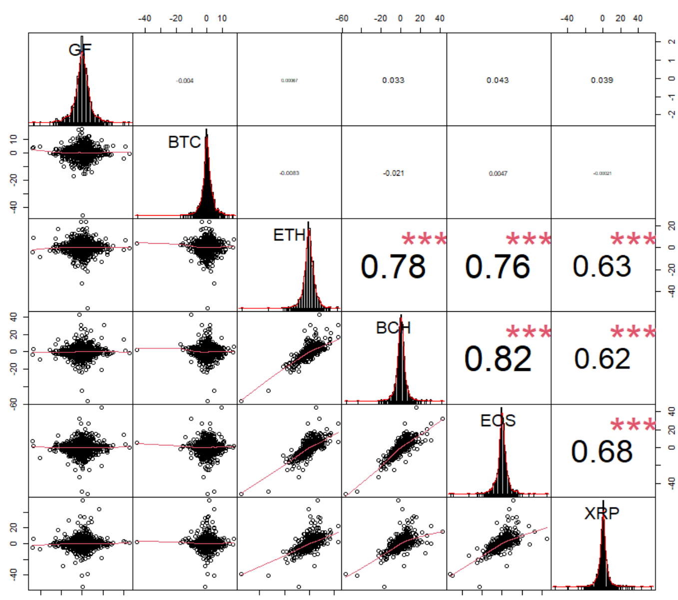


Figure 2. Correlation plot of the exmained variables

The unconditional correlations between GF and the cryptocurrency markets are reported in Figure 2. As shown in Figure 2, the linear correlations are significant and high between the cryptocurrency assets, revealing a strong association with others. Nevertheless, GF had no relationship with cryptocurrencies during the sample period. In general, we would demonstrate that no correlation might provide diversification benefits to portfolio holders in cryptocurrencies.

Empirical results

Wavelet Power Spectrum

Figure 3 illustrates the wavelet power spectrum of all time series under consideration. The vertical axis shows frequency, while the horizontal axis denotes time. The color code goes from blue to red, with blue representing low power and red indicating high power. Figure 3 shows that these markets have various characteristics at different time frequencies. Specifically, during COVID-19, around 2020, power increased dramatically up to the medium run in the cryptocurrency markets, in particular, BTC and XPR indices. Among them, the first region is from 2019 to 2020, which is mainly affected by the first wave of the COVID-19 crisis. After an increase in power in the short run, there is a significant rise in power in the long run around 2020. This is true for green bond markets, revealing that major cryptocurrency markets are more volatile than GF. An increase in power around 2020 indicates an increase in variation because of the COVID-19 pandemic.

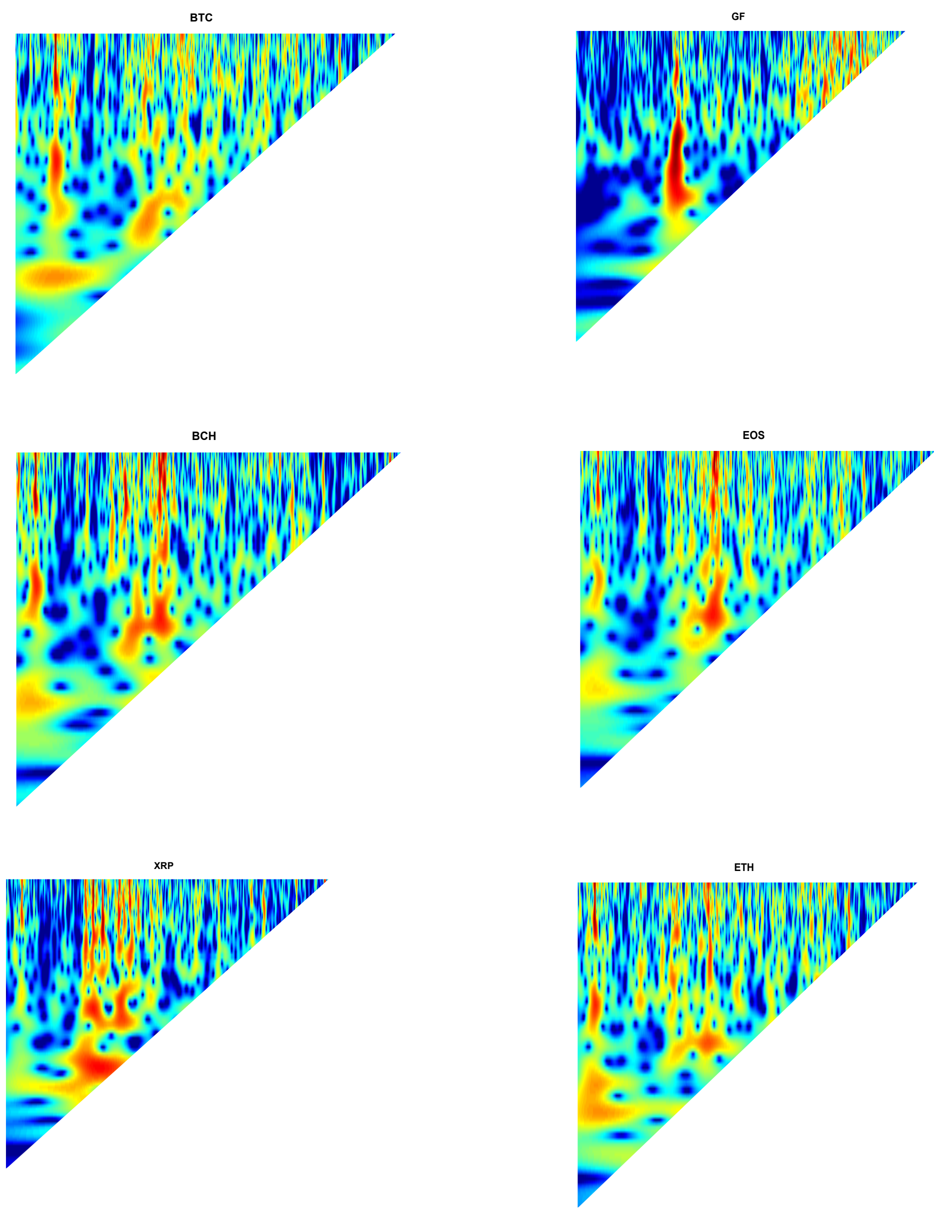
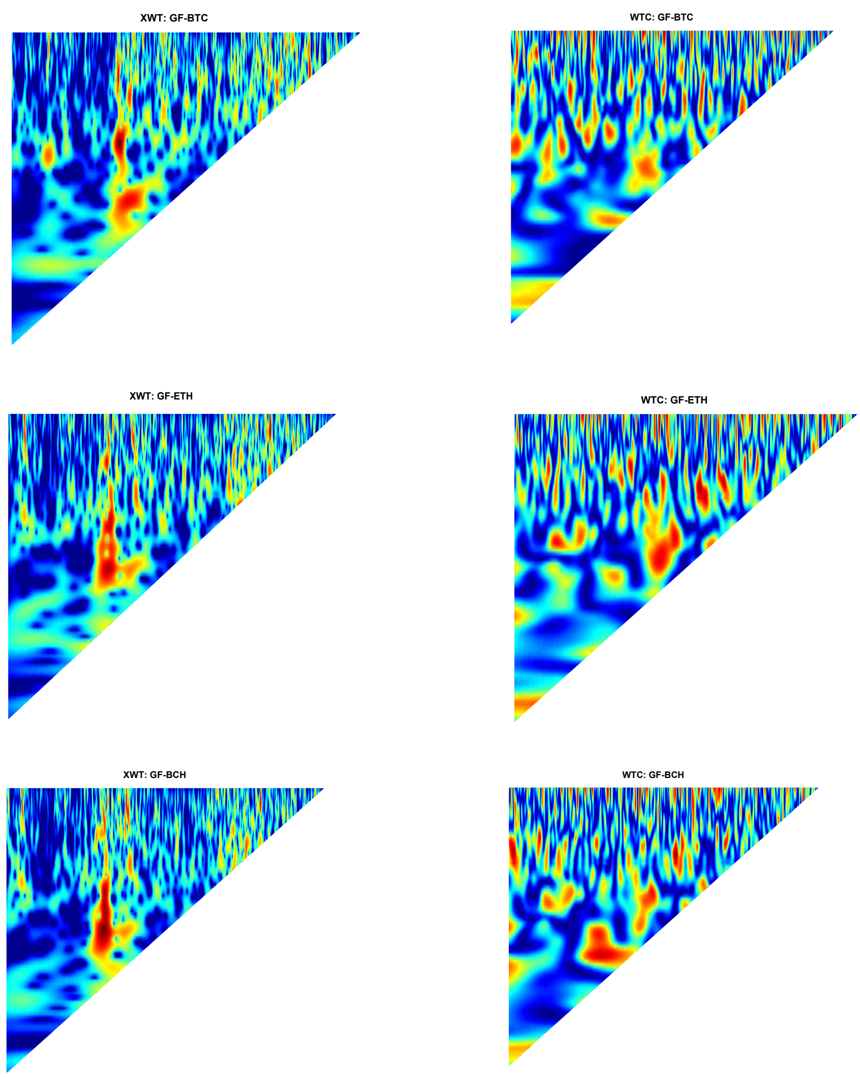


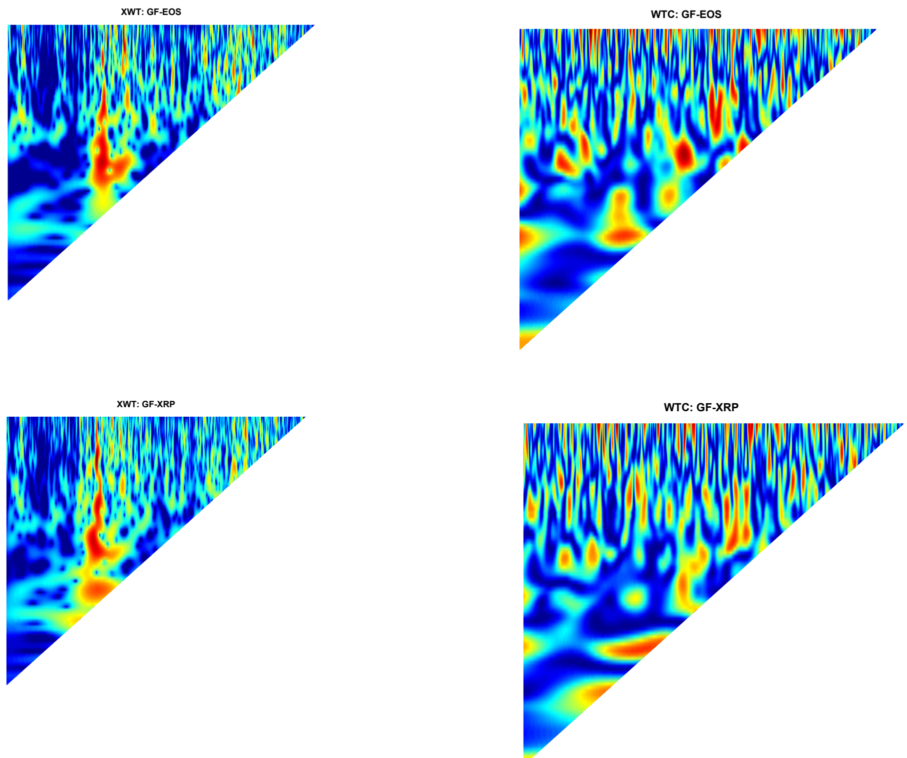
Figure 3. Wavelet Power Spectrum for the employed variables

Wavelet coherence

Figure 4 shows the cross-wavelet transform (left side) and wavelet coherence (right side) between GF and the selected cryptocurrency markets. The color bar is depicted on the right side of each figure. Blue represents little power, while yellow, reddish yellow, and red represent high, higher, and maximum power, respectively. The power of the wavelet increases with the amount of color density.

Figure 4 depicts that with time covering our sample period on the horizontal axis and frequencies on the vertical axis. The areas with heavy shaded contours are significant at the 5% level. Warmer colors (red) indicate places with high significant dependence, whereas colder colors (blue) indicate regions where the two markets are significantly less dependent on one another. The lead-lag phase relationships between the GF and crypto markets are revealed by the phase arrows. Left arrows denote anti-phase, which indicates the opposite, while right arrows denote in-phase, which indicates the co-movement of two markets on a specific scale. The first market leads, as indicated by the right-down or left-up arrows, while the second market leads, as indicated by the right-up or left-down arrows.





Cross wavelet transform Wavelet coherence

Figure 4. The wavelet coherence pairs of GF and cryptocurrencies

It is worth noting that the direction of the arrows at different scales and across time in Figure 4 (cross wavelet transform) differs between the pairs of GF and crypto market returns. Throughout 2019–2020, the green bond and cryptocurrency returns pair exhibits a zone of significant coherency and co-movement at the lower frequency band. XWT systematically explains the popular power of two indicators without normalizing to the single wavelet power spectrum. This can occasionally produce similar outcomes because the jump created in the cross-spectrum, which is a multiplication of the continuous wavelet transformation of two series, cannot be attributed to the nexus between two series if one of the spectra is local and the other one exhibits a very high jump. As a result, we employ wavelet coherence analysis to capture the significant lead-lag interplay between GF and cryptocurrencies in the time-frequency spaces. The findings of wavelet coherence are presented on the right-hand side of Figure 4.

In terms of cross-mean effects, we see various narrow and small zones with a high degree of coherence that are spread across the whole analysis period. Most important local dependencies have a propensity to be short-lived, existing within various short-run time scales. Furthermore, the arrows in such places have either a rightward or a leftward trajectory, showing the existence of positive or negative contagion effects between the GF and crypto markets.

The following plot reports the coherency between GF and Bitcoin. Strong coherencies between these variables, where the GF is driven, are mostly localized at the medium and low frequencies, suggesting that there is a long-term association between BTC and GF during the COVID-19 and Russia-Ukraine crises. The arrows pointing right indicate an in-phase nexus between these variables, revealing a positive relationship during the recent crises in low frequency. However, this relationship is negative from 2018 to 2020 in the short and medium frequencies. These results corroborate the studies of Huang et al. (2023) and Arfaoui et al. (2023).

In the case of the GF-BCH pair, red zones are detected, suggesting the existence of a lead-lag nexus between green bond and BCH markets in the medium run. The direction of the arrows is left side down in the 8–16 cycle period in the periods 2018–2019 and 2021–2022, which reveals the negative relationship between the two series. Nevertheless, some in-phase cyclic effects are also visible in this association during 2019–2020 in the long run, a 2-4 cyclic period. Similarly, the wavelet coherence for GF-EOS represents the left side up in the 4–16 cycle period between 2019 and 2023. This indicates an anti-phase cyclic effect led by EOS. By contrast, the in-phase cyclic effect with arrows right side down will occur in 2019 and 2023 in the long run. Overall, it is clearly understood that BCH and EOS have leading effects on GF in the short and medium run during the sample period. BCH and EOS have solid green attributes; they are good hedges, and their prices are significantly impacted by the appreciation and depreciation of the green bond market (Ye et al. 2023a).

For the GF-ETH pair, we observe strong dependence during 2020–2023 for the frequency of 16–32 days, with arrows pointing to the lower left, which highlights they are anti-phase and ETH is leading. Conversely, significant areas between GF and ETH are also visible during 2019–2020 and 2023, where they are in phase and GF is leading. We note that there is both a negative and positive relationship between GF and ETH in the short, medium, and long run at different time periods. However, these movements are not very strong, in line with the literature (Lee et al. 2023).

It is evident that the GF-XPR pair co-moves in a similar direction in the lower frequency scale, that is, 128–256-day cycles during 2019–2020 and 2021–2023. By contrast, the relationship changes in the opposite direction in the high and medium frequency scales, that is, 8- to 32-day cycles, over the sample period. Overall, we see weak coherence between XRP and GF during the period shown, which implies that XPR provides a chance for diversification. The findings are in agreement with those of Arfaoui et al. (2023) and Ye et al. (2023b).

5. ROBUSTNESS CHECK

To validate our estimates, we propose the spectral Granger-causality test of Breitung and Candelon (2006). This approach works well for both stationary and non-stationary time series (Khalfaoui et al., 2022). We chose the best lags for the various VAR models using the Akaike information criterion and the Schwarz Bayesian information criterion. As a result, the optimal lag is 4. In other words, this technique allows us to explore causality tests in the sense of Granger under the frequency domain to capture relationships between GF and cryptocurrency markets. At various frequencies (0-1, 1-2, and 2-3), the causal association between crypto and green bond markets uncovers short, medium, and long term, respectively. The results of the test are depicted in Figure 5. The upper line (red) shows a level of significance of 5%, while the bottom line (blue) suggests a level of significance of 10%.

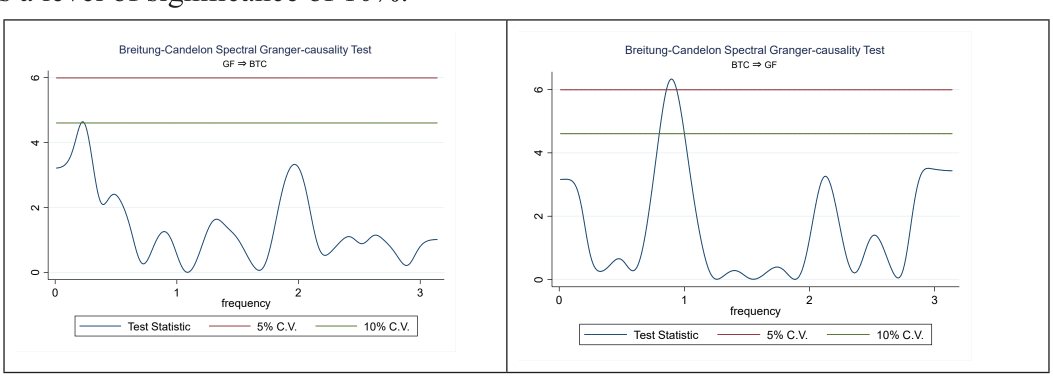


Figure 5. Breitung-Candelon spectral Granger causality test between GF and cryptocurrency markets

As indicated in Figure 5, it is illustrated that the hypothesis that the crypto markets do not Granger-cause the green bond market can be rejected for high and medium frequencies at a 10% significance level. The outcomes demonstrate that there is a bidirectional causality between GF, BTC, BCH, XPR, and BCH in the short and medium run, except that the EOS does not cause a green bond market. In fact, it is in line with our wavelet analysis that there is a significant lead-lag relationship between GF and cryptocurrency markets in different time and frequency domains.

Overall, our findings indicate the presence of a causal relationship between changes in GF and changes in cryptocurrency prices using a wavelet technique, as do those of Yadav et al.

(2023) and Arfaoui et al. (2023), among others. The results of Ye et al. (2023a, b), Yadav et al. (2023) and Lee et al. (2023) are all in agreement with our findings that there is a bidirectional causal relationship between changes in the price of cryptocurrencies and green bond markets. Furthermore, our findings are consistent with existing articles that green markets offer hedging potential and effective diversification for cryptocurrency markets (Abakah et al. 2023). In light of the existing literature (Udeagha and Muchapondwa, 2023; Lorente et al. 2023), two underlying mechanisms, namely the process of green economic transformation and the dynamics of production costs, can explain the sheltering role of green assets. Environmental threats have stimulated the financing of cleaner energy while simultaneously calling for a green transition of the energy-intensive development mode, including cryptocurrency trading and mining, in the context of globally expanding energy consumption with substantial CO2 emissions. Despite the existence of active cryptocurrency trading aimed at generating financial gains, green investors would choose to stick with safer investments, resulting in an insignificant or even opposite relationship between the dynamics of the two types of assets (Ren and Lucey, 2022).

Important policy consequences result from understanding the heterogeneous relationship between the markets for green bonds and cryptocurrencies. Our work demonstrates a lead-lag association between price movements in green bonds and cryptocurrencies. Under different market conditions, how green or sustainable investments behave has little impact on how cryptocurrencies behave. We also discover that significant cryptocurrency changes have a negative impact on green bonds. In order to enhance environmental sustainability through legislation, governments and businesses should take into account the asymmetric relationship between cryptocurrency prices and changes in green bond markets. Additionally, governments and businesses can reduce the environmental impact of cryptocurrency use by supporting the creation of green bonds through regulations that encourage the consumption of clean energy in cryptocurrency mining and trading activities. What is more, governments, corporations, and investors should be aware of the asymmetric impact of green bonds on cryptocurrency values in order to continuously incentivize the development of green bonds and ensure environmental sustainability.

6. CONCLUSION

Green investments opened a new space in the financial world as a result of the widespread concern over climate change. Many investors are keeping an eye out for green instruments as a source for supporting and promoting sustainability as the SDGs receive greater attention. Previous research revealed that traditional cryptocurrencies might benefit from using green assets as a hedge or safe haven. This empirical study sheds light on the dynamic dependence structure between green financial instruments and major cryptocurrency markets for daily data from August 1, 2018, to August 30, 2023. We use the wavelet analysis and Granger causality frameworks as they highlight the strength, causality direction, and lead-lag nexus between the selected market returns.

Our analysis illustrates that the correlation between the returns of the green bond market and key cryptocurrencies is not stable over time. The intensity of coherence is significant across the time-scale domain, and it rises from the short to the long run. The short-term relationship between GF and crypto markets is weaker than the medium- and long-term effects. However, the co-movements between these assets tend to be different and, in some cases, strong, especially during recent financial crises. Furthermore, the Granger causality test demonstrates the existence of a bi-directional causality between the prices of these cryptocurrencies and green bonds.

Our empirical results may have insightful implications for different stakeholders and researchers, especially during the recent global crises such as the COVID-19 outbreak and the Ukraine invasion. Based on these outcomes, by considering the diversification benefits of introducing green bond markets, investors and portfolio managers could construct cross-asset hedging strategies. Our findings may encourage scholars to look into the interconnections of important asset types, which are currently understudied.

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BARRIERS AND SOLUTIONS TO PROMOTE THE PRIVATE ECONOMY FAST AND SUSTAINABLE DEVELOPMENT

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Abstract: In addition to the achievements that have been achieved, the development of the private economy in our country over the past time has many limitations and shortcomings. These shortcomings are mainly due to the fact that the development of the private economy in our country is currently facing great barriers such as: the institutions for business development, entrepreneurs are still inadequate; the legal environment for the private sector is not really complete, the business environment still has high potential risks; Many legal regulations on the private economy have been promulgated but have not been strictly implemented;... Articles with mentioned qualitative research methods mention the barriers that are preventing the private economy from developing quickly and sustainably solutions such as: building and completing the legal framework, creating a safe and favorable investment and business environment for the development of the private economy; improve the effectiveness and efficiency of the State's management over private economic development. The removal of barriers is an urgent issue that the private and state economic actors themselves need to pay attention to and solve.

Keywords: economy, private economy, development, barriers, sustainability

1. INTRODUCTION

In recent years, the private economic sector has made great progress, contributing to creating more jobs, increasing incomes, improving people's lives and making an important contribution to the dynamic development of the country of the entire economy of the country. However, besides the achievements, the development of the private economy in our country is also facing barriers, confusions and obstacles both in theory and in practice... The private sector still has many limitations and shortcomings. That fact requires continuing to build and deploy a system of solutions to promote the fast and sustainable development of the private economy, which deserves to be "an important driving force of the market-oriented economy "socialist" as the Party pointed out.

Resolution No. 10-NQ/TW dated June 3, 2017 of the 5th Conference of the Central Committee of the Party (term XII) emphasized a number of new points about the development of the private sector as a driving force. Important aspects of the socialist-oriented market economy include: (4, 5, 6)

- The state economy, the collective economy together with the private economy are the core to develop an independent and self-reliant economy;
- To encourage and create favorable conditions for the private economy to develop rapidly, sustainably and diversify with high growth rates in terms of scale, quantity, quality and contribution proportion to GDP;
- The private economy can be developed in all sectors and fields that are not prohibited by law;
- Encourage the private sector to contribute capital and purchase shares of state-owned enterprises upon equitization or divestment by the state. Thus, it can be seen that the private sector can be considered as the "key" for Vietnam's economic growth.

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2. GENERAL OVERVIEW OF THE PRIVATE ECONOMY

Terrible economy private core To be area area terrible economy including the business Karma, muscle department product export terrible business rely on private ownership of the factors of production. The private economy usually exists in the form of: private enterprise, partnership, limited liability company, joint stock company, etc. section and the household terrible business fish body. Opposite to with area area terrible economy private core, profit profit always to be item pepper row initiating business activities; Therefore, the private economy has the outstanding characteristics of: High dynamism and creativity, always reacting flexibly to changes in supply and demand in the market. The private economy always has a sense and acts of fierce competition, with the desire to expand market share, eagerly position poison permission in job product export and bow grant the product Products, pandemic service answer application soft and demand school to collect profit profit high .. Although so, job run according to profit profit High and edge painting eagerly jerk market school also cause give terrible economy private core often Go attached with the face left like: edge painting not heal strong; product export have count on one's own play guide next risk muscle terrible panic excess, cause waste fee the source force of commune festival; Because commit France the law, hide contraband tax, time cheat love commercial, terrible business left permission; Are not perform full enough blame duty commune festival, cause cancel ruin lip school; family increase any jar class in commune festival, adversely affect the socio-economic life … (1, 2)

The negative aspects of the private economy can be completely controlled with the creation of a system of mechanisms and policies by the State to regulate the macro economy, especially the construction and implementation of a legal environment-business requires investors and businesses to uphold social responsibility, not to pursue profits at all costs, violating business ethics. With the effective use of macroeconomic-economic management tools, the State can fully exploit and promote the advantages of the private economy to contribute to economic development-society of the country.

3. SOME BARIERS TO PRIVATE ECONOMIC DEVELOPMENT IN VIETNAM TODAY

Thanks to the Party's correct policies and guidelines in developing the private economy in the reform period, the private sector in our country has made great strides in recent years and achieved many achievements. remarkable. Currently, our country has about 600,000 enterprises, and there are over 500,000 private enterprises. The private economy continuously maintained a good growth rate, accounting for 40-43%. The private sector's contribution to GDP structure is always above 43% of GDP (compared to the state sector's 28.9% of GDP and the FDI sector's 18 percent). % of GDP). Each year, private enterprises create about 1.2 million jobs (attracting about 85% of the labor force)… The strong private economy is not only a factor to ensure the maintenance of GDP growth rate, creating a stable source of revenue for the state budget, but also contributing to solving a series of social problems such as: creating more jobs for workers, contributing to hunger eradication, poverty reduction, and improvement of people's lives; contribute to training high-quality workers to meet the requirements of knowledge-based economy development… Many brands of the private sector have been recognized not only in the domestic market but also in the regional and international markets; There have appeared private economic groups with large scale in both capital and high technology. (3, 7)

Despite many remarkable achievements, however, private economic development currently, our country is facing many major barriers such as: (8, 9, 12)

Firstly, there are many shortcomings in the institution of business development *and entrepreneurs.* Still still one number question topic about play develop terrible economy private core need next custom Okay tool can chemical, do clear than both come back physical theory and practice , such as the problem of defining specific criteria belong to private capitalist economy to avoid identifying the private economy with the private capitalist economy; the issue of private economic development with solving exploitation and exploitation or the problem of party members working in the private economy core…

Secondly, the legal environment for the private economic sector is not really perfect, the legal system, mechanisms and policies to encourage the development of the private economy are still inadequate and limited; many policies have been issued but are not complete, clear, inconsistent, inconsistent and overlapping… causing many difficulties for private enterprises in production and business activities. On the other hand, the business environment has improved a lot recently, but there are still high risks, lack of transparency and not really creating favorable conditions for the private sector to develop strongly.

Third, many legal provisions on the private economy have been issued but have not been strictly implemented, such as the Law on Support for Small and Medium Enterprises promulgated by the National Assembly on June 20, but since then Up to now, 2 years after the law took effect, the majority of enterprises have not yet enjoyed the incentives and supports as prescribed in the Law. For example, the number of businesses accessing credit capital from banks is small and quite difficult, the State's support funds have not been deployed effectively ...; administrative procedures for businesses that want to start a business or expand production and business activities... are cumbersome and complicated; It is quite common to see the situation of harassment, trouble, abuse of power, and difficulties for businesses Karma…

Fourthly, at the IX Congress, although the Party made a request to realize the policy of equality of opportunity in access to capital, land, labor, technology in production, business and export, import ... for all economic sectors, including the private sector . However, in reality, since then, private sector enterprises still seem to suffer from injustice in their access to these factors. For example, in getting a bank loan to start up or expand production and business activities of private enterprises, especially small and medium enterprises, often face many difficulties. Up to 34.1% of private sector enterprises reported spending more than 20% of their time in a month dealing with tax and customs procedures, while this figure in the state-owned enterprise sector was only 14.7%.

In addition, some policies regulate that only state-owned enterprises are mentioned and given priority, but not private ones. In general, the right to freedom of business and property rights, and access to opportunities business, social resources are not really equal between the private economy and other economic sectors.

Fifth, the starting point and internal capacity of the private economy is still low, which is reflected in the limited industrial production capacity of private enterprises. Industrial production in the majority of private enterprises in Vietnam is currently at the level of processing and assembly based on the use of imported machinery, equipment and raw materials. Most of the production stages that bring high added value such as design, styling, marketing... are mainly performed by foreign partners. Not only that, most private enterprises do not invest in developing high-quality human resources. Therefore, the application of science-technology, application of advanced technology, and modern management are still weak.

Because of the above barriers, there are still many limitations and shortcomings in the development of the private economy in our country. Among more than 500,000 private enterprises, 96% are small and medium-sized enterprises, 2% are medium-sized enterprises, and only 2% are large-scale enterprises. The 12th Party Congress made the following statement: "Most of the private enterprises are small and lack linkages connection, the ability to cope with risks is weak, many businesses have to dissolve or stop operating moving".

In general, the level of production and business organization of most private enterprises is very low. Even a small percentage of large private enterprises still mainly rely on the advantage of land or loans, but have not invested deeply in development in the fields of production and manufacturing... Recently, there have been a number of large private economic groups that have paid attention to investing and developing technology in the fields of electronics, mechanical engineering, pharmaceutical chemistry, etc. (typically, V ingroup started out as a group of companies service and real estate groups have now switched to technology) and achieved certain successes, but compared to the total number of private enterprises in the whole country, this rate is still too low and not enough meet requirements. (10, 14)

4. SOME SOLUTIONS TO PROMOTE THE PRIVATE ECONOMY FOR FAST AND SUSTAINABLE DEVELOPMENT

Faced with the great barriers that are posed to the development of the private economy in our country today, it is necessary to build a system of solutions to break down barriers to promote the private economy to continue to develop strongly strive: by 2030 there will be at least 1 million enterprises, by 2040 there will be more than 1.5 million enterprises and by 2050, there will be at least 2 million enterprises; increase the proportion of the private sector's contribution to GDP to about 50% by 2025, about 55% by 2025, about 60-65% by 2030. Specific solutions need to be taken into account like: (11, 12, 13)

Firstly, soon improve the theory to create the basis for unifying awareness about the role of the private economy in the socially oriented market economy festival owner meaning.

Need push fast job complete good physical thesis about background terrible economy market school determined direction commune festival owner means and taste position and role of economic sectors in a socially oriented market economy festival owner meaning. This is closely related to the re-perception of the role of the State, the State economic sector and the private economic sector in the national economy. The role of the State and the State economic sector main To be live job ants create market school, build build Summer floor terrible economy - carefully art "hard" and "soft" for background terrible economic, do give market school Hentai dynamic Good than. Need early corpse determined clear commit Because the branch, sectors and products that are strategic or have great influence on the stability and security of the international economy people but Home water need Right poison permission, need hold hold 100% capital thing rate, or hold neck part domination of business to perform the role of macroeconomic regulation. The State needs to accelerate divestment from for-profit business fields, because of the efficiency in business activities of enterprises. Karma home most water is very low compared to business out-of-home career water.

It is necessary to emphasize and clarify the perception that identifying "the state economy plays a leading role, the private economy is an important driving force of the economy" does not include discrimination between "the leading role of the economy direction" compared to "developmental driving force", but the main problem here is to determine the correct position and role of each economic sector in the economy. The private economy now accounts for the majority in terms of quantity, job creation and investment capital in the society; Therefore, it is necessary to remove barriers and promote the development of the private economy so that the private economy can truly become the "most important driving force" of our economy. If officially confirmed, it will have the effect of strongly promoting the spirit of entrepreneurship, creating a breakthrough in the economic development of the country.

Secondly, Continue to improve the legal environment, encourage and create favorable conditions for the development of the private economy.

It is necessary to study and amend and supplement the necessary legal documents as soon as possible, to facilitate investors' peace of mind in investing capital in their business, and to remove annoying procedures in investment promotion and operation. business, Consideration should be given to the elimination of preferences by business sector economy to real events build build one lip school terrible business jar class before France the law. Need complete good literature copy France physical according to direction guarantee tell events system best between the The law and Nghi determined, pine private instruction; remove barriers to market liberalization, secure private property rights with special institutions that monitor contractual obligations. In particular, it is necessary to build muscle department France physical give job image wall, real presently, according to track, bar physical, prize decide painting challenge the fit economic council and handle economic-financial issues when doing business Enterprises are dissolved or go bankrupt in accordance with market rules regardless of economic sectors any.

It is necessary to improve the institution of resource allocation so that the national resources can be mobilized and used most effectively; It is necessary to have breakthrough solutions to remove the begging mechanism in accessing and allocating capital from the bank book home water; develop and implement a disclosure mechanism job fight contractor - hit contractor the attend judgment, the labour submit head private from capital echo book home water; guarantee tell terrible economy private People have equal access to State credit capital, as well as use of resources national resources as economic sectors other.

Third, it is necessary to really create a change in ensuring that the private economy is truly equal before the law as with other economic sectors.

It is necessary to eliminate the stigma in the perception and behavior of civil servants in the apparatus permission force belong to Home water opposite to with the business Karma and business core belong area area terrible economy private core when enforce labour service. Need unloading cancel the fence stop paper permission child Are not need set compartment stop and do depressed heart investors when investing and doing business. It is necessary to comply with the spirit of "What is not prohibited by law, businesses all jobs can be done"; in particular, need to support businesses private sector access to information market school, also like Have muscle processing recommended encourage the business Karma head private research rescue change new carefully art, technology, applying technological advances to products export terrible business and administration business career.

Fourth, it is necessary to improve the institutional quality and governance of the private economic sector.

The business Karma need to actively build and develop corporate culture healthy businesses, forming a team of socially responsible entrepreneurs, living and working in compliance with the standards set by the business construction industry, guarantee tell events look clean, bright White, be patient decide speak "Are not" with love status greed corruption, repent revealed in business, building the image of a responsible businessman towards society, thereby, change inferiority attitudes towards entrepreneurs businesses and entrepreneurs in the private sector core.

In addition, the State should attach great importance to honoring enterprises Businesses and entrepreneurs perform well in business activities, make many contributions to the economic development of the country, join hands to solve social problems in parallel with strictly handling enterprises enterprises and individuals conduct business in violation of the law, evade or fail to fulfill social commitments, cause image enjoy bad arrive lip school terrible economy and life living commune festival belong to add copper. Home water It is also necessary to support and create conditions to improve the level of business administration Karma for management staff in enterprises Karma outside the state through the maintenance of programs Training, fostering knowledge, skills, support France physical give the business Karma in too submit start Karma or next near pine believe market school water outside, creating opportunities for businesses Karma exchange and learn business knowledge and skills in the context of the industrial revolution 4.0, minimizing risks for businesses Karma when participating in the market school.

Fifth, improve the effectiveness and efficiency of State management over private economic development. In order to implement this solution in practice, it is generally necessary to build a lean, effective and efficient state apparatus; build a team of officials and civil servants with integrity, solid political ideology and high professional qualifications to meet the requirements of each job position. Along with that is the strength of reforming administrative procedures, simplifying and shortening the processing time of administrative procedures, especially in terms of business establishment, business registration, licensing, tax, and export, import..., implement a state, a constructivist government. Strengths in applying information technology in management, creating transparent management information systems in society to create conditions for people and businesses to access, exploit and use.

Sixth, to develop policies to encourage and support private enterprises to innovate, create and modernize technology, develop human resources in order to improve productivity and quality in production and business activities. In fact, there are very few private enterprises in Vietnam today that invest in innovation, creativity, technology modernization or investment in the development of high-quality human resources that mainly rely on profits land, natural resources, and cheap labor. That is one of the basic reasons why the majority of private enterprises in Vietnam are small businesses, with low production capacity and competitiveness enterprises of the private economic sector innovate, modernize technology, develop human resources. Specifically, the State should strengthen support for private enterprises to invest in research, development and technology transfer activities, especially new and advanced technologies in production and business activities. or corporate governance. Develop funds to support innovation and technology application.

In addition, it is also necessary to strengthen the implementation of the national strategy on human resource development. To fundamentally and comprehensively renovate and improve the quality of education and training, especially vocational training, and to train high-quality human resources to meet the demand for quantity and quality of human resources for economic development private. To encourage scientific institutions, managers, and scientists to associate with enterprises in training human resources for enterprises and transferring new and advanced technologies to enterprises. Continue to promote the construction and promote the role of the Vietnamese business team in the period of accelerating industrialization, modernization and international integration...

Seventh, private enterprises themselves need to actively develop appropriate business strategies on the basis of perfecting their organizational and management apparatus, promoting marketing activities, and practicing risk reduction measures in their business and many other measures to improve operational efficiency. In order to avoid falling into hot development leading to bankruptcy, the business strategy of private enterprises should derive from the comparative advantages of each locality with specific advantages in terms of resources, geography, natural conditions, etc. course. Moreover, the business strategies of private enterprises need to be consistent with the overall socio-economic development goals of the whole country, the strategies of each specific industry as well as the capacity of the private sector capital, technology, human capacity... to ensure succes.

5. CONCLUSION

Thus, it is clear that in order to promote the private economy to develop quickly and sustainably, worthy of being an important driving force of the economy, it is necessary to propose and implement many solutions to remove barriers that are hindering the growth of the economy. development of the private economy. This system of solutions needs to be developed and implemented synchronously in terms of both mechanisms and policies; improve the management efficiency of the State ... or solutions come from the development strategy of private enterprises.

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ELECTRONIC BANKING SERVICE QUALITY IMPACT ON CUSTOMER SATISFACTION IN HO CHI MINH CITY'S COMMERCIAL BANKING SECTOR

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Abstract: *Banks are extending their services from traditional face-to-face banking interactions to a self-service system. This study aimed to investigate how the various aspects of E-Banking service quality relate to customer satisfaction and identify which dimension may substantially impact customer satisfaction. Data were collected via a survey questionnaire distributed to clients of commercial banks in Ho Chi Minh City. A total of 533 responses were obtained and analyzed using structural equation modeling with PLS-SEM. The findings show that convenience, quality information, security, reliability, responsiveness, and website design significantly impact customer satisfaction, with reliability being the dimension with the most substantial impact. The study also provides significant implications for academicians and practitioners. The study offers valuable perspectives for commercial banks aiming to enhance their e-banking services and guarantee customer satisfaction.*

Keywords: *E-Banking, Customer Satisfaction, Ho Chi Minh City Commercial Banks.*

1. INTRODUCTION

Electronic banking (e-banking) was born due to globalization, competition, and the rapid growth of IT systems. It has evolved into a self-service delivery medium that enables banks to offer information and services to their customers more conveniently through various technological channels like the Internet and mobile phones (Chaimaa et al., 2020). There are multiple channels to conduct transactions, such as by computer, mobile phone, tablet, or face-to-face banking (Al-Qeisi et al., 2014). The nature of the transaction can also influence the choice of which channel to use. For instance, high-involvement transactions like loans may be more suited for face-to-face banking, whereas low-involvement transactions like checking account balances are typically handled online.

The use of e-banking is expected to increase steadily between 2021 and 2024, with the Asian market being the largest. Vietnam has a fast-growing e-commerce market and one of the highest smartphone and internet penetration rates worldwide. According to Statista's 2023 report, it is estimated that the total transaction value in this sector will reach USD 15 billion in 2021, and it is expected to experience an annual growth rate of 15.7% by 2025. Despite these positive trends, it's worth noting that only 30% of Vietnamese adults currently utilize digital banking services, indicating ample room for further development.

E-banking comes with many advantages. On the one hand, it provides customers personalized services, transaction security, speed of processing transactions, and overall better service quality (Abdulfattah, 2012). Consequently, this swift evolution in banking services and customer interactions necessitates examining and investigating the quality of service banks offer through E-Banking. Electronic service quality is an essential tool to measure customer satisfaction (Tetteh, 2021). Despite the many benefits of e-banking, the growing physical separation between banks

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and customers can trigger security apprehensions and a lack of confidence. As a result, researchers have focused on the security and reliability of electronic banking services due to their strong influence on business performance and customer satisfaction.

The SERVQUAL model of Parasuraman et al. (1988) is widely used to measure the service quality in the service industry using quality determinates. Han and Baek (2004) also adopted the SERVQUAL Model to measure the service quality of e-banking. However, some of the quality determinants contradict multiple meanings, specifically online banking (Othman, 2020). This study identifies the quality gaps that impact customer satisfaction when utilizing E-Banking. The quality gaps have led us to identify service quality gaps for e-banking. Thus, the research framework was based on E-S-QUAL (Parasuraman et al., 2005) to measure e-banking service quality. There is growing pressure to gain a deeper comprehension of online quality, as consumer experiences raise expectations for online businesses (Yoo & Donthu, 2001). Wolfinbarger & Gilly (2003) indicated website design includes all elements of the consumer's experience at the website (except for customer service), including navigation, information search, order processing, appropriate personalization, and product selection. The present study also adopts the E-TAILQ model by Wolfinbarger & Gilly (2003).

The primary goal of this study is to determine the aspects of electronic banking services quality that impact Ho Chi Minh City Commercial banking sector's customer satisfaction. Section 2 provides background information on the literature review and research method. Section 3 details the research results and discussion. Section 4 concludes with a discussion of outcomes, presents theoretical managerial implications, the limitations, and suggested directions for further research.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES DEVELOPMENT

2.1. The E-S-QUAL model of Parasuraman et al. (2005)

The E-S-QUAL model developed by Parasuraman et al. (2005) broadly encompasses all phases of a customer's interaction with a website. This model serves as a tool for measuring electronic service quality and has surveyed customers' perceptions of service quality. The initial measurement of the E-S-QUAL model included dimensions like efficiency, fulfillment, system availability, security/privacy, responsiveness, compensation, and contact, which are widely used today. Currently, the E-S-QUAL scale is regarded as one of the most comprehensive measures for evaluating online services, covering users' prior experiences (interpreted as website quality assessments), the shopping process, and post-transaction service (after-sales service).

2.2. The E-TAILQ model of Wolfinbarger & Gilly (2003)

The E-TAILQ model underscores the importance of developing a comprehensive conceptual framework for defining and evaluating the quality of the online shopping experience, encompassing everything from the initial stages of information search and website navigation to the final steps of placing orders, engaging with customer service, receiving deliveries, and assessing satisfaction with purchased products. The increasing expectations of consumers towards online businesses, driven by their evolving experiences, demand a deeper understanding of online quality (Yoo & Donthu, 2001).

To evaluate quality, the analysis reveals that four factors: reliability, website design, security, and customer service - are used to explore the online consumer experience. These studies have suggested issues and attributes that warrant further investigation as we strive to understand and model the perceived quality of the online shopping experience, which affects customer assessments of quality, satisfaction, loyalty, and attitudes toward the website.

2.3. Theoretical Framework and Method

2.3.1. Convenience and customer satisfaction

Convenience is understood to offer easy, quick, and convenient access to computer systems (Weir et al. 2009). Electronic banking offers the convenience of easy access for customers, allowing them to engage with e-banking services anytime and anywhere, facilitating easier access to services and products, saving resources, and reducing dissatisfaction (Rashwan, 2019). The Uses and Gratifications (U&G) theory is a widely employed theoretical framework used to explain how convenience impacts user satisfaction with information systems as users can access them from anywhere with an internet connection, at any time, and swiftly search for information (Menon & Meghana, 2021). Considering resources such as time, money, and effort that customers invest in registering and using a product/service, convenience is regarded as an attribute that enhances the value of the product/service at a constant price (Mokha, 2022). According to Khan et al., (2022), there exists a positive and significant correlation between convenience in using electronic banking services and customer satisfaction. They find that convenience plays a pivotal role in helping banks thrive in the global market by leveraging their competitive edge rooted in convenience. Consequently, banks related to this sector can secure a significant market share by providing user-friendly and convenient services. As such, we propose the following hypothesis:

H1: Convenience positively influences satisfaction with the quality of electronic banking services

2.3.2. Quality Information and Customer satisfaction

Information quality is the trust customers place in the accuracy, timeliness, and usefulness of the information system for users (Delone & Mclean, 1992). The significance of information availability and its comprehensiveness becomes evident when users can manage the content, arrangement, and duration of pertinent product information. According to the IS Success Model, information quality is correlated with satisfaction and intention to use (Delone & Mclean, 1992). Research results regarding the integration of the Webqual 4.0 system (Hamzah, 2022) suggest that information quality may encompass output characteristics provided by the information system, such as accuracy, timeliness, and completeness of data. When customers perceive the information provided as sufficient, trustworthy, and reasonable, they will be satisfied with the transaction, continue to use the service, and recommend it to others. Additionally, the research model of Minh (2020) shows that trust positively influences satisfaction, while trust is also positively influenced by information quality. As such, we propose the following hypothesis:

H2: Information quality positively influences satisfaction with the quality of electronic banking services.

2.3.3. Security and customer satisfaction

Security is the protection of users from the risk of fraud and financial loss has been shown empirically to have a strong impact on attitudes toward the use of online financial services (Parasuraman et al., 2005). The higher the sensitivity of personal data, the greater the privacy concern. According to (Mokha, 2022), security in transactions represents the safety and protection of customers' personal information and privacy/information security when carrying out any transaction, safeguarded by the bank. In other words, security involves safeguarding users from financial fraud risks and respecting private information. Therefore, this can be viewed as an essential requirement for any product or service user. As a result, electronic banks ensure security, which meets customers' needs and desires, ultimately leading to a higher level of satisfaction with the service (Thuy, 2019). Consequently, the hypothesis is derived from the above literature:

H3: Security positively influences on satisfaction with the quality of electronic banking services.

2.3.4. Reliability and Customer satisfaction

Parasuraman et al. (2005), reliability/fulfillment involves accurate representation of the product, on-time delivery, and accurate orders. Reliability is an aspect of service quality related to the knowledge and capability of company employees to instill confidence and leave no doubts about the company's existence. The attributes of this aspect include delivering services as promised, being reliable in handling customer services, providing accurate services from the first instance, delivering services on time as promised, and maintaining error-free documentation (Khatoon, 2020). Therefore, the hypothesis is derived from the above literature:

H4: Reliability positively influences satisfaction with the quality of electronic banking services.

2.3.5. Website design and Customer satisfaction

According to the E-TAILQ model, website design encompasses all elements of the consumer's experience on the website (excluding customer service), including navigation, information search, order processing, tailored personalization, and product selection. Website design refers to customers' perceptions of website design quality (ease of navigation, accessibility, user load time; useful, complete, and clear content) (Al-Qeisi et al., 2014). Many scholars have suggested that design characteristics are essential components that contribute to the quality of e-banking services and positively impact customer satisfaction (Sulieman and Warda, 2017). Thus, this is a pivotal factor that distinguishes banks from one another and serves as the key to maintaining customer loyalty to the bank (Thuy, 2019). Therefore, the hypothesis is derived from the above literature:

H5: Website design positively influences satisfaction with the quality of electronic banking services.

2.3.6. Responsiveness and Customer satisfaction

The E-S-QUAL model suggests that responsiveness is the efficient handling and provision of relevant information to customers by service providers to assist customers and deliver services promptly. The attributes of this aspect include notifying customers about the certainty of service delivery time, providing quick service to customers, being ready to assist customers, and being willing to meet customer requirements (Nurochani, 2023). Furthermore, responsiveness manifests care and an understanding of customer desires and needs (Beshir et al., 2020). This means that banks need to focus on individual customer care. Customers must see that the bank is doing its best to meet their needs. According to Ladhari (2011), the primary factor within the service quality aspect in Canadian and Tunisian banks is reliability and responsiveness. These elements stand as the most crucial determinants of satisfaction. Thus, we propose the following hypothesis:

H6: Responsiveness positively influences satisfaction with the quality of electronic banking services.

Table 1. Previous studies on electronic service quality in the e-banking context

Variable	Model	Dimension	Author
Convenience	The e-satisfaction model.	Convenience, Site design, and Financial security	Weir (2009); Szymanski and Hise (2000)
Information Quality	IS Success Model	Information quality, System quality, Service quality	Nguyen Thi Binh Minh (2020)
Security	E-S-QUAL	Efficiency, Security, Responsiveness, Assurance, Design, Empathy, Benefits	Bui Van Thuy (2019); Parasuraman et al. (2005)
Reliability	E-TAILQ, E-S-QUAL	Fulfillment/Reliability, Website Design, Privacy/Security, Customer Service	Mary Wolfinbager and Gilly (2003), Parasuraman et al. (2005)
Website Design	E-S-QUAL, E-TAILQ	Fulfillment/Reliability, Website Design, Privacy/Security, Customer Service	Wolfinbager and Gilly (2003)
Responsiveness	E-S-QUAL	Efficiency, Reliability, Security and privacy, Responsiveness, Satisfaction	Hammoud et al., (2018)

2.4 Methodology

2.4.1 Measures

The data comprised current users of Internet banking in Ho Chi Minh City. This research was carried out in Vietnam, where the primary language is Vietnamese. To adapt to this context, the survey was translated into Vietnamese by two proficient marketing researchers who were fluent in both English and Vietnamese and had a good understanding of the concepts being measured. Subsequently, a consolidated translation based on their translations, resolving any discrepancies through discussion. Client perceptions were measured using a Likert-type scale with 1 through 5, 1 being strongly disagree and 5 being strongly agree.

The instrument was subjected to a pilot test involving university graduate students and staff to ensure the clarity of meaning, comprehension, and adherence to guidelines and determine the time required for completion. Due to data protection constraints, reaching out to users through banks was not feasible. Nonetheless, since a significant portion of the population uses banking services, a convenient mall intercept sampling method was employed to gather diverse consumer opinions.

The survey instrument was additionally made available online via Google Survey Form and shared across various social media platforms. This facilitated the involvement of a varied group of participants and boosted the response rate. Ultimately, a total of 533 valid samples were gathered and analyzed for the study. Invalid or incomplete responses from participants were systematically excluded from the sample.

2.4.2. Data collection

The survey descriptive analysis of socio-demographic characteristics is shown in Table 2. The relatively high level of education and predominance of women in the sample reflect the profile of e-banking customers in Ho Chi Minh City. The data were collected from March to June 2023 from screened consumers to ensure they had taken part in using quality service E-Banking.

Table 2. Demographics information

Item	Frequency	Percent
Gender		
Male	277	52
Female	256	48
Age		
18-25 years	216	41
26-35 years	214	40
35-50 years	82	15
50 and above	21	4
Education Level		
High school	124	23,3
Diploma	84	15,8
Bachelor	141	26,4
Master	103	19,3
PHD	72	13,5
Other	9	1,7
Total	533	100
Monthly Income Level		
5.000.000 – 10.000.000 VND	243	45,6
10.000.000 – 25.000.000 VND	121	22,7
25.000.000 – 50.000.000 VND	64	12
>50.000.000 VND	105	19,7
Length of E-banking usage		
Less than a year	111	20,8
Between a and 3 years	230	43,2
4-7 years	113	21,2
More than 8 years	79	14,8
Frequency of E-banking services usage		
Once per month	68	12,7
Twice per month	124	23,2
Three times per month	151	28,3
+4 times per month	190	35,8

3. RESEARCH RESULTS AND DISCUSSION

Apply partial least squares structural equation modeling (PLS-SEM) to test the research model using SmartPLS 3.2. The analysis involves separate assessments of the measurement model and structural model.

3.1. Measurement Model

We used Smart-PLS to achieve this objective and tested the correlation between variables. In contrast, discriminant validity is assessed by measures such as Fornell Larcker, and cross-loading. The results in Table 3 show a summary of the PLS quality of the measurement model. SmartPLS is used to examine the reliability and validity of the construct measures. Internal consistency reliability is measured by both Cronbach's α and composite reliability. Traditionally, "Cronbach's alpha" is used to measure internal consistency reliability in social science research, but it tends to provide a conservative measurement in PLS-SEM. Prior literature has suggested using "Composite Reliability" as a replacement (Wong, 2013). From Table 3, all the items have CR above 0.80

(0.7<CR≤0.9), which is regarded as satisfactory (Hair et al., 2019). So, all values fall within the acceptable range to conclude good reliability.

Convergent validity (AVE) and discriminant validity were assessed for each construct (refer to Table 2). The AVE values for all constructs exceed 0.50, indicating that, on average, each construct accounts for more than half of the variance in its respective indicators. All the indicators' outer loadings > 0.7 on a construct are higher than its cross-loadings, suggesting that descriptive validity is achieved (Hair et al., 2019). Therefore, convergent validity has been established for the constructs.

Table 3. Constructs with items and reliability and validity

Constructs	**Outer loading**	**Alpha**	**CR**	**AVE**
Convenience – CO (adopted from Weir, 2009; Szymanski and Hise, 2000)				
The instructions for using this device were easy to understand (CO1)	0.828	0.699	0.833	0.627
Using this device was quick (CO2)	0.837			
Knowing how to get the code from the device was easy (CO3)	0.703			
Information Quality -IQ (adopted from Delone and Mclean, 2003; Minh, 2020)				
The displayed information content is highly useful. (IQ1)	0.827	0.725	0.845	0.645
The provided information is relevant to the execution of transactions. (IQ2)	0.809			
The information is consistently updated. (IQ3)	0.773			
Security - SE (adopted from Thuy, 2019)				
The website/software safeguards customer account and bank card information. (SE1)	0.813	0.706	0.836	0.630
Access to the website/software is conducted in a secure mode. (SE2)	0.818			
Users have confidence in the provided transaction security. (SE3)	0.749			
Reliability (REL) (adopted from Wolfinbager and Gilly (2003); Parasuraman et al.,2005)				
The product that came was represented accurately by the website. (REL1)	0.820	0.729	0.847	0.649
You get what you ordered from this site. (REL2)	0.839			
The product is delivered by the time promised by the company. (REL3)	0.755			
Website Design (WD) (adopted from Wolfinbager and Gilly, 2003)				
The website provides in-depth information. (WD1)	0.815	0.676	0.821	0.604
This website has a good selection. (WD2)	0.738			
It is quick and easy to complete a transaction on this website. (WD3)	0.777			
Responsiveness (RES) (adopted from Hammoud et al., 2018)				
E-Banking services are available 24/7. (RES1)	0.773	0.691	0.829	0.618
E-banking services provide answers to your questions. (RES2)	0.796			
E-Banking services respond immediately to clients' requests. (RES3)	0.788			
Satisfaction (SA) (adopted from Rashwan, 2019)				
I am generally pleased with the Banking's online services. (SA1)	0.787	0.709	0.838	0.633
I am satisfied with the overall online bank's products and services. (SA2)	0.838			
I am happy with E-banking. (SA3)	0.759			

To test discriminant validity, results show that the square root of the AVE was greater than its correlation with any other construct (Table 4) (Fornell & Larcker, 1981). Thus, we conclude that this research has no problem with discriminant validity.

Table 4. Discriminant validity (Fornell-Larcker)

	SE	IQ	RES	SA	REL	WD	CO
SE	0.794						

IQ	0.648	0.803					
RES	0.640	0.654	0.786				
SA	0.637	0.640	0.635	0.796			
REL	0.652	0.655	0.641	0.646	0.805		
WD	0.599	0.603	0.638	0.608	0.602	0.777	
CO	0.563	0.609	0.595	0.595	0.651	0.554	0.792

3.2 The structural model

To test our research framework, we used structural model path coefficients. In particular, we followed Hair et al. (2019) recommendations which focused on conducting four tests: (1) coefficient of determination (R^2) to measure the predictive power of our model, (2) effect size (f^2), predictive relevance (Q^2) and structural model path coefficients.

Our results show the values of R^2 for Satisfaction (0.575) obtained moderate R^2 values (Hair et al., 2019). The values of f^2 results revealed some significant impacts. For instance, Security on Satisfaction (f^2 = 0.032), Information Quality on Satisfaction (f^2 = 0.025), Responsiveness on Satisfaction (f^2 =0.021), Reliability on Satisfaction (f^2 = 0.026), Website design on Satisfaction (f^2 = 0.024). To test Q^2, we used the blindfolding technique in which we omitted the distance set to 7. This study's electronic service quality toward customer satisfaction provides a high predictive medium (Q^2 = 0.351).

Our results show that VIF values range from 1.219 to 1.592, indicating noncollinearity issues because the values are below '5' (Hair et al., 2019). The Standardized Root Mean Square Residual (SRMR) index needs to be considered to assess the model's goodness of fit to the empirical data. the SRMR value is 0.078, which is < 0.08, indicating that the structural model fits the data well. To test our hypotheses, we run PLS using the bootstrapping technique with 5,000 iterations (Hair et al., 2019). Our results revealed that all the proposed hypotheses were supported. Table 5 shows PLS results for the structural model. Our results revealed that all the proposed hypotheses were supported.

Table 5. Results for Structural Model

Giả thuyết	Mối quan hệ	Original Sample (O)	STDEV	T Statistics	P Values	Result
H1	CO -> SA	0.124	0.062	1.996	0.046	Accepted
H2	IQ -> SA	0.158	0.061	2.578	0.010	Accepted
H3	SE -> SA	0.176	0.054	3.251	0.001	Accepted
H4	REL -> SA	0.165	0.059	2.778	0.005	Accepted
H5	WD -> SA	0.146	0.052	2.819	0.005	Accepted
H6	RES -> SA	0.145	0.052	2.791	0.005	Accepted

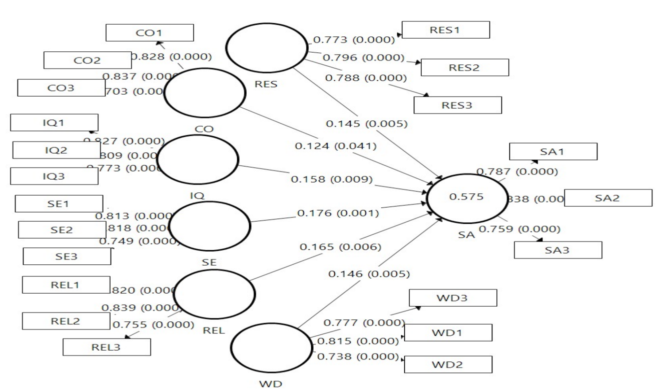

Figure 1. Structural Model

3.3. Discussion

The results of this study demonstrated that service quality plays a substantial role in influencing customer satisfaction with E-Banking services but also that security is the strongest dimension of service quality affecting customer satisfaction. This is supported by previous research (Rozie et al., 2023; Mokha, 2022; Weir et al., 2009). Despite the many benefits provided by e-banking, the increasing distance between banks and customers may lead to security concerns and a lack of confidence. Security concerns are among the major inconveniences related to the adoption of e-banking (Chaimaa et al., 2020). Clients are increasingly concerned about the security and privacy of electronic banking services, realizing their importance in terms of corporate performance and customer pleasure. Risk can originate from either within or outside the system, so banking regulatory and supervisory agencies must ensure that banks have appropriate practices to safeguard the security of data and the integrity of systems and data. The security practices of banks should be regularly assessed and reviewed by external experts to analyze network vulnerabilities and readiness for recovery.

The reliability dimension has been cited as an equally important facet of E-S- Q (Hamzah, 2022; Parasuraman et al., 2005). According to Beshir (2020), customers will be happier if they perceive that their services meet the initially agreed-upon requirements and deliver the information and services promised beforehand. Organizations need to focus on quality to increase reliability and customer satisfaction and promote customer engagement in the banking sector. Banks should prioritize service quality, including reliability and empathy, by offering value-added services and benefits for women and the elderly. Bank executives will recognize that the most significant influencing factor is customer satisfaction from the consumer's perspective. Reliability, such as employees keeping their promises, is crucial for overall development. Therefore, banks need appropriate measures to train their employees to provide a similar level of service to customers. Moreover, employees should engage with consumers and consider problem-solving techniques to enhance relationships and build proper trust in the bank.

Website design is also the most influential factor affecting the quality of e-banking services. Many scholars have suggested that design characteristics are essential components that contribute to the quality of e-banking services and positively impact customer satisfaction (Sulieman and Warda, 2017; Bui Van Thuy, 2019). Moreover, website design is the most influential factor affecting the quality of e-banking services, in contrast to the previous findings of Wolfinbarger & Gilly (2003). According to Vu (2018), an attractive website design with logically organized information makes it easy for customers to find information. It provides a comfortable interaction experience, so design characteristics also influence e-banking customer satisfaction. Gautam and Sah (2023) found that the efficiency of the website and electronic customer service were the most significant aspects of e-banking service practices. These were followed by user-friendliness, security and privacy, and the organization's site. This highlights that banks with efficient websites and swift transactions through easily accessible online platforms tend to attract more customers. Bank websites should present details regarding their privacy policies to safeguard customer data and maintain the confidentiality of credit card information. This includes privacy and security, building trust in the website, ensuring information quality and responsiveness. Ultimately, this leads to customer satisfaction and the likelihood of customers returning for electronic transactions with the bank without considering switching to another institution.

The findings also indicate the connection between the information quality and customer satisfaction. When engaging with banks and similar financial entities, customers prioritize the website's security and confidentiality. It is also consistent with prior (Hamzah, 2022). It states that banks should increase the information quality in Internet banking by offering customer satisfaction. To guarantee the quality of information, banks must comply with the State Bank's regulations regarding information disclosure to customers. Moreover, banks should establish an efficient, secure, and transparent information management system. It is essential for banks to regularly and promptly conduct assessments and appraisals of the information they deliver. Additionally, they should swiftly and openly receive and address customer feedback and suggestions concerning information quality.

The findings from the present study reveal several important, even if broad, implications for practitioners. Finally, convenience and responsiveness are the least critical of the four E-S-QUAL. Previous research has argued that responsiveness may not be critical for users (Wolfinbarger & Gilly, 2003). According to Jahan & Shahria (2021), the convenience factors associated with mobile banking do not significantly determine satisfaction. There could be several explanations for this phenomenon. For instance, individuals have become accustomed to mobile security codes and account PINs over time. While they were initially a primary concern for people, they do not significantly impact overall satisfaction. However, no single factor should be overlooked in this era of intense competition. Although these factors may not significantly influence today, banks can still enhance the number of mobile banking customers by implementing a convenient banking policy through adopting appropriate measures. This is because, within the banking industry, these factors may not actively contribute to developing loyal customers. The responsiveness dimension has a negligible impact on Customer Satisfaction. Within the dimensions of service quality, Responsiveness is essentially a variable or dimension that doesn't pose an issue in this research. Service quality related to responsiveness, or the speed of response to customers, is generally swift and doesn't trouble customers.

However, the results are also consistent with prior Internet banking research such as Ladhari et al., 2011; Ishfaq, 2022; and Khan, 2022. This plays a pivotal role in fulfilling customer needs and desires, ensuring customers always feel heard and understood. It also contributes to creating a psychological element that positively influences customer satisfaction when they use electronic banking services conveniently.

In this study, all six components of banking service quality influence e-customer satisfaction. Therefore, banks should strategically raise customer awareness of the acceptability of the Internet banking system.

4. CONCLUSION AND IMPLICATIONS

In this study, we present a new method that integrates E-S-QUAL and E-TAILQ to examine the relationship between the dimensions of E-Banking service quality and customer satisfaction. Six dimensions of Internet banking service quality were taken for the study. Our contribution to theory is an extended model based on E-S-QUAL and E-TAILQ in which overall electric service quality, as measured by the E-S-QUAL and E-TAILQ variables, influences satisfaction.

Numerous research studies in the literature have employed E-TAILQ and E-S-QUAL scales to evaluate the quality of e-services in advanced or developed nations (Zia et al., 2022). Only a few studies addressed the validity of these widely used competing scales in an emerging economy like Vietnam. This study addresses the literature gap by addressing the reliability and validity of these scales and assesses the impact of e-service quality in Internet banking. Besides, the study reveals insights into the literature by addressing multiple dimensions of e-service quality and summarizes a deep understanding of each scale item that affects customer satisfaction.

4.1 Implications for Theory

In Internet banking, our findings show that adding convenience to the integrated E-S-QUAL and E-TAILQ variables provides more insight. Our theoretical model also confirms the information quality factor by the IS success model (Delone & Mclean, 1992). With this theoretical design, future researchers can quickly test additional variables that might mediate the influence of satisfaction on continuance.

4.2 Implications for Practice

The empirical reveals that Ho Chi Minh commercial banks can enhance their competitiveness and achieve sustainable growth in the highly competitive e-banking sector by prioritizing security, reliability, quality information, responsiveness, website design, and convenience.

Numerous obstacles exist when upholding services and service quality within the banking industry. Therefore, these discoveries provide valuable insights to the banking sector for crafting effective marketing strategies, fostering enduring customer relationships, and attaining a competitive edge in the market. Additionally, this research is expected to contribute to expanding digital banking on both domestic and international fronts. It is poised to be advantageous for enhancing individuals' financial well-being, strengthening communities, and reinforcing financial connections.

4.3 Limitations and Future Research Directions

The foremost limitation of this research is associated with convenience sampling. Furthermore, this study used the "E-S-QUAL scale" to assess the E-S-QUAL on the client of Viet Nam; however, other scale constructs like "WEBQUAL" can also be examined on the population. Research can be done to obtain a comparative analysis between foreign and local banks in Viet Nam. The current framework can be broadened by incorporating additional variables such as re-purchase intention, word-of-mouth recommendations, and perceived value. Furthermore, future research could employ probability sampling methods instead of convenience sampling to enhance the robustness of the results and mitigate selection bias concerns. Additionally, it would be beneficial to integrate insights from e-banking to complement and reinforce the findings about E-S-QUAL and E-TAILQ, thus enhancing the practical implications.

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THE ROLE OF EWOM AND BRAND TRUST IN THE ONLINE PURCHASE INTENTION: AN EMPIRICAL OF THE UNIQLO FASHION BRAND

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Abstract: This study aims to examine the interaction effect of eWOM on online purchase intention and brand trust toward purchase intention at the Uniqlo fashion online store. The role of the mediation of satisfaction is vestigated. A quantitative approach was utilized to gather data via online surveys to bolster the suggested model. A total of 186 participants were included in the sample, chosen through non-probabilistic convenience sampling methods, and provided with instructions to answer the survey questions. The collected data underwent analysis utilizing PLS-SEM techniques. The findings indicate that the interaction between eWOM and brand trust influences purchase intention. Notably, the results reveal the dual roles of eWOM and brand trust, which increase purchase intention directly and indirectly.

Keywords: Brand trust, eWom, fashion industry, purchase intention.

1. INTRODUCTION

With the rise of the internet and social media, eWOM has become increasingly important in consumer purchasing decisions in the apparel industry. Prospective customers use eWOM as a source of clothing inspiration, highlighting the importance of the internet in the apparel industry. The consumer trend reflects an increasing inclination to engage in online fashion shopping (Dream Incubator Group, 2021). This trend is driven by the higher income levels of the population and the influence of brands and fashion trends on consumer choices. Among the international fashion brands venturing into the Vietnamese market, Uniqlo is one of the noteworthy names. Uniqlo, Japan's leading fashion brand, has a global presence with more than 2,200 stores worldwide, but its primary focus is on the Asian market, where approximately 92% of its stores are located.

EWOM marketing can create an exponential referral chain in the fashion industry, contributing to constant traffic, leads, and sales. This property of eWOM makes it an important channel, allowing consumers to actively participate in discussions about specific products and brands and share information reliably and effectively, helping to reduce risk in the purchasing process (Hennig-Thurau & Walsh, 2004). However, there are also challenges related to the origin and reliability of eWOM information (Chatterjee, 2004). Social media interactions are expected to entail more unpredictability and less control when compared to in-person communication. As a result, specific online consumers may attach significant importance to uncertainty avoidance (Hudson et al., 2015). Trust, in this context, denotes the extent of a customer's faith in the existence of a relationship with the service brand (Cheng & Jiang, 2022). Customer satisfaction correlates with brand trust, influencing positive or negative customer retention. Customer satisfaction influences purchase intention more than service quality (Cronin & Taylor, 1994).

Previous research on purchase intentions predominantly adopted a relational perspective, concentrating on pre-existing connections (such as satisfaction, trust, commitment, and friendship)

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among members while overlooking the impact of eWOM influence from other social media members. A lack of online purchase intention significantly hinders e-commerce growth (He et al., 2008). Further research is necessary to explore online purchase intention and behavior (Pena-García et al., 2020). Therefore, it is essential to understand how eWOM and brand trust influence purchase intentionthrough satisfaction with the Uniqlo brand in Vietnam. In doing so, we integrate the theory of reasoned action (TRA) and the Theory of Informational Social Influence.

2. LITERATURE REVIEW AND METHODOLOGY

2.1. Theory of reasoned action (TRA)

Ajzen & Fishbein (1975) contended that as people's attitude toward behavior is determined by their salient beliefs about the behavior, their attitude could be changed by influencing their primary beliefs. In a context where customers have little experience online, they will often tend to follow the instructions of their relatives or friends. Especially in Vietnam - one of the countries that promotes community culture, being influenced by relatives and friends around individuals on individual behavioral intentions is often found. According to Fishbein & Ajzen (1975), the subjective norm factor relates to how individuals evaluate how people around them perceive when they perform a behavior that receives negative opinions. Previous researchers have frequently used TRA to examine eWOM and purchase intention (Yusuf et al., 2018). This has been widely used in the context of e-commerce behavior (Lim & Dubinsky, 2005).

2.2. Theory of Informational Social Influence

Deutsch and Gerard (1955) propose two distinct categories of social influence: informational and normative social influence. Social effect occurs when the actions, viewpoints, and words of others impact an individual's actions or thoughts. People consistently assess their beliefs against those voiced by others to determine the appropriateness of their behavior (Kuan et al., 2014). The theoretical stance emphasizes a social information processing approach, wherein individuals can directly construct meaning through exposure to the expressed opinions and attitudes of others.

2.2. Hypothesis development

2.2.1. eWOM and customer satisfaction

eWOM

Word of mouth refers to the direct exchange of information between consumers regarding a product or brand. With the advancement of information and communication technologies, this form of communication has evolved into eWOM (Luthfiyatillah et al., 2020). eWOM encompasses communication on the internet and is facilitated through various online platforms, such as blogs, reviews, forums, online marketplaces, and social media channels. The content shared by previous customers on these platforms helps instill confidence in potential buyers when purchasing products or services.

C*ustomer satisfaction*

Satisfaction holds significant importance in the competitive landscape of e-commerce because it dramatically influences people's intentions and behaviors (Hsu et al., 2016). Satisfaction is commonly employed as an indicator of the quality of relationships, and a satisfactory relationship signifies that customers have enjoyed a positive experience with a brand's products or services (Jeon & Baeck, 2016). Achieving customer satisfaction is a crucial goal for all companies, and one of the critical elements in achieving it is eWOM. As Rahayu et al. (2023) stated, customer satisfaction represents customers' emotional responses to the experiences they anticipate and ultimately receive.

The theory of Informational Social Influence refers to an individual's desire for contentment derived from a product or service (Pasaribu et al., 2019). As per the findings of Laura and Fadella (2022), social media is a valuable tool for enabling people to connect with others, sharing information, and acting as an informative platform where users can learn about products offered by thrift store businesses. A study conducted by Seo et al. (2020) highlights the effectiveness of eWOM in showcasing positive reviews on social media and encouraging customers to share favorable feedback about their shopping experiences on social platforms. If consumers possess a great psychological experience with a particular product or service, they may be satisfied (Djelassi et al., 2018; Teng & Wu, 2019). Thus, we propose the following hypothesis:

H1: eWOM has a significant positive impact on consumer satisfaction.

2.2.2 Brand trust and consumer satisfaction

Brand trust

Fernandez and Lewis (2019) argue that brand trust is when consumers want to believe in themselves and an available product. Brand trust is the belief in a brand's dependability, as seen by consumers. It stems from their experiences and a consistent track record of meeting product performance and satisfaction expectations. In this fashion industry, brand trust is critical in competitive endeavors and in establishing strong consumer confidence. When consumers have a high level of trust in a brand, they are more inclined to select products or services from that brand, even if the price is higher than rival brands. Spending increased time engaging with a brand on social media results in a greater level of consumer investment in the relationship, consequently leading to a more robust brand relationship quality. Additionally, these interactions can benefit consumers by enhancing their understanding of the brand's products or services, reducing consumption-related risks, and fostering a heightened sense of trust (Hudson et al., 2015). For example, in the fashion industry, brands provide customers with reliable information through chatbots, diminishing uncertainty levels and bolstering customer satisfaction (Cheng & Jiang, 2022). Thus, we propose the following hypothesis:

H2: Customer satisfaction has a significant positive impact on brand trust.

2.2.3 Online purchase intention and Brand trust

Online purchase intention

Intentions indicate a willingness to perform a specific behavior, such as online purchasing (Ajzen, 1991). In this research, the online purchase intention concept, derived from Fu et al. (2020), refers to the readiness to accept recommendations and advice from members of social media communities before finalizing purchase decisions. Therefore, online purchase intention is the degree to which a consumer is willing to buy a product through an online store; in other words, consumers make purchases over the Internet. Calefato et al. (2015) emphasized the crucial role of social media interactions in cultivating brand trust, noting that such interactions can arise from a firm's generated content or through online comments and social media metrics. Jadil et al. (2022) underscored the significant influence of online trust on consumer behavior, a sentiment also supported by Pop et al. (2022), who affirmed that brand trust positively impacts purchase intent. Therefore, we propose the following hypotheses:

Hypothesis H3: Brand trust significantly positively impacts the online purchase intention

2.2.4 Customer satisfaction and online purchase intention

Consumers have the opportunity to leverage social networks for more informed buying choices. Given that social network users typically consist of friends, indirect acquaintances, or even strangers, the information they share tends to come across as more genuine when compared to recommendations or reviews found on e-commerce platforms that sellers supply. Consequently, consumers tend to favor information available on the shopping sections of social networking websites (Fu et al., 2020). Besides, in the context where brands are increasingly important in the business, other researchers have argued that high brand satisfaction is a reliable indicator of a person's likelihood to purchase (Paulo Rita et al., 2019). Therefore, we propose the following hypotheses:

Hypothesis H4: Customer satisfaction has a significant positive impact on purchase intention.

2.2.5. eWOM and online purchase intention

Today, online platforms empower users to reshape their perceptions of products and services, influencing their choices regarding service usage and purchases (Castillo & Fernández, 2019; Nuseir, 2019). eWOM is the act of consumers sharing their opinions online through social media and digital platforms. Typically, these viewpoints are shared with other users. eWOM, defined by Hennig-Thurau et al. (2004), refers to any statement made by customers about a company or product shared on the internet with a broad audience. This significantly impacts businesses and their clientele (López & Sicilia, 2014). Therefore, we propose the following hypotheses:

Hypothesis H5: eWOM significantly positively impacts the purchase intention of social shopping.

2.3. Customer Satisfaction as a Mediator

In marketing, consumer satisfaction is consistently recognized as a crucial factor in the intention to repurchase. When examining the connection between satisfaction and sense, studies always reveal that satisfaction consistently and positively impacts purchase intentions (Cronin & Taylor, 1994). Positive eWOM is directed based on favorable or unfavorable assessments of service quality, and these assessments play a pivotal role in shaping purchase intentions. Customer satisfaction is an emotional response of approval when getting satisfactory results and as an alternative when getting dissatisfied results (Cheng et al., 2018). This study revealed the mediation effects of satisfaction on purchase intention. The following hypotheses are proposed:

H6: The indirect effect of eWOM on online purchase intention will be mediated through customer satisfaction.

2.4. Methodology

2.4.1. Measures

For this study, we employed quantitative research methods. The questionnaire used in the study underwent a thorough review process, involving feedback from two Uniqlo store employees and two marketing professors. Their input was taken into account to refine the final questionnaire. Before launching the official survey, we conducted a pilot test by personally distributing the questionnaire to 30 individuals to validate its suitability and assess the accuracy of the phrasing. We also carefully reviewed both numerical and qualitative feedback obtained during the pretests.

In this study, we used measurement scales that were previously validated in the literature. The measures for online purchase intentions were adapted from Fu et al.'s (2020) research. To measure trust brand and satisfaction, we adapted the study of Cheng and Jiang (2022). The scales to measure eWOM were obtained from the study by Kala & Chaubey (2018). All these measurement items were rated on a five-point Likert-type scale, ranging from "strongly agree (5)" to "strongly disagree (1)." The items for the scale can be located in Table 2.

2.4.2. Data collection

Yoo et al. (2000) pointed out that the accuracy and validity of responses in a questionnaire about specific services depend on the respondents' knowledge and personal experiences with those services. To ensure reliable responses, we implemented initial screening questions to confirm the respondents were familiar with the Uniqlo fashion brand. We distributed the questionnaire through social networks and sent regular reminders to improve the response rate. To encourage participation and ensure reliable evaluation, respondents were given a choice between a thank-you gift or three ebooks related to international business or receiving VND 30,000 through the electronic wallet.

The author collected data from March to June 2023 from Ho Chi Minh City customers who had taken part in Uniqlo's fashion brand activities. A total of 213 valid responses were gathered and analyzed after excluding invalid or incomplete answers. As a result, 186 responses from customers interested in Uniqlo in Ho Chi Minh City were included in the analysis. The response rate of 87.3% (186 out of 213) exceeded the recommended minimum threshold of 20% for survey-based research. Additionally, the survey sample exclusively focused on Ho Chi Minh City, ensuring geographical representation. You can find the demographic information for the sample in Table 1.

Table 1. Respondents' profile (n = 186)

Demographic characteristics		Occurrence frequency	Occurrence rate (%)
Sex	Male	67	36
	Female	119	64
Age	Under l8 years old	28	15,1
	From 18 to under 32 years old	48	25,8
	From 32 to under 40 years old	45	24,2
	Over 40 years old	65	34,9
Occupation	Housewife	35	18,8
	Employee	21	11,3
	Freelancer	44	23,7
	Student	28	15,1
	Other	58	31,2
Income	Under 5 million VND	9	4,8
	From 5 to under 10 million VND	36	19,4
	From l0 to under 15 million VND	45	24,2
	From 15 to 20 million VND	47	25,3
Total		186	100%

3. RESEARCH RESULTS AND DISCUSSION

Hair et al. (2019) argue that PLS is well-suited for examining causal relationships formulated based on theories and tested using hypotheses and empirical data.

3.1. Measurement Model

The results in Table 2 show that the measurement scale meets the requirements of both Cronbach's Alpha is > 0.7, and all CR indicates surpass the required threshold, demonstrating the reliability of the measurement scale. The factor loading is more than 0.7, and only item (BT3) has been dropped because the loading coefficients are weak.

Table 2: Construct Measures and Confirmatory Factor Analysis Results

Construct and Scale Item			Factor Loading
eWOM (CR= 0.882; AVE = 0.598; α= 0.833)	eW1	I understand a product better after receiving relevant information about that product in online reviews.	0.768
	eW2	A comment or update about a product/brand on eWOM forms influences how I consider that product	0.791
	eW3	I will likely change my opinion about a product or brand after reading positive or negative comments on an eWOM forum.	0.785
	eW4	Given a choice between two products, one recommended on eWOM forums and the other not, I would always buy the recommended product.	0.741
	eW5	eWOM forms are important sources of information for me.	0.782
Brand Trust (BT) (CR= 0.859; AVE = 0.604; α=0.783)	BT1	I believe the brand treats me fairly and justly	0.802
	BT2	I believe that whenever the brand makes an important decision, I know it will be concerned about me	0.811
	BT4	I believe the brand takes my opinions into account when making decisions	0.762
	BT5	I believe I feel very confident about the brand's skills	0.731
Customer Satisfaction (SA) (CR= 0.811; AVE = 0.569; α=0.868)	ST1	Compared to other fashion stores online, I am delighted with X.	0.754
	ST2	Based on all my experience with X, I am delighted	0.752
	ST3	I believe both this brand and I benefit from the relationship	0.753
	ST4	I believe I enjoy dealing with this brand.	0.762
	ST5	Generally speaking, I am pleased with the relationship this brand has established with me	0.751
Online purchase intention (PI) (CR=0.898 ; AVE = 0.639; α= 0.858)	PI1	I strongly intend to purchase the product if members on social media recommend the product.	0.794
	PI2	I trust social media product reviews.	0.767
	PI3	I will consider the shopping experiences of members when I want to buy.	0.821
	PI4	I will ask members of social media to provide me with their suggestions before I go shopping.	0.833
	PI5	I am willing to buy the products recommended by members on social media.	0.780

For criminant validity, we employed two criteria: the square root of AVE and the Heterotrait − Monotrait Ratio (HTMT). Our findings indicate that the square root of AVE exceeded its correlation with any other construct (as shown in Table 3) by Fornell and Larcker (1981). Furthermore, Heterotrait − Monotrait ratios, as depicted in Table 4, were below the threshold of 0.90, as suggested by Henseler et al. (2015). Therefore, based on the outcomes of these two criteria, we can confidently affirm that this research does not encounter issues with discriminant validity.

Table 3. Discriminant validity (Fornell-Larcker)

	BT	eWOM	PI	SA
BT	0.777			
eWOM	0.169	0.774		
PI	0.270	0.566	0.799	
SA	0.206	0.466	0.513	0.754

Table 4. The Heterotrait – Monotrait Ratio (HTMT)

	BT	**eWOM**	**PI**	**SA**
BT				
eWOM	0.200			
PI	0.327	0.664		
SA	0.259	0.560	0.610	

4.2 The structural model

Our results show the values of R^2 for BT (0.043), SA (0.217), and PI (0.418). Both R^2 values were considered acceptable. Both SA (0.217) and PI (0.418) obtained moderate R^2 values. However, BT counts for a value of 0.043, considered weak. The values of f^2 results revealed some significant impacts. For instance, some values yield large effects, such as eWOM on PI ($f^2 = 0.219$) and eWOM on SA ($f^2 = 0.277$). Others pay minor effects, such as BT on PI ($f^2 = 0.032$) and SA on BT ($f^2 = 0.044$). At the same time, we find that the impact of SA on PI ($f^2 = 0.115$) is medium (Cohen, 1988). To assess Q^2, we employed the blindfolding technique by excluding the distance set to 7 from our analysis. The results showed that all four endogenous variables had Q^2 values greater than zero. These values varied within a range ranging from $Q^2 = 0.023$ to 0.262. Lastly, the VIF (Variance Inflation Factor) values fell within the scope of 1.519 to 2.161, indicating the absence of collinearity issues since they are below the threshold of '5', as advised by Hair et al. (2019).

The Standardized Root Mean Square Residual (SRMR) index must be considered to assess the model's goodness of fit to the empirical data. The SRMR value is 0.062, which is < 0.08, indicating that the structural model fits the data well (Henseler et al., 2017).

To examine our hypotheses, we employed PLS along with the bootstrapping method, conducting 5,000 iterations following the approach suggested by Hair et al. (2019). Our findings indicated that all our hypotheses were corroborated, as demonstrated in Table 5.

Table 5. PLS Results for Structural Model

	Original Sample (0)	**T Statistics**	**P Values**	**Result**
H1: eWOM -> SA	0.466	8.458	0.000	Accepted
H2: SA -> BT	0.206	3.334	0.001	Accepted
H3: BT-> PI	0.140	3.064	0.002	Accepted
H4: SA -> PI	0.295	5.202	0.000	Accepted

H5: eWOM -> PI	0.405	6.089	0.000	Accepted
H6: eWOM -> SA -> PI	0.138	4.167	0.000	Accepted

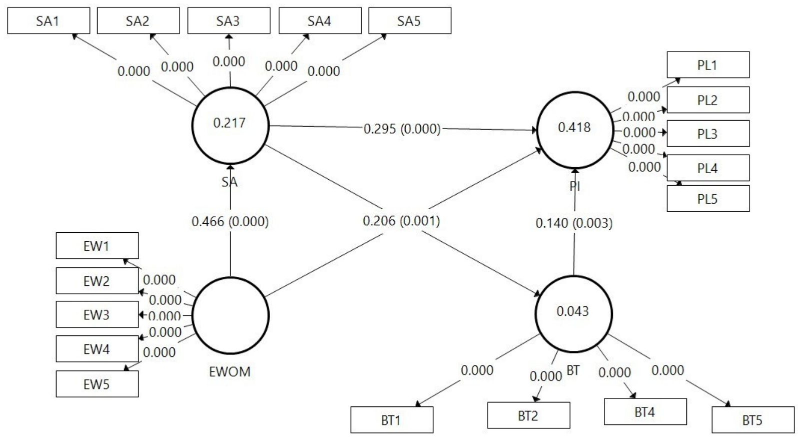

Figure 1. Structural model test results

3.3. Discussion

The PLS results for the structural model, as presented in Table 5, confirm that all the hypotheses we formulated have received empirical support.

- In support of hypothesis H1, Our research confirmed that eWOM significantly impacts customer satisfaction ($\beta = 0.466$, $p = 0.000$), which is crucial for a company's profitability. This aligns with previous studies by Duarte et al. and Laura and Fadella that highlighted the positive influence of eWOM on customer satisfaction, especially in the fashion industry. Social media interactions can efficiently resolve customer issues, resulting in satisfaction (Ramanathan et al., 2017). Effective social media interaction by companies in addressing product/service issues enhances customer satisfaction (Kautish et al., 2023). The current result comes from extant literature (Luthfiyatillah et al., 2020; Hendro & Keni, 2020; Pradeep Kautish et al., 2023; Patel et al., 2023).

- Hypothesis H2 suggests that customer satisfaction significantly and positively influences brand trust, supported by $\beta = 0.206$ and $p = 0.001$. This is consistent with previous research by Cheng and Jiang (2022) and Meylani Tuti and Viki Sulistia (2022). Brand trust is essential for customer satisfaction (Fernandez & Lewis, 2019; Alsini, 2017; Sangadji & Sopiah, 2013; Hudson et al., 2015; Cheng & Jiang, 2021).

- Supported hypothesis H3 ($\beta = 0.140$, $p = 0.002$), Brand trust significantly impacts online purchase intention. Higher trust in a brand leads to a higher likelihood of purchases. Kim and Kim (2021) report that brand trust affects purchase intentions, influencer trust, attractiveness, and similarity to followers. Armawan et al. (2022) also demonstrate that social media marketing, SerQual, and eWOM influence purchase intentions through brand image and trust.

- Supporting hypothesis H4 ($\beta = 0.295$, $p = 0.000$), customer satisfaction significantly affects online purchase intention. This discovery corresponds with Dash et al.'s (2021) research, which delves into the evolution of Marketing 4.0 and empirically investigates its influence on customer satisfaction and purchase intent. Similarly, Sadia Khatoon et al. (2020) discovered a positive correlation between customer satisfaction and purchase intention. Furthermore, the current findings align with existing literature (Rita et al., 2019).

- Supporting hypothesis H5 (β = 0.405, p = 0.000, eWOM (electronic word-of-mouth) has a positive impact on online purchase intention. Social media has immense influence in spreading and filtering topics, shaping personal decisions, and creating a moral environment for eWOM. This makes social e-commerce information more credible and useful (Hajli, 2018), increasing consumers' willingness to share their shopping experiences. As a result, improving the reputation of opinion leaders has become a rapidly growing business strategy. Yusuf et al. (2018) provide insight into what individual users need for eWOM communication in social commerce. When customers actively engage in eWOM communication, they are more likely to develop a stronger intention to purchase.

- Table 5 shows that customer satisfaction partially mediates the relationship between eWOM and online purchase intention (β = 0.138, P = 0.006). This confirms that satisfaction consistently and positively impacts purchase intention. Customer satisfaction is essential for businesses to adapt to evolving customer behaviors in dynamic environments and remain competitive (Khatoon et al., 2020).

4. CONCLUSION AND IMPLICATIONS

This study examined how electronic word-of-mouth (eWOM) and brand trust impact consumers' intention to purchase online, mainly when the eWOM is considered highly influential, and consumers have a high level of aversion to uncertainty. When consumers perceive information as credible, they are more likely to participate in eWOM activities such as sharing or seeking information. Uniqlo brand should encourage customers to include important details when sharing their experiences to assist other consumers in verifying the credibility of the messages. Uniqlo, which offers comfortable and distinctive products, can affect customer satisfaction. Therefore, Uniqlo must maintain and develop its unique products to retain or increase customers' intention to purchase their products online.

To achieve this objective, the study proposed six hypotheses based on the integration foundation theory of reasoned action and the theory of informational social influence. The findings of the study indicate that all six hypotheses were supported. The study analyzed the factors of eWOM, brand trust, and satisfaction with the Uniqlo brand, which directly and indirectly affect online purchase intention. The study suggests that electronic eWOM has the greatest influence on consumers, who exhibit a strong tendency to engage in eWOM and, in turn, have a higher likelihood of making purchases. Customer satisfaction is a crucial factor that influences purchase intention. Given the widespread of online shopping, consumers have now become information sources and information seekers. As it is commonly acknowledged, obtaining as much information as possible is one of the fundamental benefits of being part of online groups. eWOM is currently recognized as a crucial marketing tool that is believed to have a greater impact on consumers than traditional advertisements (Yusuf et al, 2018). However, there has not been enough research on eWOM yet, particularly on what factors determine consumer engagement with eWOM in online shopping. In this study, we aim to investigate the determinants of eWOM and its influence on consumers' purchase intention of the Uniqlo brand during online shopping.

This study provides valuable insights into the factors that influence consumers' online purchase intentions for the Uniqlo brand. The findings can help in developing effective marketing strategies that optimize costs, making it easier for consumers to make informed, convenient, and value-driven purchases. By encouraging customers to leave reviews, the Uniqlo brand can benefit from eWOM generated by satisfied customers. Nowadays, many companies organize contests to select the best reviews of the year, which encourages their clients to write more reviews. These findings can guide firms in developing better online strategies to engage with customers and encourage eWOM.

4.1. Implications for Theory

Informational social influence becomes particularly significant when consumers face time constraints, possess limited knowledge, perceive high risks associated with their actions, or lack the motivation to make purchase decisions independently. We posit that prospective online shoppers are likely to seek the opinions of their friends or online consumer groups before making an online purchase intention. Our study primarily focused on positive informational social influence (eWOM) because our objective was to enhance the online shopping experience. Moreover, the effect of eWOM on online purchase intention is strongly mediated by customer satisfaction.

4.2. Implications for Practice

- Our research also provides material, especially for the fashion industry. Many retailers have recognized the power of the Internet, yet they still struggle to determine which strategies will be most effective in influencing consumers' purchasing intentions. Consumer reviews play an essential role in enhancing online consumers' purchase decisions. Our research provides empirical evidence that eWOM, brand trust, and satisfaction of other consumers positively influence online purchase intention. Messages in online discussion forums and customer satisfaction influence consumers' purchase decisions through brand trust. The results of this study provide recommendations for marketing managers in the branded fashion industry in Vietnam.

- Achieving customer satisfaction is crucial for success in the branded fashion industry. To achieve this, the Uniqlo brand should focus on providing an excellent physical store space or website interface, responding to customer inquiries promptly, and processing orders efficiently. Customers often express their satisfaction through reviews. They can rate the products, provide feedback, and interact by commenting on websites or online stores. Satisfaction links electronic media or word of mouth and purchase intention. Fashion store managers must build effective communication strategies and improve marketing management to create comfortable experiences for customers. Doing so can improve service and product quality, increase customer satisfaction, and enhance brand trust.

- Uniqlo must maintain a seamless offline-to-online transition through an omnichannel approach to retain consumer trust. Improving product and service quality, responding to customer feedback, building a strong brand image, and enhancing customer satisfaction can promote purchase intention and increase profits.

4.3. Limitations and Future Research Directions

Despite the contributions of the current study, it has several limitations. To begin with, one limitation of our study stems from the fact that the data was gathered from relatively homogenous consumer groups. Another limitation is the relatively modest sample size, which might restrict our capacity to demonstrate statistical significance during hypothesis testing. Lastly, it is important to note that our research exclusively focuses on examining the effects of "positive" informational social influence on consumer decision-making within online shopping. In contrast, negative word of mouth in traditional shopping spreads faster than positive feedback.

Further research directions need to improve the limitations of this study. First, many non-fixed and unstable factors can cause consumer opinions to change over time. Second, because the investigation is limited to the Uniqlo brand in Ho Chi Minh City, it may not be possible to evaluate the purchase intentions of Uniqlo in particular and other brands in general more thoroughly. Finally, there may be limitations to selecting each variable that influences respondent choice.

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THE MODERATING ROLE OF GOVERNMENT SUPPORT PROGRAMS: THE CASE OF VIETNAMESE AGRICULTURAL SMES EXPORTING TO ASEAN+3

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Abstract: This paper examines the moderating effect of Government support programs on the relationship between perceived internal, external export barriers and export performance. 278 Vietnamese SMEs exporting agricultural products to ASEAN+3 were surveyed. The research method is the mixed research method of qualitative and quantitative methods. Smart-PLS software was applied to test the data. The results show that there are not the moderating effects of Government support programs on the relationships between internal, external export barriers and export performance. In addition, perceived internal export barriers have a small effect on export performance but perceived external export barriers do not affect export performance. Based on the results, some policy implications are suggested related to the increase in SME's resource and Government support programs.

Key words: export performance, external barriers, Government support programs, internal barriers

JEL code: P33

1. INTRODUCTION

Vietnam has shifted from a trade deficit to a trade surplus since 2012. However, there is trade deficit in some markets, especially the ASEAN+3 with about 60 billion USD from 2018 to 2022 (The authors' calculation). Besides, agricultural products are Vietnamese traditional exports and ASEAN+3 are Vietnamese key export markets. The trade deficit with ASEAN+3 can be handled by increasing Vietnamese SMEs agricultural exports to these markets. In addition, exporting to ASEAN+3 is suitable for SMEs that possess limited resources. With limited resources they face a lot of barriers to export to far distance markets such as American or European markets. Therefore, SMEs are far more dependent on external resources to export (Ramaswami & Yang, 1990). One of important external resources is Government support programs. With resource limitation, the support from the Government is very important to SMEs. However, it is inevitable that SMEs will encounter many barriers when exporting to ASEAN+3 market. In order to overcome many barriers, Government support programs are needed. There have been studies on Government support programs as an antecedent to help reduce export barriers, thereby increasing export results (Karakaya & Yannopoulos, 2012). In addition, there are a lot of researches which prove the direct relationship between Government support programs and export performance (Ali & Shamsuddoha, 2007; Leonidou et al., 2011; Haddoud et al., 2017; Wang et al., 2017) but not many researches have been found on the moderating role of Government support programs. Do Government export support programs reduce the negative impact between export barriers and export performance? Related to this topic, there is just research from Haddoud et al., (2018). The research context of these authors was in Algeria, targeting SMEs operating in the manufacturing sector. Therefore, it is essential to research the moderating role of Government export support programs in the other countries and in specific export field to evaluate the importance of this variable. This paper objectives include:

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- To test the moderating effect of Government support programs on the relationship between perceived export barriers and export performance.
- To test the relationship between perceived export barriers and export performance.
- To suggest some policy implications to push the export of agricultural products to ASEAN+3.

2. LITERATURE REVIEW AND METHODOLOGY

2.1. Literature Review

- Export barriers

Export barriers are limitations that hinder a firm's ability to initiate, continue, or develop business in foreign markets (Morgan & Katsikeas, 1998; Leonidou, 2004). There is also a wide array of export barriers which can be grouped as initial and ongoing barriers (Bilkey & Tesar, 1977); internal and external export barriers (Cavusgil, 1984; Leonidou, 1995); barriers from regular and sporadic exporters (Kaleka & Katsikeas, 1995). This research approaches the classification of internal barriers and external barriers (Leonidou, 1995). All causes associated with the enterprise's internal structure are internal barriers and all those issues that are outside the enterprise are considered as external barriers. Internal barriers include informational, functional, financial and marketing barriers while external barriers include procedural, governmental, task and environmental barriers (Narayanan, 2015).

- Government support programs

Government support programs are public policy measures offered to business community with the aim to improve the international competitiveness of domestic firms (Lages & Montgomery 2005). Seringhaus (1986) suggested that Government support programs are designed to "motivate firms into export action" and to "stimulate the exporting process". According to Shamsuddoha et al., (2009), the use of Government support programs gives managers more information and experience to help them overcome export barriers as well as create export stimuli which increase the export performance. According to Gençtürk and Kotabe (2001), Kotabe and Czinkota (1992), Singer and Czinkota (1994), Government support programs may be classified according to the nature of offered knowledge. The authors identified informational and experiential knowledge, with the former obtained through workshops and seminars and the latter acquired through direct contacts with foreign markets and clients. Some authors divided Government support programs based on real programs in their countries (Lages & Montgomery, 2005; Freixanet & Churakova, 2018). Leonidou et al., (2011) classified Government support programs into support of information, training, trade mobility and finance. Leonidou et al., (2011) classification is applied in this paper because with specific support program groups are clearer to understand.

- Export performance

According to Cavusgil and Zou (1994), export performance is defined as the degree which a firm implements strategies and economic objectives related to exporting to foreign markets. Papadopoulos & Martín (2010) define that export performance are business results in international market. Export performance can be showed in financial measures, such as international sales, profit, market share and growth measures. Furthermore, there are non-financial measures, such as management satisfaction with exporting and goal achievement (Zou & Stan, 1998). In order to measure export performance, it can be measured by either objective or subjective method. While objective measure relates to financial data such as profit, sales, growth…, subjective measure is based on the perception of the board of directors or decision-makers in SMEs. Subjective measure is more practical because SMEs board of directors or decision-makers are reluctant to provide their own SMEs' financial data (Hult et al., 2008). Because of this, this paper approaches subjective measure based on SMEs' satisfaction on export performance which is consistent with Ali & Shamsuddoha (2007), Sadeghi et al., (2018).

- The relationship between perceived export barriers and export performance

According to Resource-Based View (RBV) theory, a firm's competitive advantage comes primarily from its valuable tangible and intangible resources (Wernerfelt, 1984). In the context of internationalization, if a firm aspires to enter international markets and to export regularly, it should consider whether its resources can be a source of competitive advantage. More specifically, the firm should assess whether its resources are valuable, rare, and difficult to imitate or substitute (Barney, 1991). RBV is applicable to analyze the international activities of smaller firms because it helps to gauge how well positioned a firm is to succeed in expanding to foreign markets. If SMEs does not possess unique resources, the enterprise will perceive as internal export barriers that adversely affect their performance.

According to Lawrence and Lorsch 's contingency theory (1967), SMEs internationalization behavior is dynamic and diverse because it mostly depends on the enterprise 's capabilities and on the external environment. Sousa et al. (2008); Nemkova et al. (2012) show that the external factors are approached based on external environmental factors which affect SMEs strategy and performance. In export activity, external factors are specific external environmental factors which are beyond SMEs' control such as political factors, characteristics of the export markets, legal factors, supports from domestic government… (Katsikeas, 2014). The adverse external environmental factors will be perceived as external export barriers and can be considered as external export barriers which affect SMEs' export performance. The more barriers are perceived, the more negatively effects on export performance that SMEs realize. This is because an enterprise that perceives export barriers will have a negative attitude towards exports which will be reflected in its export performance (Dean et al., 2000). Perceived barriers will limit the ability of relevant enterprises to effectively seek, identify and exploit export opportunities. This leads to dissatisfaction with export performance (Katsikeas et al., 1996). Most studies confirm that management perceptions of export barriers negatively affect export performance (Zou & Stan, 1998) and this has been proved in many studies such as Da Silva and Da Rocha (2001); Wilkinson and Brouthers (2006); Al-Hyari et al. (2012); Boermans and Roelfsema (2013); Sinkovics et al. (2018); Yong et al. (2018). Therefore, the following hypotheses will be tested:

H1: There is a negative relationship between perceived internal export barriers and export performance.

H2: There is a negative relationship between perceived external export barriers and export performance.

- The Government export support: the institutional based view

According to North (1990), the institutional based view is a system of constraints that shape and guide the actions of individuals and organizations to reduce uncertainty. The institutional theory provides a theoretical base to explain the enhancing role of institutional interactions on firms' internationalization (Oparaocha, 2015). Such interactions would typically provide an access to additional resources that firms may use in their international development (Oparaocha, 2015).

Government support is to guide businesses, provide knowledge, experience, reduce uncertainties... to achieve good performance. Government support is believed to be crucial for SMEs to overcome the hostile and uncertain environment which often associate with export markets (Seringhaus & Rosson, 1991).

- The relationship between Government support programs and export performance and the moderating effect of Government support programs

Government support programs are necessary for SMEs with limited resources. These programs help to improve SMEs capacity to initiate export activities, to satisfy export orders, to maintain and promote export activities. Government support programs help SMEs boost their export performance which have been proved in a lot of researches (Singer & Czinkota, 1994; Leonidou & et al., 2011; Shamsuddoha & et al., 2009; Durmusoglu & et al., 2012…). Besides, related to the relationship between Government support programs and export performance, in term of the relationship with export barriers, there is also research from Karakaya and Yannopoulos (2012) which shows the indirect effect between Government support programs and export performance via export barriers.

In this paper, we posit that the Government export programs enhance export performance through the reduction of export barriers. Wilkinson & Brouthers (2006) believed that attending exhibitions, fairs and seminars helps businesses increase their activities in markets which they lack experience. Durmusoglu et al. (2012) mentioned that export support is the main factor that positively affects export performance and helps to encourage businesses to increase their performance in new markets. Myint (2019) also shows that there is a positive relationship between financial, technical support and export performance when studying garment businesses in Myanmar. Therefore, with each kind of government support programs, it helps decrease the negative effect of informational barriers (Seringhaus, 1987; Shamsuddoha et al., 2009), export procedure barriers (Leonidou et al., 2011), customer requirement barriers (Seringhaus, 1987)… which push the SMEs export performance. With these arguments in mind, next hypotheses are proposed as follows:

H3: The Government support programs reduce the negative influence of perceived internal export barriers on export performance

H4: The Government support programs reduce the negative influence of perceived external export barriers on export performance

Research model is suggested as follow:

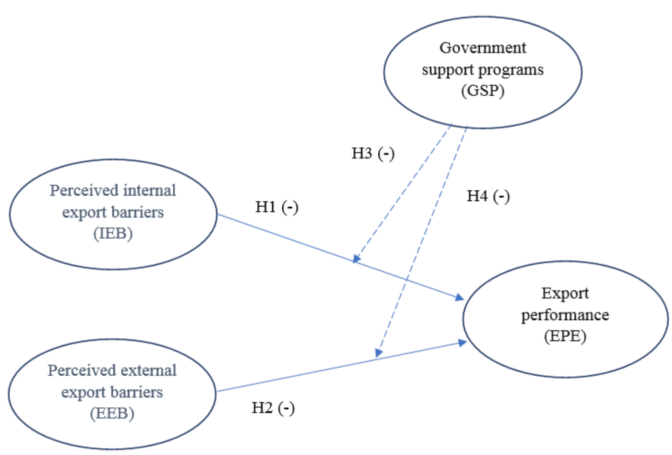

Figure 1: Proposed research model

Source: Authors' proposal

2.2. Methodology

- *Method*

This study applied mixed method of qualitative and quantitative methods. Qualitative method was conducted through in-depth interviews with senior executives, owners coming from Vietnamese agricultural export SMEs to adjust the scales. After this step, the all scales were formed (Table 1). Next, the main survey was conducted by using face to face interviews or online survey. The second step of quantitative method was implemented to assess the measurement model and structural model.

- *Sample and data collection*

Survey samples are decision-makers in Vietnamese agricultural export SMEs located in some provinces in the North, the Centre and Highland and the South of Vietnam. Because it was not easy to approach SMEs decision-makers which belongs to the boards of directors, the sample taking method is convenience and snowball.

- *Statistical analysis*

PLS-SEM was applied to test hypotheses. PLS-SEM is suitable for this research model because of the following reasons:

- The sample (n = 278) is somewhat small.
- Lacking of testing the moderating effect of Government support programs in Vietnam so this research is also a kind of exploring research for which PLS-SEM is appropriate.

- *Scales*

The research scales are inherited from previous studies which were showed in the literature review and they are adjusted through the qualitative step to be suitable for the context in Vietnam. Government support programs (GSP) is a second order construct (Leonidou et al., 2011). Export performance (EPE) is a first order construct (Katsikeas et al, 1996). Perceived internal export barriers (IEB) and perceived external export barriers (EEB) are first order constructs based on previous studies and showed in below table:

Table 1: The research variables

Variables		Sources
Independent variables	Perceived internal export barriers (IEB)	
IEB1	Lack of experience/knowledge in X market	Leonidou (2004); Tesfom & Lutz (2006); Kahiya (2015)
IEB2	Inadequate/untrained personnel for exporting	Leonidou (1995); Morgan & Katsikeas (1998); Kahiya (2015)
IEB3	Limited working capital to support exports	Leonidou (1995); Jalali (2013); Radojevic et al. (2014); Kahiya (2015)
IEB4	Gathering data/information about X market	Leonidou (1995); Da Silva & Da Rocha (2001); Kahiya (2015)
IEB5	Strict foreign rules and regulations in X market	Leonidou (1995); Kaleka & Katsikeas (1995); Da Silva & Da Rocha (2001); Wijayarathne & Perera (2018).
IEB6	Lack of trademark	Face to face interview
IEB7	Offering competitive prices in X market	Leonidou (1995); Radojevic et al. (2014); Wijayarathne & Perera (2018)
	Perceived external export barriers (EEB)	
EEB1	Lacking of vertical link in agricultural value chain	Face to face interview

EEB2	High interest rate	Shaw & Darroch (2004); Kahiya (2015)
EEB3	High domestic production - export costs	Leonidou (1995); Da Silva & Da Rocha (2001); Makrini (2015) Face to face interview
EEB4	Informal costs (Corruption) in home country	Kaleka & Katsikeas (1995); Khorana et al. (2010)
EEB5	Lack of efficient home government export assistance/incentives	Da Silva & Da Rocha (2001); Radojevic et al. (2014); Makrini (2015); Wijayarathne & Perera (2018)
EEB6	Unfavorable and changeable home country's export rules and regulations	Leonidou (2004); Milanzi (2012); Radojevic et al. (2014); Kahiya (2015). Face to face interview
EEB7	Health, safety, quality & technical standards in X market	Korneliussen & Blasius (2008); Pinho & Martins (2010); Kahiya (2015)
EEB8	Stiff competition in X market	Leonidou (1995); Morgan & Katsikeas (1998); Da Silva & Da Rocha (2001); Jalali (2013); Radojevic et al. (2014); Kahiya (2015)
EEB9	Different foreign customer habits/attitudes	Leonidou (1995); Da Silva & Da Rocha (2001); Kahiya (2015); Makrini (2015)
EEB10	The risk of being sued by the customers in X market country who apply safeguard measures, anti-dumping tariff	Korneliussen & Blasius (2008).
EEB11	Intellectual property rights protection in foreign markets	Mangal & et al. (2012).
Moderator variables	Government support programs (GSP)	
INP	Information support programs	Leonidou et al., (2011)
INP1	Information about foreign market opportunities in market X	
INP2	Specific information about doing business with a particular firm	
INP3	Provision of marketing information/advice	
INP4	The Government issues export publications (export newsletters, special reports, mailing lists, and directories…)	
ETP	Training support programs	
ETP1	Export seminars, conferences, workshops…	
ETP2	Free training programs specializing in exporting	
ETP3	Counseling advice on export business	
TMP	Trade Mobility support programs	
TMP1	Participation in trade shows/exhibitions	
TMP2	Participation in trade missions which can have an inward or outward	
TMP3	Support by trade offices abroad	
TMP4	Trademark set up	
TMP5	Innovation, quality improvements	
TMP6	Patent registration, geographical indication for agricultural products	
FIP	Financial support programs	
FIP1	Export credit	
FIP2	Preferential loans with low interest rates	
FIP3	Capital from SMEs development fund	

Dependent variables	Export performance (EPE)	Katsikeas et al. (1996)
EPE1	Satisfaction with export sales in market X	
EPE2	Satisfaction with export market share in market X	
EPE3	Satisfaction with export profit in market X	

X: a market in ASEAN+3

Source: Authors' research

3. RESULTS AND DISCUSSION

3.1. Sample characteristic

Table 2: Characteristics of research samples

Characteristics		Number of participants	Percentage (%)
Area	North	46	16
	Centre and Highland	64	23
	South	168	61
Firm size	Below 50	192	69
	From and above 50 to below 100	56	20
	From 100 to below 200	30	11
Number of export business years	Below 5 years	113	41
	From 5 to 10 years	106	38
	From 11 to 15 years	23	8
	Above 15 years	36	13
Selected export market	Asean	108	39
	Korea	25	9
	Japan	23	8
	China	122	44

Source: Authors' calculation

3.2. Evaluation of measurement model

First, the assessment of GSP second order construct is conducted using repeated indicator approach. The reliability, convergent validity and discriminant validity of all indicators are valid. Second, measurement model including all research constructs are estimated.

The result shows the constructs of GSP and EPE meet reliability, convergent validity and discriminant validity. The constructs of IEB and EEB just meet reliability and discriminant validity. In order to meet convergent validity of these two constructs, the following variables should be removed: IEB5, IEB7, EEB2, EEB9. After removing the mentioned variables, all constructs meet reliability, convergent validity and discriminant validity, showing in the table below:

Table 3: Measurement models results

Constructs	Variables	Internal Consistency Reliability		Convergent Validity		Discriminant Validity
		Cronbach's Alpha	Composite Reliability	Loadings	AVE	HTMT

IEB	IEB1	0.791	0.827	0.765	0.549	<1 (Yes)
	IEB3			0.671		
	IEB4			0.623		
	IEB6			0.878		
EEB	EEB4	0.834	0.880	0.703	0.595	<1 (Yes)
	EEB6			0.72		
	EEB7			0.84		
	EEB8			0.77		
	EEB10			0.814		
GSP	INP	0.965	0.968		0.654	<1 (Yes)
	INP1			0.825		
	INP2			0.784		
	INP3			0.798		
	INP4			0.838		
	ETP					
	ETP1			0.774		
	ETP2			0.811		
	ETP3			0.775		
	TMP					
	TMP1			0.813		
	TMP2			0.849		
	TMP3			0.854		
	TMP4			0.763		
	TMP5			0.851		
	TMP6			0.762		
	FIP					
	FIP1			0.806		
	FIP2			0.811		
	FIP3			0.815		
EPE	EPE1	0.76	0.863	0.831	0.677	<1 (Yes)
	EPE2			0.874		
	EPE3			0.761		

Source: Authors' calculation

3.3. Evaluation of structural model

Structural model is measured based on the following criteria (Hair et al., 2017):

- Collinearity assessment between constructs
- Structural model path coefficients
- Coefficient of determination (R^2 value)
- Effect size (f^2)
- Blindfolding and Predictive relevance **(**Q^2**)**
- Effect size (q^2)

Table 4: Results of structural model evaluation

Hypotheses	Relationship	Path Coefficients	Bootstrap	p-Values	Significance	VIF	f^2
H1(-)	IEB->EPE	-0.106	[-0.211; 0.069]	0.085	Yes (p<0.1)	1.071	0.014

H2 (-)	EEB->EPE	0.151	[0.049; 0.263]	0.006	No (the sign of Path Coefficient is different from hypothesis)	1.094	0.028
H3 (-)	GSP->IEB*EPE	-0.118	[-0,286; 0.261]	0.454	No	1.046	0.018
H4 (-)	GSP->EEB*EPE	0.166	[-0.258; 0.32]	0.223	No	1.075	0.034
	GSP->EPE	0.345	[0.213; 0.45]	0.000	Yes ($p < 0.05$)	1.106	0.146
Criteria							
R^2		0.262					
R^2 adjusted		0.248					
Q^2		0.146					
q^2		q^2 (IEB is removed) =0.0094; q^2 (EEB is removed) =0.03					

Source: Processed results from the authors' survey data

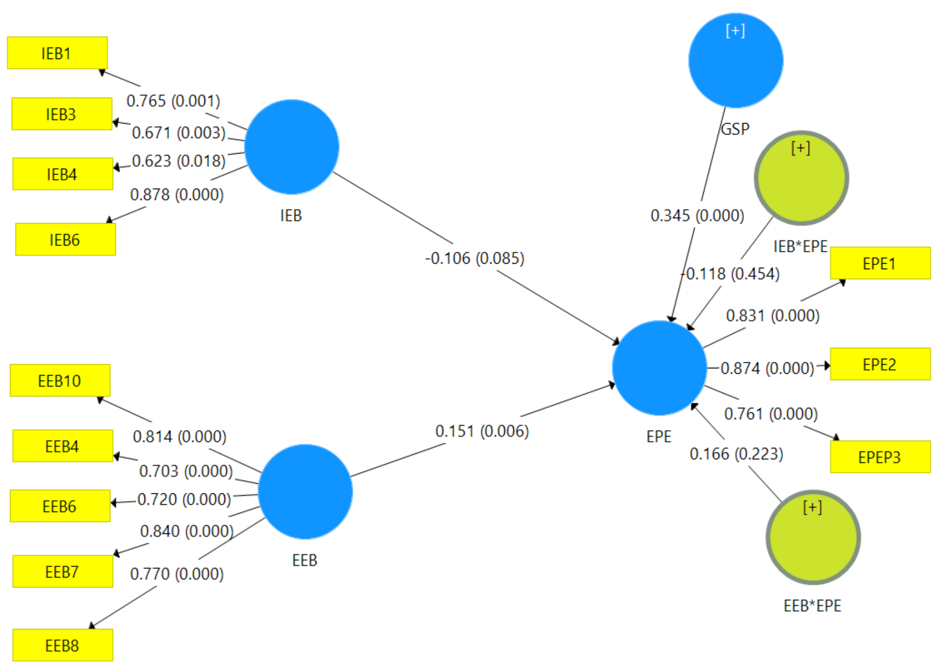

Figure 2: Structural model results

Source: Processed results from the authors' survey data

1) Collinearity assessment

VIF (variance inflation factor) is used to analyze possible collinearity. The results of Table 4 show that independent variables' VIF are below 5. Therefore, it proves there is not collinearity (Hair et al., 2017).

2) Structural model path coefficients

The result show that there is one accepted hypothesis (H1) which shows the reverse relationship between perceived internal export barriers and export performance with β=-0.106 showing a small effect. This result is similar to Jalali (2012), Anil et al. (2016), Safari et al. (2019), Haddoud et al. (2018) which show perceived internal export barriers have bad effect on export performance. The result of Haddoud et al. (2018) also shows a small effect of β=-0.15 for information barriers and β=-0.13 for functional barriers which nearly the same as our research.

There exists a positive relationship between perceived external export barriers and export performance (H2) which means that the more external export barriers SMEs perceive the better SMEs export performance they gain. This is similar to the research of Anil et al. (2016) which explained that external export barriers have forced SMEs to develop resources to solve export barriers, SMEs must operate more efficiently and compete for export performance. However, H2 is rejected because the sign of path coefficient is different from the hypothesis.

Although there exists a direct positive relationship between Government support programs and export performance but there is not the existence of the moderating effects of Government support programs on the relationship between perceived internal export barriers and export performance and the relationship between perceived external export barriers and export performance. Therefore H3, H4 are rejected which show that Government support programs cannot help to reduce the bad effects on the relationship between perceived internal export barriers and export performance and the relationship between perceived external export barriers and export performance. The result of H3 is partial similar to the research of Haddoud et al. (2018) which shows the export support programs of trade missions and export seminars do not affect the relationship between perceived internal barriers of information and export propensity but trade shows and trade missions affect the relationship between perceived internal barriers of information, function and export propensity. The result of H4 is similar to the research of Haddoud et al. (2018) which show the export support programs do not affect the relationship between perceived external barriers of procedure, environment and export propensity.

3) Coefficient of determination (R^2 value)

This value is the coefficient represents the amount of variance in the endogenous constructs explained by all of the exogenous constructs linked to it, where values of 0.5 are considered to be moderate and 0.25 are weak (Hair et al., 2017). In our model, R^2 is 0.262 so we can assess that this value is moderate. In addition, regarding the variances explained by independent variables of IEB and EEB, R^2 of 0.262 shows that perceived internal and external export barriers accounted for 26.2 per cent of the export performance variations.

4) Effect size (f^2)

In addition to evaluating the R^2 values of all endogenous constructs, the change in the R^2 value when a specified exogenous construct is omitted from the model can be used to evaluate whether the omitted construct has a substantive impact on the endogenous constructs or not. f^2 of 0.02, 0.15, and 0.35, respectively, represent small, medium, and large effects (Cohen, 1988) of the exogenous latent variable. Effect size values of less than 0.02 indicate that there is no effect. The result in Table 4 shows that there is no effect for the relationship between perceived internal export barriers and export performance (f^2=0.014); small effect for the relationship between perceived external export barriers and export performance (f^2=0.028); medium effect for the relationship between Government support programs and export performance (f^2=0.146). f^2 for the relationships of moderating GSP have no effect (f^2=0.018 and 0.034)

5) Blindfolding and Predictive relevance (Q^2)

Geisser (Q^2) test indicates the predictive ability of the dependent variables. The result shows that the dependent constructs are higher than 0 for EPE which supports the predictive capacity of our model.

6) Effect size (q^2)

The Q^2 values estimated by the blindfolding procedure represent a measure of how well the path model can predict the originally observed values. Similar to the f^2 effect size approach for assessing R^2 values, the relative impact of predictive relevance can be compared by means of the measure to the q^2 effect size. As a relative measure of predictive relevance, values of 0.02, 0.15, and 0.35 indicate that an exogenous construct has a small, medium, or large predictive relevance, respectively, for a certain endogenous construct. This figure must be computed manually because the Smart-PLS software does not provide it. To compute the q^2 value of a selected endogenous latent variable, we need the Q^2included and Q^2excluded values. The Q^2included result from the previous blindfolding estimation is available from Table 4. q^2 (IEB is removed)=0.0094 and q^2 (EEB is removed)=0.03 which show perceived internal export barriers and perceived external export barriers has small predictive relevance for export performance.

4. CONCLUSION

In order to meet the research objectives, mixed method of qualitative and quantitative methods is applied. The results show that there is not the existence of the moderating effects of Government support programs on the relationship between perceived internal export barriers and export performance; the relationship between perceived external export barriers and export performance but there exists a direct positive relationship between Government support programs and export performance. In addition, perceived internal export barriers have small effect on export performance but perceived external export barriers do not affect export performance.

5. SOME POLICY IMPLICATIONS

Based on the result of there are existences of the relationship between perceived internal export barriers and export performance; the relationship between Government support programs and export performance; there are not any effects of Government support programs on the links between perceived internal export barriers and export performance, perceived external export barriers and export performance, some research implications are suggested as follows:

Firstly, SMEs exporting agricultural products to ASEAN+3 should develop their own resources and capacity which include human resource, asset and financial resources. Rich resources help SMEs to reduce perceived internal barriers and then leads to a good effect on export performance in ASEAN+3 market. Therefore, SMEs need to have policies to recruit, retain and train high-quality personnel to have enough human resource with high knowledge and experience in exporting agricultural products to ASEAN+3. In addition, SMEs need to exploit the asset resource, capital resource effectively and plan to invest to gain more assets and capital.

Secondly, SMEs should be active in looking for Government support programs. Government support in trade mobility, information, training and finance are all necessary to contribute to the increase in SMEs export performance.

Thirdly, Government support programs should be focused on programs which helps to enhance the SMEs resources. This leads to the decrease in perceived internal export barriers and then affects the export performance. The support programs should be designed and implemented to be suitable for the kind of enterprises which are SMEs exporting agricultural products to ASEAN+3.

Fourthly, the Government should re-consider the effectiveness of all support programs to make sure that they can meet the SMEs' demands. With ineffective programs, it is not useful to apply to reduce the effects of perceived internal as well as external export barriers on export performance.

This research has some limitations related to sample size and sample taking method because the difficulty in approaching the board of director members in SMEs.

The future researches should increase the sample size and apply the more exact sample size taking method such as stratified random sampling. The future researches can be focused on Government support programs as a mediator variable or Government support programs as moderator variables for the link of both perceived export barriers and stimuli.

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THE IMPACT OF FINANCIAL LEVERAGE ON INVESTMENT ACTIVITIES OF VIETNAMESE LISTED FIRMS

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Abstract: This research investigates the impact of financial leverage on investment activities of Vietnamese enterprises by utilizing panel data regression with data collected from 98 companies listed on the Vietnam's stock market from 2015 to 2022. The results from the FGLS regression method on data indicated that financial leverage has a negative impact on investment activities, supporting the agency cost theory and pecking order theory. In addition, the cash flow hypothesis provides a positive impact on investment while liquidity, return on total assets and firm size imply a negative effect and are all statistically significant. The outcomes of this paper suggest policy implications for managers in the company and strategies for investors.

Keywords: Financial leverage, investment activities, FGLS regression.

1. INTRODUCTION

The role of businesses in the economy is becoming significantly important, contributing to shaping and developing the country in the context of the current 4.0 economy, which has been integrating and modernizing. The regulatory authorities determine the growth of the economy to effectively achieve stability and survival of companies in a competitive environment, especially for listed companies on the stock market. Competing in today's emerging capital market in Vietnam strictly requires businesses to have good and appropriate business strategies to survive or become industry leaders in the market. This is becoming more difficult when Vietnamese stock market is considered imperfect, with many legal barriers, information asymmetry and investors' psychological factors. Therefore, businesses need to carefully consider each decision when implementing policies to expand and develop their business activities.

Investment activities are considered as one of the three core financial activities of an enterprise, along with financing activities and profit-sharing activities. Enterprises need to plan and budget for an investment project to limit risks and assess the potential for socio-economic growth, profitability, and benefits in the future. Capital, also known as funding, is considered by managers as a prerequisite when an enterprise decides to make an investment project. There are many different methods of financing capital, typically two of which are featured in the capital structure: financing through equity or through debt. Each form of funding will have different effects on business performance and in corporate finance. Financial liabilities are considered as a method of external financing and a profit amplification tool to increase the profitability of the business (Barclay et al., 1999). Studies on the effect of financial leverage on investment activities of companies are quite popular in many countries around the world (Noor et al., 2022; Ilker Yilmaz, 2022; Hermuningsih et al., 2020). However, research on this topic is relatively limited in Vietnam, typically recent studies such as research by Nguyen Thi Ngoc Trang and Trang Thuy Quyen (2013); Tran Thi Tam Nguyen and Truong Dong Loc (2018); Mo and Thanh (2023). Based

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on those reasons, this study aims to find out the influence of financial leverage on the investment activities of companies listed on the Vietnam stock market in the period 2015 to 2022 in order to provide more empirical evidence then gives some policy contributions to help managers consider the use of debt in the process of budgeting for investment projects of enterprises.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Theory related to how financial leverage impacts on the firm's investment activities.

2.1.1. Modigliani and Miller Theory

Modigliani and Miller (1958) came up with the theory of capital structure referring to how the amount of debt and equity is allocated to operate its financial activities. According to M&M theory, in the perfect market without tax, whether a business decides to use debt or equity financing will not cause any differences in the value of the firm and the company's operations do not depend on financial leverage. However, the stock market in reality is always volatile, there are many problems related to transaction costs, agency costs and bankruptcy, information asymmetry or herd psychology effects, etc. This has led to cases of underinvestment or overinvestment in businesses. Therefore, Modigliani and Miller (1963) developed their previous research by adding a tax factor and concluded that in tax conditions, businesses should choose to finance by debt rather than by capital due to the advantages from the tax shield of debt.

2.1.2. Trade-Off Theory of Capital Structure

Based on the foundation developed from M&M theory, trade-off theory is known as one of two important theories along with the pecking order theory that explains the relationship between equity and debt in firm's capital structure decisions. This theory is related to the behavior of businesses in deciding to choose debt or equity capital in business activities to balance between costs and benefits from tax shields. Therefore, highly profitable firms are likely to use leverage at higher levels to take the additional benefits of the tax shield of debt (Mackie-Mason 1990; Fama-French 2002). Besides the existence of tax shield benefits, if a business is financed entirely with debt, there will have a high level of risk related to financial distress leading to bankruptcy, including direct costs such as financial distress costs and bankruptcy-related costs and indirect costs related to costs comes from loss of customers and suppliers or layoff of employees etc. This is the reason why most businesses tend to use debt and equity in a certain proportion, or in other words, to maintain an optimal capital structure is one of the most company's essential goals.

This theory also shows a negative relationship between the level of debt use and the growth opportunities. Specifically, firms with greater growth opportunities will have lower debt levels, since greater investment opportunities increase the likelihood of agency problems between managers and owners; between owners and creditors, despite of a strong incentive to promote underinvestment of the owners (Myers 1977; Smith, Warner 1979).

2.1.3. Pecking Order Theory

The pecking order theory derived from asymmetric information when the board of directors and corporate executives get a lot of important information about the growth potential, worth as well as risks of investment projects more than investors. Therefore, a business's choice between issuing debt securities or equity securities acts as a signal to shareholders outside the company. The pecking order theory suggests that among a business's investment opportunities, managers prioritize financing from three sources: retained earnings first, debt will be second, and equity will be the final one.

According to Myers and Majluf (1984) argued that high information quality transparency in the company can reduce costs from information asymmetry by only using external financing if it is difficult to find the internal sources. This implies that if external financing resources are fundamental, the company should consider using debt before issuing shares of equity. In fact, the choice of the appropriate capital structure to maximize profits depends on many factors, specifically investment opportunities and profitability of the company. Firms with high profits can choose the retained earnings to finance for their profitability and maintain a steady debt ratio. Conversely, firms with lower growth rates will be forced to issue debt financing (Donaldson, 1963) due to the limitation of internal capital resources.

2.1.4. Agency Costs Theory

The conflicts between shareholders and representatives of the enterprise affect the choice of capital structure. For example, when a business decides to use a large amount of external funding, for instance, it can lead to agency costs for managers by issuing common equity. It could be explained that when the management expects high growth rates, external capital will create a lot of value in business investment opportunities because the benefits of management and shareholders are equal (Jung, Kim, and Stulz, 1996). On the contrary, when the firm does not have strong investment opportunities, debt will play a role in limiting agency costs based on the decisions of managers according to the study of Jensen (1986), Stulz (1990); Berger, Ofek and Yermack (1997).

According to Jensen and Meckling (1976) and Myers (1977), a company might lose out the investment opportunities by financing a high level of debt due to excessive leverage problems. For risky debt, a portion of the net present value can be generated from any profitable future investment returns and redistributed from creditors. Shareholders could tend to reject a good investment opportunity through the transfer of this net asset value. Furthermore, the loss of benefits or opportunity costs of the foregone project combined with the costs of enforcing the terms of the contract constitute the agency cost of debt. In addition, if there are low transaction costs, the incentive to underinvest will be reduced (Aivazian & Callen, 1980).

2.2. Literature Review

The research related to the relationship between financial leverage and investment activities is relatively popular in scientific research field in over the world. However, these studies provide much different empirical evidence about the effect of financial leverage on firm investment activities owing to differences in data scale, methodology as well as measurement methods related to this topic.

2.2.1. Financial leverage impacts negatively on investment activities

Mondosha and colleagues (2018) investigated a study on 51 businesses in different sectors listed on African stock markets in the period 2008-2014. Research results indicated that leverage is a necessary element in investment decisions when cash flow for investment activities is limited, shown by the negative correlation between the ratio of total debt to total assets and investment. Similarly, Ali et al (2019) researched a sample of data of listed enterprises on the Pakistani stock market from year 2008 to 2017. The consequence showed that financial leverage of firms impacts negatively on investment in the low growth rates environment and there is a positive influence between financial leverage and investment in firms with high growth rates vice versa. In the studies of Jiang et al. (2019) also found negative evidence related to the effect of debt on investment activities in enterprises belong to class A-shares listed on the Chinese stock market. Using the difference-in-difference (DID) estimation method, the study provided evidence that the restriction of debt impacts certainly to the efficiency of investment by reducing over-investment in state-owned enterprises and private enterprises, firms in the energy sector and especially sharply decreased for companies paying debt by assets. Akca and colleagues (2021) identified the leverage and investment have adverse effects together in a sample of comprised companies in 5 countries (Turkey, Brazil, China, Indonesia, S. Africa and India) from 2005- 2015. Similar results were found in the research papers by Antonecchia and Ferrari (2016) for companies in Italy and Spain during the period 2006-2014; Buca and Vermeulen (2017) for 24 industries sectors of firms in 6 countries (France, Germany, France, Italy, Spain, Belgium, and Portugal) from 2000-2014. This notes that firm's investment is negatively affected by financial leverage and over debt using easily leads to under-investment and causes a prejudicial influence on increase business according to studies by Khan et al. (2019); Kumar et al (2019); Noor et al (2022) and Mo et al. (2023).

There are several similar studies in Vietnam also consistent with the previous views of the above research. Specifically, in the research article by Tran Thi Tam Nguyen and Truong Dong Loc (2018) on 248 companies listed on Ho Chi Minh and Ha Noi Stock Exchange in Vietnam through 2014-2017 period, the evidence shown that the relationship between debt and investment activities is negative correlation, specifically leverage has a weaker effect on investment activities in high-growth firms. Then Vo's (2019) research on the Stock Exchange of Ho Chi Minh City from year 2006 to 2015 indicated that when leverage increases, businesses' investment opportunities are limited for under conditions of high growth companies compared to companies with lower growth opportunities. In addition, investment activities occur frequently in companies with high market capitalization (Tobin's Q > 1), like increased cash flow. Companies with high revenue will limit investment and mainly focus on growing sales. In conclusion, it can be seen that financial leverage shows a negative correlation with investment decisions, meaning that the higher the level of debt utilization by a business, the more limited investment opportunities will be (Aivazian et al., 2005).

2.2.2. Financial leverage impacts positively on investment activities

Besides many studies findings the negative influence of leverage on investment activities, some others besides show that the relationship between financial leverage and investment activities is positively correlated. The first is findings research of Gebauer et al. (2018) on 920 listed and unlisted enterprises in 5 countries comprised Italy, Spain, Portugal, Greece and Slovenia during the year 2005 to 2014. Using threshold regression combined with GMM regression, the study provides evidence that when a company uses debt at too high a level, it limits investment opportunities due to higher default risk and higher financing costs. Similarly, Hermuningsih et al. (2020) examined classical linear regression using SPSS tool and tested the data set defects on 10 food service enterprises in the period 2015-2020. The outcomes demonstrated that financial leverage has a beneficial impact on investment, implying that businesses use leverage to finance investment activities. The financial leverage is higher, the investment opportunity is greater. Meanwhile, Chang et al.'s (2020) research on 412 enterprises in green industries, energy saving, environmental protection and green upgrading infrastructure from 2011 to 2017.By using regression FEM and

GMM, the research results proved that investment is negatively impacted by the book value of debt while being positively impacted by the market value of debt. Consistent with the above studies' evidence, Kumar et al. (2020) also found similar results of the positive impact of debt on investment in their study with a data set taken from listed banks. in Pakistan stock market during the period 2006-2013.

In Vietnam, a typical study by Nguyen Thi Ngoc Trang and Trang Thuy Quyen (2013) performed panel data regression techniques with a data sample of 264 enterprises on two largest stock markets namely Ho Chi Minh and Ha Noi Stock Exchages in Vietnam in the period 2009-2011. The authors explained the relationship between financial leverage for all companies in the sample and companies with high growth rates, a higher level of leverage will create more investment opportunities for the business. In comparison, for low growth rates companies, debt will bring more pressure to firm's future investment projects. In addition, research by Nguyen and Dong (2013) using the GMM regression method with the sample contained in 500 listed firms from 2006 to 2010 found that firms would have many investment opportunities by taking advantage of debt financing. Therefore, the above studies strongly agree with the point that financial leverage and investment activities have a positive correlation. This implies that financial leverage plays an important role, contributing to promoting efficiency and bringing many opportunities in business investment activities, or in other words, debt is evaluated as a tool to gain the benefits from tax shields (Graham, 2000), as well as creating growing cash flow, increasing profitability as well as developing investment activities of businesses.

2.2.3. Financial leverage has no impact on investment activities.

Finally, some studies demonstrate that there is no correlation was found between financial leverage and corporate investment decisions. Omet et al. (2015) studied factors affecting investment activities and regression results showed that leverage does not have a significant effect on investment decisions of 52 industrial enterprises from 2000-2013. Mwangi (2017) examined the sample of 46 non-financial companies listed on the National Stock Exchange of India during the period time from 2012 to 2016 using a regression model to find out the firm's investment activities were not impacted by using debt. A similar study was initiated by Putri et al. (2020) based on a data set of 75 listed companies on the Indonesian stock market selected based on the Z'-score index (Z'-score) (Z'-score > 2.6: The enterprise is not bankrupt). The results indicated that cash flow and financial leverage do not affect investment decisions while profitability on total assets has a positive impact on investment decisions of firms facing financial difficulties. These findings pointed out the same results that the relationship between financial leverage and investment activities is very weak and in fact financial leverage does not affect investment activities.

3. METHODOLOGY AND MODEL

3.1. Model

According to the theoretical basis and empirical research mentioned, these factors affecting investment activities of businesses selected for research include financial leverage (LEV - Leverage), cash flow (CF – Cash flow), liquidity (LIQ), asset performance (SALE), profitability ratio (ROA), business scale (SIZE), years of operation (AGE) and Tobin's Q index. Each factor is represented as a variable independently in the regression model and the basis of the included variables is explained in detail in table 1.

Following the former studies of Aka et al. (2021), Kumar et al. (2019), Mo et al. (2023), the model proposes to analyze the influencing factors impact on investment activities of enterprises in the panel data with a static multiple-regression function as follows:

$I/Ki,t = \beta_0 + \beta_1 LEVi,t\text{-}1 + \beta_2 CFi,t\text{-}1 + \beta_3 LIQi,t\text{-}1 + \beta_4 SALEi,t\text{-}1 + \beta_5 ROAi,t\text{-}1 + \beta_6 SIZEi,t\text{-}1 + \beta_7 AGEi,t\text{-}1 + \beta_8 Qi,t\text{-}1 + \varepsilon i,t$ (1)

where i represents for firm and t represents for year.

Table 1. Variables and estimation of variables in the model

Symbol	Variable names	Measurement	Expected results	Previous studies
Dependent variables				
I/K	Net investment	(Book value of fixed asset$_{i,t}$ - Book value of fixed asset$_{i,t-1}$+Dep$_{i,t}$)/ Net fixed assets$_{i,t-1}$	/	/
Independent variables				
LEV	Leverage	Total book value of debt$_{i,t-1}$/Total equity$_{i,t-1}$	(-)	Khan, M. A.; Qin, X. & Jebran, K. (2019); Noor, H.; Zafar, N., and Fizzalftikhar (2022); Mo, Tran., Thu, Hoang., and Thanh, Diep. (2023)
Control variables				
CF	Cash flow	OCF$_{i,t-1}$=[EBIT(1-t)$_{i,t-1}$+Dep$_{i,t-1}$]/ Net fixed assets$_{i,t-1}$	(+)	Akca, T., Karan, M. B., and Yıldız, Y. (2021); Ilker Yilmaz (2022)
LIQ	Current ratio	Current assets$_{i,t-1}$/ Current debts$_{i,t-1}$	(+)	Danso, A., Lartey, T., Fosu, S., Owusu-Agyei, S., & Uddin, M. (2019); Kumar, V. & Aleemi, A. R. (2020)
SALE	Asset Performance	Net sales$_{i,t-1}$/ Net fixed assets$_{i,t-1}$	(+)	Kumar, S., Verma, Dr. A. & Kumar, Dr. CVRS V. (2019); Akca, T., Karan, M. B., and Yıldız, Y. (2021)
ROA	Return on assets	Profit after tax$_{i,t-1}$/ Total assets$_{i,t-1}$	(+)	Putri, S. N. A. & Puryandani, S. (2020); Noor, H., Zafar, N., and Fizzalftikhar (2022)
SIZE	Firm size	Logarithm của total assets$_{i,t-1}$	(+)	Danso, A., Lartey, T., Fosu, S., Owusu-Agyei, S., & Uddin, M. (2019); Ding, S., Knight, J., & Zhang, X. (2019)
AGE	Years of operation	The number of years since the company started to operate$_{i,t-1}$	(-)	Kumar, S., Verma, Dr. A. & Kumar, Dr. CVRS V. (2019); Mo, Tran., Thu, Hoang., and Thanh, Diep. (2023)
Tobin's Q	Tobin's Q index	(Market value of shares$_{i,t-1}$ + Book value of total debt$_{i,t-1}$)/Book value of total assets$_{i,t-1}$	(+)	Kumar, S., Verma, Dr. A. & Kumar, Dr. CVRS V. (2019); Kumar, V. & Aleemi, A. R. (2020)

(Source: Calculation results from Stata 17.0)

3.2. Methodology

Model (1) is regressed against panel data including Pooled OLS (Pooled least squares model), FEM (fixed effects model) and REM (random effects model). While the Pooled OLS model is extensively used as a benchmark in panel data regression, the choice between FEM and REM models is often depended on the standard Hausman test (Gujarati, 2004; Baltagi, 2005).

The author procees the necessary tests to choose the relevant model: F-test (to select between Pooled OLS and FEM models); Breusch–Pagan Lagrangian test (to decide Pooled OLS or REM) and Hausman test (to come up with FEM or REM models).

After selecting the appropriate model, the author continues to conduct defect tests: Heteroscedasticity test (using the Modified Wald test for the FEM model and the Breusch–Pagan Lagrangian test for the model). REM) and autocorrelation (using the Wooldridge test) (Wooldridge, 2002).

Finally, if the model has heteroscedasticity and autocorrelation, the author proceeds to correct violations of statistical hypotheses to ensure the constancy and effectiveness of the model using the square method. Feasible Generalized Least Square (FGLS).

The sample data was collected from annual financial statements of 98 non-financial companies listed on the Vietnamese stock market included 3 main market exchanges known as HOSE, HNX and UPCOM during the period from 2015 to 2022. Unbalanced panel data with a total number of observations is 784. Data source from website finance.vietstock.vn. The article uses the ratio of net investment expenditure (I) to net fixed assets (K) to measure the investment activities of enterprises.

4. EMPIRICAL RESULTS

4.1. Descriptive statistics of research variables

Table 2 provides statistics illustrated on net investment, financial leverage, and other control variables. As can be seen, all variables have optimistic average values over the study period.

Table 2. Descriptive statistics

Variables	Mean	Std. Deviation	Minimum	Maximum
$I_{i.t}/K_{i.t-1}$	113.1352	65.3139	1	284
$LEV_{i.t-1}$	0.5295	0.1801	0.05	0.99
$CF_{i.t-1}$	118.7538	77.2385	1	317
$LIQ_{i.t-1}$	1.8828	1.3711	0.25	13.69
$SALE_{i.t-1}$	231..4375	147.9016	1	515
$ROA_{i.t-1}$	20.0905	6.7222	1	45
$SIZE_{i.t-1}$	7.0383	0.4463	5.08	8.3
$AGE_{i.t-1}$	25.9387	17.6112	3	147
$Q_{i.t-1}$	1.2786	0.8983	0.08	9.05

(Source: Calculation results from Stata 17.0)

In particular, the asset utilization efficiency (SALE) of companies in the sample reached an average of 231.44 million VND and is the variable with the strongest fluctuation. Cash flow (CF) averaged 118.75 million VND and average net investment was 113.14 million VND.

4.2. Correlation analysis and multicollinearity test

Table 3. Matrix of correlations

	I/K	LEV	CF	LIQ	SALE	ROA	SIZE	AGE	Q
I/K	1.0000								
LEV	-0.1672**	1.0000							

CF	0.6041**	-0.3539**	1.0000						
LIQ	0.1520**	-0.5454**	0.3446**	1.0000					
SALE	0.3003**	-0.0674	0.4029**	0.0371	1.0000				
ROA	0.1762**	-0.5063**	0.4330**	0.2556**	0.2708**	1.0000			
SIZE	-0.1413**	0.0827**	-0.1038**	0.0012	-0.2363**	-0.0534	1.0000		
AGE	0.0651	-0.0943**	0.0548	-0.0370	0.1463**	0.2567**	-0.0136	1.0000	
Q	0.1049**	-0.2572**	0.2243**	0.1762**	0.1493**	0.4862**	0.1673**	0.3395**	1.0000

*Note: **Correlation is significant at the 0.05 level.*

(Source: Calculation results from Stata 17.0)

The Pearson correlation test was performed between the explanatory variables to consider multicollinearity between the variables and the findings are indicated in table 3. Based on the results, most of the pairwise correlation coefficients between the variables are consistent less than 0.5. The highest correlation coefficient is 0.6 between net investment (I/K) and cash flow (CF) variables.

Table 4. Variance Inflation Factors (VIF)

Variables	VIF	1/VIF
LEV	1.83	0.545394
CF	1.53	0.653113
LIQ	1.53	0.655606
SALE	1.33	0.754110
ROA	1.87	0.534922
SIZE	1.13	0.881787
AGE	1.18	0.847616
Q	1.50	0.668695
Mean VIF	1.49	

(Source: Calculation results from Stata 17.0)

High correlation raises concerns about the possibility of multicollinearity problems. Therefore, the author conducted further analysis using variance inflation factor (VIF) analysis. The results from table 4 analyzed that most of the VIF number values are very low and less than 10 at all, meaning that the multicollinearity between explanatory variables in the regression model does not occur.

4.3. Test model selection

The main type of research data is panel data. There are three common regressions with panel data known as fixed effects (FEM) and random effects (REM) models or pooled OLS regression respectively. We use F-test to select between Pooled OLS and FEM. From the results, it shows that the F test value is 3.99 and Prob value > F = 0.0000 with a statistical significance level of 5%. From there, it is determined that the fixed effects regression model is better than the pooled OLS regression.

Table 5. Results of model selection testing

	Pooled OLS	FEM	REM
LEV	-6.0294	-0.5589	-8.917
	(-0.44)	(-0.02)	(-0.52)
CF	0.5382**	0.5475**	0.5479**
	(18.30)	(13.38)	(16.34)
LIQ	-2.1559	0.4439	-0.9527
	(-1.30)	(0.22)	(-0.53)
SALE	0.0242*	0.1042**	0.0649**
	(1.70)	(5.35)	(3.95)
ROA	-1.3263**	-1.9476**	-1.7253**
	(-3.55)	(-4.24)	(-4.31)
SIZE	-10.3591**	-47.7681**	-19.2122**
	(-2.37)	(-4.46)	(-3.32)
AGE	0.1713	1.8343*	0.13
	(1.51)	(1.92)	(0.74)
Q	1.4642	1.4184	2.5936
	(0.59)	(0.47)	(0.98)
_cons	144.1089	349.396	202.7506
	(4.35)	(4.35)	(4.35)
F test:			3.99**
Hausman test:			42.78**
Breusch and Pagan Lagrangian multiplier test:			135.66**

*Note: t_statistics in parentheses (). **,*Correlation is significant respectively at the 0.05 and 0.1 level.*

(Source: Calculation results from Stata 17.0)

Next, we performed the Breusch and Pagan Lagrange test to examine the efficiency in estimation between the two methods of random effects regression and pooled OLS regression. Results from this test report a statistical value of 135.66 and Prob > Chi = 0.0000 at a 5% level of statistical significance. This shows that compared with pooled OLS regression, random effects (REM) estimation is more efficient.

Finally, the Hausman test was applied to check whether the study results should be focused on the fixed effects model (FEM) or the random effects model (REM). Since the Hausman test gives P-value less than 0.05, the research will choose the regression results with fixed effects (FEM) to explain the relationship to be studied.

In summary, from the results of testing the above choice between pairs of estimation methods, the fixed effects estimation method (FEM) is selected as the appropriate model.

4.4. Autocorrelation test

While there are lots of discoveries about several tests for serial correlation in panel data models, the test stated by Wooldridge (2002) is commonly used because the assumption requirements are not strict as well as are easy to implement. The results of the Wooldridge series correlation test show that the FEM regression model has a first-order autocorrelation phenomenon at the 5% significance level.

Table 6. Autocorrelation test results

Wooldridge test for autocorrelation in panel data	
H_0: no first order autocorrelation	
F (1, 97)	3.313**
Prob > F =	0.0718

*Note: **Correlation is significant at the 0.05 level.*

(Source: Calculation results from Stata 17.0)

The results of the autocorrelation test are presented in Table 6, showing that the hypothesis H_0 that the model does not have autocorrelation is accepted at the 5% significance level. Therefore, the assumptions of the conventional linear regression model, specifically the autocorrelation of the residuals, are not violated from the research results.

4.5. Heteroskedasticity test

In this study, to perform the heteroscedasticity test, the author performed the Modified Wald test (see Greene, 2000, p. 598). The test is depended on the expectation that the variance of the error of the regression equation is independent of the independent variables in the model, meaning the variance is constant. If there is rejection in null hypothesis, the model has heteroscedasticity. If the Modified Wald test shows that there is conditional heteroscedasticity, the author will use FGLS (Feasible Generalized Least Squares) estimation or correct the variance of the standard error to ensure the results. The estimate is efficient.

Table 7. Results of heteroscedasticity test

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model	
H_0: Constant variance	
χ^2_1 =	70993.82**
Prob > χ^2 =	0.0000

*Note: **Correlation is significant at the 0.05 level.*

(Source: Calculation results from Stata 17.0)

The results of testing heteroscedasticity are presented in Table 7, showing that the hypothesis H0 that the model has constant variance is rejected at the 5% statistical significance level. Therefore, the estimated model violates the assumption of the conventional linear regression model regarding the constancy of the variance of the residuals.

In summary, the results of the Wald test and Wooldridge test in Tables 6 and 7 show that the research model does not have autocorrelation, on the other hand, the phenomenon of heteroskedasticity exists at a significance level of 5% in the model. In order to develop the effectiveness of estimation, the FGLS method as proposed by Beck & Katz (1995) is applied and used for analysis.

4.6. The impact of financial leverage on investment activities

The regression results demonstrate that the fixed effects model (FEM) is appropriate to analyze how the financial leverage affects to firm's investment activities. After testing the defects, it shows that the estimated research model has the phenomenon of heteroskedasticity at the 5% significance level. However, this defect can be overcome by using FGLS techniques or using OLS estimation on panel data but recalculating the covariance matrix of error term and standard errors of the regression coefficient so that the tests of them become more reliable. The authors will indicate by the FGLS regression method in this study and the empirical results presented in table 8. The results of the Wald test of the estimated model with a P-value below 0.05 show that the model used is acceptable.

Table 8. The influence of financial leverage on investment activities

Variables	Coef.	Std. Error	z	P > z
LEV	-14.8107**	3.345	-4.43	0.000
CF	0.885**	0.0083	106.83	0.000
LIQ	-1.1714**	0.4426	-2.65	0.008
SALE	-0.0001	0.0037	-0.03	0.978
ROA	-1.8016**	0.0543	-33.20	0.000
SIZE	-9.1451**	1.2655	-7.23	0.000
AGE	-0.04413	0.0333	-1.32	0.185
Q	0.0806	0.5523	0.15	0.884
_cons	127.5469	10.05347	12.69	0.000
Wald test	31608.68**			

*Note: **Correlation is significant at the 0.05 level.*

(Source: Calculation results from Stata 17.0)

Regression outcomes analyze that investment activities of listed firms are negatively affected by leverage ratio, liquidity, profitability, and firm size while cash flow shows a positive impact on investment activity at the 5% level statistically significant. In addition, asset performance and years of operation have a positive correlation while there is a positive correlation between Tobin's Q index and investment activities but all of them are statistically insignificant.

The estimation consequence proves that leverage and investment activities fluctuate in opposite directions. This result is consistent with the hypothesis and former studies such as Khan et al. (2019); Noor et al. (2022); Mo et al. (2023). Specifically, when financial leverage increases by 1%, the company's net investment will decrease by 14.81% at the 5% level statistically significant. The research results support the agency cost theory explained by the agency conflict problem between shareholders and managers (Myer, 1977) in imperfect markets leading to ineffective investment. This is due to many different reasons, specifically limitations in the legal framework, the level of information transparency and the role of the Board of Supervisors in the Board of Directors has not really been promoted in the real world in Vietnam. On the contrary, the internal governance structure of Vietnam companies is based on the two-tier governance model significantly applied in China and Germany that emphasizes the executive role being separated from the supervisory role. Although the decision-making process is slowed down, intermediation costs will be reduced. Meanwhile, in comparison with UK, US, Australia, Singapore, and Malaysia enforce the one-layer governance model (Anglo-Saxon model) to create more opportunities for the Board of Directors, especially is a CEO who can fully promote autonomy and creativity and making decision in corporate governance, but this model also causes abuse of power by management. In general, it can be concluded that agency conflicts within businesses in Vietnam are distinguish from Western countries leading to differences in research results.

The agency problem between shareholders and managers was explained by Jensen (1986), Stulz (1990) and Grossman and Hart (1982) about the negative correlation between financial leverage and investment performance. Jensen and Meckling (1976) suggested using debt leverage as a tool to limit agency conflicts. Increasing the debt-to-equity ratio in the capital structure will reduce dependence on equity capital mobilization, leading to reduced conflicts between shareholders and managers. Furthermore, debt requires the company to budget for the interest and principal expenses increased default in the future, which will interfere the managers from consuming free cash flow to invest in project has NPV < 0 (Jensen, 1986; Aivazian et al., 2005; Zhang, 2009). However, the agency costs of debt along with shareholders' responsibilities to creditors will increase at the same time as businesses use debt financing for investment projects. According to Myers (1977); Pawlina & Renneboog (2005); De Gryse & De Jong (2006) that means, management may be reluctant to pay external capital expenditures regardless of information asymmetry as default risk increases. Debt then causes constraints on investment spending due to the required cost of capital and increased default risk, explaining the negative correlation between leverage and investment. Therefore, companies might encounter many problems when using leverage as a tool to control agency costs. Firms with too high a level of debt use can cause under-investment, while companies finance by equity instead of by debt might control the over-investment situation.

The study also provides empirical evidence that cash flow has a positive impact on investment activities, proving that firms tend to focus on internal capital sources rather than external capital sources. This finding also supports the pecking order theory. In comparison, liquidity, return on total assets and firm size have a negative correlation with investment activities. This can be explained due to the macroeconomic fluctuations such as the US-China trade war, the Middle East struggles, and the Covid-19 pandemic during the period 2018-2022, which has led to many difficulties in production and operation activities of companies, lack of the ability to pay debt, low asset utilization efficiency and most large enterprises mainly focus on maintaining competitive market share rather than expanding investment activities.

5. CONCLUSION AND POLICY IMPLICATIONS SUGGESTION

This research paper analyzes the impact of financial leverage on investment activities of Vietnamese firms with annual data selected from 98 companies listed on the Vietnamese stock market from 2015 to 2022. Empirical evidence from the FGLS regression method shows that financial leverage and investment activities have a negative correlation, meaning that when leverage increases, net investment will decrease due to debt pressure affecting to the investment opportunities of companies in Vietnam. In addition, the difficulties of the economy have negatively impacted the ability of firms to pay off debts, so most managers focus on policies to restore and maintain business operations rather than finding external investment opportunities. In addition, the study also found the influence of cash flow, liquidity, return on total assets and firm size on investment activities of non-financial companies listed on the stock market Vietnam.

This paper aims to provide some recommended policies for company's managers and investors to participate in capital market. The problem of inefficient investment is related to agency conflicts in the company, where leverage acts as a valuable tool to keep the interests of shareholders safe and solve the problem of over investment. Managers should consider using financing policies to tackle overinvestment behavior, more specifically, consider long-term loans to increase the marginal efficiency of leverage. In addition, companies should identify other factors that affect investment to make decisions on using appropriate leverage subjected to the firm characteristics and type of the business, avoiding excessive debt abuse leading to the risk of insolvency, loss of future investment opportunities or even bankruptcy. In addition, for investors, when reviewing their investment portfolio, they need to carefully consider and evaluate the debt structure that businesses use to finance investment projects as well as the potential growth potential of those projects.

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THE ROLE OF FINANCIAL DEVELOPMENT TO ADDRESSING INCOME INEQUALITY: EXPERIMENTAL EVIDENCE IN DEVELOPING COUNTRIES AND POLICY IMPLICATIONS FOR VIETNAM

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Abstract: The study was conducted to assess the role of financial development in addressing income inequality in developing economies through a sample of 36 developing countries from 2008-2020 and the Bayes approach. The results of the study show that financial development increases income inequality, but when reaching the threshold of 121.965% of GDP, it will have an impact on reducing income inequality. This is consistent with Greenwood & Jovanovic's (1990) hypothesis that the relationship between financial development and income inequality follows an inverted U-shape. In addition, the research results also show that trade openness, inflation, and infrastructure will help close the income gap but government spending, human capital and economic growth will make it worse. From the research results, the author offers policy implications to promote the role of financial development in reducing income inequality in developing countries in general and Vietnam in particular.

Keywords: Income inequality, Financial development, developing countries

1. INTRODUCTION

Keeping up with the growth path of developed countries is always a matter of concern in developing countries. However, economic growth that does not keep pace with social progress and development can also destabilize countries. Therefore, instead of individual economic development goals, developing countries attach importance to sustainable development.

Income inequality has long been seen as a drag on sustainable growth. In the "2030 Agenda for Sustainable Development" of the United Nations (2015), it was stated that: "Sustained, inclusive and sustainable economic growth is essential for prosperity. This will only be possible if wealth is shared and income inequality is addressed". Therefore, for sustainable development, it is necessary to solve the problem of income inequality.

Many empirical studies have been conducted to find the factors affecting income inequality, thereby providing proposals to reduce income inequality for policymakers in different countries. One of those research streams is the study of the role of financial development on income inequality. Financial development is simply understood as the process of overcoming cost barriers that exist in the financial system, including the costs of collecting information, enforcing contracts, and carrying out transactions (World Bank, 2023). Any improvement in access to finance and a concomitant reduction in credit constraints is expected to benefit the poor by facilitating their financing so that they can invest in human capital, career skills and business opportunities. This is expected to help narrow the gap between rich and poor. However, the results of studies on the relationship between financial development and income inequality so far are still mixed. Three popular trends in the results of previous studies: i) Financial development can decrease income inequality (Bittencourt & F, 2006; Enowbi Batuo et al., 2010; Kapingura, 2017; Zhang & Ben

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Naceur, 2019); ii) Financial development exacerbates income inequality (Tiwari et al., 2013; Jauch & Watzka, 2016); or iii) The relationship of financial development and income inequality is nonlinear. On the one hand, financial development increases income inequality in early financial development, but after a threshold is reached, an increase in the level of development will have the effect of narrowing the income gap, such a relationship is also known as an inverted U-shaped relationship (Shahbaz et al., 2015; Destek et al, 2020); On the other hand, there are studies show that the relationship between financial development and income inequality follows a U-shaped (Tan and Law, 2012; Ridzuan et al., 2021). The inconsistency in the above studies is due to the difference between the scope of research space, research time and research methods.

It is clear that the above studies have approached financial development in two ways: Analyzing the impact of financial development into individual components or combining the components of financial development into a total index. The Global Financial Development Database of the World Bank developed a comprehensive yet relatively simple conceptual 4x2 framework to evaluate financial development globally. The four sets of proxy variables defined by this paradigm as traits of a sound financial system are financial depth, access, efficiency, and stability. Then, the impact of these four elements on the financial institutions and financial markets—the two key pillars of the financial sector—is assessed. Using this World Bank measure of financial development to examine its impact on income inequality has the advantage of taking into account all manifestations of financial development, but the disadvantage is that can only confirm the net impact of financial development while individual components may have different impacts on income inequality (Kapingura, 2017; Zhang & Ben Naceur, 2019). This will reveal limitations when researchers want to present appropriate policy implications for each perspective. This problem can be solved by analyzing the impact of all factors of financial development separately on income inequality to find the impact of each component. However, in this study, the author will investigate the impact of neither financial development using a composite index, nor all aspects of financial development on income equality, priority is given to focusing on financial development from a banking perspective because the development of the banking sector has a stronger positive impact on income distribution than the development of the stock market (Zhang & Ben Naceur, 2019). Alleviating constraints on access to credit was supposed to benefit low-income groups through human capital channels (Galor & Zeira, 1993), or career options (Banerjee, A. V., & Newman, A. F., 1993), or improve household capital income with small fixed costs (Greenwood and Jovanovic, 1990), thereby reducing income inequality. The main factor that causes more developed financial markets to eventually reduce income inequality in the cases above is always higher credit availability, which enables household decisions to be made more in line with economic optimality and less in line with inherited wealth. The author will therefore use domestic credit to the private sector (as a percentage of GDP) as a proxy for financial development.

Additionally, previous studies used many different methods such as OLS, FEM, REM, GMM, ARDL, etc. The common point of these methods is the frequency statistical approach which is suitable for research in the field of natural sciences. Meanwhile, the impact of financial development on income inequality takes place in the social environment. The Bayesian method does not need to be based on the assumption that observational samples must be continuously repeated with the same conditions over the years, so it seems suitable for use in case studies in the field of social sciences (Briggs & Nguyen, 2019). That is why the author wants to test this relationship with a new method, the Bayesian method in developing countries. From the research results, the author provides policy implications for Vietnam, which is also a developing country, to promote the role of financial development in narrowing the income gap.

This article is organised as follows. Section 2 presents a summary of the studies. Modeling, methodology framework and data collection are presented in Section 3. Section 4 explains the results and Section 5 provides policy implications for Vietnam.

2. LITERATURE REVIEW

There are many studies that have highlighted different aspects of the link between financial development and income inequality, including:

i) Financial development has the effect of narrowing income inequality. Bittencourt & F (2006) examined the effect of financial development on income inequality using data from Brazil in the 1980s and 1990s and discovered that it increased the poor's access to credit, decreased extreme inequalities, and therefore improved welfare without impairing economic performance. Li et al. (1998), using panel data of 40 developed and least developed countries for the period 1947 to 1994 discovered that a well-functioning financial sector resulted in low income inequality. Similarly, Enowbi Batuo et al. (2010) use data limited to African countries for the period 1980-2004 and apply the generalized method of moments (GMM) technique to examine the impact of financial development on income distribution. The empirical results show that the financial development variables and the composite index predict a negative and linear relationship between finance and the Gini Coefficient. However, in Kapingura's (2017) research, there is no consensus on the impact of financial development components on income inequality. The author examined the relationship between financial sector development and income inequality in South Africa over the period from 1990 to 2012. Using quarterly data and the ARDL model, the study found that financial development measured by the number of ATMs has reduced the level of inequality in South Africa in both the short and long term, but financial development measured by bank credit to the private sector, there is a positive correlation. Zhang & Ben Naceur (2019) examine five dimensions of financial development (including financial access, depth, efficiency, stability and liberalization) that impact income inequality in 143 countries around the world from 1961 to 2011. Using the OLS estimation tool and instrumental variable (IV) regression, the authors find that four out of five aspects of financial development can significantly reduce income inequality and poverty, except that financial liberalization tends to exacerbate those problems.

ii) Financial development increases income inequality. Using the ARDL approach, Tiwari et al. (2013) analyzed the role of financial development on income inequality between rural and urban areas in India over the period 1965–2008. They found that financial development exacerbates income inequality between urban and rural areas in the long run. With the data in India on the other period, from 1982 to 2012, Sehrawat & Giri (2015) examined the relationship between financial development and income inequality. The results of the ARDL test show that financial development exacerbates income inequality both in the long run and in the short run. Jauch & Watzka (2016) examined similar associations in 138 countries over the period 1960–2008. Taking domestic credit to the private sector to GDP as a measure of financial development and using a FEM estimate, the researchers found that all income groups in a country benefit from greater financial development, but richer people benefit more, so income inequality is increasing, which means financial development has a positive effect on income inequality.

iii) The relationship between financial development and income inequality is nonlinear. Based on the link between economic growth and income inequality by Kuznets (1955), Greenwood & Jovanovic (1990) concluded the inverted U-shaped relationship between financial development and income distribution. The two argued in favor of the previous conclusion by claiming that expansion will supply the necessary resources while the financial structure will assure more effective use of capital, allowing for rapid growth. According to this theory, only the wealthy class with a specific income level can take advantage of market opportunities in the early stages of financial development because of the high expenses associated with the substructure. As a result, the income gap between the rich and the poor will widen. In the next period when financial markets can gain a certain volume by solving their infrastructure problems, the poor will also have the means to have cheap credit and the process will lead to a decrease in income inequality. This study has been considered the Greenwood - Jovanovic (GJ) hypothesis and has been considered by many later researchers as a theoretical framework for testing. Shahbaz et al. (2015) studied this association in Iran for the period 1965–2011. Using the ARDL method, they found evidence to support the GJ hypothesis. Park & Shin (2017), using data from 162 countries in the period 1960–2011, found that financial development contributed to reducing inequality to some extent, but as financial development progressed further, it contributed to increasing inequality. Similarly, Younsi & Bechtini (2018) analyzed the relationship between financial development and income inequality in the BRICS countries over the period 1995-2015 using POLS and GMM methods. The empirical findings confirm the GJ hypothesis of an inverted U-shaped relationship between financial sector development, and income inequality in the BRICS countries during this century. Chakroun (2020) used instrumental variable threshold regression introduced by Caner and Hansen in 2004 on a cross-sectional database of 60 developed and developing countries to test the GJ hypothesis. The finding shows that there is a significant financial development threshold effect in the financial development-income inequality relationship.

However, the GJ hypothesis does not always exist. There is no evidence to support the GJ hypothesis in the paper investigated by Shahbaz & Islam (2011) about the relationship between financial development measured by domestic credit distributed to the private sector as a share of GDP and income inequality in Pakistan in the period 1971–2005 following the ARDL method. Similarly, although Enowbi Batuo et al. (2010) asserted the existence of a negative and linear relationship between financial development and the Gini Coefficient, an inverted U-shaped relationship was not established.

Besides the inverted U-shaped relationship, the relationship between financial development and income inequality is also found to follow a U-shaped in some studies. Tan & Law (2012) analysed the relationship between financial development and income inequality using data from 35 countries. Their results indicate a U-shaped relationship between financial depth and income distribution. (Ridzuan et al., 2021) applied the bounds test to examine the long-run and short-run relationship based on data samples in 4 Southeast Asian countries from 1970 to 2016. The results show the presence of the financial Kuznets hypothesis in the shape of an inverted U in Malaysia and Thailand, while U-shaped curves are found in Indonesia and the Philippines.

3. RESEARCH MODELS AND METHODS

Based on the model of Shahbaz et al. (2015), the author proposes the following model:

$$GINI_{it} = \theta_0 + \theta_1 * PVRT_{it} + \theta_2 * PVRT2_{it} + \theta_x * X_{it} + u_{it} \quad (1)$$

where i represents the country and t is the time of observation in the model. The variables in the model are described in the following table:

Table 1: Summary of variables in the research model

Variable name	Symbol	Measure	Source	Expected	Inheritance Research
Dependent variable					
Income inequality	GINI	GINI coefficient	WDI		(Zhang & Chen, 2015)
Independent variables					
Financial development	PRVT	Domestic credit to private sector/GDP	WDI	+	(Shahbaz et al., 2015)
Square of the financial development	PRVT2	PRVT Squared	WDI	-	(Shahbaz et al., 2015)
Control variable					
Trade openness	TRD	(Export + Import)/GDP	WDI	-	(Chakroun, 2020)
Inflation	INF	Inflation, GDP deflator	WDI	-	(Chakroun, 2020)
Infrastructure	TEL	Fixed telephone subscriptions/ Population, total	WDI	-	(Calderón & Servén, 2004)
Government spending	GEG	government final consumption expenditures/GDP	WDI	+	(Zhang & Chen, 2015)
Education	EDU	School enrollment, primary/ Population by age group	WDI	-	(Chakroun, 2020)
Economic growth	GDP	GDP per capita growth	WDI	+	(Chakroun, 2020)

Source: Author's compilation

Note: "+" means there is a positive relationship with income inequality

"-" means there is a negative relationship with income inequality

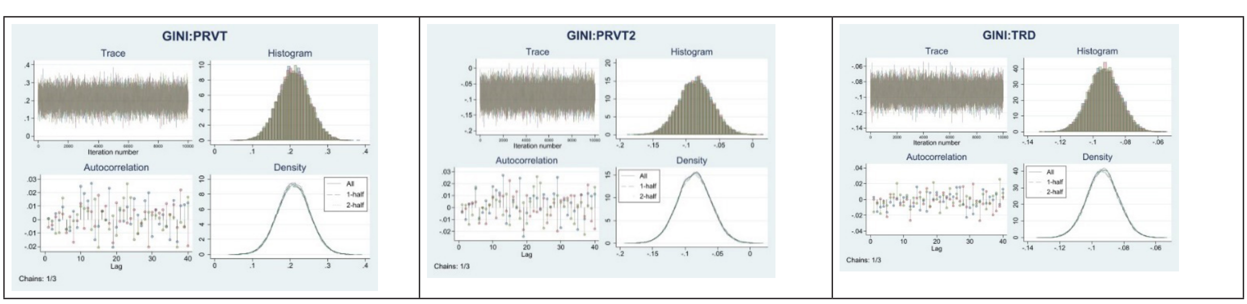
The sample includes 36 developing countries (Appendix 1) and the period mentioned in the paper is from 2008 to 2020 due to data availability. Data sources: World Development Indicators (WDI).

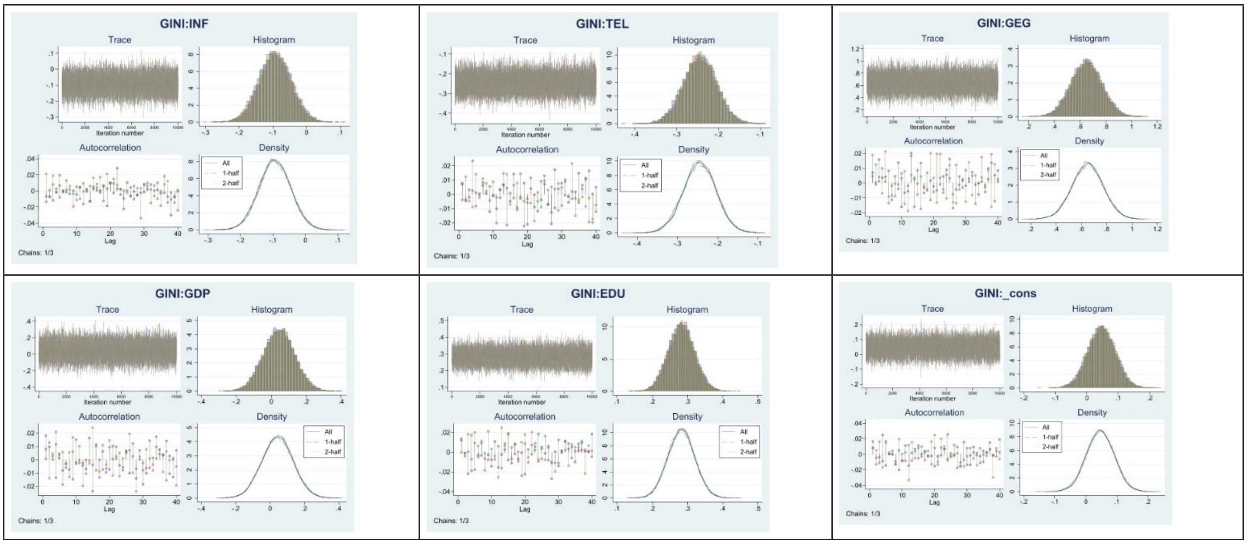
To analyze the impact of independent variables on income inequality, the author approaches the Bayesian method because this method has advantages that can overcome model defects such as autocorrelation, variable variance, and endogenous (Ramírez Hassan & Montoya Blandón, 2019).

Prior information is unavailable because the majority of earlier studies used a frequency method. However, with a sample of 36 developing countries and a period of 13 years, the number of observations is relatively large, so prior information does not affect the posterior distribution too much. The Markov Chain Monte Carlo (MCMC) technique and Gibbs sampling are used to create posterior distributions for each parameter in the model.

4. RESULTS AND DISCUSSION

Figure 1 Convergence diagnostic graph





Source: Author's calculation on Stata 17.0

From Figure 1, we see that the values of the coefficients fluctuate around the mean, and the graph shape is uniform, it can be concluded that the Bayesian simulation is stable.

Table 2: Bayes Regression Results

	Mean	Std. dev	MCSE	Median	Equal-tailed [95% cred. interval]	
PRVT	0.2098434	0.0419797	0.000242	0.2099387	0.127698	0.2927133
PRVT2	-0.0860259	0.0256312	0.000148	-0.0858277	-0.1363028	-0.0357136
TRD	-0.0931698	0.0097231	0.000056	-0.0931936	-0.1123281	-0.0741669
INF	-0.0937823	0.0483247	0.000281	-0.0939936	-0.1886183	0.0013463
TEL	-0.2445297	0.0403024	0.000233	-0.2445925	-0.3245711	-0.1653018
GEG	0.6489337	0.1211571	0.000706	0.6491046	0.4125881	0.885715
GDP	0.0437654	0.0903436	0.000525	0.0440603	-0.1319646	0.2212042
EDU	0.2827289	0.0378688	0.00022	0.2827339	0.2092002	0.3572817
cons	0.0463976	0.0443329	0.000256	0.0464606	-0.0405942	0.1326933
var	0.0048917	0.0003253	0.000002	0.0048775	0.0042967	0.0055665

Source: Results from running the model on Stata 17.

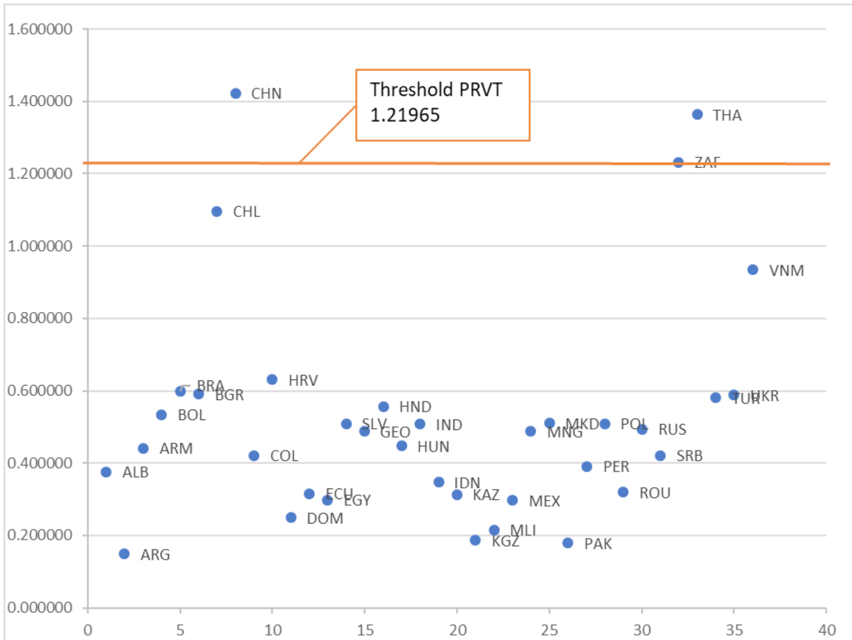
The regression coefficients in Table 2 show the change of income inequality GINI when there is a mean change of each independent variable in the model. Specifically:

$$\mathbf{GINI_{it} = 0.0463976 + 0.2098434*PRVT_{it} - 0.0860259*PRVT2_{it} - 0.0931698*TRD_{it} - 0.937823*INF_{it} - 0.2445297*TEL_{it} + 0.6489337*GEG_{it} + 0\ .0437654*GDP_{it} + 0.2827289*EDU_{it} + e_{it}}$$

Thus, the variables PRVT, GEG, GDP, and EDU have a positive effect on GINI, while the variables TRD, INF, and TEL have a negative effect on GINI. The regression coefficient of the PRVT2 variable of the model is negative, which means that there exists a turning point Specifically:

The regression coefficient of PRVT has a positive sign and the coefficient of PRVT2 is negative, that is, PRVT increases GINI, however, when passing a threshold PRVT = $\frac{0.2098434 \quad 0.2098434}{2\times 0.0860259\, 2\times 0.0860259}$ = 1.21965, the GINI coefficient will be reduced. This result is consistent with the hypothesis of **Greenwood & Jovanovic (1990)**. In the first stage of financial development, due to the high costs that stemmed from the substructure, only the rich could take advantage of market opportunities. As a result, the income inequality gap will widen. In the next period when financial markets can gain a certain volume by addressing their infrastructure problems, the poor will also have the means to have cheap credit and the process will lead to a decrease in income inequality. This result is similar to many previous studies such as that of Destek et al. (2020), and Chakroun (2020)

Figure 2: Average PRVT of the 36 countries in the sample



Source: Results from data of World Development Indicators (WDI)

The results from Figure 2 show that only 3/36 countries have a level of financial development (represented by private credit) above the turning point 1.21965, while 33/36 countries in the sample have financial development level lower than the threshold, including Vietnam. This means that in these countries, increasing levels of financial development (represented by private credit) will exacerbate income inequality.

Trade openness reduces GINI. In other words, the benefits of trade openness have been translated into a better and fairer distribution of income. This result supports the Stolper-Samuelson theorem and is similar to Ridzuan et al. (2021).

Inflation has a negative effect on GINI. This occurs because mild inflation acts as a stimulant for investors, encouraging investment, which leads to the creation of job possibilities. Additionally, inflation favors the debtors and most of the poor in developing economies are indebted. (Shahbaz & Islam, 2011)

Infrastructure as represented by Fixed telephone subscriptions/total population has a negative effect on income inequality, demonstrating that enhanced infrastructure can reduce income inequality. This result supports the view of Calderón & Servén (2004) that infrastructure will help the poor integrate more effectively into the economy.

Government spending drives incomes to become more unequal. This result is similar to Altunbaş & Thornton, (2019), which studied 121 developed and developing countries, indicating that most final government spending is in the form of transfers to the middle class.

Economic growth has a positive effect on GINI, which implies that economic growth hinders equal income distribution. This result is consistent with Shahbaz et al. (2015) in the case of Pakistan but contradicts Destek et al., (2020) when they studied in Turkey in the period 1990-2015 using the ARDL method.

Education is expected to improve income inequality, but in this study, the impact of education is positively related to income inequality. Enowbi Batuo et al. (2010) reached a similar conclusion, arguing that an increase in enrollment rates would exacerbate income inequality with data for 22 African countries between 1990 and 2004. This can be argued because education is still costly for the poor (Bukhari & Munir, 2016). Another possible explanation for the above result is that the enrollment rate may not be the best representative of workers' educational attainment as wage inequality may be affected by the education level of the current workforce rather than the future (Xu et al., 2021).

5. POLICY IMPLICATIONS

Policy implications for developing countries

For better income distribution, the financial sector in developing countries must be strengthened and strive to surpass the threshold point. In addition to enhancing financial development, developing country legislators need to make it easier for entrepreneurs to access financial services. Access to capital markets by the poor and disadvantaged can be beneficial to them by developing entrepreneurial skills and thus engaging them in productive activities and/or by enabling them to learn higher level and quality training, especially in the fields of science and technology, which can help people to form capital and innovation.

Policy implications for Vietnam

Firstly, the average level of financial development of Vietnam over the years is 93.43% of GDP, still below the threshold point of 121.965% of GDP, so similar to developing countries, Vietnamese policymakers need to continue its financial development policies, especially effective management systems for financial institutions, as well as strengthen the financial infrastructure (credit information, collateral and insolvency mode).

Second, policymakers can increase commercial activities as a means to create employment opportunities for unskilled workers, which are abundant in Vietnam, which can increase the income of unskilled workers. they increase, narrowing the income gap with skilled workers.

Third, higher inflation has benefited the income distribution in developing countries. Therefore, policymakers need to ensure that any reforms, such as fiscal reforms that lead to inflation, have overall positive effects on economic growth as well as social development by keeping income distribution gaps to a minimum.

Fourth, government final consumption expenditures need to be increased on education, in order to avoid the cost of education being a burden on the poor, leading to a vicious circle that cannot escape poverty because of limited human capital.

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FOREIGN DIRECT INVESTMENT, INVESTMENT OF SMALL AND MEDIUM ENTERPRISES - CROWDING OUT EFFECT?

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Abstract: The study was conducted to assess the impact of FDI inflows on investment activities of small and medium enterprises (SMEs). Research results show a crowding out effect of FDI inflows, which implies that localities need to focus on the quality of FDI inflows instead of quantity. In addition, the study also considers the impact of internal factors of SMEs, Bayesian regression results show that the size of SMEs, SMEs with e-commerce activities tend to promote investment activities; while the number of years of operation of the business has a negative impact on this activity. Finally, government spending has a positive impact on investment activities of SMEs, the implication of this finding is that the government should increase the rate of allocation budget state to provinces which have high level of budget contribution and great growth potential.

Keywords: small and medium enterprises, foreign direct investment, crowding out effect

1. INTRODUCTION

There have been many studies and researches in the world showing the importance of Foreign Direct Investment (FDI) to the economy of developing countries, including Vietnam. Not only is FDI an additional source of developmental investment capital, but also a more stable capital flow than other international investment flows, because FDI is based on a long-term view of the market, growth prospects and doesn't create debts for the government of the host country; therefore, it tends not to change in adverse circumstances. Beside capital transfer, FDI is also a technology transfer channel from developed countries to investment-receiving countries, contributing to increasing the technology research and development capabilities of the host countries.

Realizing this important role, Vietnam has quickly opened up its economy, traded with foreign countries and received FDI as an important source of capital for economic growth since Doi Moi in 1986. Based on information from the OECD FDI Regulatory Restrictiveness Index, Vietnam is one of the economies with the largest openness to FDI in the ASEAN region. In 2021, despite being affected by the COVID-19 epidemic, FDI attraction of Vietnam is estimated at 31.15 billion USD, up 9.2% over the same period in 2020 (GSO). Besides the assessment that FDI is a bright spot in Vietnam's economic picture, there are more and more worries about the absorption of this capital flow. Experts have warned of risks when Vietnam's economy is too dependent on external resources. The contribution of the FDI sector to Vietnam's GDP growth is increasing, from 14.6% in the period 1991-1995 to over 20% after 2010. In particular, the prolonged COVID-19 outbreaks have eroded the strength of many domestic enterprises.

According to statistics from the National Business Registration Portal of Vietnam, in December 2021, 13,945 enterprises were temporarily suspended or dissolved; most of them were established less than 5 years and had small capital scale. (90.1% of suspended and 88.6% of dissolved enterprises were SMEs). FDI enterprises were also affected significantly when up to

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26% of SMEs have to let a certain number of employees quit their jobs to be able to maintain their operations (Khanh Linh, 2021). The question is whether FDI enterprises are crowding out the domestic enterprises, and what can be done to both attract FDI and ensure the operation of SMEs in Vietnam? To answer this, the authors use the data of SMEs in Vietnam to analyze the impact of FDI on this kind of enterprises, thereby proposing some policy implications to improve the efficiency of FDI inflows and avoid causing a crowding-out effect on Vietnam's SMEs.

2. LITERATURE REVIEW

Over the past years, FDI has always been a topic attracting the attention of domestic and foreign researchers, especially its impact on the activities of enterprises in the host country.

FDI can replace or supplement domestic investment. However, the exact impact of FDI on domestic investment depends on several factors. First of all, the competitive nature of the sector in which investments are directed will determine the impact of FDI. If FDI flows into a low-competition, high-tech sector, it will create positive effects through the transfer of knowledge, technology and investment (Agosin & Machado, 2005). In contrast, if FDI flows into a competitive sector, the lower marginal costs of Multinational enterprises will further increase the level of competition, leading to a crowding out effect (Aitken & Harrison, 1999). Secondly, the impact of FDI depends on the spillover of knowledge and technology. Blomström & Kokko (1998) argue that by contacting foreign firms, domestic firms can initially observe and then integrate technologies into local firms, thereby promoting domestic investment. However, Kogut & Zander (1996) argue that sometimes Multinational enterprises try to make use of whatever advantage they have and as such, domestic investment may shrink in reality. Thirdly, labor turnover also affects the impact of FDI on domestic investment. As foreign firms often offer higher wages to employees (Dunning, 1983), the quality and quantity of managers available to domestic firms decreases, making the inflows of domestic investment narrowed. However, if they then work with a local company, these employees can develop valuable insights into the strategies and practices of Multinational enterprises (Meyer, 2004), helping businesses have strong and stable growth, thereby promoting investment of these companies.

Agosin & Machado (2005) assesses the extent to which FDI crowds in or crowds out domestic investment in 36 developing countries in Asia, Africa and Latin America in the period 1971-2000. Applying GMM estimation, the study shows that the impact of FDI on domestic investment in each region is different. Specifically, for the three decades involved (from 1971 to 2000), FDI crowded out domestic investment in Latin America, but contributed to an increase in overall investment in Africa and Asia. As for each decade, the study shows that this crowding out effect only occurred in Latin America in the 1970s and in Africa in the 1990s. In particular, in Latin America, if only 80% of FDI was converted into real investment, the effect of FDI on total investment is said to be neutral.

Pilbeam & Oboleviciute (2012) investigates whether FDI crowds in or crowds out domestic investment in the European Union (EU). The study applies the GMM estimation on the data covering 26 of the 27 EU countries (except Luxembourg) for the period 1990-2008. The results show that FDI has no negative impact on domestic investment in the 12 new EU member states over the long run, but completely crowds out domestic investment in the older EU14 member states in the short run.

The study of Jude (2019) examines the relationship between FDI and domestic investment in 10 Central and Eastern European countries for the period 1995-2015. The author also finds the FDI crowding out effect toward domestic investment in the short run through the GMM estimation.

Besides the objective factor that FDI capital can affect domestic investment, many studies also show that some internal characteristics of enterprises also affect the ability to access capital through the impact on investment activities by SMEs. Bates (1990) emphasizes that the education level of business owners is a major determinant of the amount of money banks lend to SMEs. Zarook et al (2013) also confirmed that management experience and education level, and SME assets have a significant positive impact on SME's access to finance.

In Vietnam, there are also many studies on the role of FDI, especially studies on the impact of this capital on the exit of the industry of domestic enterprises.

Pham et al. (2014) argue that the presence of FDI has created competitive pressure on domestic enterprises. The authors' research has found evidence that in addition to factors such as age of the firm, firm size, import and export status, market concentration, and labor productivity, the appearance of FDI in the same industry significantly and positively increases the posibility of exiting industry of domestic firms.

Pham (2016) study the effect of crowding in and crowding out investment of FDI on Vietnamese enterprises in the period 2001-2010. Applying OLS, Fixed Effects and GMM regression models, the author found a firm-level crowding-out effect due to higher shares in turnover as the level of foreign capital increases as well as an industry-level crowding-in effect as the share of foreign-owned firms in turnover is lower when the industry-level of foreign capital intensity increases. Specifically, the author argues that domestic firms tend to lose market share to their foreign-invested firms when they compete head to head, but they also tend to benefit from higher levels of foreign capital invested in their industry.

Nguyen & Do Quynh (2020) study the crowding out effect of FDI on the exit of domestic enterprises in the Vietnamese textile and garment industry by applying Logistic regression model. The results show that the number of years of operation, enterprise size, labor productivity and import-export status have a negative relationship with the exit rate of Vietnamese textile and garment enterprises. Meanwhile, FDI not only does not increase the exit rate of domestic textile and garment enterprises, but on the contrary also helps to improve the viability of these enterprises.

Similarly, the study of Do (2020) also shows that the presence of FDI does not cause crowding out effect on the exit of food processing enterprises in Vietnam but also helps to reduce the number of firms exitting the industry.

In general, studies on FDI in Vietnam have been conducted in different approaches and yielded inconsistent results. This proves that the impact of FDI on each industry is not the same. However, there have been no studies assessing the impact of FDI on SMEs - an important part that accounts for about 96.7% of the total number of enterprises, employs 51% of the workforce and contributes more than 40% of GDP in Vietnam (Ministry of Planning and Investment, 2020). Therefore, the authors will focus on studying SMEs to provide appropriate policy implications.

3. METHODOLOGY

The related studies mentioned above showed that FDI can positively or negatively affect the operations of the host country's businesses. However, in developing countries like Vietnam, policymakers expect that FDI would positively impact domestic enterprises' operations; hence, the authors hypothesize as follows:

Hypothesis 1: FDI inflows promote investment activities of the SMEs.

Besides that, based on a review of previous studies, the authors also test other factors that may affect the investment activities of SMEs, including:

Bhattacharya & Bloch (2004) argue that large enterprises have the ability to exploit economics of scale and their ability to access capital is also better, so large enterprises will have more resources to invest than small businesses. Thus, hypothesis 3 is:

Hypothesis 2: The size of the enterprise is directly proportional to its investment activities.

Since the enterprise has been operating for a long time, the knowledge and experience will be accumulated more and more, which will promote investment activities of enterprises (Rossi & Cebula, 2015).

Hypothesis 3: The longer the enterprise is in operation, the more likely it is to carry out investment activities.

According to Zarook et al (2013), the higher the education level the enterprise owners have, the more easily they can access bank credit, which will create favorable conditions for investment and expansion activities for production and business of the enterprise.

Hypothesis 4: The higher the education level of managers, the easier it is for SMEs to access investment capital.

The research written by Batubara et al (2021) shows that the application of e-commerce has a positive effect on increasing and stabilizing revenue for enterprises. When enterprise's revenue grows steadily, it tends to invest to expand business activities. In addition, enterprises with stable revenue will have easier access to loans from financial institutions, so they will be more favorable when carrying out their investment activities, so the next hypothesis is:

Hypothesis 5: SMEs that apply e-commerce will tend to carry out investment activities.

Costello & Tuchen (1998) stated that enterprises having websites can publish their product information on the website, making it easier for accessing customers as well as receiving customer feedback to improve product quality, so the revenue of these enterprises tends to grow steadily. Besides, Mushtaq et al (2021) argue that the application of information and communication technology helps to reduce information asymmetry among SMEs. As a result, banks are more likely to grant credit and to finance projects and the working capital of innovative enterprises. The next research hypothesis is as follows:

Hypothesis 6: SMEs having websites tend to carry out investment activities.

Essien et al (2016) argue that public spending has a role in promoting output growth. Keynes (1936) argued that, through fiscally subsidized budget spending and infrastructure investment programs, the government effectively increased aggregate demand, boosting consumption and stimulate investment activities of enterprises. Therefore, the authors propose hypothesis 8 as follows:

Hypothesis 7: Government spending promotes investment by SMEs.

Hypothesis 8: the authors supposed that firms with highly educated managers would help limit the negative impact of FDI on business investment.

$$INV = \beta_1 FDI + \beta_2 \text{SIZE} + \beta_3 AGE + \beta_4 E_{COM} + \beta_5 WEB + \beta_6 EDU + \beta_7 GOV + \beta_8 EDU\_FDI + \varepsilon$$

Table 1. Description of variables in the research model

Variable	Explaination	Expectation sign
Dependent variable		
INV	Investment activities of SME, receive the value "1" if the enterprise has investment activities within 3 years and "0" otherwise.	
Independent variables		
FDI	Natural logarithm of FDI.	+/-
SIZE	Enterprise size, logarithm of enterprise asset size.	+
AGE	Logarithm of years of operation of the enterprise.	+
E_COM	E-commerce, receive the value "1" if the SME has e-commerce activities and "0" in the opposite case.	+
WEB	E-commerce, receive the value "1" if the SME has a website and "0" in the opposite case.	+
EDU	Manager's educational level, value "1" if not graduated from primary school, value "2" if not graduated from lower secondary school, value "3" if not graduated from high school, value "4" if graduated from high school or higher.	+
GOV	Government spending as a percentage of GDP	+
EDU_FDI	The interaction variable of the manager's educational level and the FDI variables.	-

The dependent variable is the binary variable; it takes the value 1 if the business had investment activities and 0 for otherwise; hence we applied Bayesian Logit regression to explore the impact of FDI on the investment of SMEs in Vietnam. Because the studies on the impact of factors on the profitability of SMEs are mainly carried out by the frequency econometric method, we do not have prior information on the distribution of variables in the research model. In this case, Gelman et al. (2008) propose a Cauchy distribution (0; 2.5) for the parameters in the model and Cauchy (0; 10) for the constant in Bayesian Logit model.

4. RESULTS AND DISCUSSIONS

Table 2. Descriptive statistics of variables in the model

Variable	Obs	Mean	Std. Dev.	Min	Max
INV	2,647	0.49	0.50	0	1
FDI	2,647	3.94	0.66	2.68	4.62
SIZE	2,647	14.01	1.78	8.41	20.64
AGE	2,647	2.63	0.65	0.69	7.61
E_COM	2,647	0.09	0.29	0	1
WEB	2,647	0.12	0.33	0	1
EDU	2,647	3.66	0.60	1	4
GOV	2,647	0.16	0.08	0.06	0.31

Source: Authors' calculation

To carry out the study, the authors used data from a survey with the participation of 2,647 SMEs conducted by the Central Institute for Economic Management (CIEM) under the direct authority of the Ministry of Planning and Investment of Vietnam, the Institute of Labour Science and Social Affairs under the Ministry of Labour, Invalids and Social Affairs of Vietnam and the Development Economics Research Group (DEGR) of the University of Copenhagen, Denmark.

Table 2 presents the statistical results of the variables in the model. The number of observations in the model is 2,647 enterprises, with 49% having investment activities in the last 3 years, while only 9% having e-commerce activities and 12% having an official website.

The logarithmic mean (standard deviation) of *SIZE* is 14.01 (0.66), *AGE* is 2.63 (0.65), *FDI* is 3.94 (0.66), *GOV* is 0.16 (0.08), *EDU* is 3.66 (0.60).

Table 3. Regression results

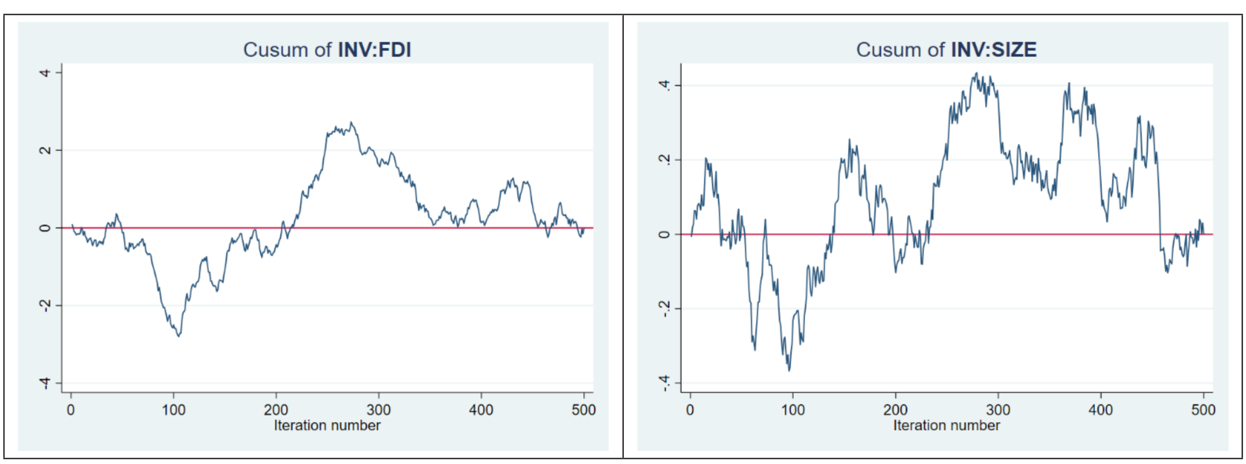
INV	Mean	Std. Dev.	MCSE	Median	Equal-tailed [95% Cred. Interval]	
FDI	-0.596	0.099	0.019	-0.589	-0.795	-0.416
SIZE	0.393	0.031	0.008	0.393	0.330	0.450
AGE	-0.260	0.062	0.004	-0.264	-0.376	-0.143
E_COM	0.549	0.180	0.010	0.547	0.213	0.942
WEB	0.188	0.150	0.007	0.183	-0.086	0.500
EDU	0.315	0.080	0.010	0.312	0.161	0.468
GOV	5.970	0.650	0.218	6.069	4.589	7.111
EDU_FDI	-0.066	0.022	0.001	-0.066	-0.111	-0.024
_cons	-4.338	0.586	0.300	-4.329	-5.411	-3.273
Acceptance rate	0.235					
Efficiency: min	0.110					

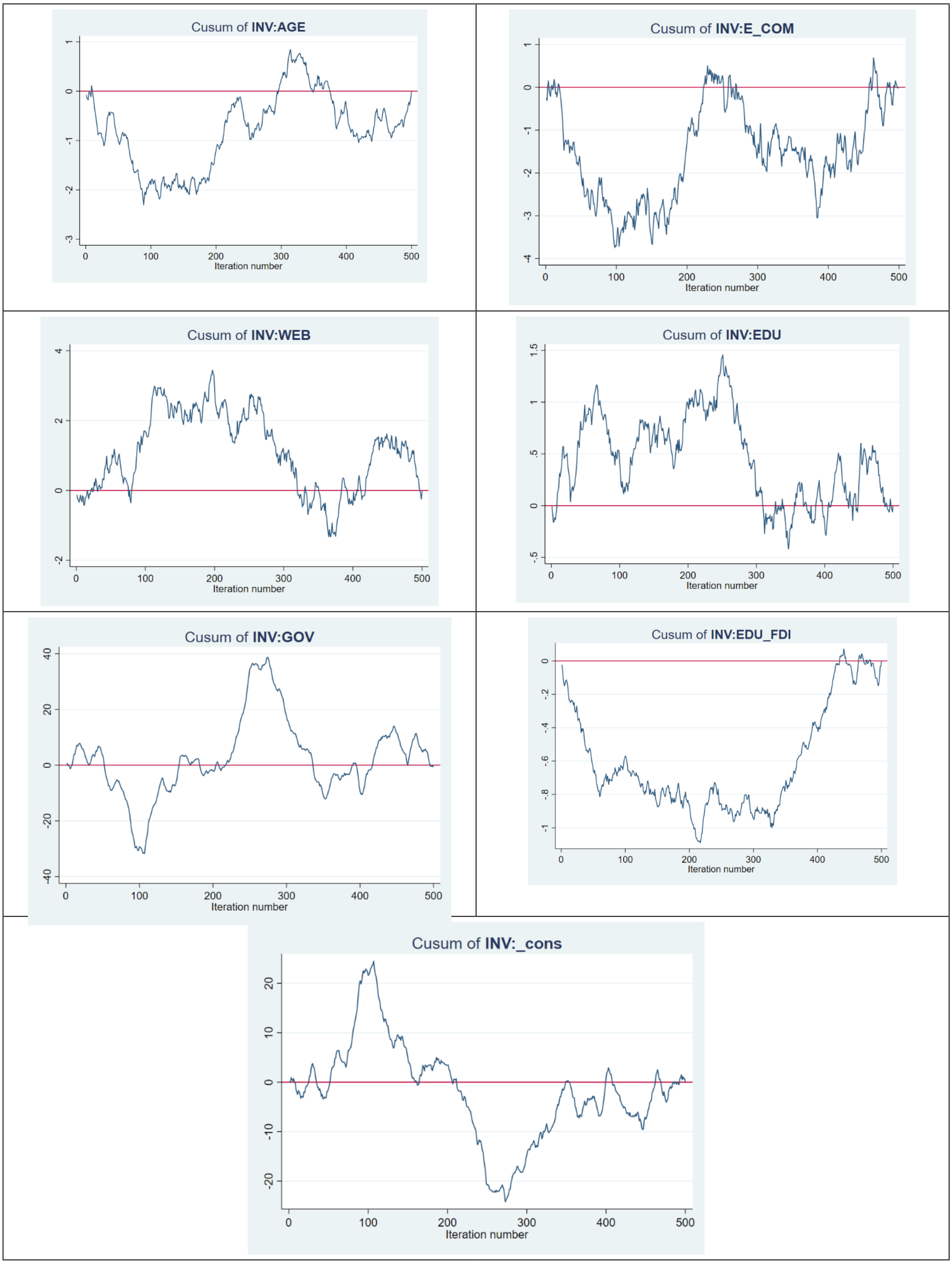
Source: Authors' calculation

According to Roberts & Rosenthal (2001), an acceptance rate of 0.15-0.5 is optimal. Table 3 shows that the average acceptance rate is 0.223, so the regression model has an acceptance rate. To check the convergence of the MCMC series of parameters, we can consider the effective sample size, whereby a sample size greater than 1% is considered satisfactory. The results in Table 3 show that the minimum effective sample size is 0.12, so it can be concluded that the model meets the requirements for convergence.

Besides the effective sample size, another criterion that should be considered when evaluating the convergence of MCMC series is the use of the Cusum charts.

Figure 1. Cusum charts





Source: Authors' calculation

The Cusum charts are used to evaluate the mixing rate of the MCMC series. The slower the sequence mixing is (the MCMC series does not converge), the smoother the cusum curve is. In contrast, the faster the mixing speed of the series is, the rougher the cusum curve is, and the faster the MCMC series will converge. Figure 1 shows the Cusum charts of the parameters that intersect the x-axis many times and have jagged lines, which confirms that the MCMC series of the model meets the convergence conditions.

The results in Table 3 show that FDI inflows have a negative impact on investment of SMEs, while government spending (GOV) has an improved effect on investment activities of this group of enterprises. For intrinsic factors, only the time of operation (AGE) has a negative impact on investment activities of SMEs, the remaining factors include enterprise size (SIZE), e-commerce (E_COM), enterprises with official website (WEB) and the education level of the enterprise owner (EDU) have a positive impact on the investment activities of SMEs. Unlike the frequency method, which only knows the trend of the independent variables' effects on the dependent variable, the Bayesian method allows us to calculate the probability of the occurrence of these events, in other words, we can determine the exact level of the trend of the independent variable's impact on the dependent variable.

Table 4. Posterior probability

	Mean	Std. Dev.	MCSE
prob {INV:FDI} < 0	1.000	0.000	0.000
prob { {INV:SIZE} > 0	1.000	0.000	0.000
prob {INV:AGE} < 0	1.000	0.000	0.000
prob {INV:E_COM} > 0	1.000	0.000	0.000
prob {INV:WEB} > 0	0.900	0.300	0.015
prob {INV:EDU} > 0	1.000	0.000	0.000
prob {INV:GOV} > 0	1.000	0.000	0.000
prob {INV:EDU_FDI} < 0	1.000	0.000	0.000

Source: Authors' calculation

The results in Table 4 show that the negative impact of FDI inflows on SME investment is very clear with the probability of the impact up to 100%. Aitken & Harrison (1999) assert that if FDI flows into highly competitive sectors in the host market, then, with a lower marginal cost advantage, MNEs can create even greater competitive pressures on domestic firms, causing them to narrow their business activities and lead to the crowding out effect. In addition, with the advantage of salary, FDI enterprises can attract high-quality labor sources, making it more difficult for domestic enterprises to find human resources. A shortage of labor force will make domestic businesses less efficient as they are unable to handle large orders (Dunning, 1983). In addition, FDI enterprises with the advantage of assets, the guarantee of the parent company, and the transparency of their records help them improve their competitiveness in accessing domestic credit sources. This leads to a shortage of credit sources for local SMEs, making it difficult for these businesses to find funding sources for their investment activities.

The percentage of government spending over GDP has improved SME investment with a probability of up to 100%, which is consistent with the initial hypothesis. As Keynes (1936) observed, the government can effectively improve investment in the economy by implementing large-scale investment programs to stimulate the market through government orders, purchasing system, thereby stimulating aggregate demand of the economy. In addition, for developing countries with great growth potential like Vietnam, the government can also invest in infrastructure, roads, and industrial parks to create favorable conditions for enterprise activities, thereby promoting investment activities of these enterprises.

Thus, contrary to the initial hypothesis, operating time has a very clear negative impact on investment activities of SMEs. Although enterprises with a long operating time are expected to be able to accumulate experience and capital, thus facilitating investment activities. However, according to Jovanovic (1982), at the beginning of the business cycle, enterprises have a primary objective of achieving the minimum efficient scale that allows them to survive in the markets in which they operate. Achieving efficient scale means that they must achieve a relatively high rate of growth within the first years of operations, and its need for growth should diminish as it approaches or reaches that efficient scale. Farinas & Moreno (1997) also agree with the conclusion of Jovanovic (1982). These authors argue that young firms have a higher growth rate because their most immediate goal is to achieve a certain size of market share to ensure the survival their company. According to these authors, over a certain period of operation, when the customer volume of these enterprises has grown to a certain size, helping them to survive in the market, they will have tended to decrease their growth rate and thus their investment needs also decrease.

The remaining factors including the size of the enterprise's assets (SIZE) and the enterprise with e-commerce activities (E_COM) have a very clear impact on improving investment activities of SMEs with the probabilities are 100%, respectively, which is consistent with the original hypothesis. Besides, the variable of enterprises having official website (WEB) also tends to support the investment activities of SMEs, however, this effect is not clear when the probability of impact is only 90%.

Finally, as expected by the authors, the interaction variable between EDU and FDI has a negative value with a probability of 100%, which implies that a high level of management education would reduce the negative impact positive effects of FDI on investment activities of SMEs.

5. CONCLUSIONS AND POLICY IMPLICATIONS

The study was conducted to analyze the impact of FDI inflows on investment activities of SMEs. The research results show that FDI has a negative impact on investment activities of SMEs, in other words, FDI causes a crowding out effect on investment activities of enterprises. This is explained by the fact that FDI inflows tend to flow into areas with a high degree of competition. With the advantage of operating scale, the marginal cost of FDI enterprises is smaller than that of domestic enterprises operating in the same field, causing competitive pressure on domestic enterprises, especially SMEs when their financial resources, technology and management level are much lower, this can lead to narrowing the market share of SMEs and they cannot conduct investment activities. Besides, the labor force also tends to participate in FDI enterprises instead of domestic enterprises because the salary and other policies of FDI enterprises are better. This has a positive effect of improving the living standards of workers, but for SMEs, they may face many difficulties in recruiting workers and cannot meet large orders because of labor shortage. Banks also tend to favor FDI enterprises because these enterprises have better asset quality and transparency in documents than SMEs. Therefore, the supply of credit to finance investment activities of SMEs is also significantly narrowed. This implies that localities should gradually change their thought, starting from focusing on quality of FDI enterprises rather than quantity. Priority should be given to FDI enterprises investing in key industries with high technology and management levels to create driving force for economic development. For fields where many enterprises have operated, it is necessary to improve criteria such as technology and environmental standards to both improve the quality of FDI inflows and avoid creating a crowding-out effect on operations of local businesses.

For internal factors, the number of years of operation of the enterprises has a negative impact on the investment activities of SMEs; the remaining factors include the size of the enterprise and the enterprise with e-commercial activities have a very clear crowding in effect on the investment activities of this group of businesses, while we do not have enough evidence to conclude the impact of enterprises having official websites on investment activities.

The results also show that the percentage of government spending as a percentage of GDP has improved the investment activities of SMEs. However, boosting public spending can cause a burden on the government budget, so this tool should not be abused. This finding has certain significance in balancing the government budget. The rate of budget regulation should direct to cutting down for localities, state-owned enterprises that use government budget capital inefficiently. It is necessary to radically cut down unnecessary works such as building monuments... to increase the level of budget regulation in key economic regions such as Ho Chi Minh City, Binh Duong, Long An ... especially when these provinces and cities have just experienced a difficult 2021 due to the Covid-19 pandemic. Increasing the rate of budget regulation will help these provinces quickly recover and make remarkable contributions to the economy of Vietnam.

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FOREIGN DIRECT INVESTMENT AND ENVIRONMENTAL POLLUTION IN SELECTED ASIAN DEVELOPING COUNTRIES: THE ROLE OF INSTITUTIONAL QUALITY

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Abstract: The study assesses the impact of foreign direct investment (FDI) and institutional quality on the environment, while also determining the role of institutional quality in the environmental effects of FDI in developing Asian countries. By analyzing panel data from 10 developing Asian economies for the period 1996-2021 using the System Generalized Method of Moments, the research finds evidence confirming the negative impact of FDI on environmental quality in these countries. Additionally, the study also uncovers the indirect impact of institutional quality on environmental pollution through FDI activities. Based on the research findings, the authors propose several policy implications to enhance institutional quality to mitigate the adverse effects of FDI on the environment.

Keywords: FDI, CO2 emission, environmental pollution, institutional quality

JEL codes: F41, E02, G28

1. INTRODUCTION

Sustainable growth is a long-term objective that all countries aim for. To achieve this goal, in addition to economic development policies, nations also need to pay attention to environmental protection. A trend in recent decades is the global warming and climate change issue, which many countries around the world, especially developing countries, are facing (Tang & Tan, 2015; Al-Mulali et al., 2015). One of the main causes of this situation is the increase in CO2 emissions in countries during economic growth and development. Rapid urbanization and the growth of numerous industrial zones without proportional urban planning have led to severe environmental pollution, particularly in regions with many developing countries, including Asia. According to the World Health Organization (WHO), about 90% of deaths related to air pollution occur in low and middle-income countries, with the majority in Asia and Africa. Asia, being the world's largest continent with over 4.6 billion people[2], is considered a major source of abundant cheap labor. Along with high growth prospects, it has become an attractive destination for foreign direct investment (FDI). According to (UNCTAD, 2021), FDI flows into developing countries account for 75% of global FDI, with over 55% going to developing countries in Asia. This region is currently the largest recipient of FDI in the world. Asian countries encourage foreign and private sector investors to play a greater role in their economies to promote foreign direct investment activities, which also contribute to economic growth and comprehensive economic integration through technology spillover effects and the accumulation of physical and human capital. Along with implementing policies to open up, Asian countries have achieved significant achievements, but not without negative environmental impacts. Therefore, alongside the positive effects that FDI brings to the economy, it is also one of the factors contributing to environmental pollution in developing countries. In other words, foreign direct investment is an important factor in economic growth and development, promoting technology transfer in developing Asian countries. However,

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2 According to UNFPA, as of December 26, 2021, the total population of Asia is 4,697,998,233 people.

these countries often have to trade off economic growth, integration, and attracting FDI with energy consumption and environmental degradation. In other words, the economic benefits of FDI come with environmental costs that society has to bear.

In addition to FDI, institutional quality has also been examined recently in terms of its impact on environmental quality. A fair and efficient institutional environment is a prerequisite for promoting economic growth while limiting negative impacts on the environment (Salman et al., 2019). It is acknowledged that countries with more stable political systems, along with existing conditions to attract more FDI, often have negative effects on environmental quality. Therefore, it is essential to improve the quality of regulations and law enforcement, control corruption, and enact strict environmental regulations to improve environmental quality or at least slow down environmental degradation (Salman et al., 2019; Zakaria & Bibi, 2019).

Many empirical studies have demonstrated the impact of FDI and institutional quality on environmental quality, but there is no consensus on the direction of their impact on the environment. Regarding FDI, most studies indicate a negative impact on the environment, as it increases CO2 emissions (Omri et al., 2014; Al-Mulali et al., 2015; Haug & Ucal, 2019; Pazienza, 2019). Conversely, some other studies show a positive impact on the environment, such as the research by Al-mulali (2011); Wang et al. (2019); Shurui et al. (2019); Lin et al. (2022). In terms of institutional quality, most studies suggest that enhancing institutional quality is a solution to improving the environment through effectively controlling corruption issues and increasing the efficiency of law enforcement, especially environmental regulations (M. Khan & Rana, 2021; Obobisa et al., 2022; Salman et al., 2019; Yuan et al., 2021).

However, there are still very few studies that examine the role of institutional quality in the impact of FDI on environmental quality, especially in developing Asian countries. Therefore, this research hopes to contribute to empirical evidence on the specific impact of FDI on environmental quality and assess the role of institutional quality in the impact of FDI on environmental quality in developing Asian countries. The author hopes that the research results will help provide a more accurate assessment of the role of FDI and institutional quality in environmental pollution issues in developing Asian countries in general and Vietnam in particular. Based on this foundation, appropriate policies related to FDI and improvements in institutional quality to mitigate negative impacts on environmental quality in these countries can be proposed.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Theory of the impact of FDI on environment quality

The debate on the role and impact of FDI on environmental quality began in the early 1990s. There are two competing theories explaining the contrasting effects of FDI on environmental quality, namely the Pollution Heaven Hypothesis (PHH) and the Pollution Halo Hypothesis (PHL).

The Pollution Heaven Hypothesis (PHH) posits that FDI has a negative influence on environmental quality in the host countries. Long-term economic growth and development are the goals of every nation. As an inevitable trend to achieve this goal, governments of countries often seek to attract FDI by offering specific incentives and environmental standards that are less stringent. This leads to a significant number of “dirty” production activities relocating from developed economies with strict environmental regulations to developing economies, giving rise to the concept of pollution heaven. Consequently, with the increase in FDI inflows, the level of environmental pollution in these countries becomes progressively worse (Tang & Tan, 2015).

Conversely, the Pollution Halo Hypothesis (PHL) suggests that FDI creates opportunities for businesses to grow while gaining access to clean, modern, and energy-efficient technologies, thereby contributing to the improvement of environmental quality. Many empirical studies have found supporting evidence for this hypothesis, such as the research conducted by (Al-mulali, 2011; Wang et al., 2013; Shurui et al., 2019).

2.2. Literature review

Many experimental studies have shown that FDI is one of the critical factors influencing environmental quality in countries, especially developing ones. The FDI inflows into these countries often follow models that use environmentally unsustainable energy sources, theoretically leading to a "pollution haven" phenomenon and causing environmental degradation, as demonstrated in studies by Hoffmann et al. (2005); Tang & Tan (2015); Baek (2016); Candau & Dienesch (2017); Li et al. (2019); Hanif et al. (2019). Similar results were found in a recent study by Y. Wang & Huang (2022) conducted in East Asian countries. However, FDI only increased short-term CO2 emissions, with no statistically significant long-term impact. On the contrary, some studies have found positive effects of FDI on the environment, supporting the hypothesis of spillover effects, suggesting that FDI helps the host countries adopt and apply advanced technologies in production, thus reducing CO2 emissions and contributing to environmental improvement. Examples of such studies include Al-mulali (2011); Wang et al. (2019); Shurui et al. (2019). Similarly, Lin et al. (2022) found a positive impact of FDI in reducing CO2 emissions in China. Additionally, the research discovered that FDI has negative effects on the environment in provinces and cities directly receiving FDI inflows but positive effects on neighboring provinces and cities. Recently, Adeel-Farooq et al. (2021) investigated the impact of FDI on environmental pollution in East Asian countries, examining differences in the origin of FDI inflows. They found that FDI from developed countries has an environmentally beneficial impact, whereas FDI from developing countries often harms the host country's environment.

Exploring the correlation between institutional quality and environmental pollution has recently been a topic of significant interest. Institutional quality in a country is reflected through various aspects, including the level of corruption control, investment-financial policy, and the effectiveness of policy enforcement and legislation. Many experimental studies have examined the influence of institutions in general and specific institutional aspects on environmental quality. Most research results affirm that a country with good governance often establishes stricter environmental regulations and policies to limit negative environmental impacts (Salman et al., 2019; Zakaria & Bibi, 2019). Furthermore, some other studies investigate the regulatory role of institutions in the relationship between environmental quality and various aspects of the economy. For example, a study by Wang et al. (2018) found that controlling corruption can reduce CO2 emissions and regulate the relationship between trade and CO2 in BRICS countries. More recently, Uzar (2020) also provided evidence of the intermediary role of institutions in addressing environmental issues by promoting the use of renewable energy sources. Therefore, an effective institutional system with rigorous monitoring mechanisms helps reduce environmental costs in economic development, contributing to environmental pollution reduction (Salman et al., 2019).

3. MODEL, DATA, AND RESEARCH METHOD

3.1. Research model and data

The study analyzes the impact of FDI (Foreign Direct Investment) on environmental pollution, considering different institutional quality conditions in various developing Asian countries that attract a significant share of FDI with a high global proportion. To achieve this objective, the authors referred to models from previous experimental studies and used the Generalized Method of Moments (GMM) approach for panel data with the following standard models estimated:

Model (1): Assessing the impact of FDI and institutional quality on environmental pollution.

$$CO2_{it} = \mu_i + \alpha FDI_{it} + \beta INST_{it} + \theta X_{it} + \varepsilon_{it}$$

Model (2): Evaluating the interactive effects of FDI and institutional quality on environmental pollution.

$$CO2_{it} = \mu_i + \alpha FDI_{it} + \beta INST_{it} + \delta (FDI * INST)_{it} + \theta X_{it} + \varepsilon_{it}$$

In which: i and t represent the respective country and time, $\mu\mu$ is a constant, εit is the random error term for country i at time t. The set X includes control variables such as trade openness (TO), energy consumption (EN), and financial development (FD).

Environmental pollution_CO2 is the dependent variable reflecting the level of environmental pollution, measured by average CO2 emissions per capita (tons per person). CO2 emission data are collected from the U.S. Energy Information Administration (EIA) database. While various indicators can measure different aspects of environmental pollution (CO2, SO2, NOX), due to data limitations for 1996-2021 concerning other environmental pollution indicators (such as water and soil pollution), CO2 is chosen as the representative indicator.

Foreign Direct Investment_FDI is an independent variable reflecting each country's foreign direct investment attraction level, measured by FDI inflows as a percentage of GDP for each country. FDI data is collected from the World Bank's World Development Indicators (WDI).

Institutional Quality_IQ is an independent variable reflecting the quality of institutions in the sample countries. According to the Worldwide Governance Index (WGI) dataset, institutional quality and governance indicators reflect various aspects of a country's institutions and governance, such as control of corruption, government effectiveness, voice and accountability, regulatory quality, political stability, and the rule of law. This approach implies that including all the indicators in the model as explanatory variables can enhance the model's explanatory power. However, because these variables reflect different aspects of governance, there may be a potential correlation between them, and multicollinearity may occur in the model. Furthermore, it can lead to over-parameterization, affecting the model's confidence. Consequently, the author used the Principal Component Analysis (PCA) method to determine a composite institutional quality index based on six component governance indices.

Trade Openness_TO is a control variable reflecting economic openness, measured by each country's total value of exports and imports as a percentage of GDP. Trade openness data is collected from the World Bank's World Development Indicators (WDI).

Energy Consumption_EN is a control variable that reflects the level of energy consumption in various industrial sectors, production regions, and overall consumption patterns. As foreign direct investment (FDI) inflows and international trade activities expand, the production processes tend to become more energy-intensive, increasing energy consumption. Data on energy consumption per capita (thousand tons per person) in different countries are collected from the U.S. Energy Information Administration (EIA) database. Energy consumption in industrial sectors and production regions significantly contributes to environmental degradation due to its association with high emissions. Therefore, most experimental studies have consistently demonstrated the negative impact of energy consumption on the environment.

Financial Development_FD measures the scale and efficiency of financial intermediaries and financial markets, playing an essential role in economic development. Many experimental studies have found evidence of its negative impact on environmental quality (Boutabba, 2014; N. H. Khan et al., 2018; Salahuddin et al., 2015; Shahbaz et al., 2013; Tamazian et al., 2009; Zhang, 2011). A developed financial system allows businesses more straightforward access to capital, facilitating expansion and business development, thereby increasing CO2 emissions and negatively affecting the environment. Data on the financial development index are collected from the IMF database.

Additionally, to assess the role of institutional quality in the impact of FDI on environmental quality, the author introduces the interaction variable **FDI*IQ** into the model (2). We collected data on CO2 emissions, trade openness, FDI, and energy consumption for Vietnam and nine developing Asian countries, including Bangladesh, Cambodia, India, Indonesia, Malaysia, Mongolia, Nepal, the Philippines, and Thailand, with annual frequency from 1996 to 2021.

3.2. Research method

Based on previous experimental research, the author chose the System- Generalized Method of Moments (SGMM) for panel data to analyze the role of institutional quality in the impact of FDI on environmental quality in developing Asian countries.

Firstly, the author examined the cross-sectional dependence of variables to select an appropriate testing method considering the data characteristics (Cross-sectional Dependence Test). Using Pesaran's (2021) approach, the test's results indicated the presence of cross-sectional dependence among the variables across countries. Therefore, the author proceeded to test the stationarity of the variables to select an appropriate regression model for a proper investigation of the underlying relationship. To confirm the stationarity of variables, the author performed a second-generation CIPS stationarity test. After confirming that the data series were non-stationary, the author continued to determine whether there was a long-term cointegration relationship among the variables by the Westerlund cointegration test.

Since there was no evidence of a long-term cointegration relationship among the variables, traditional regression methods such as POLS, FEM, and REM could be employed. However, when conducting tests for multicollinearity, the author discovered multicollinearity in the model due to interacting variables, and endogeneity issues were also detected. It led to biased and unreliable estimation results. Hence, the author used the SGMM method developed by Arellano & Bond (1991); and Blundell & Bond (1998) to address these shortcomings.

The advantage of this method over traditional regression methods (POLS, FEM, REM) is that it provides robust and unbiased coefficient estimates, even when endogeneity assumptions are violated, with customarily distributed and efficient estimates. To ensure the reliability of the estimation results, we conducted a two-step SGMM estimation. Simultaneously, the author performed the Hansen J test proposed by Blundell & Bond (1998) to assess overid restrictions and to test the hypothesis of no serial correlation.

4. RESEARCH RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 4.1 presents descriptive statistics of the variables used in the study. According to the table, the average CO2 emissions per capita from 1996-2021 for developing Asian countries is approximately 2.15 tons per year. Among these, the highest average CO2 emissions per capita are observed in Malaysia, followed by Mongolia and Thailand, with average values of 6.15 tons/year, 5.76 tons/year, and 3.56 tons/year, respectively. In contrast, Nepal has the lowest average CO2 emissions per capita (0.144 tons/year).

The average trade openness is 0.8978 in the sample. Malaysia is noted as the country with the highest level of economic openness, followed by Vietnam and Thailand, with trade openness values of 1.4524 and 1.2117, respectively. On the other hand, Bangladesh and India have the lowest trade openness among the countries, with values of 0.3597 and 0.3941, respectively.

The observed average energy consumption is 2.6 thousand tons per person. Malaysia has the highest energy consumption, followed by Mongolia and Thailand, with average energy consumption per capita of 8.05, 5.44, and 4.97 thousand tons per person, respectively. In contrast, Nepal has the lowest energy consumption, with an average of 0.266 thousand tons per person.

The average FDI (Foreign Direct Investment) as a percentage of GDP is 3.84% in the sample. Mongolia has the highest FDI/GDP ratio at 12.29%, followed by Cambodia and Vietnam at 8.71% and 5.25%, respectively. The lowest FDI/GDP ratios are observed in Nepal and Bangladesh, corresponding to 0.278% and 0.747%. FDI is considered a technology driver for economic growth, especially in developing countries. According to the pollution haven hypothesis, an increase in FDI inflows is expected to lead to an increase in CO2 emissions and environmental pollution.

Tab 4.1. Descriptive statistic results

	CO2	FDI	TO	EN	FD	IQ
Mean	2.1499	3.8489	0.8978	2.6022	0.3399	-0.3760
Max	7.6290	43.9121	2.2041	9.8578	0.7408	0.4568
Min	0.0689	0.0057	0.2193	0.1197	0.0286	-1.1418
St.dev	2.1748	5.3650	0.4739	2.5848	-1.1418	0.3955

Source: Author's calculations

4.2. Multicolinearity test

Multicollinearity occurs when two or more independent variables in a regression model are highly correlated, making it difficult to determine the individual effect of each variable on the dependent variable. In such cases, the parameter estimates can become unstable, making it challenging to interpret the results accurately. If the model exhibits multicollinearity, regression results can be biased. Therefore, the author uses the variance inflation factor (VIF) test to assess the multicollinearity of the variables in models (1) and (2).

Tab 4.2. Results of VIF test

Variables	VIF	
	Model (1)	Model (2)
FDI	1.29	2.20
TO	1.92	2.43
EN	4.46	5.10
FD	2.38	2.41

IQ	2.82	3.39
FDI*IQ		3.07
Mean VIF	2.58	3.10

Source: Author's calculations

The results show that the mean VIF (Variance Inflation Factor) values are greater than two and less than 5, indicating that the model has multicollinearity but is not severe. The multicollinearity phenomenon may occur due to the interaction variable FDI*IQ in the model; however, it is not too severe.

4.3. Unit-root test

The author conducted unit root tests to assess the stationarity of variables in the model. The hypothesis test results concerning the cross-sectional dependence in panel data affirm the existence of cross-sectional dependence among variable series. Therefore, the author applied the second-generation CIPS unit root test with the null hypothesis (H_0) set as a non-stationary variable series. The results of the unit root tests are presented in Table 4.3 below.

Tab 4.3. Results of Unit-root test

Variables	Level 0	Level 1	Conclusion
CO2	-0.411	-3.816***	I(1)
FDI	-.2651***	-5.412***	I(0)
TO	-1.430	-4.251***	I(1)
EN	-0.611	-3.644***	I(1)
FD	-1.873***	-5.384***	I(0)
IQ	-1.327	-3.975***	I(1)
FDI*IQ	-2.220***	-4.998***	I(0)

*Note: ***p<0.01, **p<0.05, *p<0.1*

Source: Author's calculations

The findings in Table 4.3 reveal that only the variables FDI, FD, and the interaction variable FDI*IQ are stationary at the original level. However, all other variables (CO2, TO, EN, and IQ) are stationary at the first differenced level. Subsequently, the author proceeds to conduct cointegration tests to determine the presence of long-term relationships among the variable series.

4.4. Cointergation test

Due to the existence of cross-sectional dependence among the variable series, the Westerlund cointegration test was selected. The specific results of the cointegration test are presented in Table 4.4 below.

Tab 4.4. Result of Westerlund test

	Model (1)	Model (2)
Statistic	-1.195	-0.645
p-value	0.116	0.259

Source: Author's calculations

The results of the cointegration tests in both models indicate that the statistical values are greater than 0.1, demonstrating no cointegrating relationship among the variable series in the model. Based on this, suitable estimation methods for these data could be POLS, FEM, or REM. However, since the model exhibits multicollinearity, using these traditional regression methods might result in biased and less reliable estimation outcomes.

As discussed in section 3 on research methodology, the author continues to examine the endogeneity of the model before applying the SGMM regression method.

4.5. Endogeneity test

To identify endogenous variables in the model, the author used the two-stage least squares (2SLS) regression method with the Durbin Wu-Hausman test for each independent variable, with the null hypothesis (H_0) being that the variable is exogenous. The results of the endogeneity tests for the independent variables in the model are presented in Table 4.5 below.

Tab 4.5. Result of Durbin Wu-Hausman test

Variables	Durbin	Wu-Hausman
FDI	$\chi^2_1 = 14.8802$***	F(1,243) = 15.3789***
TO	$\chi^2_1 = 0.9015$	F(1,243) = 0.8794
EN	$\chi^2_1 = 0.7468$	F(1,243) = 0.7505
FD	$\chi^2_1 = 0.0884$	F(1,243) = 0.0860
IQ	$\chi^2_1 = 3.0866$	F(1,243) = 3.0376

*Note: ***p<0.01, **p<0.05, *p<0.1*

Source: Author's calculations

The results in Table 4.5 show that FDI is the only endogenous variable in the model. Endogeneity can lead to biased coefficient estimates using traditional regression methods. Therefore, to address multicollinearity and endogeneity issues, the author employs the System Generalized Method of Moments (SGMM) to identify correlations between variables in the model. The advantage of this method is that it can provide robust, unbiased, normally distributed, and efficient coefficient estimates even when endogeneity issues are present.

4.6. Estimation results

Tab 4.6. Result of SGMM estimation

Variables	Model (1)	Model (2)
FDI	0.0033**	0.0038***
	(0.0016)	(0.0014)
D.TO	0.7695*	0.1997*
	(0.4523)	(0.5809)
D.EN	0.6935***	0.8186***
	(0.1085)	(0.1124)

FD	0.0001	-0.0660
	(0.0316)	(0.0513)
D.IQ	0.2772	0.2721
	(0.2979)	(0.2964)
FDI*IQ		-0.0065*
		(0.0037)
Constant	-0.0131***	0.0118***
	(0.0125)	(0.0164)
Number of observations	240	240
Number of instruments	8	9
Number of groups	10	10
Wald test	640.60***	2824.82***
Diagnostic test for SGMM model		
Arellano-Bond test in first-differences	AR (1): z = -2.06**	AR (1): z = -1.74*
	p-value = 0.039	p-value = 0.082
	AR (2): z = -1.53	AR (2): z = -1.40
	p-value = 0.125	p-value = 0.161
Hansen J test of overid restrictions	$\chi_2^2\chi_2^2 = 3.27$	$\chi_2^2\chi_2^2 = 1.49$
	p-value = 0.195	p-value = 0.475

*Note: Standard deviation in (); ***p<0.01, **p<0.05, *p<0.1*

Source: Author's calculations

AR(1) represents the instrumental variables correlating with the endogenous variable; therefore, the p-value must be less than or equal to 10%. Meanwhile, AR(2) represents the instrumental variables correlating with the residuals, so the p-value must be greater than 10%. Specifically, the results in Table 4.5 show that AR(1) has p-values of 0.039 and 0.082, less than 10%. AR(2) has p-values of 0.125 and 0.161, greater than 10%. It demonstrates that the instrumental variables used in the model are appropriate because they do not correlate with the endogenous variable and the residuals. The Hansen test assesses the validity of instrumental variables for the two-step GMM method, with the null hypothesis (Ho) being that the instrumental variables are valid. The test results yield p-values of 0.195 and 0.475, both more significant than 10%, indicating no basis for rejecting the null hypothesis (Ho). It once again confirms the appropriateness of the instrumental variables.

Additional, the number of instrumental variables is greater than the number of variables in the model and is less than the number of groups. Specifically, for model (1), the number of instrumental variables is 8, which is greater than the number of variables in the model (6 variables, including CO2, FDI, TO, EN, FD, and IQ). For model (2), the number of instrumental variables is 9, which is greater than the number of variables in the model (7 variables including CO2, FDI, TO, EN, FD, IQ, FDI*IQ). It ensures the confidence of the estimation results using the two-step SGMM method.

From the estimation results of the model, it is observed that financial development does not exhibit statistically significant effects on environmental quality. However, all three variables - FDI, TO, and EN - directly impact the increase in CO2 emissions and environmental degradation. It is evident through positive and statistically significant correlation coefficients, although there are differences in the magnitude of the impact of each factor. Specifically, energy consumption (EN) has the most substantial influence on the increase in CO2 emissions, with correlation coefficients of 0.6935 and 0.8186 in the two models, respectively. Next is international trade (TO), with correlation coefficients of 0.769 and 0.1997, followed by FDI, which has the least negative impact. Although the regression coefficient of FDI is not very high, these results confirm the adverse effect of foreign direct investment on environmental quality in developing Asian countries.

In reality, during the initial stages of market liberalization in these countries, FDI inflows concentrated in heavy industries characterized by high emissions. The formation of industrial zones, increased production, and energy consumption led to higher CO2 emissions and environmental pollution. Furthermore, despite being the leading destination for global FDI, these countries often had limited technology and lax legal and environmental regulations, making FDI activities less environmentally efficient. Due to the significant difference between registered FDI and actual FDI invested in the production process in these countries, the increase in CO2 emissions remained relatively low.

Market liberalization promoted international trade and foreign investment activities, increasing the demand for energy use in production and economic development, resulting in increased CO2 emissions that negatively affected the environment. Moreover, developing Asian countries are attractive destinations for exporting products, hazardous waste, and dirty production activities from developed nations.

When considering the individual effects of institutional quality on environmental quality, the study did not find statistically significant effects. However, when examining the interaction effect between FDI and institutional quality, the author discovered a positive impact on the environment at the 10% significance level with a negative coefficient. It suggests that developing countries' institutional quality does not directly impact but indirectly affects the environment through FDI activities. It is a novel finding of the research.

Most ASEAN countries are developing nations with high political risks, corruption issues, and institutional shortcomings. Incomplete legal frameworks and ineffective enforcement of environmental policies, coupled with high levels of corruption, have created conditions for dirty production activities, increasing the risk of environmental pollution. Therefore, improving institutional quality, establishing strict environmental regulations, and enforcing effective monitoring mechanisms are essential measures to mitigate the adverse effects of FDI on the environment.

5. CONCLUSION AND POLICY IMPLICATIONS

The main objective of this study is to assess the impact of foreign direct investment (FDI) on CO2 emissions and simultaneously examine the role of institutional quality in the environmental consequences of FDI in developing Asian countries. These countries have experienced periods of high economic growth, but this growth has come at a significant environmental cost. Using the SGMM method for panel data spanning 10 developing Asian countries from 1996 to 2021, the research supports the pollution haven hypothesis regarding FDI in these countries. Additionally, the study provides evidence that institutional quality indirectly affects the environment through FDI activities.

Developing Asian countries, with their rapidly growing economies, have become attractive destinations for FDI inflows. However, they often have institutional shortcomings, loose legal frameworks, and high levels of corruption, making them recipients of low-quality investments in industries and sectors with high emissions, leading to environmental pollution. The question of "How can we harness the positive effects of FDI while mitigating its negative impacts on the environment?" is a significant policy challenge. To minimize these negative effects and promote sustainable economic growth, Asian developing countries should:

(1) Improve the effectiveness of environmental policy management, monitoring, and enforcement.

(2) Selectively screen international trade activities and FDI projects that meet environmental standards, focusing on investments and products that are environmentally friendly.

(3) Enhance institutional quality, particularly in institutions and policies related to the environment.

(4) Strengthen international cooperation and coordination among countries in the region on climate, air quality, and other environmental pollution issues.

The study was limited to 10 out of 45 Asian developing countries. In future research, the author expects to collect a complete dataset for all 45 Asian developing countries to explore the role of governance quality in the impact of FDI on environmental issues in these countries. Additionally, the author aims to determine the threshold level of governance quality at which the impact of FDI on the environment shifts from negative to positive.

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ANALYSIS OF FACTORS AFFECTING AWARENESS OF GREEN BANKING IN SUSTAINABLE DEVELOPMENT

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Abstract: This article aims to study activities related to green banking and the importance of green banking practices. In addition, the study clarifies current opinions related to green banking activities and examines the level of awareness of green banking among customers in Ho Chi Minh City through a survey using a 5-point Likert scale to assess customers' understanding of green banking. The study used SPSS 26.0 and SMART-PLS 26.0 to analyze data and showed that there are three factors: Awareness of e-banking; Awareness of green investment; and Awareness of energy saving that affect awareness of green banking in Vietnam. The research plays a role in discovering factors affecting green banking activities, thereby contributing to raising customers' awareness of green banking in the sustainable development of banking in Vietnam. In addition, the research serves as a basis for planners to set forth directions to increase awareness and social responsibility of the commercial banking system for environmental protection and combating climate change.

Keywords: green banking, SEM, sustainable development

1. INTRODUCTION

According to Hossain, Rahman, Hossain, and Karim (2020), green banking is a type of banking activity where banks strive to perform their daily operations as conscientious members of society by taking into account internal and external environmental sustainability, and such banks are termed as green banks. Green banking could be an influential strategy that recognizes environmental concerns, social responsibilities, and sustainable ecological balances, attracting customers (Rifat et el. (2016). Nowadays, banks are considered the main cause of world climate change as they can focus more on green banking and urge stakeholders to maintain green concepts in their regular operations (Bukhari et al., 2019). Alsayegh et al. (2020) stated that the idea of sustainable banking requires the use of green banking techniques to take into consideration ethical, social, and environmental concerns. In addition, banking institutions play an important role in financing many industrial projects that may exert profoundly adverse social or environmental impacts. Zheng et al. (2021) pointed out that Green Financing is viewed as an important component of sustainable banking, having a significant influence on the development of an eco-friendly economy and industry in general. Therefore, it can be said that in enhancing the sustainable practices of the financial sector, the banking industry should focus on ensuring the financing of eco-conscious projects through financially efficient banking activities to boost banks' competitive advantage, generate more earnings, improve existing assets, and save invested capital and other costs. Up until recently, green banking seemed to be merely an idea and environmental concerns did not appear particularly relevant to bank operations. This concept has yet to be adopted by developing economies. Mir and Bhat (2022) believed that the number of studies on green banking in developing countries is still limited, leading to an urgent need to unlock this concept holistically. Similarly, Sharma and Choubey (2022) observed a scarcity in the number of studies on the green banking space. The majority of research, if any, focuses on corporate social responsibility and environmental management (Biswas, 2016) and green banking strategies (Kaur and Sandhu,

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2019). In Vietnam, there are not many empirical studies related to the role of green banking in sustainable development and green banking-related awareness. Therefore, this study attempts to fill the research gap concerning this issue.

2. LITERATURE REVIEW ON GREEN BANKING

2.1. Definition of green banking

Green banking has been defined in various ways by researchers, but the overall focus remains complete banking systems that ensure significant economic growth while improving environmentally friendly practices. (Lalon, 2015). Green banking is becoming a global standard for application in today's business activities. Green banking is environmentally friendly in that it prevents environmental degradation and makes the earth more eco-friendly. Green banking is recognized as a type of sustainable banking that contributes to protecting the world from environmental damage to ensure economic prosperity (Islam et al., 2020).

Banks must play a more significant role related to climate change through green banking and banking operations must be efficient (Khatun, Sarker & Mitra, 2021). They defines green banking as environmentally friendly banking as well as a set of practices and responsibilities that help establish an environmentally friendly business. Companies have shown increasing interest in integrity issues due to growing external pressure from various stakeholders, including government banking institutions, socially conscious investors, and advocacy, among others; following this trend, the recent increase in environmental costs has motivated businesses to incorporate environmental issues into all levels of management (Mir & Bhat, 2022). (Islam et el., 2020) believe that Green Banks are those carrying out direct activities to minimize environmental impacts such as economically using energy, water, and waste treatment or exerting indirect impact on the environment through increased support for eco-friendly projects such as waste gas plants, renewable and solar energy plants, or bio-manufacturing plants.

(McEwen et al., 2020) argue that a green bank features the following basic characteristics: "(i) Implement e-services and automation; (ii) Prioritize lending or investing in projects with environmental risk assessment; (iii) Pay attention to social goals, sustainable development goals, and green development; (iv) Demonstrate careful supervision and guidance on customer projects to minimize the risk of environmental pollution; (v) Demonstrate a change in the ability of banking officers and customers to evaluate environmentally friendly activities". (Ransom et al., 2005; Tu & Dung, 2017) claimed that the products and services that a green bank needs to provide to customers may include: (1) Online banking services that help commercial banks cut the amount of paper, energy, and other natural resources during use, through the fact that utility bills such as phone, cable TV, services, and credit cards can all be remotely processed via an Internet connection from a computer or smartphone; (2) Infrastructure such as ATMs or specialized screens placed at banks for green checking accounts which banks encourage customers to use by offering attractive interest rates or waiving (reducing) banking fees; (3) Green loans: including "household support loans, commercial center construction loans, or car loans"; (4) Green cards: such as credit cards and debit cards for banks to "contribute funds to environmental protection organizations through each currency unit spent with the card" (usually 0.5% of the value of each transaction).

Goddy et al. (2020) suggested that the concept of "Green Bank" refers to banks that carry out many activities to encourage environmental and low-carbon practices such as encouraging customers to use green products and services, applying environmental standards when approving loan applications, or granting preferential loans to CO2 reduction and renewable energy projects. (Mir & Bhat, 2022) pointed out that banks are still lagging in implementing green banking services despite many opportunities in green banking, hence the need to take strict measures on implementation alongside customer awareness and training. Banks must educate consumers about the concept of green banking and employ all techniques to help protect the environment while enhancing the bank's reputation. Upon reviewing domestic and foreign empirical studies, it is evident that the majority of banks are increasing their development efforts following the current trend to achieve sustainable development (SD) through the use of green practices.

2.2 Customer's awareness of green banking

Green banking is considered one of the processes to ensure sustainability where the negative impact of business activities on the environment is limited. Banks play an intermediary role in the economy as they directly impact the sustainable development of the economy. Green banking not only ensures the greening of sectors but also helps banks improve asset quality in the future. Green banking enhances a bank's image by demonstrating and implementing its environmental commitment; reducing operating costs due to less use of stationery, energy, and water; increasing employee productivity and efficiency through skilled and optimal use of technology; and reducing hazards by installing environmentally friendly equipment. Green banking considerably saves on forestry costs by minimizing the use of paper; reduces greenhouse gas emissions by organizing remote conferences and arranging transportation for employees; supports the development of customers' environmental awareness by organizing awareness-raising programs; and reduces the level of non-performing assets by investing in less risky projects. Green banking involves technical advancements, operational improvements, and changes in customer behavior in the banking sector. Green banking programs often include energy conservation, recycling, carpooling, and environmentally responsible lending. Due to strict environmental regulations by authorities across countries, industries will have to comply with specific standards to conduct business. Green banking saves money and energy by reducing costs and increasing the country's GDP.

Vidyakala (2020) suggested that green bank (GB) activities (environmental worker training, energy-saving activities, green policies, and overall green initiatives) have had a favorable impact on the environmental performance of banks. Green banking aims to achieve sustainability, growth, and development that is sustainable through an eco-friendly and sustainable banking system (Brundtland, 1987) and sustainability can also be achieved with online banking, e-banking, and adherence to the 3D strategy (de-materialization, de-carbonization, and de-mobilization) in the bank's daily operations. After reviewing the above literature, it can be easily assessed that green banking and sustainability have a positive and significant relationship with sustainable growth and development worldwide. Thus, the previous literature supports the view that despite significant risks, the financial sector has responded perfectly to sustainability as an intermediary function in the economy, leading to the conclusion that green banking should never be overlooked to achieve sustainability.

Customer perception of green banking gradually becomes positive as green banking facilitates digitalization, green and eco-friendly infrastructure, and effective IT support that reduces carbon and radiation emissions. Most interestingly tech-savvy customers feel comfortable participating in green banking initiatives but older customers prefer the inefficient traditional banking system. Aiming at customer satisfaction, the technology acceptance model (TAM) will be an option, which is a combination of the theory of Reasoned Action and the theory of Planned Behavior. Customers are ready to accept new technology but to build awareness, banks have acknowledged various issues to assist them in using green banking easily (Shrivastava et al., 2019).

Subrata et al. (2017) research on customer awareness and perception of green banking in Sylhet state, Bangladesh shows that customers are more aware of banking via text messages (SMS banking). Prakash and Pappu (2017) show that customers are more aware and aware of green banking towards large state-owned banks. Satheesh (2017), Omid et al. (2015) pointed out that customers at small private banks along with bank employees are better aware and aware of green banking than the general public, so state banks need to do more. to help the public access the green banking system. Ganesan and Bhuvaneswari (2016) pointed out that education has a great impact on awareness and perception of green banking.

3. RESEARCH DESIGN AND MODEL

3.1. Research design

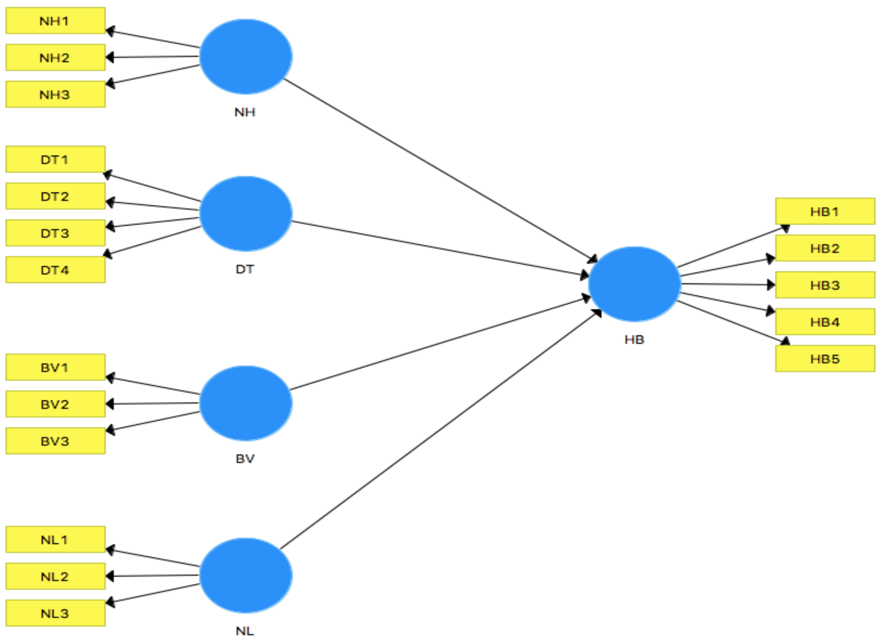
The study created a survey with a total of 18 observed variables for the 5 main concepts of the research model, designed as closed-ended questions with a 5-point Likert scale, from 1 "Strongly disagree" to 5 "Strongly agree". In particular, the number of observed variables for each factor is as follows: (1) Awareness of e-banking (3 observed variables); (2) Awareness of green investment (4 observed variables); (3) Awareness of sustainable banking (3 observed variables); (4) Awareness of energy saving (3 observed variables); and (5) Level of understanding of green banking of customers in Vietnam (5 observed variables). To ensure reliability and objectivity in terms of content and format, questions were extracted and adjusted based on previous studies. The study collected data from customers in Vietnam on their level of understanding of the green banking system. The convenience sampling method was used to randomly send the survey to commercial bank customers living and working in Vietnam. Due to limitations in implementation time, the survey questionnaire was distributed for about one month, and a total of 96 valid responses were collected, consistent with the minimum research sample size needed for the PLS-SEM model.

3.2 Research model

The study inherits from previous studies of Ellahi et al. (2023) and Rai et al. (2019) to build a research model with four main independent variables: (1) Awareness of e-banking; (2) Awareness of green investment; (3) Awareness of sustainable banking; (4) Awareness of energy saving and (5) Level of understanding of green banking of customers in Vietnam.

The study tested the hypothesis and the Structural Equation Modeling (SEM) has advantages over traditional methods because it calculates measurement errors and allows combining and measuring latent concepts with theoretical models at the same time (Hulland et al., 1996). The study employs partial least squares structural equation modeling (PLS-SEM) to overcome the limitations of research data due to time constraints. PLS-SEM can produce analysis results for sample sizes smaller than 200.

Figure 3.1: Research model



With research hypotheses, including:

H1: Awareness of e-banking positively affects the level of understanding of green banking.

H2: Awareness of green investment positively affects the level of understanding of green banking.

H3: Awareness of sustainable banking positively affects the level of understanding of green banking.

H4: Awareness of energy saving positively affects the level of understanding of green banking.

4. Research findings

Table 4.1 Characteristics of the final study sample

Criteria		Quantity	Proportion (%)
Gender	Male	49	51
	Female	47	49
Age	18 – 25 years old	87	90.6
	25 – 35 years old	2	2.1
	Over 35 years old	7	7.3
Average monthly income	Under 5 million	41	42.7
	5 – 10 million	14	14.6
	10 – 15 million	18	18.8
	Over 15 million	23	24
Education level	Undergraduate	79	82.3
	Upper secondary	6	6.3
	Postgraduate	1	1
	Other	10	10.4
Total:		96	100

Source: Author, 2022.

Table 4.2 Scale reliability assessment results

Latent variable (Cronbach's Alpha)	Measurement variable	Outer Loading	Mean	Total Correlation	Variance
Awareness of e-banking (Cronbach's Alpha = 0.826; CR = 0.896; AVE = 0.743)					
NH1	I prefer paperless transactions with commercial banks.	0.819	4.18	0.619	0.8
NH2	I prefer using e-banking over traditional banking services.	0.884	3.8	0.68	1.024
NH3	I prefer digital receipts after making transactions to paper receipts issued from an ATM.	0.88	3.77	0.708	1.168
Awareness of green investment (Cronbach's Alpha = 0.759; CR = 0.855; AVE = 0.619)					
DT1	I think online banking services are less harmful to the environment.	0.861	3.8	0.656	1.424
DT2	I have heard of or used green facilities (green loans, green mortgages, green investments) provided by commercial banks.	0.867	3.91	0.64	1.075
DT3	I think reducing paper waste through e-statements and digital receipts needs to be implemented in commercial banks nowadays.	0.927	3.81	0.789	1.017
DT4	I like debit and credit cards that are made from eco-friendly recycled materials.	0.349	3.74	0.358	1.353
Awareness of sustainable banking (Cronbach's Alpha = 0.542; CR = 0.757; AVE = 0.512)					
BV1	I want to pay the bank I am using to follow sustainable banking practices.	0.621	3.97	0.384	0.725
BV2	I have seen the bank I am using advertising or promoting green banking activities.	0.811	3.71	0.608	1.114
BV3	I will switch to another bank if the bank I am using does not develop a green banking model.	0.693	3.99	0.611	0.831
Awareness of energy saving (Cronbach's Alpha = 0.671; CR = 0.816; AVE = 0.597)					
NL1	The bank products and services I am using are eco-friendly.	0.715	3.98	0.58	0.652
NL2	The bank products and services I am using are environmentally sustainable.	0.782	3.99	0.544	0.663
NL3	The bank products and services I am using are environmentally friendly.	0.818	3.72	0.603	0.878
Level of understanding of green banking (Cronbach's Alpha = 0.796; CR = 0.859; AVE = 0.552)					
HB1	I am an environmentally conscious person.	0.820	3.69	0.708	0.891
HB2	I have a certain awareness of the concept of green products.	0.744	3.54	0.552	1.051
HB3	I have a certain knowledge of the green banking model.	0.735	4.2	0.676	0.687
HB4	The bank I am using provides green banking-related services and products.	0.636	3.99	0.522	0.642
HB5	I know the green banking model is currently being implemented in the bank I am using.	0.768	3.93	0.659	0.721

Source: compiled by author.

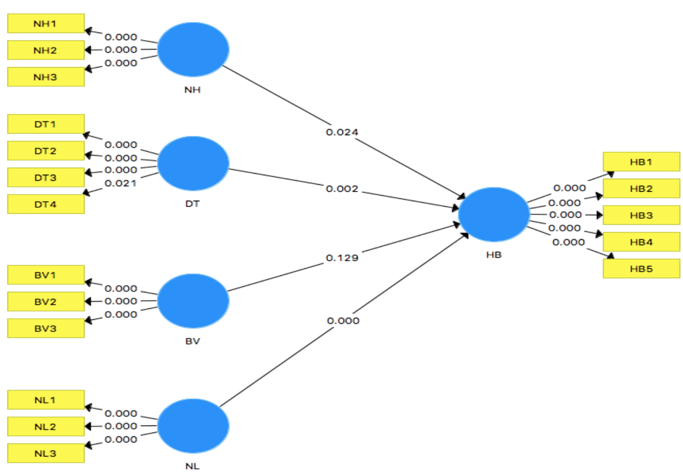
Table 4.3 Evaluation of relationships

Correlation	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Conclusion
Awareness of sustainable banking -> Level of understanding of green banking	0.127	0.123	0.084	1.518	0.129	Reject
Awareness of green investment -> Level of understanding of green banking	0.249	0.257	0.08	3.131	0.002	Accept
Awareness of e-banking -> Level of understanding of green banking	0.187	0.188	0.083	2.261	0.024	Accept
Awareness of energy saving -> Level of understanding of green banking	0.441	0.441	0.087	5.092	0.000	Accept

Source: compiled by author.

The results in Table 4.3 show that the impact of variable BV (Awareness of sustainable banking) on variable HB (Level of understanding of green banking) has a value P that does not satisfy the required conditions. (P=0.129>0.5). On the contrary, all the correlations between the remaining three variables and the dependent variable HB (Level of understanding of green banking) all have a coefficient P that satisfies the required condition (P less than or equal to 0.05), specifically with values of 0.002 of DT (Awareness of green investment); 0.024 of NH (Awareness of e-banking); and 0.000 of NL (Awareness of energy saving) respectively.

Figure 4.2 Evaluation of relationships



The results of this study show that there is a rejected research hypothesis, H3, which means that awareness of sustainable banking is not convincingly proven to exert an impact on the level of understanding of green banking in Vietnam. This result is completely different from previously referenced research by Ha Nam Khanh Giao et al(2020); Ellahi et al. (2021); and Raj et al. (2019). This difference may result from the fact that the term Sustainable Banking is still relatively new to customers in the Vietnamese market. The factor found to have the strongest impact is "Awareness of energy saving", showing similar results to the research of Raj et al. (2019) and Ellahi et al. (2021). Two factors found to have an average effect positively impacting the level of green banking knowledge of customers in Vietnam are awareness of e-banking and awareness of green investment, with coefficients f square of 0.059 and 0.095, respectively. This result is similar to the research articles of Ellahi et al., 2021 and Raj et al., 2019. The specific level of impact of each study varies due to differences in subjects, sample size, or survey scope of the studies. However, the biggest similarity is that these two factors always exert a moderate level of impact. This result has proven that the majority of customers, not only in the Vietnamese market but also in other markets around the world, are subject to the moderate impact of these factors on their level of understanding of green banking.

5 CONCLUSIONS AND POLICY IMPLICATIONS

These can be summarized in the following points:

First, to date, there is no widely accepted framework for green or sustainable banking. However, green banking is at different stages of development across countries. As for Vietnam, green banking activities are at a developing stage and green processes have a significant impact on sustainable banking development and the environment.

Second, this research provides useful insights to the banking industry in identifying factors that affect customer awareness of green banking activities. Awareness of energy saving is the factor with the greatest impact on awareness of green banking among customers in Vietnam; therefore, the study recommends that commercial banks can improve Vietnamese customers' awareness of green banking by first raising their awareness of energy saving. This research has noted areas where banks can focus to develop customer awareness related to a greener, more sustainable economy. Advanced technology and electronic applications that can save energy need paying more attention than before. In addition, bank managers also need to be extra mindful of energy saving in the course of business and product development to offer products that promote environmental friendliness to consumers, thereby increasing customer awareness of using green products. To achieve that, bank managers need to build long-term business strategies related to recycling and energy saving.

Third, the research supports the banking industry in identifying areas that require development so that it can focus on improving social satisfaction and stakeholder satisfaction in its areas of operation.

The study still has the following limitations: Firstly, there is a lack of diversity in the characteristics of the sample, with the age group from 18 - 25 years old accounting for more than 90% due to the convenience sampling method employed. Future studies can use other sampling methods to collect more diverse research samples. Second, the scope of the research was limited to Ho Chi Minh City, Vietnam, hence the modest results found.

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THE MEDIATING ROLE OF COGNITION, EMOTION AND TRUST IN CONSUMERS' INTENTION TO ADOPT "BUY NOW PAY LATER": A SOR FRAMEWORK ANALYSIS

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Abstract: This study employs the Stimulus-Organism-Response theory in consumer behavior research to investigate the decision-making process of consumers regarding Buy Now, Pay Later (BNPL) services. Data from 348 university student questionnaires were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings highlight the significantly mediating roles of emotion and cognition in shaping trust during the pre-purchase process, ultimately influencing consumers' intentions to adopt BNPL services.

Key words: Buy now pay later, SOR, Trust, Intention

JEL codes: G41, M31

1. INTRODUCTION

Buy Now Pay Later (BNPL) is a modern financial service that allows consumers to make purchases and manage their payments through convenient installments or by deferring payments over a specified period. This is an alternative and innovative installment method that distinguishes itself from traditional bank-provided installments by offering a "zero interest" feature. This implies that consumers are not required to pay interest if they settle their debt punctually. However, failing to do so may result in the imposition of significant surcharges and late payment fees (Raj et al., 2023; Relja et al., 2023).

The development of BNPL in Viet Nam is closely intertwined with the growth of fintech starups, which introduce a novel payment method primarily targeting low-income individuals and Gen Z (Behera & Dadra, 2023; Lia & Natswa, 2021; Lupșa-Tătaru et al., 2023) who may encounter difficulties accessing traditional credit systems. Subsequently, e-commerce platforms such as Lazada, Shopee, and Tiki, along with mobile payment providers like Zalo and MoMo, have actively collaborated with banks to enter this burgeoning market (VnExpress, 2021). Results from both MasterCard and Research & Market indicate that BNPL has a significant growth potential in Vietnam, given that only 32% of respondents currently utilize installment payment methods. The primary reasons for selecting this payment method include the attraction of low or zero interest rates, the ability to save money, avoid waiting, and the added convenience of making purchases at any time (Người Lao Động, 2023; Tuổi Trẻ, 2022).

BNPL services boast a low consumer adoption barrier and are currently governed by different regulations compared to traditional short-term credit systems. Despite garnering substantial media attention and achieving rapid market penetration (Người Lao Động, 2023), BNPL remains relatively new in the financial landscape. Consequently, it is imperative to cultivate an improved understanding of how consumers engage with BNPL.

Contemporary research primarily centers on individuals' personal financial management. From this standpoint, it is posited that Buy Now, Pay Later (BNPL) services may intensify materialistic tendencies, as indicated by studies conducted by Matos et al., (2019) and Raj et al. (2023). This

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heightened materialism can have ramifications for consumers' financial well-being (Powell et al., 2023; Schomburgk & Hoffmann, 2022), potentially placing consumers at risk of accumulating debt (Center, 2022; Cook et al., 2023; Lusardi & Tufano, 2015).

Furthermore, effective utilization of BNPL credit is contingent on consumers' attitudes toward debt (Almenberg et al., 2021; Białowolski et al., 2020). Additionally, achieving proficiency in financial literacy (Tahir et al., 2020), and gaining financial experience (Lusardi & Tufano, 2015) are essential prerequisites.

Another line of research suggests that BNPL services, due to their low consumer adoption barriers, have the potential to magnify materialistic tendencies (Matos et al., 2019; Raj et al., 2023; Tan, 2022). This amplified materialism can particularly impact consumers who lack access to traditional credit systems, leading to impulsive purchases (Azmi et al., 2022; Tan, 2022), and a propensity for overconsumption (Azmi et al., 2022).

The existing research gaps lie in the insufficient attention given to understanding how consumers are emotionally impacted by the increasing popularity of BNPL services in the market. Additionally, there is a dearth of research exploring consumers' trust in this emerging payment method as a crucial factor influencing their willingness to adopt it. Incorporating the examination of emotional and trust-related factors in their decision-making process can profoundly enhance understanding of consumer behavior during their pre-purchase stages.

2. LITERATURE REVIEW

2.1. Theoretical Framework

The SOR theory, as proposed by Mehrabian and Russell (1974), can be effectively employed to forecast consumer behavior across diverse contexts, encompassing online shopping, impulsive purchases, customer experiences, and sustainable consumption. (Han et al., 2022; Hewei & Youngsook, 2022; Kumar et al., 2023; Tandon et al., 2023). The model posits that, during consumers' pre-purchase processing, environmental factors have an impact on their perception and emotions, subsequently influencing their behavioral outcomes. The stimuli arising from marketing activities or the purchasing situation serve as triggering factors that raise consumers' awareness (Lupșa-Tătaru et al., 2023; Raj et al., 2023). The organism represents an individual's internal state, comprising both affective and cognitive aspects of their mind, which is influenced by external stimuli (Matos et al., 2019; Tandon et al., 2023). The final stage involves consumers' responses (behaviors) to these stimuli, which are mediated by their perception (Coffey et al., 2023; Schomburgk & Hoffmann, 2022).

2.1.1. Stimuli - Organism

Brand popularity can trigger a bandwagon effect (Ergün, 2021; Lin & Spence, 2019) and also create consumer anticipation for consumption outcomes as expected by service providers (Vichiengior et al., 2019). More over, as consumers become more familiar with a product, they tend to develop positive attitudes towards it (Ha & Perks, 2005; Legendre et al., 2019; Wang et al., 2018) and reduce their emotional perception of associated risks (Huang et al., 2004).

Consumers' attitudes are indeed influenced by external sources. Recommendations or feedback from others can evoke positive emotions in consumers (Zablocki et al., 2019). Consumers may experience a sense of connectedness and a desire to emulate their influencers (Ki & Kim, 2019), potentially feeling a need to belong to the group they are associated with (Alabri, 2022). These emotional responses, in turn, have a positive relationship with consumers' purchase intentions (Ashraf et al., 2023; Aydin et al., 2021; I. Kang et al., 2019; Tran et al., 2019).

When consumers buy products on credit, there is a risk that the credit may transform into debt if they cannot adhere to the repayment schedule (Center, 2022; Evans & Gregson, 2023). This situation necessitates financial responsibility on the part of the consumers (Aalders, 2023; Schomburgk & Hoffmann, 2022), particularly those who exclusively rely on BNPL for credit access (Bian et al., 2023). In the case of BNPL, the presence of low or zero interest rates may enhance consumers' perception of benefits precede costs (Siemens, 2007), thereby significantly stimulating consumption (Bian et al., 2023). Hence, it is suggested that the cost transparency of BNPL could have a positive impact on consumers' cognition.

Since BNPL primarily targets consumers who may have limited access to traditional credit systems, it offers a faster and more accessible financial arrangement. Therefore, it is suggested that the convenience of BNPL positively contributes to consumers' perception of their ability to make purchases that may have been otherwise unattainable solely based on their salary (Evans & Gregson, 2023).

2.1.2. Organism - Response

Research results indicate that marketing stimuli have a positive impact on both consumers' emotions and cognition. These psychological states significantly influences consumer decision-making, In the tourism industry, marketing activities that directly target customers through advertising, as well as indirect approaches using influencers, have been shown to generate positively influenced consumer emotion and leading to their purchase behavior. (Le et al., 2020). In various other domains such as livestreaming, advertising, and online shopping, research findings consistently suggest that both cognition and emotion play crucial roles in influencing consumer decision-making (Gao et al., 2022; J.-A. Kang et al., 2020; Zablocki et al., 2019).

Trust indeed acts as a mechanism for simplifying complexity, enabling consumers to navigate complex purchase situations effectively. In simpler terms, when consumers trust a brand, they are more inclined to view it positively and be more receptive to it (Siegrist, 2021). Indeed, marketing stimuli that incorporate relevant and valuable content can foster trust among consumers towards a brand, rather than solely aiming to persuade them to make a purchase (Hollebeek & Macky, 2019). Additionally, research has shown that trust mediates consumers' intentions to use mobile payments (Park et al., 2019), perception of expericence performance in voice shopping (Bawack et al., 2021). Therefore, it is suggested that consumers' trust can function as mediatior between cognition, emotion and their decision outcome.

2.2. Method

This study utilize quantitative data collected method using a structured questionnaire to collect data from consumers. This approach is also know as survey research, which is considered as suitable method for collecting information from a large sample (Hair et al., 2020).

The study's sample comprised university students, a demographic representing potential BNPL consumers due to their limited income and restricted access to traditional credit systems. A digital questionnaire was created using Google Form. This service from Google was chosen as it was low cost and function rich. It has built-in logic that suitable for this study such as skip patterns and screener questions, as well as has wide range of templates for different kinds of question and scale formats. Another reason for using digital survey is the penetration of internet is over 70% of Vietnamese population (VietnamPlus, 2022). The items are measured on an interval scale using a five-point Likert scale. Interviewees were asked to choose their degree of agreement with the statements, ranging from strongly disagree to strongly agree. The survey was conducted in August 2022 and collected a total of 362 responses. Of these, 14 were excluded from the analysis due to inconsistent or incomplete answers, leaving a final dataset of 348 questionnaires for data analysis.

For data analysis, this study employ PLS-SEM (Partial Least Squares Structural Equation Modeling). This choice is made because the research aims to identify the key constructs that affect the intention to use BNPL. PLS-SEM is a suitable method for understanding and modeling complex relationships among constructs in such cases. The conceptual model has constructs with several path relationships; there is also an advanced element in the proposed model such as moderator variables which make it complicated. Furthermore, as there are potential nonnormality of multivariate data in social science research (Cain et al., 2017) make it ideal for using PLS-SEM in this study. The outer measurement model and the inner measurement model are assessed to examine the PLS-SEM results as recommended by Hair et al. (2020).

3. RESULTS AND DISCUSSION

3.1. Research results

3.1.1. Testing the measurement model

Factor loading is a critical step in the structural model, with a requirement for values to be greater than 0.7 to be considered acceptable. In this study, Popularity exhibits factor loadings ranging from 0.717 to 0.851, all above the acceptable threshold, with 4 items included in the model. Influencer factor loadings range from 0.773 to 0.819, meeting the criterion, with 3 items selected for the model structure. Convenience factor loadings fall between 0.804 and 0.826, with all 4 items included. Cost Transparency has factor loadings between 0.761 and 0.842, and 4 items are integrated into the model. Trust's factor loading varies from 0.742 to 0.787, meeting the threshold, with 3 items included. Finally, Intention exhibits strong factor loadings, ranging from 0.888 to 0.91, well above the acceptable limit.

The study ensures validity through Cronbach's alpha, where values ranging from 0.7 to 0.9 are considered acceptable. The results in Table 1 display the Factor Loading, Outer Weights, and Cronbach's alpha test, all contributing to the overall model's fitness and reliability.

Table 1: Factor loading, Outer weights and Cronbrach's alpha test

Key variable	Item	Item loading	Outer weight	Cronbach's Alpha
Convenience	C1	0.826	0.321	0.835
	C2	0.804	0.297	
	C3	0.817	0.307	
	C4	0.824	0.297	
Cost Transparency	CT1	0.761	0.286	0.823
	CT2	0.817	0.312	
	CT3	0.811	0.313	
	CT4	0.842	0.325	
Influencer	I1	0.813	0.436	0.723

	I2	0.819	0.406	
	I3	0.773	0.404	
Intention	IT1	0.91	0.383	0.883
	IT2	0.888	0.366	
	IT3	0.903	0.362	
Popularity	P1	0.827	0.31	0.817
	P2	0.717	0.274	
	P3	0.851	0.348	
	P4	0.815	0.308	
Trust	T1	0.787	0.36	0.718
	T2	0.742	0.364	
	T3	0.86	0.519	

Reliability tests are conducted to evaluate the internal consistency of measurement items within each construct. Composite reliability (CR) is also recommended for testing the reliability of a construct, and its value should ideally be above 0.70 (Hair et al., 2020). Table 2 shows that all the constructs are reliable, as they exhibit CR values higher than 0.70.

To evaluate convergent validity, the Average Variance Extracted (AVE) metric is used, which quantifies the average shared variance between the construct and its constituent items. To meet the criteria for convergent validity, the AVE should be at least 0.5, and the factor loadings should ideally be at least 0.7 (Hair et al., 2020). All the constructs, showed in Table 1, have AVE values higher than requirements, meaning the collected data do not have any convergent validity problem.

Table 2: Reliability and AVE test

Key variable	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Convenience	**0.836**	**0.89**	**0.669**
Cost Transparency	0.825	0.883	0.653
Influencer	0.724	0.844	0.643
Intention	0.886	0.928	0.81
Popularity	0.824	0.879	0.647
Trust	0.747	0.84	0.637

The hetero-trait-monotrait ratio (HTMT) of correlations is commonly analyzed to evaluate discriminant validity (Sarstedt et al., 2017). A high HTMT value may indicate issues with discriminant validity. In cases where the path model contains constructs that are conceptually highly similar, a threshold of HTMT at 0.9 is typically used. However, when the constructs within the path model exhibit greater conceptual distinction, a threshold of 0.85 could be considered (Henseler et al., 2015). All HTMT values from Table 3 are below 0.85, hence the measurement model was validated.

Table 3: Hetrotrait-Monotrait ratio (HTMT)

	Convenience	Cost Transparency	Influencer	Intention	Popularity	Trust
Convenience						
Cost Transparency	0.397					
Influencer	0.367	0.418				

Intention	0.693	0.65	0.774		
Popularity	0.396	0.082	0.202	0.364	
Trust	0.475	0.463	0.58	0.567	0.205

3.1.2. Assessment of structural model

Potential collinearity issues among the constructs must be examined. Threshold for multicollinearity was determined by the variance inflation factors (VIF) values ranging from 0.2 to 5.0 as proposed by Hair et al. (2019). All variables has VIF value ranging from 1.021 to 1.168, showing no collinearity problem.

Table 4: Standard coefficients and significance value

Path	Path coefficient	p-values	Decision
Influencer -> Emotion	0.5	0	Supported
Popularity -> Emotion	0.79	0	Supported
Convenience -> Cognition	0.628	0	Supported
Cost Transparency -> Cognition	0.597	0	Supported
Emotion -> Trust	0.214	0.001	Supported
Cognition -> Trust	0.362	0	Supported
Trust -> Intention	0.429	0	Supported

To evaluate the strength and significance of the hypotheses, a 5,000 bootstrapping subsamples with no sign change option are carried out. As guided by Hair et al. (2019), path coefficients are reported based on the t-values, ranging from -1 to +1, which show the direction and strength of relationship between constructs. The significance of hypotheses is determined if p-value is equal or smaller than 0.05. The results in Table 4 illustrate that all the relationships were supported ($p < .05$).

3.1.3 Direct and indirect effects

To examine the mediating roles of Emotion, Cognition, and Trust between stimuli and Intention to use BNPL, the Sobel test (Sobel, 1982) and bootstrapping method are recommended, as advocated by Preacher & Hayes (2008), to statistically assess the significance of these mediation effects.

The results of direct and indirect effects, as presented in Table 5, demonstrate that all the paths are statistically significant ($p < .05$). These findings confirm that Emotion and Cognition partially mediate the relationship between stimuli and Trust. Furthermore, Trust also partially mediates the relationships between Emotion, Cognition, and Intention to use BNPL.

Table 5: Direct and indirect effect analysis and p-value

	Original sample	t-statistics	p-values
Direct effect			
Influencer -> Emotion	0.64	10.047	0
Popularity -> Emotion	0.673	11.9	0
Cost Transparency -> Cognition	0.591	21.206	0
Convenience -> Cognition	0.634	22.016	0
Emotion -> Trust	0.263	4.641	0
Cognition -> Trust	0.336	5.778	0
Emotion -> Intention	0.359	10.373	0
Cognition -> Intention	0.519	15.661	0

Trust -> Intention	0.097	2.53	0.011
Indirect effects			
Influencer -> Emotion -> Intention	0.23	6.152	0
Popularity -> Emotion -> Intention	0.242	9.829	0
Convenience -> Cognition -> Intention	0.329	13.385	0
Cost Transparency -> Cognition -> Intention	0.307	13.939	0
Influencer -> Emotion -> Trust -> Intention	0.016	2.01	0.045
Popularity -> Emotion -> Trust -> Intention	0.017	2.225	0.026
Convenience -> Cognition -> Trust -> Intention	0.021	2.286	0.022
Cost Transparency -> Cognition -> Trust -> Intention	0.019	2.257	0.024
Influencer -> Emotion -> Trust	0.168	3.659	0
Popularity -> Emotion -> Trust	0.177	5.158	0
Convenience -> Cognition -> Trust	0.213	5.745	0
Cost Transparency -> Cognition -> Trust	0.199	5.673	0
Emotion -> Trust -> Intention	0.025	2.161	0.031
Cognition -> Trust -> Intention	0.033	2.277	0.023

Figure 1 illustrates the finalized structural model depicting the relationships between the studied constructs, which encompass marketing stimuli and consumers' intention. This model also includes the critical mediating variables of emotion, cognition, and trust.

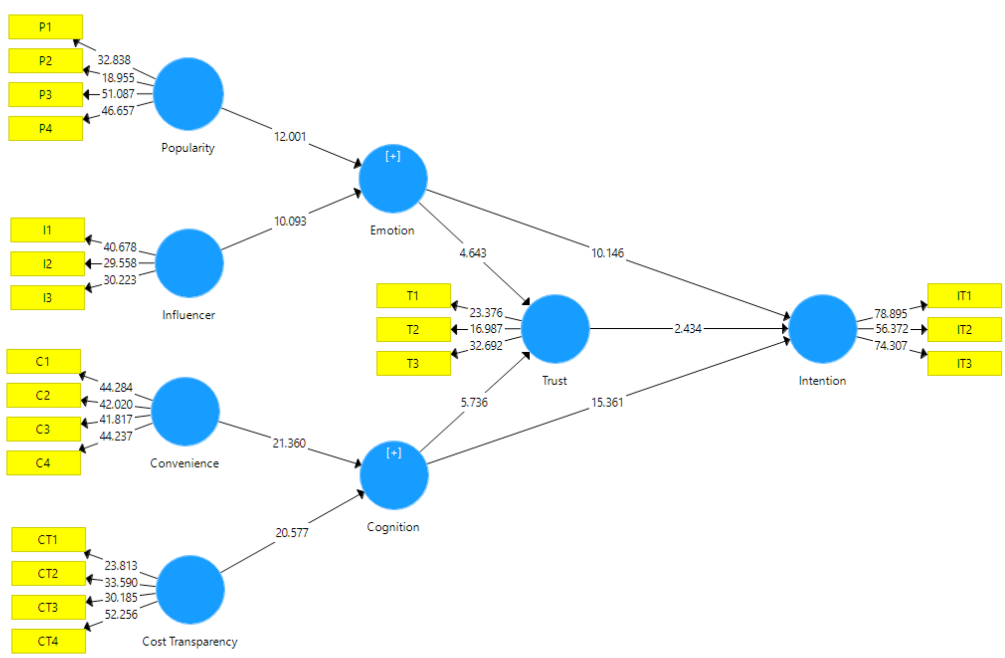

Figure 1: Structural model

3.2. Discussion

Applying the SOR theory in consumer behavior research can contribute valuable insights into how consumers process information to make informed decisions.

The paths from Influencer and Popularity to Emotion and subsequently to Intention both exhibit significant positive relationships. These findings underscore the substantial impact of influencers and the overall popularity of BNPL services on evoking positive emotions among consumers, ultimately influencing their intention to use these services.

Convenience and Cost Transparency significantly affect Cognition, which, in turn, affects Intention. These paths demonstrate strong positive relationships, indicating that the ease of use and the perceived financial benefits associated with BNPL have a substantial influence on consumers' cognitive processes and their intention to adopt this payment method.

Both Influencer and Popularity indirectly influence Intention through Emotion and Trust. These findings highlight the importance of influencers and the overall popularity of BNPL services in not only affecting consumers' emotions but also building trust, which subsequently influences their intention to use BNPL.

Influencer endorsements, Popularity, Convenience, and Cost Transparency are all factors that influence Trust and, consequently, Intention. Emotion and Cognition act as mediators in this process, with positive emotional and cognitive responses leading to higher trust and, in turn, more positive intentions to use BNPL services. Hence, Trust can play a direct role in shaping consumers intention to use BNPL services as well as mediates the relationship between emotion/cognition and intention.

The results also reveal that cognition has a stronger effect on intention than emotion, suggesting that consumers are more influenced by rational factors than emotional factors when deciding to use BNPL.

4. CONCLUSION AND IMPLICATIONS

The study aimed to explore the intricate relationships between various factors - popularity, influencer impact, cost transparency, convenience, and consumers' intention to use Buy Now, Pay Later (BNPL) services, using SOR framework. All relationships were supported, signifying the roles of cognition, emotion, and trust in consumers' decisions during their pre-purchase process. This study highlights the significance of factors such as cognitive and affective state, in turn, affect trust and consequently influence consumers' intentions.

The research provides valuable insights for BNPL providers and marketers. To foster trust among consumers, it's crucial to give equal attention to both cognitive and affective aspects. However, when it comes to acquiring new customers, a more concentrated effort should be directed toward addressing consumers' cognitive considerations.

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THE EFFECTS OF INTELLECTUAL CAPITAL ON CORPORATE SUSTAINABLE GROWTH: EVIDENCE FROM VIETNAMESE FOOD AND BEVERAGE FIRMS

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Abstract: The study examines the impact of intellectual capital on the sustainable growth of food and beverage companies in Vietnam. Research data includes food and beverage enterprises listed on the Ho Chi Minh City Stock Exchange and the Hanoi Stock Exchange for the period of 2018 - 2022. The regression analysis results show that intellectual capital has a significantly positive effect on the sustainable growth of businesses in the industry. For intellectual capital's components, while capital employed efficiency has no statistically significant relationship, both human capital efficiency and structural capital efficiency have a significant positive relationship on corporate sustainable growth. From the research results, we make some recommendations for business managers.

Keywords: intellectual capital, corporate sustainable growth, food and beverage firms

1. INTRODUCTION

With the shift of the business environment from the traditional economy to the knowledge economy, the intangible assets' value is gradually surpassing the tangible assets' value, leading to problems related to intellectual capital (IC) plays an increasingly important role in improving the enterprises' competitiveness. The development of the knowledge economy puts greater pressure on enterprises to effectively use soft resources such as human capital and knowledge, which have become the main drivers of economic growth (Ahmed et al., 2019). In the past, the success, profitability and value of a business depended mainly on tangible assets such as land, infrastructure and equipment (Nuryaman, 2015) but in today's global economy, intangible assets contribute about 80% of enterprises' value through human resource development and knowledge management (Vodák, 2011). Therefore, investment in IC is inevitable in the current era because it is one of the factors contributing to improving competitiveness.

Corporate sustainability, one of the leading topics in financial management, has attracted much interest in recent years. Sustainable growth determines the enterprises' dynamic development trend not only reflecting their potential for existence and development but also affecting their future performance (Xu et al., 2021). According to Xu et al. (2020), sustainability is very important, especially in times of economic uncertainty. The recent COVID-19 pandemic has caused many difficulties, challenges and changed the way many enterprises do business. This has led enterprises to pay more and more attention to sustainability. Sustainable growth will help enterprises continue to meet their short- and long-term financial goals and prevent them from falling into disrepair and ultimately falling apart.

The role of IC in corporate sustainable growth has recently received much attention from researchers. According to Xu et al. (2021), enterprises that want to own outstanding sustainable growth efficiency must take advantage of intangible resources (IC) to maintain competitive advantages. Zhang & Wang (2022) argue that if a company wants to have good sustainable growth performance, it must maintain a competitive advantage through the use of IC and adjust investment

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in IC to dynamic changes in the business environment. Some other researchers also believe that IC is important for corporate sustainability as it provides businesses with a potential source of sustainable competitive advantage assisting them in achieving sustainable growth and leading competitition (Mukherjee & Sen, 2019). In addition, previous studies indicated that in emerging economies, intellectual capital and its components serve as a key driver for corporate sustainable growth (Xu & Wang, 2018).

In Vietnam, the topic of intellectual capital has also attracted researchers recently. Many studies focus on the relationship between intellectual capital and the businesses' performance (Hoang et al., 2020; Nhon et al., 2020; Zhang et al., 2021; Kweh et al., 2022; Tran et al., 2022; Nguyen, 2023; Nguyen et al., 2023). These studies all show that intellectual capital and some of its components have an impact on performance. Other studies explore other issues of intellectual capital such as the relationship between intellectual capital and corporate value (Nguyen & Doan, 2020), the relationship between corporate governance and intellectual capital (Tran et al., 2020), the impact of green intellectual capital on green innovation (Tran et al., 2023), review of empirical studies on the impact of intellectual capital on enterprises' sustainable growth around the world and propose research directions in Vietnam (Pham and Dut, 2022), etc. Thus, amount of research on the relationship between IC and sustainable growth is very small and does not focus on a specific industry.

In the fields of production and business activities, the food and beverage industry is one of the important economic sectors with great potential for development. Before 2020, this industry always maintained good growth momentum each year, and is forecasted to have a growth rate of 5-6% in the period 2020-2025 (Vietnam Report, 2020). However, when COVID-19 pandemic appeared in early 2020 and broke out strongly in 2021, the food and beverage industry was seriously affected and could not maintain the previous growth trend. Consumer behavior changes towards prioritizing essential goods, shopping channels also change towards using online channels, forcing businesses in the industry to make adjustments. In 2022, the pandemic has been well controlled, consumer demand has recovered, along with the strong development of science and technology, causing food and beverage businesses to continue to change. In this context, intellectual capital expressed in terms of knowledge, management capacity, technology, and software plays an important role in helping these businesses make changes to meet the real situation. economy and improve competitiveness. Therefore, how to take advantage of resources to achieve sustainable growth is an urgent issue for businesses in the industry. Therefore, the author chooses the food and beverage industry to investigate the relationship between IC and the sustainable growth of enterprises.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. Intellectual capital

Various scholars have proposed different concepts of IC. One of the first to define IC was Thomas A. Stewart. According to Stewart (1997), IC is the intellectual resources such as knowledge, information, intellectual property, and experience that can be used to create value and wealth. According to Roos, Pike, and Fernstrom (2007), IC can be defined as all non-monetary and non-physical resources that are fully or partially controlled by an organization and that contribute to the creation of value for the organization. Khan, S. Z. et al., (2019) supposed that IC represents the majority of firms' intangible assets and encapsulates talents, intellect, knowledge and skills, patents and patterns, goodwill and brand image, competency, and social interaction with other stakeholders.

There are several methods for measuring IC and are often associated with its components. Pulic (1998) introduced the Value Added Intellectual Coefficient (VAIC) model to measure IC efficiency. This model aims to measure the extent to which a company creates added value based on IC efficiency. The VAIC provides a relatively simple quantitative approach based on financial statements that are publicly available and obtained from an identifiable source. VAIC consists of three components: human capital efficiency, structural capital efficiency, and capital employed efficiency. Human capital includes the knowledge, skills and abilities of employees (Luthy, 1998). Employees generate intellectual capital through their competence, attitude and intellectual agility (Bontis et al., 2000; Khalique et al., 2011). Competence includes skills and education; attitude includes behavioral aspects of an employee's work while intellectual agility is based on innovation and solutions to business problems (Bontis et al., 2000; Khalique et al., 2011). Structural capital is everything in an organization that supports employees in their work including: infrastructure, hardware, software, processes, brands, etc. (Luthy, 1998). Bontis et al. (2000) defined structural capital as "Structural capital includes all the non-human storehouses of knowledge in organizations which include the databases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value". The third component of VAIC is capital employed efficiency. According to Public (1998), creating added value must have the contribution of capital employed. Capital employed efficiency is an economic term that reflects the level of exploitation and use of capital by an enterprise in production and business activities to create maximum value with minimum cost (Nguyen & Doan, 2020). Capital employed helps companies maintain good relationships with their external as well as internal stakeholders, including customers, governments, employees, creditors and suppliers (Chowdhury et al., 2019).

After Pulic (1998), other scholars have developed models of measuring IC consisting of two components, three components, four components, and five components. Although there are many criteria for dividing the IC's components, there is no significant difference in understanding of the nature of IC (Xu et al., 2021). Specific measurement methods can be used depending on the purpose and subject of the study.

2.2. Sustainable growth

The term "sustainable growth" has been defined by many different studies. Higgins (1977) proposed that "for those companies that want to maintain a target payout ratio and capital structure without issuing new equity, sustainable growth is defined as the annual percentage of increase in sales that is consistent with the firm's established financial policies". It is the maximum rate at which a company can use its internal funds to achieve growth without borrowing money from a bank or financial institution (Xu & Wang, 2018). Van Horne & Wachowicz (2015) defined "the sustainable growth rate is the maximum annual percentage increase in sales that can be achieved based on target operating, debt, and dividend-payout ratios". Some scholars emphasize sustainable growth not only to achieve financial objectives but also substain them into the future (Anbarasan & Sushil, 2018; Yusoff et al., 2018; Mukherjee & Sen, 2019; Xu et al., 2021).

2.3. Intellectual capital and corporate sustainable growth

From the perspective of resource-based theory (Barney, 1991), firms can use available resources to create a competitive advantage because they can implement strategies that create value that current competitors or other potential competitors cannot do. IC is considered a strategic resource of the enterprise (Alvino et al., 2021; Xu et al., 2021). Therefore, only by continuously developing new skills and technologies that cannot be imitated by competitors, a business can establish its dynamic capacity to achieve sustainable profits (Xu et al., 2021).

Many empirical studies have shown the influence of IC and its components on corporate sustainable growth. Mukherjee & Sen (2019) revealed a significant positive impact on corporate sustainable growth in India. In Korea, Xu & Wang (2018) also found evidence that IC has positively related to the sustainable growth of manufacturing enterprises. The research results of Xu et al. (2021) showed that IC has a significant positive effect on sustainable growth with research samples of listed companies of agriculture, tourism and renewable energy sector in China. Similarly, Zhang & Wang (2022) also found a positive relationship between intellectual capital and sustainable growth of manufacturing companies in China. Lu et al. (2021) concluded that IC plays an important role in the sustainable growth of companies in China and Pakistan. Based on previous studies, we propose the following hypothesis:

Hypothesis 1: There is a significant positive relationship between IC and corporate sustainable growth.

IC components also have a separate impact on corporate sustainable growth. According to Pulic (1998), capital employed efficiency refers to all necessary financial funds and physical capital. The capital employed is the financial basis for corporate sustainable growth and the guarantee for enterprises' survival in the market competition (Xu et al., 2021). Some empirical studies also show a positive relationship between capital employed efficiency and corporate sustainable growth (Mukherjee & Sen, 2019; Xu & Wang, 2018; Xu et al., 2020; Xu et al., 2021). Thus, this paper proposes the following hypothesis:

Hypothesis 2: There is a significant positive effect of capital employed efficiency on corporate sustainable growth.

Human capital is the fundamental element to implement the IC's functions. It refers to factors such as the knowledge, skills, abilities, and attitudes of employees in an organization (Chen et al., 2004). Previous empirical evidence suggests that companies with higher human capital efficiency exhibit superior financial or overall business performance (Mukherjee & Sen, 2019). Xu & Wang (2018), Xu et al. (2020), Lu et al. (2021) and Xu et al. (2021) find evidence of a positive effect of human capital efficiency on corporate sustainable growth. Therefore, this relationship is also hypothesized:

Hypothesis 3: There is a significant positive effect of human capital efficiency on corporate sustainable growth

Structural capital is concerned with the mechanics and structure of a business that can help support employees in their search for optimal intellectual performance, and thus overall business performance (Chen et al., 2004). Structured capital is the foundation to play intellectual capital's role, helping businesses be competitive in a dynamic environment and promoting sustainable growth (Xu et al., 2021). Based on these analyses, we propose the following hypotheses:

Hypothesis 4: **There is a signiffcant positive effect of structural capital efficiency on corporate sustainable growth**

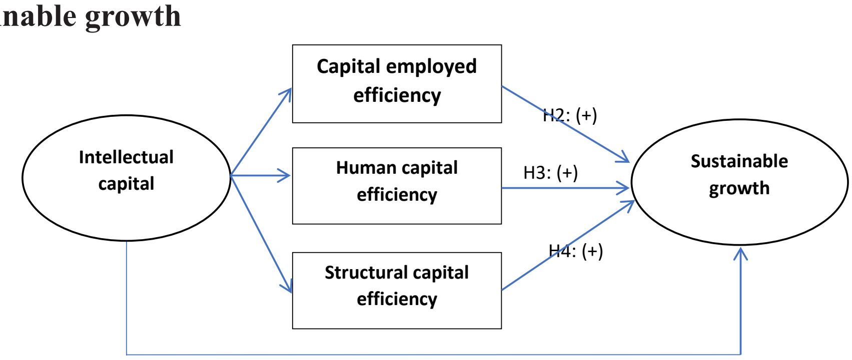

Figure 1: The relationship between IC and its components and sustainable growth

3. DATA AND METHODOLOGY

3.1. Data

In the study, we selected a sample of food and beverage firms listed on the Ho Chi Minh City Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX) during 2018-2022. We excluded companies that lacked the data to be collected during the research period. Thus, the sample includes 42 companies over 5 years, corresponding to 210 observations. We collected the annual audited financial statements of the companies, then calculated the research variables based on the collected data.

3.2. Methodology

To build models that test the relationship between intellectual capital and corporate sustainable growth, we identify variables based on previous studies. We use employed Van Horne and Wachowicz's sustainable growth rate (SGR) (2015) which is widely used in prior studies as the dependent variable of the study. The formula is as follows:

$SGR = \frac{ROE \times b}{1 - ROE \times b}$ where ROE is return on equity, b is retention ratio.

VAIC and its three components (capital employed efficiency – CEE, human capital efficiency – HCE, structural capital efficiency – SCE) are used as independent variables. Calculation of VAIC is performed sequentially as follows (Pulic, 1998; Pulic, 2000; Dženopoljac et al., 2016; Xu & Wang, 2018; Mukherjee & Sen, 2019):

- Calculate value added (VA): VA = Operating Profit + Employee expenses + Depreciation + Amortization

- Calculate CE (capital employed), HC (human capital), and SC (structural capital)

CE = Total assets - Intangible assets

HC = Total expenditure on employees

SC = VA - HC

- Calculate VAIC and its three components

CEE = VA / CE

HCE = VA / HC

SCE = SC / VA

VAIC = CEE + HCE + SCE

We add two control variables to the model including size (SIZE) as measured by the logarit of total assets and financial leverage (LEV) as measured by the ratio of total debt to total assets. In addition, to test whether the COVID-19 pandemic occurring in 2020 and 2021 affects corporate sustainable growth, we include the COVID dummy variable in the model. The dummy variable was set to 1 during the COVID-19 pandemic from 2020 to 2021 and otherwise 0.

To achieve the research findings, we build the following 5 models:

$SGR_{it} = \beta_0 + \beta_1 VAIC_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 COVID_{it} + \varepsilon_{it}$ (1)

$SGR_{it} = \beta_0 + \beta_1 CEE_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 COVID_{it} + \varepsilon_{it}$ (2)

$SGR_{it} = \beta_0 + \beta_1 HCE_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 COVID_{it} + \varepsilon_{it}$ (3)

$SGR_{it} = \beta_0 + \beta_1 SCE_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 COVID_{it} + \varepsilon_{it}$ (4)

$SGR_{it} = \beta_0 + \beta_1 CEE_{it} + \beta_2 HCE_{it} + \beta_3 SCE_{it} + \beta_4 SIZE + \beta_5 LEV + \beta_6 COVID_{it} + \varepsilon_{it}$ (5)

where i is the i^{th} enterprise and t is the t^{th} year.

In this study, we use panel data regression to estimate the above models. At the same time, we also use some necessary tests when choosing a suitable model.

4. RESULTS AND DISCUSSION

4.1. Results

4.1.1. Descriptive Statistics

Table 2: Descriptive Statistics of Variables

Variables	Observation	Mean	Std.Dev	Min	Max
SGR	210	0.0646261	0.1641281	-0.65917	1.401019
VAIC	210	6.18205	7.7733	-10.40696	36.69952
CEE	210	0.4630421	0.7740829	-0.06319	5.53642
HCE	210	5.185571	7.072036	-11.4714	34.09153
SCE	210	0.5334374	0.5529816	-4.45041	1.519047
SIZE	210	12.01673	0.7648739	10.68325	14.15027
LEV	210	0.4262022	0.1943219	0.029298	0.842043

Source: Authors' calculations from Stata software

Table 2 shows that the average sustainable growth value of businesses in the food and beverage industry is 0.0646261 – a moderate growth rate. The high standard deviation of sustainable growth shows that there is a high variation in growth among firms in the industry. The industry VAIC mean is 6.18205, with the maximum and minimum being -10,40696 and 36.69952, respectively. Having businesses with a negative VAIC value indicates that the investment in intellectual capital is greater than the value it creates for the business. The industry's CEE, HCE, and SCE have mean values of 0.4630421, 5.185571 and 0.5334374, respectively. In which, the value of HCE fluctuates quite a lot among enterprises in the industry. Among the factors of VAIC, HCE has the largest value, which means that HCE plays a key role in VAIC.

The average size of the logarithm of total annual assets is nearly 12.01673, which does not vary much between firms in the industry. The industry average leverage ratio is 42.62% with the minimum and maximum values at 2.93% and 84.20% respectively. This means that there are companies that are financed almost entirely by equity, but there are businesses that use more than 80% debt in their capital structure.

4.1.2. Regression Analysis

To test the relationship between sustainable growth and intellectual capital according to models (1), (2), (3), (4) and (5), we perform panel data regression analysis with fixed effects model (FEM) and random effect model (REM). Performing the Hausman test to choose between two models FEM and REM, we obtain the following results:

Table 3: Hausman test findings

Model (1)	$\chi^2(4) = 19.11$, P-value = 0.0007	FEM is selected
Model (2)	$\chi^2(4) = 19.17$, P-value = 0.0007	FEM is selected
Model (3)	$\chi^2(4) = 18.14$, P-value = 0.0012	FEM is selected
Model (4)	$\chi^2(4) = 14.32$, P-value = 0.0063	FEM is selected
Model (5)	$\chi^2(6) = 20.85$, P-value = 0.0019	FEM is selected

Source: Authors' calculations from Stata software

After selecting the appropriate regression model, we get the regression results for each model from (1) to (5) in Table 4.

Table 4: Regression results from FEM models

Independent variables	Dependent variable: SGR				
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
VAIC	0.01047**				
CEE		0.09934**			0.06015
HCE			0.01033**		0.00743*
SCE				0.03784	0.03090
SIZE	-0.50579***	-0.5073539	-0.50923***	-0.53827***	-0.49922***
LEV	0.19761	0.207182	0.18506	0.24354	0.22899
COVID	-0.03163	-0.03488***	-0.03339	-0.03234	-0.02809

, **, * show the levels of significance at 10%, 5% and 1%.*

Source: Authors' calculations from Stata software

Before deciding whether to accept the above regression results, we check whether the models have autocorrelation and heteroskedasticity. We use the Wooldridge test to detect autocorrelation and the Wald test to check heteroskedasticity. The results are shown in Table 5.

Table 5: The results of autocorrelation and heteroskedasticity

Model	Autocorrelation	Heteroskedasticity
Model (1)	F(1,40) = 7.156, P-value = 0.0108	$\chi^2(46)$ = 120,000, P-value = 0.000
Model (2)	F(1,40) = 8.502, P-value = 0.0058	$\chi^2(46)$ = 53,110, P-value = 0.000
Model (3)	F(1,40) = 7.229, P-value = 0.0104	$\chi^2(46)$ = 140,000, P-value = 0.000
Model (4)	F(1,40) = 9.065, P-value = 0.0045	$\chi^2(46)$ = 93,127, P-value = 0.000
Model (5)	F(1,40) = 7.114, P-value = 0.0110	$\chi^2(46)$ = 210,000, P-value = 0.000

Source: Authors' calculations from Stata software

The results show that all models have autocorrelation and heteroskedasticity. Therefore, to overcome these two phenomena, we use the Feasible Generalized Least Squares (FGLS) method. The results obtained from the FGLS model are presented in the following table:

Table 6: Regression results from the FGLS model

Independent variables	Dependent variable: SGR				
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
VAIC	0.00299**				
CEE		0.00325			-0.0057
HCE			0.00316***		0.0022**
SCE				0.03934***	0.02957***
SIZE	0.01791**	0.01991***	0.01763**	0.01581**	0.01736**
LEV	0.09509***	0.08704***	0.09573***	0.08719***	0.06435***
COVID	-0.02818***	-0.02102***	-0.02898***	-0.02261***	-0.02031***

, **, * show the levels of significance at 10%, 5% and 1%.*

Source: Authors' calculations from Stata software

The results from the FGLS model show that VAIC has a statistically significant positive relationship with SGR. Specifically, when VAIC increases by one unit, the sustainable growth rate increases by 0.00299 units. This result supports hypothesis one, which is consistent with the prior studies (Mukherjee & Sen, 2019; Xu & Wang, 2018; Lu et al.,2021; Xu et al., 2021; Zhang & Wang, 2022).

Among the three factors of VAIC, CEE does not have a statistically significant relationship with SGR in both models (2) and (5). HCE and SCE have a statistically significant relationship with SGR in the individual models and the model combining the VAIC's three factors. Both HCE and SCE have a positive impact on SGR (β_2 = 0.00222 and β_3 = 0.02957, respectively). These findings are similar with the results of Mukherjee & Sen (2019), Xu & Wang (2018), Lu et al. (2021), and Xu et al. (2021). These results allow us to accept hypotheses three and four but reject hypothesis two.

In addition, SIZE, LEV, and COVID all have a statistically significant relationship with SGR in all research models. SIZE and LEV have a positive effect on SGR. The findings are in line with the previous studies such as Mukherjee & Sen (2019), Xu & Wang (2018), Xu et al. (2021), and Zhang & Wang (2022). Conversely, COVID has a negative effect on SGR.

4.2. Discussion

From the research findings, we accept hypotheses one, three, four, and reject hypothesis two. The accepted hypothesis one shows that there is a positive relationship between IC and corporate sustainable growth. According to the resource-based theory, businesses with a sustainable competitive advantage due to their unique resource ownership can implement strategies to create value that existing or other potential competitors cannot be performed. Because intellectual capital is seen as a business resource, it can create a competitive advantage, increase business value, and contribute to corporate sustainable growth. The food and beverage industry has recently faced a change in consumer behavior, and the shift of traditional shopping trends to modern channels. This situation causes businesses in the industry to make changes, especially in technology and human resource skills - important factors of intellectual capital. Investing in intellectual capital effectively helps these companies keep up with changes, achieve their goals, and lay the foundation for future growth; thereby creating sustainable growth.

The research results allow us to accept hypothesis three, proving that more investment in human capital will ensure sustainable growth for businesses. As we have analyzed, in the face of changes in consumption trends and sales channels, the management's acumen and the cooperation of the staff play an important role in creating the businesses' success in the industry. Therefore, the more effective the investment in human capital, the more sustainable growth it will be to create for the businesses.

Hypothesis four implies that the more businesses focus on managing structural capital (software, technology, processes, databases), the more sustainable growth will be promoted. In the current context, structural capital is an important element of intellectual capital that creates strong competition for food and beverage businesses. Therefore, this factor contributes to corporate sustainable growth. However, hypothesis two is rejected which indicates capital employed efficiency cannot impact achieving sustainable growth.

For the control variables, the regression results also show a positive relationship between the size, financial leverage and sustainable growth. Large-scale enterprises will have economies of scale to create a sustainable growth engine; moreover, pressure from creditors also makes businesses keep this sustainable growth. Finally, the COVID-19 pandemic has really negatively impacted the business of food and beverage companies. In fact, in the two years since COVID-19 occurred, under measures to prevent the spread of the disease, the demand for some goods decreased, some businesses were forced to close, disrupting the supply chain, etc. has adversely affected the revenue, profit and sustainable growth goals of enterprises.

5. CONCLUSION AND IMPLICATIONS

In order to provide empirical evidence on the influence of intellectual capital on corporate sustainable growth in Vietnam, the study uses data of listed companies in the food and beverage industry during the period 2018 – 2022. The study uses the VAIC model to measure the intellectual capital efficiency. By the regression analysis method of research models between sustainable growth rate with VAIC and its components, we have obtained important research results. The results from the FGLS model show that VAIC has a statistically significant relationship with the sustainable growth rate. Specifically, the more effective the investment in intellectual capital, the more sustainable growth rate will increase. We also found a statistically significant positive relationship between HCE and SCE. This proves, the more effective the investment in human capital and structural capital, the more sustainable growth rate will be promoted. The above results allow us to draw the general conclusion that intellectual capital has an impact on the sustainable growth of listed companies in the food and beverage industry. In addition, we also find evidence of a positive relationship between firm size and leverage and sustainable growth; and a negative relationship between COVID-19 and sustainable growth.

From the research results, we believe that food and beverage businesses should raise awareness of the importance of intellectual capital and pay attention to improving the efficiency of intellectual capital investment to foster sustainable growth. We make some recommendations to the enterprises' managers as follows: (1) allocate resources reasonably and have an appropriate strategy for investing in intellectual capital and its components to improve competitiveness; (2) regularly train and share knowledge in the organization to improve the quality of human resources, and at the same time improve the morale and assertiveness of employees to contribute to sustainable growth; (3) need to invest more in technological innovation, regularly research and develop to improve the efficiency of technological innovation; (4) establish a positive corporate culture and develop appropriate management control systems to support the enterprise's business processes. In addition, businesses should also consider the relationship between size, debt ratio, and the COVID-19 pandemic with sustainable growth to have flexible management policies.

The limitation of this study is that it only considers the effects of the three intellectual capital components on corporate sustainable growth. Furthermore, we only studied food and beverage enterprises in the period 2018 - 2022. Further studies can be extended to businesses of many different industries and add more intellectual capital components.

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RELATIONSHIP BETWEEN BUSINESS ENVIRONMENT AND ECONOMIC DEVELOPMENT: EVIDENCE FROM SOUTHEAST ASIA

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Abstract: Encountering significant challenges from the middle-income trap, the Association of Southeast Asian Nations (ASEAN) formed ASEAN Economic Community (AEC) envisioning its integration into a competitive global market. Of several solutions, the ASEAN Economic Blueprint 2025, as the name suggested, established a road map to actualize ASEAN's potential. The recent trend of shifting focus to optimal business and economic reform, with a new dynamic brought by a very fast-paced digital transformation in the region and a group of upper-middle-income consumers, has become a new source of hope for ASEAN. Through this transformation, the region expects more business owners to enter the market with fewer barriers. As people start building their entrepreneurship, the region also expects an upward economic growth trajectory. However, the question remains as to how we realize said future. How do we act as a springboard for business owners, the tech-savvy young generation, and a group of wealthy consumers that demand more services? Answering this question, this study tests the relationship between the current business environment and economic development to establish an initial foundation for ASEAN's direction toward business environment reform.

Keywords: business, growth, development, digital transformation

1. INTRODUCTION

On December 31, 2015, ASEAN officially established the "ASEAN Economic Community" - after a joint statement at the ASEAN Summit meeting in Kuala Lumpur, together with the ASEAN Political-Security Community and the Cultural Community. ASEAN society has three important pillars, which include bringing ASEAN to a new step in terms of quality and creating an ASEAN with a position in the world economy.

This economic community is also known for its publication of "ASEAN Economic Community (AEC) Blueprint", which had its first version in 2008, namely "ASEAN Economic Community (AEC) Blueprint 2015" with a distinct outlook on growth. Built upon the success of this blueprint, in 2015, a new version was created with a continued vision to promote and encourage the main themes of integration and cohesiveness in the region. However, several new directions have been established in this blueprint, especially regarding the scene of micro, small, and medium enterprises (MSMEs). ASEAN Economic Community (AEC) Blueprint 2025's aim to create an enabling business environment, thus, has been discussed widely [2] [3]. MSMEs are increasing their position as the most integral form of establishment in ASEAN, with 70 million in ASEAN and accounting for 97.2% to 99.9% of all business activities [4]. The Economic Research Institute for ASEAN and East Asia (ERIA) has conducted research on business development regarding trade, investment human resource development, and many other prominent topics [5].

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2 "Improving the Business Environment in 2022," 2022, https://mof.gov.vn/webcenter/portal/thtk/pages_r/l/chi-tiet-tin-tin-hoc-va-thong-ke?dDocName=MOFUCM222478.

3 "Policy Insight: Formalisation of Microenterprises in ASEAN," 2018, http://www.economica.vn/news/detail/policy-insight-formalisation-of-microenterprises-in-asean/504.

4 "Development of Micro, Small, and Medium Enterprises in ASEAN (MSME)," ASEAN Main Portal, accessed May 12, 2023, https://asean.org/our-communities/economic-community/resilient-and-inclusive-asean/development-of-micro-small-and-medium-enterprises-in-asean-msme/.

5 OECD and Economic Research Institute for ASEAN and East Asia, *SME Policy Index: ASEAN 2018: Boosting Competitiveness and Inclusive Growth*, SME Policy Index (OECD, 2018), https://doi.org/10.1787/9789264305328-en.

In light of this blueprint, this paper focuses on the relationship between the business environment and its effect on growth in the region. The research question concerns whether a more open entrepreneurial environment will contribute to economic growth in ASEAN. While there are several aspects to be considered with regard to the business environment, from institutions, regulations, and policies to tax administration, this paper focuses on an economic freedom index that captures the big picture of all the aforementioned. On one side of the equation, the proxy for the business environment will be the Index of Economic Freedom (IEF) by the Heritage Foundation and Wall Street Journal. On the other side, the proxy for growth will be the countries' growth rate of GDP per capita. The findings help establish a cornerstone for the body of literature in ASEAN on whether the step towards a more open and liberal economic environment does align with its intended development trajectory. This becomes more urgent as there is limited theoretical frameworks and empirical evidence focusing solely on Southeast Asia, more specifically on ASEAN, regarding this topic.

There are two papers that this research relied on for idea references. The first one is "A study on the impact of economic freedom on economic growth in ASEAN countries". In this paper, Tran also used IEF as a variable of interest and GDP per capita growth rate as the dependent variable. The author used a sample of eight ASEAN from 2000 to 2017 [1]. However, this paper focused on using the three indicators from the index, while the overall score is vaguely touched upon. In a similar vein, the second paper, "The Impact of Economic Freedom on Economic Growth? New European Dynamic Panel Evidence," used a panel data of 43 European countries from 1995 to 2014. This paper moved to use the entire overall score of IEF as a variable of interest, with a main focus on European countries. This article also included the dummy variable of the European Union (EU) to test the effect of EU membership on economic growth. As the EU is the main theme of the paper, chosen control variables also reflected further characteristics of this region.

Our paper, while sharing some similarities in terms of ideas with these two articles, contributed to the body of works of literature by focusing on ASEAN Member States, with IEF overall score as our main focus, while also extending the timeline from 1998 to 2021 to cover for the effect of Covid in ASEAN. We also control for government expenditure as an independent variable while running a fixed effect model with a robustness check. This distinguishes our paper while respecting the contribution of previous researchers.

In conclusion, this paper's main focus will be the quantified aspects of the business environment on the economic growth of ASEAN Member States.

2. LITERATURE REVIEW

2.1. Definition of business environment

Business environment is a multifaceted and non-homogenous concept with multiple identifications and no official definition[2] [3]. Current literature acknowledges both the importance

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[1] Dung Viet Tran, "A Study on the Impact of Economic Freedom on Economic Growth in ASEAN Countries," 2020, https://ageconsearch.umn.edu/record/301155/files/201910101737_24_BEH_2019_Vol15_Issue3_Vol15_Issue3_DV-Tran_Study_economic_freedom_ASEAN_423-449.pdf.

[2] Dimitri Uzunidis, "Business Climate and Entrepreneurialism," in *Encyclopedia of Creativity, Invention, Innovation and Entrepreneurship*, ed. Elias G. Carayannis (New York, NY: Springer, 2013), 143–48, https://doi.org/10.1007/978-1-4614-3858-8_194.

[3] Dr Kinange and Nikhil Patil, "BUSINESS ENVIRONMENT: The Concept and A Literature Review," 2020.

and the complexity of defining this concept [1]. Vlachou et al. and Weaver et al. concluded that the concept of "business environment" or "business climate" remains inconclusive and broad, without a concrete grounding [2] [3]. However, the author defined the business environment as "the combination of factors that influence the development of entrepreneurship". This can be seen as the holistic combination of economic, socio-economic, and political characteristics that surround individual business activities. In a similar vein to the ASEAN MSMEs vision, Weaver et al. defined business environment as the existence of a support system for better creation and growth of small enterprises[4].

Within the scope of this paper, we define a business environment similar to that of the Heritage Foundation's Index of Economic Freedom. More specifically, we believe the four main themes covered in this index also encompass what we want to convey with the concept of the business environment. These four main themes of Rule of Law, Government Size, Regulatory Efficiency, and Open Markets also correspond to UNIDO's policy, legal, institutional, and regulations definition of the business environment.

2.2. Development definition

The terms economic growth and economic development are sometimes used interchangeably, but they are fundamentally different [5]. As these concepts are discussed in an extensive body of literature, their definitions are concrete and well-established. Economic growth refers to a quantitative and measured increase in income and national or per capita product. If a country becomes more productive and the national average income increases, we will consider it "economic growth". However, economic development is a broader concept in which economic growth has to be translated into an actual improvement in all aspects of human well-being [6].

According to the Cambridge Dictionary, economic development is the process in which an economy grows or changes and becomes more advanced, especially when both economic and social conditions are improved. Indeed, these improvements tend to focus on structural changes that take place in health, education, or urbanization. Furthermore, this development needs to be shared among all citizens. This means the concentration of economic surplus should not be in an elite group while all other groups suffer [7]. Several countries enjoy economic benefits through natural resources yet the traditional social structure remains. This is not considered development. Society for International Development defined development as the process of quality change and

[1] Sergii Sardak and Ihor Movchanenko, "Business Environment of Enterprise," 2018.

[2] Charisia Vlachou et al., "The Entrepreneurial Environment in Greek Rural Areas: The Entrepreneur's Viewpoint," *Sustainability* 13 (February 5, 2021): 1719, https://doi.org/10.3390/su13041719.

[3] K Mark Weaver, Eric W Liguori, and George S Vozikis, "Entrepreneur Business Climate Perceptions: Developing a Measure and Testing a Model," 2011.

[4] Weaver, Liguori, and Vozikis.

[5] Dwight H Perkins et al., "Economics of Development," accessed May 30, 2023, https://wwnorton.com/books/9780393934359.

[6] Economic Recovery and Innovation Ministry of Jobs, "What Is Economic Development? - Province of British Columbia" (Province of British Columbia), accessed May 29, 2023, https://www2.gov.bc.ca/gov/content/employment-business/economic-development/plan-and-measure/economic-development-basics.

[7] Perkins et al., "Economics of Development."

a continuation of conditions for that change [1]. In conclusion, there are tee pillars of development: economic growth, structural transformation, and well-being.

Within the scope of this study, we acknowledge the broadness of development, while narrowing it down for research efficiency. Thus, we decide to see development as an improvement in the standard of living and the health of an economy. This captures the essence of these terms while simplifying it to find one suitable proxy. GDP per capita has been chosen as this figure has been as a result since it has been used by researchers extensively when analyzing the topic of life quality[2]. Furthermore, this figure has also been used by economist as a proxy for the state of an economy[3]. Together, GDP per capita, though not perfect, fully delivers the message we want for this study.

3. INDEX

We chose this index mainly for its efficient capturing of the business environment in a holistic approach, both thematically and technically, and its alignment with AEC visions in the past and the future.

Firstly, this index captures the essence of business environment of a country in the most quantitative manners [4]. While there are other attempts to capture this same factor, namely the World Bank's Doing Business Ranking (DBR) or the World Economic Forum's Global Competitiveness Index (GCI), IEF offers a different perspective and strong quantitative measurement of the degree that individuals can function freely in an economy, which includes the freedom to produce, consume, and invest. This index also accounts for the macroeconomic elements of a nation, which helps provide a more holistic outlook, though compressed into one number. Furthermore, IEF also helps convert qualitative data into quantitative numbers for better calculation, with a transparent methodology and grading scheme. In comparison, GCI mostly deals with surveys, and DBR mainly manages local practitioners' responses. We will be more technically dissecting each of its components in detail in the Data & Methodology section.

From a practical standpoint, this index is suitable for serving as a proxy for the business environment from a political economy perspective. By definition, this index "focuses on four key aspects of the economic and entrepreneurial environment over which governments typically exercise policy control" [5]. In fact, IEF also includes both key macroeconomic indexes and the country's historical and political context. In doing so, this index equips researchers with timely information on both the political risks and economic reforms [6]. Through this index, we have a better grasp into the country's risks regarding inflation, taxation, tariffs, and especially property

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1 "What Is Development?," *Sid Israel - Society for International Development* (blog), February 16, 2021, https://sid-israel.org/en/what-is-development/.

2 Mary Hall, "How Does GDP Affect the Standard of Living?," Investopedia, 2021, https://www.investopedia.com/ask/answers/060115/how-does-gross-domestic-product-gdp-affect-standard-living.asp.

3 "Gross Domestic Product (GDP) per Capita and GDP per Capita Annual Growth Rate," accessed May 30, 2023, https://www.who.int/data/nutrition/nlis/info/gross-domestic-product-(gdp)-per-capita-and-gdp-per-capita-annual-growth-rate.

4 "Business Environment Indicators," 2012.

5 Anthony Kim Anthony Kim@heritage org Research Manager and Editor of the Index of Economic Freedom, Anthony.Kim@heritage.org, and Research Manager and Editor of the Index of Economic Freedom, "2023 Index of Economic Freedom | The Heritage Foundation," accessed May 15, 2023, //www.heritage.org/index/about.

6 Ryan Olson, "Using the Index of Economic Freedom: A Practical Guide," The Heritage Foundation, 2014, https://www.heritage.org/international-economies/report/using-the-index-economic-freedom-practical-guide.

rights enforcement. This index also provides detailed public policy elements that are translated into business' everyday activities: how free entrepreneurship activities take place, what the nation's priorities are, and which direction of business openness is being encouraged.

From a technical standpoint, the four aspects covered by this index, namely the rule of law, government size, regulatory efficiency, and open markets, deeply affect business functions and can be viewed as the business environment as defined in section 1.1. Indeed, these four pillars directly affect a business's operations, profitability, and sustainability [1]. This strengthens our decision to choose IEF as a proxy for the business environment in the world context. Olson, 2014 further emphasizes how this index can help depict a great picture for business leaders and policy-makers trying to research into any country's market.

Secondly, the ASEAN trajectory and visions from Economic Community Blueprint 2025 are all measured in this index. From its name, this Blueprint acts as a guiding principle with its overarching vision of cultivating optimal business and economic environment, as stated as follows:

"In the next decade, ASEAN will also provide a new emphasis on the development and promotion of micro, small and medium enterprises (MSMEs) in its economic integration efforts. At the same time, ASEAN will likewise embrace the evolving digital technology as leverage to enhance trade and investments, provide an e-based business platform, promote good governance, and facilitate the use of green technology" [2].

Table 1: The relevance of Index of Economic Freedom's indicators and ASEAN vision from ASEAN Economic Community Blueprint 2025

Economic Freedom Indicators	ASEAN Economic Community Blueprint 2025 visions
Business Freedom	B.1. Effective Competition Policy
Financial Freedom	A.4. Financial Integration, Financial Inclusion, and Financial Stability
Fiscal Health	
Government Integrity	B.6. Good Governance
Government Spending	
Investment Freedom	A.3. Investment Environment
Judicial Effectiveness	B.7. Effective, Efficient, Coherent and Responsive Regulations, and Good Regulatory Practice
Labor Freedom	A.5. Facilitating Movement of Skilled Labor and Business Visitors
Monetary Freedom	
Property Rights	B.3. Strengthening Intellectual Property Rights Cooperation
Tax Burden	B.5. Taxation Cooperation
Trade Freedom	A.1. Trade in Goods

(Source: Authors)

One of the earliest attempts to quantify economic freedom and business environment was by Easton and Walker in 1992. Utilizing this index, Islam tested the relationship between scoring high with this index and the national growth rate[3]. The result shows there exists a direct relationship between them in high-income and all countries in the sample. This is not the only paper confirming

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[1] Olson.

[2] "ASEAN Economic Community Blueprint 2025," 2016, https://aecvcci.vn/tin-tuc-n1790/asean-economic-community-blueprint-2025.htm.

[3] Sadequl Islam, "Economic Freedom, per Capita Income and Economic Growth," *Applied Economics Letters* 3, no. 9 (September 1, 1996): 595–97, https://doi.org/10.1080/135048596356032.

a positive relationship of the economic freedom index. In fact, a majority of them stated how there is a direct link between the economic and business environment (and its indexes) with the annual per capita growth rate[1].

The second prominent and commonly applied quantitative measure for economic and business freedom is the Fraser Institute's Economic Freedom of the World (EFW) index. Asking the question of "Does Really Economic Freedom Mater for Growth in South Asia, Nadeem et al. found concrete empirical evidence and positive direction from economic freedom and GDP per capita growth [2]. Akin et al. argued that while there exists a statistically significant and positive correlation between economic freedom and economic growth, the strength of this effect varies as the lower-middle income group receives more contribution from a free environment [3]. Nevertheless, all levels of economic freedom still benefit from this openness. Discovering the relationship in-depth, Faria & Montesinos found a robust pathway from economic openness to prosperity and proposed the least risky way to economic development should be ignited through better policies to cater to these findings [4]. Kacprzyk further explored the relationship by testing each indicator from the index and found property rights, monetary policy quality, freedom to trade, and regulatory framework as the four key aspects of economic freedom that translate into growth. From this finding, the author confirms the significant and positive impact that a free environment has on European economic development, highlighting the biggest impact found in enhancing property rights protection [5].

However, the application of EFW also reveals intriguing findings by Weede that there might be underlying characteristics that direct the strength of this relationship [6]. The level of prior economic development and the existing human capital of the nation itself might play into the mechanism. The author also proposed a new lens to dissect the matter within a global context: economic freedom has a massive spillover effect, as all countries are indirectly taking advantage of it, not only those directly benefiting.

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1 Islam.
- Saima Sarwar and Noor ul Haq, "Re-Assessing Political, Social and Economic Determinants of Economic Growth: An Analysis from Selected Asian Developing Economies," *Journal of Emerging Economies and Islamic Research* 5, no. 1 (January 31, 2017): 82–92, https://doi.org/10.24191/jeeir.v5i1.8798.
- Kandi Dwi Pratiwi and Ika Yuni Wulansari, "Economic Globalization in Asean Countries: A Panel Cointegration Analysis," *Economics Development Analysis Journal* 11, no. 4 (December 18, 2022): 425–41, https://doi.org/10.15294/edaj.v11i4.56323.

2 Muhammad Nadeem et al., "Does Really Economic Freedom Matter for Growth in South Asia? Empirical Evidences from Pre-Economic Crises and Post-Economic Crises Period," *Asian Economic and Financial Review* 9, no. 1 (January 2, 2019): 52–63, https://doi.org/10.18488/journal.aefr.2019.91.52.63.

3 Cemil Serhat Akin, Cengiz Aytun, and Başak Gül Aktakas, "The Impact of Economic Freedom upon Economic Growth: An Application on Different Income Groups," *Asian Economic and Financial Review* 4, no. 8 (2014): 1024–39.

4 Hugo J. Faria and Hugo M. Montesinos, "Does Economic Freedom Cause Prosperity? An IV Approach," *Public Choice* 141, no. 1 (October 1, 2009): 103–27, https://doi.org/10.1007/s11127-009-9440-0.

5 Andrzej Kacprzyk, "Economic Freedom–Growth Nexus in European Union Countries," *Applied Economics Letters* 23, no. 7 (May 2, 2016): 494–97, https://doi.org/10.1080/13504851.2015.1083076.

6 Erich Weede, "Economic Freedom and Development: New Calculations and Interpretations," *Cato Journal* 26 (2006): 511.

Last but not least, using Heritage Foundation's IEF, several authors have presented interesting results on the relationship between economic and business environment on growth. Heckel explored whether there is a causal relationship between them and found that the level of freedom measured by the index can be a good predictor for growth [1]. The Granger-causality tests certainly suggest Capital Flows, Property Rights, and Regulation precede growth and not the other way around. However, researchers also found that this effect might also be seen in the long term. As a recent paper by Pratiwi & Wulansari suggests, several factors must first be met for this impact to be visible [2]. Applying panel data cointegration analysis on ASEAN, this study tested the effect of globalization proxied by ICT, economic freedom, and economic openness. While ICT and economic openness showed immediate results in growth, economic freedom required zooming out of the timeline to fully be accounted for. Similar results can be found in a paper by Brkić et. al with a sample of European countries in panel data [3].

Increases in economic freedom proxied by Heritage Foundation's Index are correlated with growth regardless of its level. In the same vein, results from BRICS and Latin America Countries samples also showed concrete evidence. Explaining the relationship's mediator in the BRICS sample, Haydaroglu found that economically free governments and institutions undertake opportunities to enhance the national quality of life and reduce poverty in emerging economies [4]. The aggregate effect of IEF on growth once again confirms its vitality to any developing country. In the Latin American countries sample, Bengoa & Sanchez-Robles entangled the relationship with panel data analysis and found that the channel through which economic freedom manifested its effect on growth is FDI [5]. The quality of FDI that a country attracts will be vital to its developing stage. Indeed, the case study from Vietnam confirms this relationship at 5% significant level while the case study from the ASEAN sample also shows a significant relationship [6] [7].

Another prominent paper using Heritage Foundation's Index is "A Study on the Impact of economic freedom on economic growth in ASEAN Countries". While testing for the relationship between economic and business freedom indicators and growth, the author found several insights into the mechanism that underlies it. Which, higher financial liberalization is seen to have a positive effect on the growth of its association with direct money transfer and foreign investment. These streams of capital, in turn, will stimulate economic growth and translate into long-term development. The author

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1 Jac C. Heckelman, "Economic Freedom and Economic Growth: A Short-Run Causal Investigation," *Journal of Applied Economics* 3, no. 1 (May 1, 2000): 71–91, https://doi.org/10.1080/15140326.2000.12040546.

2 Pratiwi and Wulansari, "Economic Globalization in Asean Countries."

3 Ivana Brkić, Nikola Gradojević, and Svetlana Ignjatijević, "The Impact of Economic Freedom on Economic Growth? New European Dynamic Panel Evidence," *Journal of Risk and Financial Management* 13, no. 2 (February 2020): 26, https://doi.org/10.3390/jrfm13020026.

4 Ceyhun Haydaroğlu, "The Effect of Foreign Direct Investment and Economic Freedom on Economic Growth: The Case of BRICS Countries," *Research in World Economy* 7 (March 7, 2016), https://doi.org/10.5430/rwe.v7n1p1.

5 Marta Bengoa and Blanca Sanchez-Robles, "Foreign Direct Investment, Economic Freedom and Growth: New Evidence from Latin America," *European Journal of Political Economy* 19, no. 3 (September 2003): 529–45, https://doi.org/10.1016/S0176-2680(03)00011-9.

6 Nguyen Huu Cung and Nguyen Thi Hong Nhung, "Impact of Economic Freedom and Corruption Perceptions Index on Foreign Direct Investment in Vietnam," *European Scientific Journal ESJ* 16, no. 10 (April 30, 2020), https://doi.org/10.19044/esj.2020.v16n10p25.

7 Tran, "A Study on the Impact of Economic Freedom on Economic Growth in ASEAN Countries."

also found that labor freedom increases growth, as lower regulation frameworks on wages, working hours, and labor force participation give employers and employees a window of flexibility. Aligning with AEC Blueprint on lowering the trade barriers through the reduction of tariffs and nontariff, the result also shows a positive effect of trade freedom in the region.

However, this paper by Tran also records worth-noting insights: financial freedom and credit to the private sector do not necessarily hold a positive relationship on economic development in ASEAN [1]. This can be explained through the lens of risk management: credit to the private sector might have an unwanted linkage to the increase in overall risk within an economy.

The idea to combine both Heritage Foundation and Fraser Institute Indexes for a more objective outlook on the matter has been realized by Mimoun & Essaggay [2]. The authors also explored both the aggregate and disaggregated versions of these indexes, as this implementation will provide insights into the most efficient policy recommendation for assured growth. Indeed, property rights, efficiency in government spending, flexible regulations, business freedom, and investment are once again confirmed as major sources for growth, proxied by the total factor of production. In fact, the index itself can explain up to 72 percent difference across regions for GDP per worker and up to 65 percent of the total factor of production. This finding confirms the weight of the economic and institutional environment's influence on cross-countries different levels of development.

Further research into economic and business freedom influence also shows a strong nexus of economic freedom-FDI and growth. In ASEAN, Ansari & Sensarma found that economic freedom can, in fact, be the channel through which FDI fully exercises its effect on growth, alongside improvement in human capital quality and financial institutions [3]. A bigger sample of South Asia, East Asia, Latin America, and North and West Europe contributes to the robustness of this result. This mechanism can also be explained as macroeconomic factors from economic freedom help attract FDI, and this liberalization further enhances the FDI inflow in the long run. Once again, a trade openness policy with relaxed tariff and export procedures create an investment-friendly environment that directly boosts the FDI inflow [4]. Another paper by Azman-Saini et al. helps explain the mechanism on which this relationship fully expands: the degree of effect from FDI is based upon the level of economic freedom in the country as countries with a higher level of freedom also gain more when multinational cooperations enter [5]. This means FDI itself does not directly cause growth but a country's own characteristics. The authors, thus, emphasized the significance of policies that help mediate the full effect of FDI. Since the effect of economic freedom is both direct and indirect,

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1 Tran.

2 Mohamed Mimoun and Ali Essaggay, "Economic Freedom, TFP and Growth: Comparative Analysis of GCC and East Asian Newly Industrialized Economies (NIEs)," *INTERNATIONAL JOURNAL OF RESEARCH IN LAW ECONOMIC AND SOCIAL SCIENCES* 4 (March 1, 2018).

3 Md. Gyasuddin Ansari and Rudra Sensarma, "Does Economic Freedom Influence the FDI–Growth Nexus in ASEAN Economies?," *Journal of Asian Economic Integration* 4, no. 2 (September 1, 2022): 144–59, https://doi.org/10.1177/26316846221112228.

4 Devesh Singh and Zoltán Gal, Economic Freedom and Its Impact on Foreign Direct Investment: Global Overview, *Review of Economic Perspectives* 20, no. 1 (March 1, 2020): 73–90, https://doi.org/10.2478/revecp-2020-0004.

5 W. N. W. Azman-Saini, Ahmad Zubaidi Baharumshah, and Siong Hook Law, "Foreign Direct Investment, Economic Freedom and Economic Growth: International Evidence," *Economic Modelling* 27, no. 5 (September 1, 2010): 1079–89, https://doi.org/10.1016/j.econmod.2010.04.001.

the government is encouraged to fully account for positive spillovers of foreign investment.

In summary, economic freedom indexes and their key constituents of property rights, legal framework, regulations, trade freedom, and investment freedom show a robust and positive result on growth regardless of the index being used.

However, economic freedom on growth receives massive criticism by Singh & Gal [1]. The author argued how literature had been tainted strongly in favor of economic freedom with massive publication bias, making it challenging to decipher their true effect. Echoing this view is Doucouliagos & Ulubasoglu applied meta-analysis and panel data analysis and found a specification bias when controlling for physical capital [2].

In conclusion, sourcing through the literature, we understand there is a lack of literature on the ASEAN business environment and growth. This is alarming, especially given the new Blueprint that requires in-depth policy aligning with the long-term vision of the regions.

III. DATA & METHODOLOGY

1. Data

1.1. Data description

This study uses a panel data with unbalanced observations, in which 8 Member States of ASEAN will be followed from 1998 until 2021. There, are two reasons we choose these countries and time periods: data availability and the timeline legitimacy of the region. While ASEAN consists of 10 Member States, there is limited data availability for Brunei Darussalam and Myanmar. 1998 was chosen as the start of the timeline so that the effect of the 1997 Asian financial crisis would not be included and confound the result.

We want to include credit to the private sector and literacy rate as control variables. However, due to data missing problems, we cannot include them in the model.

Table 2 Description of variables

Abbreviation	Unit	Description	Source
		Dependent variable	
gdppcgrowth	annual %	GDP per capita growth	World Bank national accounts data, and OECD National Accounts data files.
		Variable of interest	
overallscore	Estimate	The degree of economic freedom in the world's nations	The Heritage Foundation and Wall Street Journal
		Control variables	
unemployme~e	% of totallabor force	Unemploymzent, total (modeled ILOestimate)	International Labor Organization

1 Singh and Gal, "Economic Freedom and Its Impact on Foreign Direct Investment."

2 Chris Doucouliagos and Mehmet Ali Ulubasoglu, "Economic Freedom and Economic Growth: Does Specification Make a Difference?," *European Journal of Political Economy* 22, no. 1 (March 1, 2006): 60–81, https://doi.org/10.1016/j.ejpoleco.2005.06.003.

fdi	% of GDP	Foreign direct investment, net inflows	International Monetary Fund, International Financial Statistics and Balance of Payments databases, World Bank, International Debt Statistics, and World Bank and OECD GDP estimates.
export	% of GDP	Exports of goods and services	World Bank national accounts data, and OECD National Accounts data files.
covid	dummy variable = 1 in 2020 and 2021 = 0 otherwise	Time when ASEAN receives effect fromthe global pandemic	Self-constructed

2. CONSTRUCTING VARIABLES

2.1. Dependent variable

GDP per capita growth rate: "Annual percentage growth rate of GDP per capita based on constant local currency. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources."

2.2. Variable of interest

"Overallscore" is the Index of Economic Freedom (IEF).

2.3. Control variables

The field of development studies has long been focusing on the determinants of economic growth; however, little consensus on an over-encompassing model has been found. Prominent findings, thus far, include government efficiency, labor market, financial system, fiscal policies, saving, and investment

3. EMPIRICAL STRATEGY: PANEL DATA REGRESSION

Does economic freedom as defined by the standard of Heritage affect the growth rate of ASEAN Member States? Is it better for ASEAN to push for a more open business environment, or is some level of control required for emerging state economies? The correlation between our dependent variable with variables of interest will be tested, while we control for some potentially confounding variables. Our econometric regression of the panel dataset will be performed by the following model:

gdppcgrowth $it = \alpha + \beta 1$overallscore$it + \beta 2$ unemployme~e$it + \beta 5$ fdi $it + \beta 7$ covidit + μi + εit

in which: i is the Member State and t is the time period. We care about the effect of the independent variable of interest on the dependent variable while controlling for other variables. The dependent variable gdppcgrowth it or the growth rate of GDP per capita within a nation at each point of observation (in this study, we observe it annually). The independent variable of interest in the overallscoreit also known as the Index of Economic Freedom that we discussed. We control for the effect of the unemployment rate with unemployment rateit, Foreign Direct Investment (FDI) with fdi it. We also control for the effect of Covid as the dataset runs through 2020 and 2021 and might potentially distort the result.

We choose panel data to record our sample and this empirical strategy since it can record and track many individuals across time. This decision relies on the fact that a time-series model of one individual (in our case, country) will not be able to fully capture and explain the complex insights of our variables' relationship. Panel data, thus, is seen as a tool to help isolate the effect of policies on our dependent outcome [1]. Other reasons for the application of panel data include controlling for omitted variable bias. As the economic model can never fully account for every element, this method helps reduce the effect of unobserved variable bias. The consistent internal patterns of all individuals make it easier for researchers to eliminate unwanted effects on dependent variables.

IV. RESULT AND DISCUSSION

This part : presents the results and the main findings from the regression model. While the model controls for several variables to obtain a confoundedness assumption, the causal relationship should not be interpreted without caution. Coefficients, thus, should be seen as correlations first and foremost.

1. Result

1.1. Summary of statistics

Table 3: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Gdp	192	0.04997	0.03623	-0.13126	0.145197
gdppcgrowth	192	0.0353	0.03635	-0.1448	0.12509
overallscore	192	0.61768	0.12543	0.335	0.897
unemployment rate	192	0.0281	0.01715	0.0014	0.0806
fdi	192	0.05861	0.06421	-0.0276	0.2969
export	187	0.71967	0.51911	0.17271	2.28994
covid	192	0.08333	0.27711	0	1

(Source: authors)

1.2. Correlation Matrix

Table 4 Correlation Matrix

	gdppcg~h	overal~e	unempl~e	fdi	export	covid
gdppcgrowth	1					
overallscore	-0.214	1				
Unemployment rate	-0.2081	0.2899	1			
fdi	0.1325	0.6122	0.0137	1		
export	-0.0587	0.7946	0.1976	0.7685	1	
covid	-0.3291	0.1299	-0.0125	0.0522	-0.003	1

(Source: authors)

Next, we move to correlation matrix to drop any value that exceeds the correlation coefficient's cut-off of 0.7. In this case, we need to drop the variable of export as it stands at 0.7946. The logic

1 Cheng Hsiao, "WHY PANEL DATA?," *The Singapore Economic Review* 50, no. 02 (October 2005): 143–54, https://doi.org/10.1142/S0217590805001937.

behind eliminating variables is to drop either of those that are highly correlated with each other. In this case, overallscore and export are correlated. However, overallscore is our variable of interest so we need to eliminate the variable of export instead.

1.3. Multicollinearity Matrix

Table 5 Multicollinearity matrix

Variable	VIF	1/VIF
overallscore	3.12	0.320588
fdi	2.60	0.385132
unemployme~e	1.17	0.853964
covid	1.09	0.916835
Mean VIF	2.46	

(Source: author)

Next, we test for multicollinearity with a universal cut off of 5. There is no problem with our variables in this test, as all of them have coefficients below 5.

1.4. Hausman Test

Table 6 Hausman Test result

	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
overallscore	-.0038179	-.1089886	.1051707	.0551177
unemployme~e	-.1698442	-.2289571	.0591129	.2677019
fdi	.2165955	.2150488	.0015466	.0615215
covid	-.0456884	-.0395337	-.0061547	.003479

```
                     b = consistent under Ho and Ha; obtained from xtreg
      B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        3.81
                Prob>chi2 =      0.4329
```

(Source: author)

Hausman Test is executed to decide between the Fixed Effect Model and Random Effect Model. While panel data requires the application of the Fixed Effect Model normally, this result of insignificance leads us to choose Random Effect Model, in which we assume differences in coefficients are not systematic.

1.5. Heteroskedasticity and Serial correlation test

Table 7: Heteroskedasticity and serial correlation test

```
Tests:
   Random Effects, Two Sided:
   ALM(Var(u)=0)         =     4.27 Pr>chi2(1) =  0.0389

   Random Effects, One Sided:
   ALM(Var(u)=0)         =    -2.07 Pr>N(0,1)  =  0.9806

   Serial Correlation:
   ALM(lambda=0)         =     4.38 Pr>chi2(1) =  0.0364

   Joint Test:
   LM(Var(u)=0,lambda=0) =     6.71 Pr>chi2(2) =  0.0349
```

(Source: authors)

Serial correlation coefficient does not show statistically significant results while the heteroskedasticity test has a significant result at 5% level, leading us to implement a strategy to account for it in the next section.

1.6. FGLS

Table 8: Two specifications

Variables	Model RE GDPPCGROWTH	Model GLS GDPPCGROWTH
OVERALLSCORE	-0.109*** (-4.35)	-0.0637*** (-3.45)
UNEMPLOYMENTRATE	-0.229 (-0.580)	-0.467*** (-1.496)
FDI	0.215*** (4.63)	0.161*** (3.50)
COVID	-0.0395*** (-4.71)	-0.0374*** (-6.43)
Constant	0.0997*** (7.60)	0.0838*** (9.72)
Observations	192	192
Number of id	8	8

z-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

(Source: authors)

Model (2) or Model GLS is being used to fix the problem of heteroskedasticity that we encountered in the previous section.

The juxtaposition of the Random Effect (RE) specification and the Feasible Generalized Least Squares (FGLS) specification reflects the robustness of the model. Our main result is the second specification; however, seeing both show consistent results without major differences in values proved the model's correct direction. For future research, the same model's framework can be considered, while changing and accounting for more control variables.

First, we analyze control variables and their significance in two specifications. The unemployment rate is the only variable without a consistent effect on GDP per capita growth. While the main specification finds a significant coefficient, Random Effect Model does not produce a similar finding. However, both specifications show how the unemployment rate has negative consequences on growth, as expected with literature in the field and the Okun law. This was also confirmed by studies done by several other researchers [1] [2] [3] [4].

1 Sibusiso Clement Makaringe and Hlalefang Khobai, "The Effect of Unemployment on Economic Growth in South Africa (1994-2016)," MPRA Paper, March 19, 2018, https://mpra.ub.uni-muenchen.de/85305/.

2 Changshuai Li and Zi-juan Liu, "Study on the Relationship among Chinese Unemployment Rate, Economic Growth and Inflation" 1 (March 31, 2012).

3 Tariq Ahmad Bhat and Tariq Ahmad Lone, "The Validity of Okun's Law: Evidences from Indian Economy," n.d.

4 Qamar Uz Zaman, Zhang Donghui, and Muhammad Imran, "Unemployment and Economic Growth of European Union: A Panel Data Analysis," *European Journal of Economic Studies* 15 (March 1, 2016), https://doi.org/10.13187/es.2016.15.292.

FDI has a strong and statistically positive result on growth, which is confirmed by literature in the field from Dabour; Hussian; Quan [1] [2] [3]. COVID has a statistically negative consequence on growth, which can be confirmed also with literature on ASEAN's growth rate during the pandemic.

MAIN DISCUSSION

From our model, the variable of interest or the IEF's overall score for the economic and entrepreneurial environment has shown a statistically significant and negative result on development. This is alarming, given how we discussed the similarity between AEC Blueprint and IEF's main themes toward a more liberalized external environment for businesses. Indeed, of four major pillars, AEC included globalization and integration into the world economy as an outlook towards the future. This plan has ASEAN planned to sign trade agreements and join economic partnerships. Furthermore, several ASEAN countries are preparing to improve their position in the global supply chain [4].

Though alarming, this result is anticipated, whilst contradicting the current state of research in the field. To our knowledge, this is the second paper on the topic of business and economic environment with an exclusive focus on ASEAN as a region. Previous papers, with bigger panel data and more countries, had never grouped ASEAN countries together. This is exactly where this study fills in the gap, as we understand the underlying homogeneity of this region will act as a background for real effects to emerge.

Based on our careful analysis and close scrutiny, the most plausible explanation to explain this negative relationship between our variables lie in the informal economy of ASEAN.

Our observation follows the logic that one-fourth of IEF scores rely on the rule of law, which has been criticized for its inconclusive impact on development. Concurrently, countries that depend on the informal sector receive negative short-term impacts from economic freedom, especially from the rule of law, and ASEAN is such a region. The informal sector is currently at the heart of the ASEAN economy, and while it might be beneficial to eliminate them for future growth, visions to reform the whole economy towards economic and business freedom might need certain adjustments to match the current state of development.

Economic and business freedom and the informal economy have been proven to have a strong negative relationship. In the recent research by Sweidan the informal economy was studied by analyzing a balanced panel of 112 countries over 7 years period [5]. Characteristics that help the informal economy grow will greatly be affected by the current concept of economic and business freedom. The author also suggested that countries with the informal sector to carefully understand their own situation, as implementing economic freedom policies will seize the life of their informal

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1 Nabil Dabour, "THE ROLE OF FOREIGN DIRECT INVESTMENT (FDI) IN DEVELOPMENT AND GROWTH IN OIC MEMBER COUNTRIES," 2000.

2 Mohammed Ershad Hussain and Mahfuzul Haque, "Foreign Direct Investment, Trade, and Economic Growth: An Empirical Analysis of Bangladesh," *Economies* 4, no. 2 (June 2016): 7, https://doi.org/10.3390/economies4020007.

3 Le Le Doan Hong Quan, "TÁC ĐỘNG CỦA FDI TỚI TĂNG TRƯỞNG KINH TẾ Ở VIỆT NAM Dự Án SIDA," accessed May 31, 2023, https://www.academia.edu/32387423/T%C3%81C_%C4%90%E1%BB%98NG_C%E1%BB%A6A_FDI_T%E1%BB%9AI_T%C4%82NG_TR%C6%AF%E1%BB%9ENG_KINH_T%E1%BA%BE_%E1%BB%9E_VI%E1%BB%86T_NAM_D%E1%BB%B1_%C3%A1n_SIDA.

4 "ASEAN Economic Community Blueprint 2025."

5 Osama Sweidan, "Economic Freedom and the Informal Economy," *Global Economy Journal* 17, no. 4 (December 2017): 20170002, https://doi.org/10.1515/gej-2017-0002.

sector. This argument is also confirmed by D'Agostino et. al as they found how an increase in economic freedom measurement results in the reduction of the shadow economy in countries with high corruption and low democracy [1]. Furthermore, evidence found how the rule of law only matched countries that encourage the concept and not necessarily countries of different structures [2]. Property rights, which are usually regarded as the key component of economic integration, rely on the assumption that it is established due to the existence of the rule of law. However, it is worth noting how the struggle for power comes into play. Property rights existed because the institution that benefits from it wanted it in the first place [3]. Another study by Berdiev et al. also found evidence of underground economy mitigation as five aspects of economic freedom increase [4].

As such, countries and regions with huge informal sectors will be at risk of trying to abruptly implement their policies toward economic and business freedom. ASEAN has been struggling to build its economy from the grassroots with a completely different set of values and institutions. With half of the region's population or 244 millions of people relying on the informal economy for living, amounting to almost 80 percent of the workforce, the ASEAN situation requires careful consideration [5]. This situation was pronounced during Covid as no protection was formally provided for these workers. Any policy targeting this group of vulnerable people, thus, should be carefully considered. Given this context, a paper by Wilson suggested a gradual path toward growth as countries resort to their own informal strengths and build themselves while reforming their environment [6].

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2 Abdul Sattar and Tahir Mahmood, "Intellectual Property Rights and Economic Growth: Evidences from High, Middle and Low Income Countries," *Pakistan Economic and Social Review* 49, no. 2 (2011): 163–86.

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CORPORATE SOCIAL RESPONSIBILITIES AND THE ROLE OF THE STATE IN GREEN ECONOMIC DEVELOPMENT IN VIETNAM

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Abstract: Corporate Social Responsibility (CSR) has emerged as an expanding global trend and is progressively evolving into a "soft" requirement for businesses amid the ongoing process of integration. In the context of Vietnam, however, this concept remains relatively nascent and has not garnered the level of attention commensurate with its growing significance. The pressing need for social responsibility has been underscored by environmental disasters and adverse consequences linked to business activities. In contemporary Vietnam, the practice of corporate social responsibility aligns seamlessly with the overarching objective of sustainable development. In facilitating the enhanced fulfillment of social responsibilities by businesses, the state plays a pivotal role in steering the economy towards sustainable development, with the advent of a green economy emerging as a noteworthy strategic direction. This article employs qualitative research methods, encompassing analytical, synthetic, and comparative approaches, to offer insights and observations on this subject. The findings of this research endeavor culminate in a set of recommendations aimed at empowering businesses to more effectively embrace their social responsibilities, with a focus on state support as a catalytic mechanism. Furthermore, these recommendations encompass measures designed to propel Vietnam towards the realization of a green economy, encompassing the establishment of requisite legal frameworks and the strategic utilization of financial resources to propel green economic development.

Keywords: social responsibility, green growth, sustainable development...

1. INTRODUCTION

Corporate Social Responsibility (CSR) is a comprehensive concept that includes various aspects such as business ethics, philanthropy, organizational citizenship, sustainability, and environmental responsibility. It's essential for organizations aiming for sustainable development to adhere to standards that ensure not only profitable business operations but also the protection of the natural and labor environment. This includes implementing gender equality, occupational safety, labor rights, employee training and development, and contributing to community development. CSR also involves activities related to social security implementation, such as humanitarian efforts and charity. In essence, CSR represents an enterprise's total responsibility for the societal impacts resulting from its decisions and business activities. It is carried out with respect for the law and commitment to stakeholders, linking business activities with the resolution of social, ethical, and environmental issues. CSR also involves the protection of human rights and addressing customer concerns. The ultimate goal is to maximize the benefits for business owners, stakeholders, and society as a whole while identifying, preventing, and minimizing any potential negative impact from business operations.

The term corporate social responsibility officially appeared when Bowen HR (1953) published his book titled "Social Responsibilities of the Businessmen" for the purpose of propaganda and calling on property managers not to infringe on the rights and interests of others, calling for charity to compensate for the damage caused by businesses to society [3]. Since then, many researchers have offered different views such as: Archie Carroll (1999) introduced a broader concept, saying that " Corporate social responsibility refers to all the economic, legal, ethical and other areas

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that society expects from a business in a given time." [5]. Matten and Moon (2004) argued that "Corporate social responsibility is a cluster concept, encompassing various concepts such as business ethics, corporate philanthropy, corporate citizenship, sustainability and environmental responsibility [14]. It is a dynamic concept and is always challenged in each specific economic, political, and social context". Today, the issue of corporate social responsibility is increasingly being studied by many people. The Organization for Economic Cooperation and Development (OECD) (2009) stated that: "Corporate social responsibility is the contribution of enterprises to sustainable development, not only the responsibility of enterprises in ensuring income for shareholders, wages for employees, products and services for customers but also responsibility for the values of society and the environment. According to the European Union (2011), corporate social responsibility "is a concept in which businesses voluntarily put social and environmental issues into one of the concerns of their business activities as well as the interrelationships of the business with related objects". In general, these concepts emphasized that corporate social responsibility was the voluntary commitment of enterprises in applying standards and rules to the management and organization of their business activities in the market, it covered all social and environmental issues and required to be incorporated in the business strategy of the enterprise.

Thus, one of the corporate social responsibilities is to protect the environment in order to develop a green economy, towards sustainable development. The term " green economy " was officially used by the international community at the United Nations Summit on Sustainable Development (June 2012) in Rio de Janeiro, Brazil. Previously, the adjective "green" was used quite a lot, associated with many activities towards sustainable development, such as green production, green consumption, green lifestyle, green products... with the main connotation is "environmentally friendly".

There are different definitions of green economy, of which the definition of the United Nations Environment Program (UNEP, 2011) in the book titled "Towards a Green Economy - Roadmap for Sustainable Development and Poverty Alleviation" most cited by scholars in Vietnam: "A green economy is one that enhances people's lives and improves social equity, while significantly reducing environmental risks and deficiencies. Simply put, a green economy is low-emissions, resource-efficient, and socially equitable". Up to now, the concept and perception of green economy is not really clear, there are many different interpretations and names. Western countries identify as green economic model; developing countries towards a green growth strategy (China with transforming its economic development mode with the connotation of green development and building ecological civilization as the focus, Thailand with the "just enough economic model ").

Based on the given text, we can infer that the green economy and sustainable development are closely related concepts. The green economy is a way of expressing sustainable development in the context of climate change, with much emphasis on environmental resources. It not only includes economic goals but also extends to social and ecological goals. In the green economy, environmental resources are considered a decisive factor for economic growth, improving value chains, bringing stability, and long-term prosperity. The focus of the green economy is sustainability in environmental resources and response to climate change. The concept of "green economy" does not replace the concept of "sustainable development," but it is increasingly recognized as a suitable model as the foundation for sustainable development. In other words, a green economy is an economic strategy to achieve sustainable development goals.

Green economic development means achieving economic growth with less fuel use, by focusing on developing industries that are eco-friendly, reducing greenhouse gas emissions to fight climate change, and aiming for poverty reduction, social justice and environmental protection. Green economy has three main aspects: 1) Environmental friendliness; 2) In-depth economic growth; and 3) Social sustainability. In detail: (i) Green economy is an economy that respects the environment, which is shown by lowering greenhouse gas emissions, especially carbon dioxide emissions, to deal with climate change - a major threat to life on earth, including humans and human society. Green economy promotes the use of renewable energy and low carbon technology as alternatives to fossil fuels. Increasing the supply of renewable energy will lower the risks of unstable fossil fuel prices, while also gaining the benefits of cutting down greenhouse gases (GHGs) since the current energy system based on fossil fuels is the main cause of climate change. (ii) Green economy is an economy that grows in depth by using and maximizing all features of natural resources with less consumption of raw materials; enhancing ecological industries through the transition to green and clean technology. Green economy guides economic development towards investing in greener technology industries, towards making production more eco-friendly, reducing the use of natural resources, boosting ecological industries and environmental services, technological innovation. To develop a green economy, it is necessary to restrict the growth of economic sectors that produce large amounts of waste, pollute, and damage the environment; to use natural resources, especially water, land and mineral resources, in a frugal and efficient way; to encourage green economic sectors to grow fast to increase the country's natural capital, and create more jobs and improve people's quality of life; to build sustainable infrastructure, strengthen technological innovation, spread cleaner production. To develop a green economy, international organizations and developed countries are initiating the movement to develop agriculture that is smart for the climate to invest in clean technology, green technology market, information technology standards, cleaner production and resource efficiency, green jobs… (iii) A green economy is an economy with social sustainability (eliminating poverty, reducing poverty, enhancing social justice). An important feature of a green economy is that it aims to provide diverse opportunities for economic development and poverty reduction without depleting the natural wealth of the nation. This is especially important in low-income countries, where the main source of income for rural poor communities is ecosystem goods and services. Ecosystems and services provide a buffer against natural disasters and economic crises.

Confronted by the challenges of climate change and the prevailing environmental pollution issues in Vietnam, the adoption of corporate social responsibility aligns seamlessly with the trajectory of the green economy, all in pursuit of sustainable development.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

Research on corporate social responsibility

Corporate social responsibility is a widely recognized concept across various sectors today. It is commonly understood that contemporary businesses bear a social responsibility that extends beyond their fiduciary duties to shareholders or investors. However, establishing a universally accepted and clear definition remains a challenge. While CSR is not a novel concept, it continues to pose a new and evolving idea, proving elusive for academics and contentious for business managers and stakeholders due to the vast array of definitions and the varied ways in which the term is employed.

Referring to the concept of CSR, some of the following authors must be mentioned: Freeman; Crane and Matten; Welford; Habisch and Jonker. However, the concept of CSR is considered to have first appeared in the 1950s (Carroll; Freeman; Carroll and Beiler; Sturdivant). "Social Responsibilities of the Businessman" (1953) by Bowen H.R is the book in which Bowen first introduced the concept of social responsibility for the purpose of propagating property managers do not infringe on the rights and interests of others and called for charity to compensate for the damage caused by businesses to society. Bowen's definition generated an in-depth discussion of CSR in the first half of the 20th century. In "A Three Dimensional Conceptual Model of Corporate Performance" (1979) by Carroll, A.B provided a conceptual model that comprehensively described the essential aspects of corporate social activities, and at the same time, answerd the following questions: (1) What were the components of corporate social responsibility? (2) How should the organization deal with social problems (3) What was the model of the organization for social responsiveness? In the book "Measuring Corporate Social Responsibility: A Scale Development Study" (2008), Duygu Turker analyzed origins, values, and reliable measurement of CSR, arguing that it reflected the responsibility of an enterprise to different stakeholders. In this publication, data was collected from 269 business professionals working in Turkey. The analysis results provided a four-dimensional structure of CSR, including social responsibility for stakeholders, employees, customers, and the government [12]. Sean Valentine, Gary Fleischman in "Ethics Programs, Perceived Corporate Social Responsibility and Job Satisfaction" (2007) used survey information collected from 313 business experts to draw the conclusion that CSR was the mediator of the positive relationship between ethical law and satisfaction of stakeholders. The results indicated that CSR fully or partially mediated the positive association between the four variables of ethics program and individual job satisfaction, showed that companies can be better if they manage employees' ethical perceptions [21].

In Vietnam, researchers have mentioned many different interpretations of CSR, but they all had one thing in common: they consider CSR not only for economic benefits but also for sustainable development, for the sake of the community. Typical in this direction are Nguyen Dinh Cung, & Luu Minh Duc (2009), in the book "Some theoretical issues and innovation requirements in state management for CSR" [10] ; Hoang Long, "Corporate Social Responsibility - Driving force for development", Trade Newspaper, No. 26/2007 [16]. These authors have demonstrated the importance of CSR to the development of enterprises in society. Also in this direction, when discussing ethical and business issues, author Hong Minh with "Social responsibility and corporate ethics",

Newspaper of Culture and Social Life, No. 2/2007, stated that ethics and social responsibility were clearly indispensable issues in business. It is difficult to convince businesses to perform well on issues of ethics and responsibility with arguments based on immediate economic benefits. Dr. Nguyen Manh Quan, in the Textbook "Business Ethics and Corporate Culture", Labor and Social Publishing House (2004) gave the concept: business ethics and corporate culture were valuable assets that make an important contribution to determine the success or failure of any business. It is a system of values, standards, and methods of thinking that greatly influence the actions of members of an enterprise. [20]

In another study, Prof. Dr. Pham Van Duc (2010) in the article "Corporate social responsibility in Vietnam: Some urgent theoretical and practical issues", Philosophical Journal No.2 [13] argued that, in Vietnam, CSR is understood according to the definition of the World Bank's Private Economic

Development Group. Accordingly, “CSR is an enterprise’s commitment to contribute to sustainable economic development through activities to improve the quality of life of employees and their families as well as the community and society as a whole, in a way that benefits both the business and the general development of society.” The author has also specified CSR into four constituent elements, including environmental protection, contributions to the social community, good performance of responsibilities to suppliers, assurance of benefits and safety for consumers; good relations with employees and the guarantee of benefits for shareholders and employees in the enterprise.

Research on green economy and sustainable development

Up to now, there have been many scientific works, topics, projects ... researchs on green economy and sustainable development. Firstly, studies on the characteristics of the green economy: The article “Green economy - the path to sustainable development of the country” [2] , Journal of Political Theory, No. 4 (2013), p.30-35, analyzed and clarified the concept, position, role and basic contents of green economic development, in which, economic development, social development and environmental protection were ensured balance and harmony, the author believed that converting to a green economic model was a strategy for Vietnam’s sustainable development. In order to successfully transform, it was necessary to carry out a combination of groups of solutions: propaganda, economic restructuring, building of a legal environment, promotion of technological innovation, development of clean energy sources, building of people’s awareness... Nguyen Hoang Oanh (2011) in the work “Green economics - Development trends of modern economic theory” [19], Journal of Economics and Development. The article introduced the general context of the world leading to the birth of the green economic model and the concepts of green economy and green economic development. The article has also given the theoretical basis of green growth such as the Kuznets curve hypothesis on the environment, environmental taxes and dual benefits, the system of environmental regulations and the Porter hypothesis. Secondly, research on green economy, economic development in Vietnam and some countries around the world pointed out the opportunities and challenges that Vietnam may meet in green economic development. Green economic development was one of the development trends of the world economy, and Vietnam was not an exception to that trend. There were a number of articles on green economy development such as: Nguyen Xuan Thang (2013), Ministerial project: “The transition to a green economy: Korea’s experience and some suggestions for Vietnam” [24]. The topic has focused on understanding and explaining the transition to a green economy in the world in the post-financial crisis and global economic recession; exploring Korea’s experience in transitioning to a green economy and draw some suggestions for transforming the growth model and restructuring Vietnam’s economy towards green development. Ministry of Foreign Affairs (2011), Report on Green Economic Development Trends in the World and Impacts on Vietnam, No. 4267/BC-BNG-THKT, Hanoi. The report provided a general concept of green economy, international perspectives and practices on green economic development, opportunities and challenges for Vietnam in green economic development[4]. Nguyen Thi Tham (2011) in the article “Green growth policy and prospects for Vietnam - Korea cooperation” [23], International scientific conference “Korea’s green growth strategy and suggestions for Vietnam”, Institute for Northeast Asian Studies, Hanoi, December 27, 2011, presented the process of developing Korea’s green growth policy and the main contents of the green growth policy such as the green growth implementation strategy, the plans to concretize the green growth implementation strategy and the main content of the country’s green growth framework law. At the same time, the article has analyzed the prospects for cooperation between Vietnam and Korea on green growth. Nguyen Quang Thuan, Nguyen Xuan Trung in “Green economy in growth model innovation and economic restructuring in the coming period" [26], Proceedings of the Spring Economic Forum (2012), co-organized by the Economic Committee of the National Assembly and UNDP in Vietnam, referring to the position of green economic development in the growth model, development possibilities and the choice of green economic development direction in the transformation of the growth model of Vietnam by presenting the concept of green economy, green growth and the position of green economy in growth model innovation and economic restructuring in Vietnam. Nguyen Trong Hoai (2012) in the article "Green growth model: Analytical framework and policy options for Vietnam", Economic Development Magazine, introduced the green growth approach, a more specific approach than the sustainable approach to growth. Based on the green growth analysis framework of the Organization for Economic Co-operation and Development (OECD), the study selected a number of measurable indicators in order to assess the current green growth status of Vietnam and from there made some policy suggestions for this new approach. Research results showed that Vietnam's economy was facing great challenges in moving towards a green growth model. These were reduced productivity in the use of inputs, the economy was less efficient, wasteful, and emit more pollutants. In addition, there were the challenges of resource depletion and degradation of living environment due to industrialization. In that not-so-positive picture, the bright spots that emerge were the improved productivity of pollutant emissions in agriculture, the significant increase in forest cover, and the improvement of clean water conditions, and initially developed and promulgated a policy framework for environmental protection through the legal system. The policy suggestion from this study was that Vietnam should emphasize the combination of various policy instruments, the coordination of actions of the whole society, and international cooperation to achieve the goal of green growth. Doan Thi Hong Van and Bui Thi Van Khanh (2013) in the article "Green growth in Vietnam's rubber industry", Economic Development Magazine, March 2013 showed the development process of the industry was increasingly revealing many inadequacies: Output was too dependent on the Chinese market – which imported more than half of Vietnam's rubber exports, there was widespread deforestation for rubber plantations, ineffective; profits in the rubber value chain were distributed improperly, losing the motivation of rubber growers, etc. The old growth model in the rubber industry was no longer suitable, it's time to switch to a new growth model - green growth. The article focused on clarifying the concept of green growth, assessing the current situation of Vietnam's rubber production and export in recent years, in-depth study of the inadequacies in the industry, on that basis, proposing a solution for green growth, creating a premise for Vietnam's rubber industry to develop sustainably [27]. Nguyen Trong Hoai & Le Hoang Long (2014) in the article "Industrial development towards green growth: A case study of the Mekong Delta", Journal of Economic Development. This study refered to a new approach to development, which was industrial development oriented towards green growth. The study assessed the industrial status of the Mekong Delta region according to the green growth approach, and at the same time evaluated the State's policies to support the green growth approach in industry [15]. Nguyen Van Huy (2011) in "Green growth and some priority orientations for Vietnam", Institute of Strategy, Policy on Natural Resources and Environment gave a general overview of the trend of green economic development and some key contents on green growth of the world. Besides, the article also gave some orientations to promote green growth in Vietnam. Pham Thanh Cong (2011) in "Green economy: orientation for sustainable development in the new century", Economic Studies, Vol 401, No 10 (2011), pp. 22-28 introduced an overview of the green economy - a new economy for the sustainable development of the world in the 21st century as well as the development trends of countries in the world and Vietnam. UNEP (2011) in the report "Towards a green economy

– A road map for sustainable development and poverty alleviation", (Translated by the Institute of Strategy and Policy for Natural Resources and Environment), Agriculture Publishing House, Hanoi, introduced the concept and new measuring tools, focused directions as well as clarified the relationship between development and environmental protection, the role of developing countries in a green economy. Information and Documentation Center (2012), Central Institute for Economic Management (CIEM), Hanoi, "Potential for creating green jobs in Vietnam", provided information on green economy, green jobs; the experience of some countries on green job creation, assessed the green economy and green jobs in Vietnam. Ngo Tuan Nghia (2013) in the article "Restructuring the growth model associated with green economic development in Vietnam", Journal of Political Theory, No. 5, Hanoi, mentioned the trend of green economic development, challenges of green economic development in restructuring the growth model in Vietnam. Ho Thuy Ngoc, Nguyen Tu Anh (2016), "Green Economy Development in Vietnam and Enterprise Participation". The article showed that currently, the Vietnamese economy was in the process of developing and opening up to the world market. Obviously, new strategies were required. The green economy could start from technological innovation and that such innovation was due to both knowledge-based labor and external assistance. It can also be hypothesized that the green economy may be pushed under external pressure on Vietnamese enterprises. This report was designed to test these hypotheses and to address the obstacles to businesses' contribution to green economic development in Vietnam .

3. RESEARCH METHODS

The article aims to explain the social responsibility of businesses and the role of the state in creating institutions and policies that guide businesses in green economic development, towards green growth and sustainable development in Vietnam. The article uses the method of analysis, synthesis and systematization of documents. The research results are based on secondary data collected from published reports, books and journals.

4. RESEARCH RESULTS

4.1. Corporate social responsibility in green economy development

Promoting green economy and green growth in Vietnam is not only a requirement in the current integration process, but more importantly comes from the internal requirements of our economy, with its weaknesses, requires a transformation of growth models. That is the low quality of economic growth, unsustainable development, weak competitiveness of the economy, low efficiency; the link between economic growth and social progress and justice is not very close and sustainable; economic growth depends heavily on investment capital and resource exploitation, generating a lot of waste causing environmental pollution; the situation of food security, social security, epidemics is complicated... Management, exploitation and use of natural resources are wasteful, ineffective and unsustainable. Some types of resources are over-exploited leading to degradation and depletion; environmental pollution is increasing, in some places it is very serious; the remediation of environmental consequences is slow and ineffective; The risk of ecological imbalance is taking place on a large scale, negatively affecting socio-economic development, people's health and life.

The 11th Party Central Committee's Third Conference has examined and identified the limitations and weaknesses in economic restructuring according to the growth model from breadth to depth, and has reached important conclusions, among which the most urgent one is to renew the growth model and restructure the economy, enhancing the quality, efficiency and competitiveness of the economy. Generally speaking, the economic restructuring process consists of three key aspects: restructuring the economic sector; technological innovation; and development governance reform. The simultaneous implementation of these three tasks aims to change the economic growth model, with the core content being to change the mechanism of resource allocation in the economy to create a basis for development. Green economy, in which green growth is a new development model pursued by many countries around the world, intends to not only reduce greenhouse gas emissions, mitigate the negative impacts of climate change, but also improve the quality of growth, change the structure of production and consumption towards sustainability and improve people's lives. Initially, green growth was an idea of integrating environmental issues into the economy, but today it has transcended that narrow concept and become synonymous with sustainable development; it is a method of economic development that is fast, effective and sustainable, while contributing to mitigating and preventing the impacts of climate change. Green growth relies on increasing investment in conservation, development and effective use of natural capital, reducing greenhouse gas emissions, improving environmental quality, thereby stimulating economic growth.

Green growth is not only necessary, but also an integral framework of the economic restructuring process in general and the manufacturing industry restructuring process in particular, in response to the requirements for innovation and sustainable development of the country in the current period. In fact, we cannot separate and isolate the economic restructuring and the green growth model restructuring as two independent steps. In the current context, it is imperative that these two processes be integrated into one to achieve the goal of economic restructuring for sustainable growth and development, and integration with the regional and world economies.

The Government has approved the National Strategy on Green Growth (according to Decision 1393/QD-TTg dated September 25, 2012) and the National Action Plan on Green Growth in 2014-2020 period and vision till 2050 (according to Decision 403/QD-TTg dated March 20, 2014) [4] to achieve the above goal. Accordingly, Vietnam changes its economic growth model to achieve low carbon use, reduce greenhouse gas emissions, and pursue a vision to 2050 issued by the Government, which defines the following primary tasks:

- Greening production: Restructuring the economy towards a shift from extensive to intensive development, reducing the use of natural resources, enhancing ecological industries and environmental services, technological innovation, applying advanced and environmentally friendly technology. Specific tasks include: (i) Greening production through restructuring, especially limiting the development of economic sectors that generate large waste, cause pollution, and degrade the environment; (ii) Using resources economically and efficiently, especially water resources, land resources and mineral resources; (iii) Developing sustainable infrastructure; (iv) Innovating technology, applying and disseminating cleaner production technologies.

- Reducing the intensity of greenhouse gas emissions per unit of gross domestic product growth and increasing the share of renewable energy use, reducing greenhouse gas emissions. Specific tasks include: (i) improving energy efficiency, reducing energy consumption in production, transportation and trade activities; (ii) switching to cleaner fuels in industries and transportation; (iii) enhancing the exploitation of new and renewable energy sources to gradually increase the proportion of clean energy sources in the national energy production and consumption, gradually reducing the dependence on fossil energy sources, improving energy security, environmental protection and sustainable development; (iv) reducing greenhouse gas emissions through sustainable organic agriculture development, limiting the use of pesticides and fertilizers that are harmful to the environment, increasing the competitiveness of agricultural production.

- Greening lifestyle and sustainable consumption: Greening production is linked to greening sustainable lifestyles and consumption patterns of society. Specific tasks include: (i) implementing urbanization policy according to sustainable planning, balanced development, and improved quality of life for people. Urban development planning and management need to meet the criteria of ecological efficiency and social security; (ii) building a new countryside with an environmentally friendly lifestyle, implementing the National Target Program on building a new countryside, integrating economic growth with environmental protection, developing education, health, culture and social justice to ensure sustainable rural development; (iii) promoting sustainable consumption and building a green lifestyle, changing consumption patterns and behaviors towards sustainability of both private, state and social consumption.

One of the paramount tenets of corporate social responsibility lies in the establishment and advancement of an economy intertwined with the principles of sustainable development. The pursuit of a green economy represents a novel trajectory within the realm of sustainable development, and its realization hinges upon the collaborative efforts of both the public and private sectors. In this regard, the state assumes a pivotal role by orchestrating and refining policy frameworks, while enterprises emerge as the primary agents responsible for the practical execution of strategies aimed at fostering green growth.

A noteworthy indicator of the resonance of green and socially responsible practices in Vietnam emerges from the findings of the Sustainable Development Report conducted by Nielsen, a global leader in market research, in 2019. This report unveiled a distinctive trend among Vietnamese consumers, with an impressive 86% of them demonstrating a readiness to allocate a higher expenditure for products and services sourced from suppliers known to exert a positive influence on society and the environment. Furthermore, consumer preferences within the Vietnamese market underscore the substantial influence of sustainability commitments. Products that are perceived as beneficial for personal health, with a 77% endorsement, as well as those composed of natural, fresh, and organic constituents, also receiving a 77% rating, hold particular sway in the purchasing decisions of consumers. Similarly, products adhering to rigorous safety standards command a 76% preference. Furthermore, products produced by companies demonstrating a firm commitment to environmental responsibility and the betterment of the communities in which consumers reside enjoy a commendable 62% endorsement [4].

Moreover, a survey conducted by the National Forest in 2017 serves to underscore the profundity of the commitment to environmentally responsible choices among consumers. A staggering 81% of customers actively opt for environmentally friendly products, while 73% of employees exhibit loyalty towards employers who are actively engaged in charitable endeavors[4]. These compelling statistics reflect not only the evolving landscape of consumer preferences but also the overarching significance of sustainability and social responsibility within the Vietnamese market.

Henceforth, businesses operating within the Vietnamese context find themselves engaged in a multifaceted competition arena that extends beyond the traditional realms of goods, pricing structures, and service quality. Notably, social responsibility has emerged as a pivotal component of sustainable competitive strategies, instrumental in cultivating a loyal customer base. From a community perspective, these enterprises grapple with a dual imperative: safeguarding the environment and community health constitutes the primary undertaking, followed by the execution of social, humanitarian, and charitable endeavors. It is imperative to underscore that the realm of green investments has garnered substantial global attention, particularly within developed nations. The challenges posed by environmental pollution, natural resource depletion, climate change, and contemporary societal issues collectively mandate a shared responsibility, with businesses, in particular, shouldering a significant role in addressing them.

Enterprises dedicated to environmental preservation, in addition to adhering to state regulations, stand to benefit from cost reduction as they mitigate expenditures related to compensation and amelioration of adverse consequences stemming from their activities. Furthermore, it is noteworthy that state regulatory bodies exhibit a predisposition toward favoring businesses that maintain a commendable track record in terms of environmental protection and consumer welfare. This alignment of interests underscores the interconnectedness of business performance, ecological stewardship, and societal well-being, reinforcing the notion that environmental responsibility constitutes a key facet of corporate operations and strategy, thereby influencing not only financial outcomes but also the favor of regulatory authorities.

The process of international economic integration has bestowed upon Vietnamese businesses a unique opportunity to expand their global footprint. However, it has also placed them within a dynamic business environment characterized by a series of transformations. These changes necessitate that Vietnamese businesses not only embrace a global perspective but also commit to operating in a manner that underscores respect for individuals and communities, while simultaneously demonstrating a heightened sense of responsibility towards the environment and society at large.

An illustrative instance of this commitment can be found in the Textile and Garment Agreement inked between Vietnam and the United States in May 2003. Under the provisions of this agreement, Vietnamese authorities are entrusted with the responsibility of promoting the application of social responsibility principles, a precondition for accessing the US market [1]. This underscores the inextricable link between business engagement and social responsibility within the context of international trade agreements.

Furthermore, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) exemplifies this overarching shift towards greater corporate social responsibility (CSR). This agreement necessitates that member countries proactively encourage businesses operating within their respective territories to voluntarily adopt CSR principles, particularly with regard to environmental considerations. These principles are expected to adhere to internationally recognized standards and validated guidelines. The integration of CSR into trade agreements reflects the growing recognition of the pivotal role that ethical business practices play in fostering international economic cooperation and sustainability.

Evidently, given the imperative to confront the intensifying competition in the contemporary business landscape, where the competitiveness of Vietnamese enterprises and the broader national economy remains relatively modest, and where international customers consistently impose stringent quality standards, it becomes unequivocally clear that the adoption and implementation of Corporate Social Responsibility (CSR) standards represent the singular path for Vietnamese enterprises to not only endure but also prosper.

4.2. The role of the state in supporting businesses to carry out social responsibility to develop a green economy

The transition to a green economy and green growth is a complex process that is influenced by many factors, among which the role of the state is crucial. The state acts as the institution builder, guiding the transition to a green economy; as the investor, focusing investment efforts to lead businesses and people towards a green economy, green consumption, investment in scientific research, and green technology transfer. The role of the state in development is an essential responsibility that belongs to the state for a successful transition to a green economy. Specifically:

Firstly, one of the key steps for the transition to a green economy and green growth is to improve the legal framework in accordance with the economic development orientation towards green growth. The improvement of appropriate institutions will have a significant role in creating an environment that fosters the greening of the economy. This requires the improvement of the economic institution by developing fully and synchronously the market elements and types of markets, including the science and technology market, so that businesses can access new research results and apply them in production and business towards greening production and consumption. In fact, a well-constructed legal framework can establish rights and create incentives to direct green economic activities, as well as eliminate barriers to green investments and regulate unsustainable, environmentally harmful behaviour, by setting minimum standards or outright prohibiting certain activities. Furthermore, the complete legal framework helps to reduce the business risk, as well as increase the confidence of investors in the market. Business operations will be more favourable when standards (especially those related to environmental protection) are clear and effectively enforced, because then, businesses will share a common competitive ground and avoid unfair competition from non-compliant enterprises. Along with the institutional improvement, it is necessary to issue a system of eco-friendly technical and economic norms for each industry and each field of the economy. Building a unified database system on natural resources, environment and climate change according to international standards, and at the same time having an appropriate mechanism to exploit, share information and effectively use the database. These are the orientations for production and business activities of enterprises and people.

Secondly, creating a mechanism to strengthen public-private cooperation and attract resources to develop the green economy. Currently, the state budget is still limited, the capital for investment in green economy development is still modest, so it is necessary to choose a cooperation method under the public-private partnership (PPP) mechanism to meet the demand for investment capital for green economic development. There are many ways to do this, maybe the state chooses a private organization that is able to create links and coordinate to participate in green economic projects or provide solutions for businesses in green production. Or the state makes an agreement with a private organization to provide technology solutions for businesses. The implementation of the public-private cooperation mechanism to socialize resources for green economic development is one of the solutions to increase the mobilization of social resources; attracting domestic and foreign investment for science and technology development, towards green economic development.

Thirdly, the State needs to have preferential policies for businesses to invest in areas that stimulate the greening of the economy. Support and encourage enterprises to apply technological innovation. On the other hand, the state needs to create favorable conditions for all economic sectors to participate in investment and development of new and renewable energy. Development and production of new raw materials, fuels and materials to replace traditional resources. Green subsidies such as price support measures, tax incentives, direct subsidies and loan support can be powerful levers for the transition to a green economy. In addition to green subsidies, it is necessary to limit spending and subsidies in areas that deplete natural capital.

Fourthly, the State should take measures to take advantage of financial support as well as technical, technological and management experience from the international community for green economic areas. To attach importance to exploiting programs and projects supported by international organizations of the United Nations and ODA from developed countries for this field. Continuing to expand and develop ideas and actively participate in activities of international organizations and movements on environmental protection, climate change response, building a green economy. In addition, the state promotes international cooperation in green economic development through the signing of international agreements and conventions on climate change.

Fifthly, the State needs to strengthen the supervision of environmental law enforcement by enterprises; supporting enterprises to access appropriate technology as well as to access preferential financial sources to invest in changing environmentally friendly production technologies; to research, develop and perfect the policy framework to implement new economic models. At the same time, the business community needs to take immediate action against climate change. Specifically: increasing the efficiency of energy consumption in production and business; gradually switch to using renewable energy sources, environmentally friendly energy; control to limit waste and emissions; increasing the use of recycled materials; participating in sharing and contributing to common initiatives.

Sixthly, to achieve the goal of restructuring the economy towards green growth, it is necessary to have an integrated approach to the goal of sustainable production, consumption and business development... all these fields are in great need of the role of the state, in which the restructuring of the industry, especially limiting the development of economic sectors that generate large wastes, cause environmental pollution. The government must develop regulations appropriately, taking into account the pillars of sustainable development such as economic, social and environmental pillars. CSR can serve as one of the "tools," or substitute for regulatory policy. Accordingly, the authorities review the master plan for socio-economic development in key regions, the planning of economic sectors, especially those that affect the environment such as energy, mining, construction, transportation and tourism must soon develop and implement action plans to ensure sustainable development.

5. CONCLUDE

Sustainable development represents an overarching imperative within our nation's developmental trajectory, wherein the harmonious integration of the three fundamental pillars of development - namely, economic sustainability, social sustainability, and the preservation of natural resources and the environment - is paramount. Within this framework, the pursuit of green growth, as a pathway towards a green economy, assumes a pivotal role. It embodies a strategic approach to economic development that is characterized by expeditious, efficient, and enduring progress, while concurrently serving to mitigate and forestall the adverse repercussions of climate change. In the ongoing endeavor to transition towards a green economy through innovation, the significance of CSR takes on heightened importance. Here, the instrumental role of the state emerges as a crucial enabler. The transformation from a traditional economy to a green economy emerges as a global trend pursued by numerous countries worldwide. Vietnam, in particular, has identified and prioritized various imperatives for establishing a green economy, necessitating a prompt infusion of investment capital into sustainable development projects. The promotion of CSR within the realm of green economic development assumes a central role, with the state playing a pivotal part in catalyzing this transformation. Accompanying this process are the requisite transformative solutions that must be implemented throughout the course of transitioning to a green growth model for development. A primary strategy involves the active cultivation of the public-private partnership model, designed to proactively access financial resources from the private sector. This strategic approach is geared towards augmenting the resources allocated to foster green growth.

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GREEN FDI – CONTEXT AND POLICY FOR THE PRIORITY IN VIETNAM

PhD. Cao Phuong Thao[1]

Abstract: Green Foreign Direct Investment (FDI) has the potential to greatly advance sustainable development. It is crucial for the enhancement of growth and innovation, through the quality of jobs it creates, and the development of human capital which further raises living standards. Many researches have recently pointed that Green FDI plays a vital role in achieving the Sustainable Development Goals, and its role goes beyond SDG8 and SDG9. The positive effects that occur from FDI can be seen in all 17 of the goals. The enhancement of growth and innovation that creates quality jobs and develops human capital can aid in ending gender inequality, with more employment opportunities being made available for women worldwide. Furthermore, an increase in human capital for the host country means that fewer people will fall under the poverty line and fewer will suffer from hunger. An increase in human capital can also increase the health and wellbeing of citizens. By analyzing the evident benefits of Green FDI for host countries that promoting for increasingly seeking more green investors, authors would like to suggest some recommendations for Vietnamese governments to become attractive destinations for sustainable investment.

Keywords: FDI, green FDI, sustainable development, investment.

1. FDI AND THE LINKAGE OF FDI AND UN'S SUSTAINABLE DEVELOPMENT GOALS

1.1. FDI and the linkage of FDI

At the 2015 United Nations Summit, world leaders made the decision to adopt the 17 Sustainable Development Goals (SDGs) as part of the 2030 Agenda for Sustainable Development. These goals, planned to be achieved within 15 years of coming into force, were built off the previous successes of the Millennium Development Goals (MDGs) and aim to create a stronger mobilization of efforts to end all forms of poverty, fight inequalities and tackle climate change. These goals create a universal call to action for all countries and recognize the importance of strategies that promote economic growth and address a variety of social needs in the fight towards ending poverty, protecting the planet and promoting peace and prosperity for all people (Figure 1).

Source: United Nation

Figure 1: The Sustainable Development Goals

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The COVID-19 pandemic has significantly slowed progress toward achieving these goals by 2030. The pandemic pushed an additional 124 million people into poverty in 2020 alone. Over 255 million jobs were lost, and the number of people suffering from hunger increased by approximately 132 million. It is evident that the COVID-19 pandemic both exposed and intensified inequalities globally (United Nation). Therefore, the need for green FDI has now become more pressing than ever, if we are to rebuild after the pandemic and attain the Sustainable Development Goals.

1.2. UN's Sustainable Development Goals

The SDGs were created to be the blueprint for achieving a better and more sustainable future for all. However, achieving the Sustainable Development Goals by 2030 is an expensive goal that requires significant investments in innovation, infrastructure and technology.

Prior to COVID-19, UNCTAD estimated that developing countries' SDG financing gap was 2.5 trillion USD per year. The impact of the COVID-19 pandemic on investment levels has now further compounded the problem. In addition, COVID-19 caused the world to reverse its progress towards the SDGs in 2020 for the first time (United Nation).

2. THE ROLE OF GREEN FDI

According to an OECD survey conducted in 2021, 37% of OECD IPAs report to contribute to the Sustainable Development Goal (SDG) 13 related to climate change (*Sztajerowska and Volpe Martincus, 2021)*. Higher shares report to contribute to broader SDGs that could also be related to green investment (Figure 2).

Source: Sztajerowska and Volpe Martincus (2021).

Figure 2: SDG's and green investment

To achieve the 2030 Sustainable Development Goals, green FDI can be channeled towards related sectors (*Sztajerowska and Volpe Martincus, 2021)*. FDI often makes a positive contribution to the host country's economy through the transfer of money, knowledge, skills, and technology that would otherwise not be present. Green FDI plays a positive role in the achievement of all 17 SD goals, but it has the greatest impact on goal 8, "Decent work and economic growth" and goal 9, "industry, innovation and infrastructure"

SDG 8: Decent Work and Economic Growth

A key benefit of FDI is the employment and economic boost it can provide to host countries.

FDI can create new jobs and opportunities that would not be available without investors creating new companies overseas. Additionally, FDI can be used as a catalyst for stimulating the economy of a host country. This will result in an environment that will be beneficial for companies, investors, and the overall economic growth of the region.

Goal 8 of the sustainable development goals focuses on promoting inclusive and sustainable economic growth, as well as full and productive employment and decent work for all (Unctad, 2015). Green FDI can be used to achieve this goal through the economic and employment boost it provides (Figure 3).

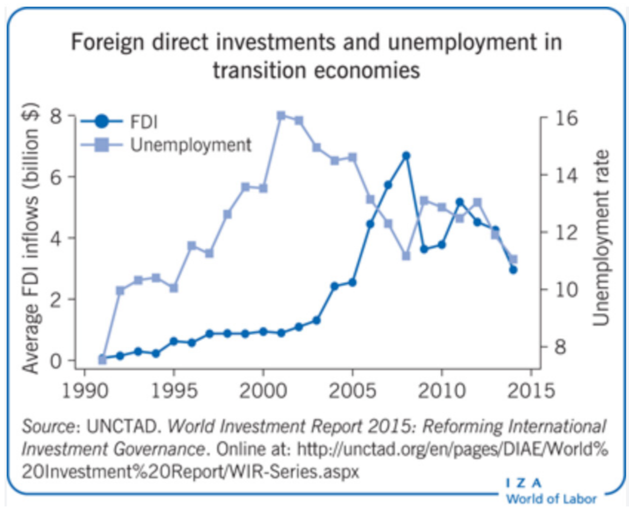

Figure 3: Growth in FDI and employment

A country's employment rate and the amount of foreign direct investment (FDI) it attracts are directly correlated. Investment Monitor studied this correlation from 2003 to 2019, and the data showed that countries with decent employment rates received more FDI projects than those with low employment rates.

Green FDI initiatives ensure that the positive impacts of FDI on employment rates and economic development in a host country will continue, an aspect crucial to the achievement of SDG8. In addition to creating standards for investing in host countries similar to those in developed markets, green FDI encourages investment into sustainable industries.

SDG 9: Industry, innovation and infrastructure

Further benefits of FDI include the exchange of knowledge, technology and skill that occur in areas it would not otherwise be possible. Consequently, the host country's education and human capital are enhanced as workers acquire these skills.

Goal 9 of the sustainable development goals focuses on building a resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation. Foreign direct investment has been a driving force for technological innovation within host countries, but these innovations are often associated with environmental pollution. However, Green FDI is changing this, with initiatives that are focused on sustainable industries and industrialization.

Green FDI promotes investment in sectors that are aligned with the achievement of the SDGs. According to Investment Monitor, Investments in agriculture, climate action, technology and services are some areas that could provide the needed growth to meet the targets for SDG9. FDI initiatives promoting green investment opportunities are targeted towards sectors like electric vehicle manufacturing, renewable energy like hydropower, modular housing, and the emerging green 3D print manufacturing industry (Bruce Takefman, 2022).

3. INCENTIVES – A PRIORITY FOR GREEN FDI

The most popular incentives used by host countries to attract new investments are fiscal FDI incentives. There are many common tax incentives related to FDI, and more that are being introduced specifically for Green FDI – these tax advantages are often a large motivator towards an investors choice to go green. According to FDI Intelligence many of the common tax incentives can be broadly separated into several major categories:

- reduced corporate income tax rates;
- tax holidays (no taxes for a period of time);
- investment allowances and tax credits (reductions in taxes that are based on the amount of investment and are in addition to normal depreciation);
- accelerated or free depreciation (allowing businesses to write off depreciation more rapidly);
- exemptions from indirect taxes, ie, import tariffs on inputs; and
- export-processing zones (special zones for exporters; enterprises in such zones are typically exempt from all indirect taxes or, in some cases, all direct taxes).

Tax incentives for Green FDI vary by host country, with some offering more than others. The EU for example is strongly committed to meeting their ambitious emissions goals, as such they are strongly encouraging the use of renewable energy and have dedicated over a third of their new €1.8 trillion budget towards sustainable development (Bruce Takefman, 2022). Companies can receive subsidies for investing in cleantech, adopting circular economy processes, or greening their supply chains. The EU has even dedicated their €1 billion Innovation Fund to support floating wind farms, carbon capture mechanisms and energy storage with the goal of making sectors such as cement and steelmaking more sustainable.

North American countries have introduced similar incentives to those of the EU, with the US government creating federal incentive programs that allow companies to potentially qualify for 10%-25% tax credits for the cost of their investment for wind, solar and combined heat, and power (Bruce Takefman, 2022). The Canadian government offers incentives through funding that support investments in projects to reduce emissions and investments that create jobs in sustainable fields. These incentives are not only in developed countries, but they are also especially encouraged in developing countries that could benefit the greatest from the effects of Green FDI. The World Trade Organization (WTO) provided five suggestions for initiatives that developing countries specifically should adopt to both make to boost sustainable development.

Green Foreign Direct Investment is clearly playing an important role in the achievement of the 2030 Sustainable Development Goals, and the positive benefits they achieve are vital to the goal of achieving a better and sustainable future for all. It is clear that Green FDI's presence in sustainable development is not going to slow down any time soon, given the high acknowledgment of the benefits it brings to host countries, as well as the new incentives that have been implemented to encourage it.

At 2020 World Economic Forum, the World Trade Organization (WTO) provided five suggestions for initiatives that developing countries specifically should adopt to both make to boost sustainable development, including:

(1) Creating a supplier database with sustainability as a factor. That means taking into account not only traditionally vital information such as business's production capacity, goods and services offered and contact information, but also information regarding the sustainability of domestic supplier operations such as the environmental protection and carbon offset activities, the social impact of the operations and information on their supply chain management.

(2) Adopting 'silent yes' mechanisms to eliminate barriers to investment because of the time it takes to obtain approval. The use of "silent yes mechanisms" could be considered after a certain period of time has passed without any concerns being raised about their application.

(3) Adopting risk-based approaches to administrative approvals with low-risk investments to be approved at an expedited rate.

(4) Creating 'investment alert' mechanisms for any investment complaints or concerns raised to be caught early on – before it negatively impacts the investment appeal.

(5) Providing greater support to investors that contribute to sustainable development.

4. INCENTIVES FOR GREEN FDI - A LESSON FOR VIETNAM

4.1. African Green FDI Initiatives

Ghana and Kenya have followed the suggestions made at the January 2020 World Economic Forum and have implemented new Green FDI initiatives within the past two years in collaboration with the Forum.

Ghana has worked alongside investors to create and adopt a set of standards for sustainable investment. They have a new category under their tax legislation for companies that meet these standards. Investors who are sustainable are provided with additional assistance, including shorter approval timeframes, separate channels for imports and exports, and comprehensive aftercare. Consequently, this supports the investors committed to Ghana's sustainable investment goals and encourages other investors to meet the standards in order to get the same level of support.

Kenya's new Green FDI initiative highlights and measures sustainable businesses and creates two new mechanisms to grow sustainable investments. First, the Kenya Investment Authority has started an ambassador program where they highlight and promote different sustainable businesses to both the public and private sectors to help them gain exposure and showcase their sustainable methods. The second mechanism is a sustainable investment metric for the country. It offers a measurement of what the standards of sustainability are and shows the country's progress towards sustainability. These mechanisms highlight the country's efforts while encouraging the growth of sustainable practices as the norm(Bruce Takefman, 2022).

4.2. Latin American and Caribbean

Latin America and the Caribbean are faced with strong consequences of Climate Change, and as such, they have been the leading areas in green initiatives to combat the effects of climate change. Before the 2020 World Economic Forum, 23 countries, led by Chile, launched a climate ambition alliance. They vowed that by 2050, they would be "net-zero" emitters and launched new FDI initiatives to achieve their goal (Bruce Takefman, 2022). These governments estimated that they would need $77 billion before 2030 to meet their goals, and their public investments would only cover 25% of it. To ensure they would reach their target they implemented new Green FDI initiatives to encourage investment into green projects that would fulfill their sustainable development goals.

However, these countries found that when it came to green projects, investors wanted transparency regarding where their investments were being used and the contributions their investments were truly making. In response they launched the Green Bond Transparency platform, which allows the investors to track their investments and see exactly where and how they are being used. This guarantee of transparency attracted numerous investors and helped the Latin American and Caribbean countries to issue $5 billion of green bonds within the first year of the platforms launch.

Green FDI initiatives are rapidly gaining traction across the globe, with developing countries implementing them at a rapid pace. For developing countries, foreign direct investment has always been a key tool for growth, and now, in recent years, the benefits are expanding to make a sustainable future possible (Bruce Takefman, 2022).

5. GREEN FDI IN VIETNAM – STRATEGY AND POLICY

5.1. Vietnam's FDI Strategy for 2018-2023 period

Vietnam's Ministry of Planning and Investment, with the assistance of the World Bank, is currently drafting a new FDI strategy for 2018-2023 focusing on priority sectors and quality of investments, rather than quantity. The new draft aims to increase foreign investment in high-tech industries, rather than labor-intensive sectors. Manufacturing, services, agriculture, and travel are the four major sectors in focus in the draft.

Sectors in focus

The four major sectors in focus are:

- Manufacturing – It includes high-grade metals, minerals, chemicals, electronic components, plastics and high-tech;
- Services – Includes MRO (maintenance, repair, and overhaul) along with logistics;

- Agriculture – Includes innovative agricultural products i.e. high-value products such as rice, coffee, seafood, milk;
- Travel – High-value tourism services.

5.2. Investment priority

The draft prioritizes FDI investments on a short-term and medium-term basis. In the short-term, industries with limited opportunities for competition will be prioritized.

Industries include:

- Manufacturing/Production – Automotive and transport equipment OEMs and suppliers;
- Environmental-friendly technology – Water conservation, Solar, Wind investments.

In the long-term, the emphasis is on sectors that focus on skills development, including:

- Manufacturing – Manufacturing of pharmaceuticals and medical equipment;
- Services – Services include education and health services, financial services, and financial technology (Fintech);
- Information technology and intellectual services.

Foreign direct investment into Vietnam rose by nearly 7 percent year-on-year to USD 10.55 billion in January to July 2019. In addition, FDI pledges for new projects, increased capital and stake acquisitions - which indicate the size of future FDI disbursements – surged from a year earlier to USD 20.22 billion. The manufacturing and processing industry are set to receive the largest amount of investment (71.5 percent of total pledges), followed by real estate (7.3 percent) and wholesale and retail sector (5.4 percent). Hong Kong was the biggest source of FDI pledges in the first seven months of 2019 (26.9 percent of total pledges), followed by South Korea (15.5 percent) and China (12.3 percent). Foreign Direct Investment in Vietnam averaged 6.35 USD Billion from 1991 until 2019, reaching an all time high of 19.10 USD Billion in December of 2018 and a record low of 0.40 USD Billion in January of 2010.

Majority of the foreign investments in Vietnam are from Korea, Japan, and Singapore. Rather than been over-dependent on Asian countries, Vietnam has to promote itself further and increase investments from the EU, US, and other countries outside Asia-Pacific. With the EU-Vietnam FTA and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), Vietnam has an opportunity to increase investments from countries outside Asia (*Vietnam Briefing)*.

5.3. Recommendations

Context for encouraging green growth strategies for Vietnam's industries

Vietnam is one of the countries most affected by climate change, natural disasters, public health challenges, and other external factors. However, the country is also continuing the momentum of innovation, accelerating the transformation of the growth model, promoting quality and efficiency, and doing its best to recover from the pandemic. With that in mind, in the National Green Growth Strategy for the 2021-2030 period with a vision to 2050, ambitious goals to push

Vietnam's sustainable development to greater heights are high-lighted:

The strategy was officially launched just before the United Nations' COP26 in Glasgow, once again highlighting Vietnam's strong commitment via practical actions on localizing greenhouse gas (GHG) emission reduction targets in harmony with sustainable development goals, and restructuring the economy in association with model innovation growth and social justice. Green growth is an important method for sustainable development, directly contributing to the reduction of emissions towards being a carbon-neutral economy in the long term.

Under the strategy, we could limit economic sectors that generate large amounts of waste and cause environmental pollution and degradation, as well as create conditions for the development of new green production industries. Furthermore, we aim to promote the fast development of green economic sectors to create more jobs, increase incomes, and enrich natural capital. Businesses are also encouraged to focus on the application of green technologies, best-practice management and monitoring systems for production activities to save natural resources, reducing GHG emissions, and improving the ecological environment.

One of the key themes in the prime minister's decision is that Vietnam recognizes green growth as an essential approach to ensure sustainable development and improve the quality of people's lives, leaving no-one behind. There are some specific objectives in terms of reducing the intensity of GHG emissions per unit of GDP. For targets towards 2030, Vietnam is set to reduce the intensity of emissions per unit of GDP by at least 15 per cent compared to 2014. Towards 2050, we aim to reduce the intensity by at least 30 per cent compared to 2014.

More specifically, some key targets towards 2030 might be noted, such as primary energy consumption per unit of GDP during 2021-2030 period to reduce by 1-1.5 per cent per year; the proportion of renewable energy over the total primary energy supply to reach 15-20 per cent; the digital economy aiming to reach 30 per cent of GDP; the proportion of forest coverage to be stabilized at 42 per cent; and at least 30 per cent of the total irrigated upland crop area to adopt advanced, water-saving irrigation methods.

All industries are encouraged to implement a circular economic model and digital transformation to improve growth quality, promote competitive advantages, and minimize adverse environmental impacts. On the other hand, under the scheme, people's quality of life and resilience capacity towards climate change would be increased.

Specific recommendations made in the report for Vietnam in the coming time

Previously, we considered China as the largest market in the world and it was very difficult for Vietnam to compete with China in terms of technology as the latter was superior in high-quality human resources, market size, and income per capita. That country has an attractive strategy for international investors. However, more opportunities have recently come to Vietnam. Due to the U.S.-China trade war and China's conflicts with the EU and some G20 countries, the Chinese government attaches importance to the domestic market, encouraging local enterprises to invest at home. Then came global supply chain diversification as part of the "China plus one" trend. The

U.S., Japan, and the EU encourage businesses to move production out of China back home or to neighboring countries like Vietnam and Indonesia. Thus, we see good opportunities. Chinese enterprises may come to invest in Vietnam, which has good relations with the U.S., EU, OECD, and 15 free trade agreements. Vietnam should take advantage of these opportunities.

However, there are two major competitors - India and Indonesia. India's population is about to surpass China's and India's technology is generally of very high quality. India also has abundant human resources, training the most engineers in the world, while wages are much lower, at about 60-70% compared to Vietnam. Indian Prime Minister Narendra Modi's policy is to attach great importance to global integration, and strongly promote investment ties with the U.S. and the EU.

In ASEAN, Vietnam's competitor is Indonesia, whose population and GDP are three times higher than Vietnam. The Indonesian president also attaches great importance to foreign investment and the country has good relations, receiving a lot of investment from the EU and the U.S. For the "China plus one" trend, Indonesia offers many attractive policies to lure FDI. Vietnam has its own challenges domestically in attracting new-generation FDI, including an incomplete legal system, loose law enforcement, and inadequate incentives for MNCs. That is to say, it's hard to retain tech giants if changes are not made. In addition, high-quality personnel is another challenge. And it is still not very convenient for foreign experts to enter Vietnam.

Next is technology. Vietnam attaches great importance to technology and has made great achievements in research and development. Major Vietnamese companies like Hoa Phat, Sungroup, and Vingroup have set up R&D centers, but this is still not enough to promote our transition to the digital economy.

Finally, there are complicated administrative procedures and many types of sub-licenses. They have harmed investor confidence in Vietnam. The country's infrastructure has already developed, but more modern infrastructure facilities are still needed like high-speed railways. Our waterways are still undeveloped, and our seaports are not yet part of a complete logistics system. We're still weak in digital technology and big data, while better policies are needed to encourage residents and businesses to join the digital transformation.

In conclusion, Green economic development has become an increasingly clear trend globally. However, depending on the scale and level of economic development in each country, the speed of transition towards a green economy is very different. For Vietnam, the basic conditions and foundations to move towards a green economy are quite clear, however, we are only in the first phase of a long road ahead. Along with the strong determination from the Government in moving towards a green economy, Vietnam is facing a clear opportunity in attracting FDI capital, especially for investment projects with high technology, less impact on the environment from developed countries. In fact, investors from developed countries are increasingly concerned about environmental and sustainability issues when making investment decisions in Vietnam. What is needed for Vietnam today is a complete legal framework that is comprehensive but also specific enough to ensure the implementation of green economic goals. These legal frameworks need to guide the transformation of production and business models and the application of advanced technology and production processes. Besides, there needs to be a clear corridor with preferential policies to encourage businesses to develop green economy and related fields.

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THE ROLE OF ACCOUNTANTS IN THE CONTEXT OF INDUSTRY 4.0

Ph.D Tran Thanh Tam[1]

Abstract: Big Data and Artificial intelligence (AI) technology are considered as one of the important and core technologies of Industry 4.0. The process of organising information in accounting work is strongly influenced by Industry 4.0 because this revolution will completely change this implementation process in businesses. The article focuses on analysing the impact of Artificial Intelligence and Big Data on accounting nowadays and in the future in terms of organisational personnel apparatus, human resources, the degree of application of information technology, and the role of an accountant. Since then, the author has contributed practical notes to future accountants to improve the quality of accounting work, especially management accountants in business management, which is consistent with the development of AI and Big Data.

Keywords: Industry 4.0; Artificial Intelligence; Big data; accountant; management accountant.

1. INDUSTRIAL REVOLUTION 4.0 AND THE IMPACT ON VIETNAMESE BUSINESS ACTIVITIES

Industry 4.0 was first introduced in 2011 at the Hannover Industrial Fair in the Federal Republic of Germany. The introduction of this concept has spurred competition in technological development in other industrialised countries such as the US, China, India, Japan, etc. "Industry 4.0" refers to high-tech strategies, the technologisation of manufacturing and computerisation without human involvement.

At the world's largest economic forum held in 2016, Mr Klaus Schwab, German professor and president of the Davos World Economic Forum, defined the Fourth Industrial Revolution as "a term phrase for organisational technologies and concepts along the value chain" that accompany physical systems in cyberspace, the Internet of Things (IoT) and the Internet of Services (IoS) (Munirathinam, 2019). This concept has completely changed the way that people used to live, work and communicate with each other. Digital technology applied to optimise production processes or production methods is the essence of Industry 4.0. It includes physical networking, the Internet of Things, Artificial intelligence (AI) and cloud computing.

Artificial Intelligence (AI) and Big Data (Big Data) are among the modern technologies that are developing dramatically along with other technologies such as the Internet of Things, cloud computing, Virtual Reality (VR), etc. This technology has transformed the real world into a digital world with experiences that humans have never had before. This is the content of the fourth industrial revolution (Industry 4.0); this digital revolution will strongly promote the development of the digital economy and e-commerce worldwide. Big Data and AI are considered the important and core technologies of Industry 4.0. Accounting works also follow the rules of this development because information technology is widely applied in accounting. The process of organising information in accounting is strongly affected by Industry 4.0 because this revolution will completely change this implementation process in businesses. Specifically, the study focuses on analysing how the influence of Artificial Intelligence (AI) and Big Data technologies will impact accounting in aspects: organisation of human resources, level of application of information technology, the role of accountant... From there, the study contributes practical notes for accountants in the future to improve the quality of accounting, especially management accounting in business management, in line with the development of AI and Big Data.

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2. THE IMPACT OF INDUSTRY 4.0 ON THE WORK OF ACCOUNTANTS

Industry 4.0, with the development of the Internet increasingly popular and widely covered in territories applying digital technology, has impacted many professions, especially the accounting profession.

According to the National Electronic Authentication Centre, currently, 100% of businesses have used digital signatures, mainly in services such as tax declaration, customs, social insurance ... In addition, to assess the application of digital technology in the management of production and business activities at enterprises in Vietnam, the Ministry of Industry and Trade of Vietnam surveyed 3,000 enterprises in 2022. In particular, accounting finance software (91%) and human resource management software (57%) are the two most commonly used software by businesses. Some other software, such as customer relationship software (33%), supply system management software (31%), and business management software (22%) are also used by businesses. Through the above figures, it can also be seen that financial accounting in the management of production and business activities at enterprises is the top concern of managers and invest in digital technology to be able to catch up with the development trend of Industry 4.0 (Ministry of Industry and Trade of Vietnam, 2023).

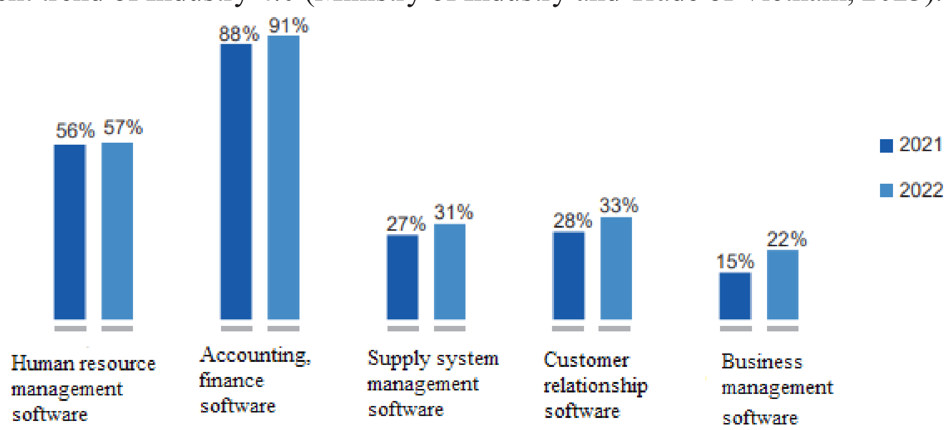

Figure 1: Popular software used by businesses

(Source: E-commerce Association Trade Index Report 2023)

However, preparations for the transformation from Industry 4.0 on a large scale for all businesses in Vietnam are limited. According to statistics conducted by the Ministry of Industry and Trade and the United Nations Development Programme (UNDP) for nearly 2,700 enterprises in 18 industry groups in terms of readiness to access the achievements of the 4.0 Revolution, up to 82% of enterprises are in new positions; 61% of businesses are still on the sidelines, and 21% of businesses are just starting. The handbook cites the report on the readiness of manufacturing enterprises, "Assessment of readiness to approach the industrial revolution 4.0 of enterprises in Vietnamese industries", conducted by the UNDP, the Ministry of Industry and Trade of Vietnam and partners, showing Industry and Trade in general has not been prepared for the industrial revolution (Industry 4.0) with the industry-wide readiness level of 0.53 points on a 5-point scale. (Ministry of Industry and Trade, 2022).

The development of Industry 4.0, in which AI and Big Data are the core technologies has developed dramatically over time. They gradually replace human labour in some special positions in the working environment, including manufacturing, agriculture, services or trade. The advent and gradual replacement of human manual labour is gradually pushing people to develop professional knowledge and skills to find new careers. AI and Big Data create products with high labour productivity, accuracy, standardisation and low cost, even with products with much more complex characteristics that only AI and Big Data can do. The effectiveness of AI and Big Data is gradually widely recognised in many areas of life and the economy.

Big Data is defined as data sets with huge and complex volumes. Traditional software is no longer capable of processing these large numbers in a short period; instead, the advent of artificial intelligence will solve this problem. AI is capable of gathering, analysing, and processing a large set of information at the same time with the most accurate results. Artificial intelligence, or Artificial Intelligence (AI), is a branch of computer science. This type of intelligence was created so that computers can automatically simulate human behaviour through the use of machine learning. Computers with AI technology know how to communicate with humans, understand the language, voices and actions of the opponent to interact, and know how to think, reason, and analyse.

While there is no denying the effectiveness of AI and Big Data, they cannot replicate human intelligence. That is the limit of AI and Big Data. Now, humans are creating them, understanding them and manipulating them with a wonderful combination of machines and humans.

AI and Big Data have also had a very early impact on business and accounting. Process automation and AI are technologies that have an earlier impact on the accounting field in general and the accounting profession in particular (Oanh, 2020). They are capable of handling a huge amount of accounting operations in a short period. They can help businesses produce the metrics that managers need for quick decision-making. Since then, they have replaced some of the job functions of accountants, such as processing figures, preparing reports according to specific requirements, etc.

However, the application of AI in accounting is still in its early stages. Accounting includes stages such as Collecting, processing, analysing and providing information. However, according to the current 4.0 technology trend, all these stages can be replaced by machines. Technology will have an impact on making the work environment change from manual to automated. AI and Big Data will fundamentally change the way of performing accounting tasks by applying electronic documents, applying automatic processing software programs, data synthesis and bookkeeping, and implementing data inspection methods in a computerised environment. With the application of new technologies, data will be stored in large volumes, without limits, automatically backed up to create copies of data to help protect data in case of system failure, data loss or data destruction. Accounting does not take too much effort in classifying documents, handling each economic transaction, and recording accounting books in a certain order, but the concern is to present financial statements and provide financial information according to the most common standards.

Skoulding (2018) không thấy trong tài liệu tham khảo also affirmed that if in the past, the work of accountants and auditors was associated with accounting books and with predetermined processes, in the digital age, the emergence of intelligent accounting software applying artificial intelligence will gradually replace those jobs.

AI and Big Data can process data quickly, but in fact, businesses still need accountants to analyse and interpret AI data as well as provide consulting services. Instead of replacing the role of an accountant, AI is aiding in the tasks accountants are performing efficiently. In a recent study, accountants spend 66% of their time processing documents, compared to 11% of the ideal model. To achieve this ideal model, accounting must be supported by technology. AI technology helps accountants solve manual and repetitive tasks, as well as with fast processing speed, Big Data and AI for quick data sets. Accountants will have time to perform tasks related to strategic management or data analysis. With manual tasks with the help of AI, accountants can use that data to analyse to support decision-making in the most logical way and in real time. Information is provided promptly and immediately, supporting management decisions in assessing past operations, controlling current operations, and planning for the future. In addition, AI will improve the accuracy of information and reduce accountants' liability risks.

At the seminar "Artificial Intelligence and Digital Breakthrough", when discussing the future of the accounting and auditing profession in the era of Artificial Intelligence - AI, Ms Kirstin Gillon said: "AI will greatly change the role of accountants - auditors in the future. AI will help accountants focus on the true values of this profession. The role of accounting and auditing experts in the era of artificial intelligence is not only to record books but to make accurate decisions and help businesses prosper, as well as ensure the accountability of those involved" (Thanh, 2018).

Also at this seminar, Mr. Vu Ngoc Hoang, software solution architect of (International et al.) IBM Vietnam gave remarkable predictions about the accounting profession in the digital future in his presentation on the topic "Digital labour - what will the future of work look like" (Ministry of Industry and Trade of Vietnam, 2018). According to him, up to 66% of SMEs will replace the services that accountants are performing with cloud services. If personnel cannot adapt to this technology, up to 50% of businesses agree to replace personnel accordingly. The software will replace simple and manual, repetitive tasks such as bookkeeping, preparing financial statements, salary reports and year-end financial analysis reports.

The author of several books and radio shows, "The Real Desire of the Customer," James Evangelidis, also argues that advanced technology will help accountants eliminate some businesses but will also create new jobs. This expert said that accounting practitioners should not worry too much because these advanced technologies will make their work faster and more efficient. They help accountants perform accounting operations well, comply absolutely and eliminate all errors in the process, as well as prevent tax evasion (Oanh, 2020).

Thus, AI and Big Data do not replace the job position of accountants, but they help support the tasks of accountants most effectively and effectively, bringing many benefits to businesses. However, it is necessary to have a good combination of accountants and the use of these advanced technologies for accounting to be truly effective.

In short, accountant's work will be affected by AI and Big Data technologies in the following things:

About data storage: Big data (also known as cloud technology) helps store real-time information that arises in huge volumes and is not limited in memory as before, limiting risks such as damage or data loss.

About data analysis and processing: Besides recording highly standardised operations or events, artificial intelligence can also replace humans in some complex operations such as pricing, provisioning, etc. Standardised, iterative records will be technologies to increase operational efficiency. The development of advanced technology will provide more modern and efficient tools and software in data analysis in addition to conventional ones.

3. THE ROLE OF ACCOUNTANTS IN THE CONTEXT OF INDUSTRY 4.0 - RECOMMENDATIONS AND DISCUSSIONS

The application of technology in businesses in Vietnam is also only in the early stages; most businesses still use outdated technology. Therefore, in order to catch up with the development and application of high technology, those working in the field of accounting, the profession that applies technology most widely, need to pay attention to improving their qualifications and skills in applying for advanced software and data analysis tools that support accountant's work most effectively in the new era.

Accountant's work is highly compliant, so technology will have a stronger impact; the software will process the work faster than humans. According to James & Lee (2016), accountants in the industrial 4.0 need to focus on skills in analysis, planning, consulting, and financial management ... rather than bookkeeping jobs, particularly in management accountants. Therefore, management accountants are also increasingly asserting their important position in the organisation because accountants, from performing technical operations, have shifted to the role of solving strategic problems through collecting, analysing and processing specific information to support each decision of business administrators. They have become part of the management apparatus. However, this technology only solves one basic stage of collecting and calculating information, while the intention of processing or processing depends largely on the role of the performer. Management accountants must be able to create business value from data. They must be knowledgeable about the strategy of the business and the short-term and long-term goals of the organisation to create value from the data that has been collected and processed. Management accountants act as a manager in the business. They must be able to connect with all departments in the business and grasp all information from events inside and outside the business to support the analysis of information provided to those who need to make decisions. Management accountants, as consultants and strategic advisors to decision-makers, must be able to use processed data sheets to send a message to managers.

To do this, accountants need to focus on improving their capacity to meet the practice conditions in the period of international technology. Each individual needs to access the technological achievements of Industry 4.0, update knowledge and improve the level of using artificial intelligence for their work. The good combination of humans and artificial intelligence will create the highest work efficiency. In addition, with the current development of technology, the role of accountants has gradually changed from manually performing compliance operations to solving customers' questions and concerns, advising them on business insights, and offering specific solutions for each situation. Therefore, to do this, accountants also need to equip social media skills to work with customers and develop relationships.

Professional ethics is also an extremely important issue for the accounting profession. Confidentiality and truthfulness in reporting are essential, helping to protect shareholder and organisational interests, as well as helping to enhance customer and shareholder value. As manual and technical tasks are replaced by technology, accountants must take on more advanced strategic roles. Mastering technology in their accounting work is an essential task for accountants in the digital era.

4. CONCLUSION

Vietnam is in the stage of deep integration with the world, so the impacts of the Industrial Revolution 4.0 will have significant effects on all fields and industries. Accounting and auditing are highly compliant industries, so that the industrial revolution will have a stronger impact on this industry and human resources in the future. Under the impact of digital technology, accountants must have high professional qualifications, appropriate skills in the technology age and professional ethics to meet the requirements of accounting and auditing careers in the digital age.

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ASSESSING MARKETING COMMUNICATION EFFECTIVENESS AT UNIVERSITIES IN THE DIGITAL ERA: AN EMPIRICAL STUDY AT UNIVERSITY OF FINANCE AND ACCOUNTANCY

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Abstract: *This study aims to assess the effectiveness of marketing communication activities at universities in the digital era. In the empirical study, the data were collected from 396 students studying courses at the University of Finance and Accountancy (UFA). The data were analyzed descriptively. The dependent variables included Aware, Appeal, Ask, Action, and Advocate (5A). The data were calculated using Purchase Action Ratio (PAR) and Brand Advocacy Ratio (BAR). The data were calculated based on the criteria of 5A. The findings show that the level of UFA brand awareness is quite high, the service usage rate is relatively high, but the level of brand support is not as expected. Based on the research results, some solutions are proposed to increase the marketing effectiveness, especially brand communication in the near future.*

Keywords: *marketing communication, effectiveness, university, 5A model.*

1. INTRODUCTION

University education is a pedagogical environment of higher education with an in-depth level of knowledge according to the major or profession that students choose and training at the university level is only for those who have real needs and enough knowledge and social ability to learn. In Vietnam, the 2019 Law on Higher Education has increased the autonomy of higher education institutions, especially in enrollment. Therefore, marketing communication and brand promotion activities have become more necessary and important than ever in the development strategy of higher education institutions. Clearly defining the role of marketing activities will create right and ahead of time direction, help the university plan attractive and well-invested visual communication strategies, and increase the ability to interact with stakeholders and customers inside and outside the university. Regarding educational development in the current context of digital transformation, choosing a university, choosing a career, understanding the university, understanding the profession are of great concern, many university professions are widely known in society.

Therefore, in the period of higher education innovation, scientific research using modern marketing effectiveness indicators in the context of 4.0 to evaluate the current state of enrollment communication is extremely essential. Simultaneously, this study applies the 5A model with an in-depth analysis of indicators to evaluate the implementation process instead of just evaluating the implementation results, in order to find the good and bad points of this activity. By actively promoting enrollment communications, identifying the reasons why brand purchase action (PAR) and brand advocacy (BAR) indicators increase or decrease, the power of communications is effectively exploited. This is a study expected to bring a new approach in evaluating the effectiveness of marketing communications 4.0, especially in the field of educational service. It

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not only contributes to enriching the source of knowledge related to marketing management in teaching and learning, but also serves as a basis for building important solutions for the university to reach development goals at a new level in the future.

2. THEORETICAL BACKGROUND

The concept of promotion has developed in recent years. Traditionally, promotion has always been a one-sided affair where companies send messages to customers as audiences. The rise of social media allows customers to respond to these messages. This also allows the customer to talk about the messages with other customers. Digital marketing is not intended to replace traditional marketing. Instead, the two must coexist with roles that are exchanging along the customer's path. One of the earliest and most widely used frameworks to describe customer pathways is AIDA (Attention, Interest, Desire, Action). Derek Rucker from Kellogg School of Management offers a modification of AIDA called 4A (Aware, Attitude, Act, and Act again) (Kotler et al., 2016).

In the digital era or connectivity changes in the customer's path according to the changes formed by connectivity. In this era, the customer path is rewritten as 5A, namely:

1) Aware, at this stage the customer is passively exposed to a long list of brands from past experience, marketing communications, and/ or advice from others. Company driven advertisements and word of mouth by other customers are also sources of brand awareness;

2) Appeal, in a highly competitive industry, brand appeal must be stronger. Some customers respond more to brand appeal than others. An example is young people are usually the first group to respond;

3) Ask, at this stage the customer usually follows up by actively researching brands that are of interest to them to get a lot of information from friends and family, the media, and/ or directly from the brand;

4) Act, if you feel confident with further information in the questioning stage, the customer will decide to act. The customer's desired actions are not just limited to purchases. After purchasing a brand, customers interact more deeply through consumption and use and post-purchase services;

5) Advocate, in this stage there are 3 levels of consumer loyalty. Level 1 is if consumers continue to use that brand called retention. Level 2, if the consumer makes a repurchase called repurchase. The highest level is when consumers are willing to risk their personal reputation to recommend the brand. This stage is called loyalty which is the same as advocacy (Tampi and Pamungkas, 2018).

All the distinctive features of marketing that apply to the service sector apply equally to the higher education sector. Therefore, the concept of customer in higher education services is understood similarly to all other business relationships (Sax, 2004; Svensson and Wood, 2007). Accordingly, customer is the name given by a product or service provider to an individual or organization purchasing that product (Santesmases, 2004).

Initial research begins to evaluate the most appropriate terminology to qualify recipients of services provided by the university. The concept of customer in higher education can henceforth be understood as an individual, or organization, who makes a direct payment to a university in exchange for providing a service, such as receiving classes or research on certain topics (Cliff, 1994). However, there is a view that graduates are the products of higher education institutions and employers are considered customers (Kotler and Fox, 1985; Conway et al., 1994). The outstanding customer difference in higher education lies in the recognition of ownership of the core product. According to Svensson and Wood (2007), ordinary product buyers gain ownership by paying the price, while college students do not automatically receive a degree through paying for enrollment, because they must acquiring knowledge is recognized. For university services, there are many parties who directly or indirectly receive some benefits without having to participate directly in the transaction, or even without having to make any payments to receive those benefits (Brennan and Bennington, 1999).

For other approaches, the expansion of the concept has led to the choice of the more appropriate term “stakeholders”. These are customers who are individuals or organizations that make indirect payments to educational institutions, as they also indirectly receive a range of services. For example, the indirect exchange that takes place between universities and the training of qualified personnel that companies will benefit from, or the investment in education that generates technological innovations. Technology will be beneficial for business development and social welfare, etc. Therefore, many studies have classified customers in universities into different groups including: students; student’s family; social community; organization’s personnel; public and government agencies; organizations and current and potential employers (Greenland, 1994; Bristow, 1998; Sahney et al., 2004; Marzo et al., 2007). Different proposed classifications of customers in higher education use different criteria. Among them, the most frequently used criterion is the distinction between internal customers and external customers, whereby internal customers are considered those who have a close and direct relationship with the university and those who work to achieve external customer satisfaction. The existence of many diverse results in the work developed by universities, as well as in the process of achieving them, means the presence of many customers of these institutions.

The most basic goal of communication activities is to increase public reputation and awareness of the school (Kittle, 2000). In the market economy, competition in the field of higher education is increasingly fierce among universities, so communication activities of organizations are increasingly focused; the importance of communication activities has been clearly demonstrated through the establishment of specialized communication departments at universities as well as increased budgets for marketing activities.

Kotler & Fox (1995) believe that the communications department at higher education institutions, in addition to performing the following tasks: preserving and enhancing the promotion of the school’s image, providing information about training majors, attracting prospective students is encouraging them to apply. There is also a need to build long-term relationships with former students and strengthen their support, attract donors and address misinformation about the school. To carry out these activities, organizations need to use tools to convey information appropriately. In the field of education, tools for communicating with the public of educational organizations include: advertising, public relations, direct marketing and promotions (Ivy, 2008). Meanwhile, according to Nigamananda Biswas and Vipin Bihari Srivastava (2010), communication in education includes: advertising, public relations, word-of-mouth marketing, point-of-sale marketing, direct marketing and websites. These two authors also emphasize that educational organizations need to focus mainly on advertising, direct marketing through websites and word of mouth marketing.

Kotler (2012), Smedescu and colleagues (2016) also provide 8 main commonly used communication tools including: advertising, sales promotion, events and real experiences, public relations, direct marketing, interactive marketing, word of mouth marketing and personal selling. Tools applied in communication activities at higher education institutions with specific activities in recent years (Hanover, 2014): advertising, sales promotion (tuition exemptions, grants, scholarships,..), events and practical experiences (school tour events, charity events, exhibitions, job fairs,..), public relations (seminars, workshops...), direct marketing (email, phone), interactive marketing (via website, social networking sites), word of mouth marketing and personal selling.

The effectiveness of professional marketing communication activities in the University of Finance and Accountancy (UFA) will be evaluated using the marketing productivity indicators:

Purchase Action Rate (PAR) and Brand Advocacy Ratio (BAR). They are metrics to measure the productivity of a marketing strategy. Both of these indicators are consistent with 5A. PAR is a metric that measures how well companies convert brand awareness into purchases. Meanwhile, Brand Advocacy Ratio (BAR) is a metric to measure how well an organization converts brand awareness into brand advocacy (Kotler et al., 2016). These two simple indexes are modeled from the index that financiers use to measure financial situation such as Return On Equity (ROE), to measure profitability per dong of fixed capital in a joint stock company. ROE helps shareholders track the "effectiveness" of the money they have invested. Likewise, PAR and BAR allow marketers to measure the effectiveness of their investment, specifically the process of creating brand awareness.

3. RESEARCH METHODOLOGY

This was a descriptive quantitative study. The statistical analysis used was quantitative descriptive analysis by describing in detail the problem being examined based on the data obtained. Data were obtained through questionnaires that had been filled by respondents. The location of the study was conducted at UFA, Quang Ngai province. The study was conducted in June 2023.

The population in this study was current UFA students with the sampling technique used was random sampling. A total of 400 people were selected for this study using Slovin formula with a margin of error of 0.05. The variables in this study were Aware, Appeal, Ask, Action, and Advocate (5A). As follows, Aware (A1) was the awareness of students about UFA information; Appeal (A2) was the interest of students for UFA information; Ask (A3) was student who will ask about UFA information; Act (A4) was student who become official UFA student; Advocate (A5) was student who will encourage friends or relatives to go to UFA (see in Table 1).

The data were collected through questionnaires survey (see in Appendix). The exclusion criteria were students who did not have access to UFA's promotional information sources. Analysis of the data used is quantitative descriptive data analysis by describing in detail. Data obtained through a questionnaire was used to find out the indicators of 5A (Aware, Appeal, Ask, Act, Advocate) which were the variables in measuring the effectiveness of marketing communication activities.

The data obtained is then analyzed by calculating the total the answer. From these data, the percentage of each indicator is calculated using the following formula:

$$An = \frac{\text{Total value of An}}{\text{Total expectation value}} \times 100\%$$

Information:

An: The value of variable n

A1: The value of Aware variable

A2: Value of Appeal variable

A3: Value of Ask variable

A4: Value of Act variable

A5: Value of Advocate variable

The questionnaire (Appendix) was built on the theoretical basis of the 5A model of Kotler et al. (2016) with two observation groups: an observation group to measure the value of variables and an observation group to serve In-depth interviews to support analysis of conversion rates between stages of the research model.

To strengthen the results of the study, PAR (Purchase Action Ratio) and BAR (Brand Advocacy Ratio) measurements were calculated based on the 5A criteria after the conversion rate of each variable was also calculated.

Table 1. Measurement model

Variable	Items	Purpose
Aware (A1)	1.1: When mentioning the name of a university in Quang Ngai, what comes to mind first? 1.2: When you mention a university training in Economics in Quang Ngai, which school do you think of? 1.3: When you think of a public university under the Ministry of Finance in Quang Ngai, which one comes to mind?	Measure values
	1.4: When choosing a university for yourself, which schools did you think about? 1.5: Have you ever accessed the admission information of the University of Finance and Accounting? 1.6: What source did you learn about UFA?	In-depth interviews
Appeal (A2)	2.1. When you received UFA's admissions information, how did you feel?	Measure values
	2.1. When you received UFA's admissions information, how did you feel?	In-depth interviews
Ask (A3)	3.1. When looking for admissions information or information about UFA, which sources do you usually prioritize?	Measure values
	3.2. When looking for admissions information or information about UFA, which sources do you usually prioritize? 3.3. What channels of UFA have you accessed? 3.4. How would you rate the usefulness of UFA communication?	In-depth interviews
Act (A4)	4.1. Are you considering admission to UFA?	Measure values
	4.2. If so, how do you consider admission to UFA? 4.3. If so, how much do you consider for admission to UFA?	In-depth interviews
Advocate (A5)	5.1. Would you be willing to recommend UFA as a college option for relatives, acquaintances, friends?	Measure values
	5.1. Would you be willing to recommend UFA as a college option for relatives, acquaintances, friends?	In-depth interviews

According to the sampling plan, the sample size needed to be collected is 400 samples corresponding to the total number of questionnaires distributed. In fact, with 400 questionnaires distributed, 396 questionnaires were collected, corresponding to a response rate of 99%. Of the 396 students surveyed, there were 112 1st year students (accounting for 30.81%), 160 2nd year students (accounting for 40.4%), 82 3rd year students (accounting for 20.71%) and 32 4th year students (accounting for 8.08%).

So, based on theory, the sample size is 396 respondents, the total expected value will be 396. An is the value of variables A1, A2, A3, A4 and A5, representing the total number of respondents answering with the brand/product (in this study, the brand of the University of Finance and Accountancy and UFA's higher education services).

4. RESULT AND DISCUSSION

Percentage of 5A Variable

Based on data obtained from filling out the questionnaires by the respondents, obtained several calculation results as Table 2:

Table 2. Result of percentage value of 5A variable

Variable	Value	Percentage value
Aware (A1)	381	$\frac{381}{396}$ x 100% = 96.21%
Appeal (A2)	196	$\frac{196}{396}$ x 100% = 49.5%
Ask (A3)	187	$\frac{187}{396}$ x 100% = 47.22%
Act (A4)	305	$\frac{305}{396}$ x 100% = 77.02%
Advocate (A5)	266	$\frac{266}{396}$ x 100% = 67.27%

In Aware Stage (A1)

The awareness stage was assessed by asking whether the students knew about the presence of the UFA brand in Quang Ngai province or not. Among 396 students, when asked to name a university in Quang Ngai, 299 of them first mentioned the name of University of Finance and Accountancy (UFA), the remaining 97 did not know. And when we continued to be prompted with some related information such as "university in the economic sector" or "state university under the Ministry of Finance", out of 97 respondents, 82 respondents began to remember the UFA and remaining 15 respondents still don't know. Thus, if we consider additional questions assessing the level of brand awareness through keywords, out of 396 surveyed students, 381 respondents are aware of the UFA brand (299 respondents think at the first and 82 respondents remembered through suggested information).

In Appeal Stage (A2)

The student appeal rate of UFA's current communication channels is assessed at an average level (accounting for 49.5%), which means that out of 10 people know about UFA's communication information, less than 5 people feel that information attracts them. Through the results of in-depth interviews with students who have had access to UFA's promotional information, it can be seen that two groups of content have been communicated quite effectively, including: Tuition, Scholarships and Training programs. Information about employment opportunities for UFA students after graduation as well as content shared by alumni are also of interest to students. On the contrary, the location of the training facility and the image of the current faculty and students are content groups that need to be more invested in and promoted by UFA to enhance the effectiveness of communication about the representative image of the UFA brand.

In Ask Stage (A3)

The rate of "Asking" obtained from the results of research is quite low, showing that the rate of the public performing activities to find out detailed information about the university admission in recent years is really not high. In the current marketing communication channels that universities are using in admission activities, the rate of both normal-level and high-level interactions is still low. However, in some businesses, this will not indicate whether the brand has high or low purchasing power. The "Learn" phase of the 5A model is more specifically different from the traditional AIDA model in complexity because of the intersection between online and offline learning methods. In marketing, curiosity arises when customers are given interesting knowledge without being given too much information. To take advantage of curiosity, marketers must create content that can be searched and shared whenever customers search for it (Kotler et al., 2016). This can be a note in planning strategies for building marketing communication content for universities.

In Act Stage (A4)

Of the 396 respondents, 305 students made the decision to study at UFA through the marketing communications information they accessed (accounting for 77.02%), and 91 students became UFA students for reasons from other environmental factors, not from one's own desires. Value of A4 shows the rate of customer purchasing actions, and this study results show that A4 is rated at a good level, but not the desired level of university leaders. Therefore, marketing activities aimed at increasing this ratio in the future become one of the important goals of UFA.

In Advocate Stage (A5)

When asked more deeply about the reasons for the 266 students, they said "competitive tuition", "friendly and enthusiastic lecturers", "because UFA is a public university, reasonable tuition, and lecturers", "friendly university, good teaching equipment", "reputation of the university", "quality of training program" are the reasons why they decide to recommend it to others. However, some still do not decide to recommend it to others because "the facilities are not as good, and there are few exper... to change their learning ... ompleting the university ... ond major university deg ... 's degree (rate 23.6%), ...

The level ...

Based on ... s Table 3:

Conversion stage	Conversion rate value
Aware (A1) → Appeal (A2)	$\frac{\text{Appeal}}{\text{Aware}} = \frac{196}{381} = 51.44\%$
Appeal (A2) → Ask (A3)	$\frac{\text{Ask}}{\text{Appeal}} = \frac{187}{196} = 95.41\%$
Ask (A3) → Act (A4)	$\frac{\text{Act}}{\text{Ask}} = \frac{305}{187} = 163.10\%$
Act (A4) → Advocate (A5)	$\frac{\text{Advocate}}{\text{Act}} = \frac{266}{305} = 87.21\%$

Conversion rate from aware to appeal

The results showed that only 51.44% of 381 students who recognized the UFA brand felt attracted and could initiate research behavior in the next step. This shows that, when implementing multi-channel recruitment communication activities, each communication channel also needs to be reviewed and evaluated periodically to adjust marketing communication policies to suit the needs of receiving information as well as getting the public feedback. Specifically, UFA in the past period has used 5 main communication channels including: Social networks, Word of mouth, Events, Publications, Advertising. Through the survey, students searched information about UFA through the above channels but with different access rates. Most students know information about UFA mainly through admission consulting events organized by UFA, through introductions from acquaintances and through social networks. Among them, access through acquaintances accounts for the highest rate, followed by admission consulting events conducted by UFA and information on social networks. As for media advertisements in publications and mass media such as newspapers, radio and television, they rarely reach students. This situation raises the issue of the university's effectiveness in choosing to use a system of marketing communications media consistent with the marketing communications budget.

Conversion rate from appeal to asking

The results showed that 95.41% of the 196 students who felt attracted to the UFA brand had the behavior of learning more about the university's admission information. This shows that the quality of direct consulting, word of mouth, news content, image design, as well as the way of organizing admission consulting events through media channels maximizes effectiveness. The effect of attracting interaction of information access subjects.

Through the results of in-depth interviews with students, the UFA communication channel most approached by students is "Fanpage" - 143 choices (accounting for 72.95%), "Tiktok channel" - 23 choices (accounting for 16.39%), "Hotline phone number" - 31 choices (accounting for 14.34%), "Direct admission consultation" - 84 choices (accounting for 41.39%), "Enrollment consulting event at high school" - 71 choices (accounting for 42.62%) and 5 choices are accessing information through other channels.

Conversion rate from asking to acting

The above results once again demonstrate another characteristic of the 5A model, that customers can go through different journeys at access points and can completely skip steps, or change the order of steps at middle of the journey. In this case, the majority of people choose to study at university through introductions from acquaintances or family members who have information or have experienced studying at the university before. So, the conversion rate to A4 - Action can completely be considered to come from A1 - Aware.

Conversion rate from acting to advocating

Calculation results show that the conversion rate of the Action (A4) to Support (A5) phase of UFA students reached 87.21%, a relatively good level. This rate shows a high level of loyalty or encouragement from students, thereby influencing the recommendation of UFA's higher education services to others in a positive way. According to Kotler et al. (2016), the low conversion rate of the Action (A4) to Advocacy (A5) stage means that after experiencing the brand, customers do not feel satisfied enough to recommend it to others. Low conversion rates are the result of poor after-sales service or products/services that do not meet customer expectations. Customers can be attracted by the brand and brand communication activities but ultimately feel disappointed when using the product/service. With low conversion rates in the brand advocacy phase, marketers need to improve customers' experiences when using products/services. This will help brands increase their relationship with customers, build loyalty, and support the brand more.

In the 5A model, the number of service users of a brand can be derived from the total number of people who recognize that brand without having to go through the research step because of the brand's availability in the market and the habit of choosing higher education services largely through family recommendation. Purchase Action Ratio (PAR) measures the conversion from awareness to purchase behavior, so it can be said that PAR explains the 5A model at UFA with the value of A4 being significantly higher than the value of A2 and A3.

UFA Marketing Effectiveness seen from PAR (Purchase Action Ratio):

$$\textbf{PAR} = \frac{\text{Act}}{\text{Appeal}} = \frac{305}{381} = 80.05\%$$

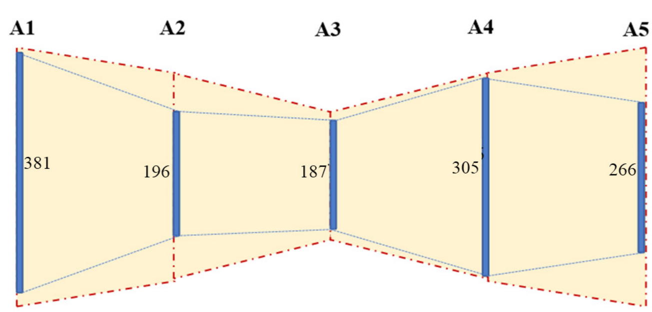
This result is considered positive for UFA's marketing communication activities in recent times. High awareness leads to the action of using UFA's services, accounting for 80.05% of the total number of students recognizing the brand, which is a positive result that needs to be promoted by UFA in the future. Considering the nature of the PAR index, UFA's marketing communications department will be able to estimate the potential for brand market share in the enrollment market to increase when the university promotes awareness, trademark. In the process of planning brand development strategies and future enrollment marketing communications, if the university plans to invest budget to increase UFA brand awareness by 1%, then the PAR is 0.8005 (means UFA has spent 80.05% of the budget to develop market share) and other factors remain unchanged, the UFA brand will be estimated to increase its market share by 0.80% compared to the present. Although this is a preliminary estimate under ideal environmental conditions, this index also helps the university plan its spending budget more appropriately, especially spending on marketing communication in general and brand communication in particular.

UFA Marketing Effectiveness seen from BAR (Brand Advocacy Ratio):

$$\textbf{BAR} = \frac{\text{Advocate}}{\text{Appeal}} = \frac{266}{381} = 69.81\%$$

Accordingly, among the 381 students who recognize the brand, there will be 266 students (accounting for 69.81%) who are willing to introduce and recommend UFA's higher education services to others. This ratio is assessed at an average level, demonstrating the current situation that the brand has not built customer loyalty. Because the BAR index is an index that shows the results of the entire 5A customer journey by measuring the ratio of starting and ending point values, when considering the meaning of the BAR index, it is important to pay attention to conversion rates at stages in that journey. In essence, BAR as well as learner loyalty does not only include the level of awareness and support, but is a long and complex experiential process that includes: creating attraction, creates curiosity, ensures commitment and enhances the level of connection through relationships with learners.

Based on Kotler's theory of the 5A ideal model, Bow Tie Pattern - The bow shape represents the main characteristics of a perfect brand with a BAR index of almost 1 (awareness = support); and perfect attractiveness result in a conversion rate from attraction to action of almost 1, meaning that any customer who is attracted will buy/use the product/service of this brand. Other types of patterns (such as the Knob, Goldfish, Trumpet or Funnel) all strive to achieve this perfect bow pattern (Kotler et al., 2017). The conversion rates between customer behavioral phases in the communication activities represented as a knob, based on the findings of the UFA research on the 5A customer journey model.



--------- Main model --------- Ideal model

Figure 1. Compare main model with ideal model in customer journey

When we insert a perfect model within are shown in the form of a knob. When we superimpose an ideal model within main model, we can see to need improve the customer journey through marketing communications solutions. Correctly changing the restricted contact point will usually improve the PAR and BAR index closer to 1. The purpose of all this is to improve the effectiveness of marketing communications and avoid unnecessary waste in the university's marketing budget. Therefore, in order to increase BAR in the future, the university needs to have solution systems to improve conversion rates at all stages of UFA's customer journey, especially problematic bottlenecks, as like as conversion rate from aware to interested and conversion rate from acting to advocating. Instead of trying to improve every stage of the customer journey, marketing communications can focus attention on what's truly important according to the goals of the organization's marketing strategy.

From these results it can be seen that the response of students to the UFA promotional information is quite good. Also, promotion through social media is an effective promotion. The university can continue to increase promotion information through social media.

5. CONCLUSION

In the current context of fierce competition in enrollment, marketing and brand promotion activities have become more necessary and important than ever in the development strategies of higher education institutions. In this study, the authors evaluated the achievements and shortcomings that need to be overcome in recent enrollment activities. To be able to objectively evaluate the effectiveness of marketing communication activities, the authors used the 5A model in evaluating and conducting a survey of 396 students. From the survey results, it shows that the marketing communications in recent times have brought positive results such as: The University of Finance and Accountancy brand is highly recognized in the province today; Social network media channels are highly appreciated by high school and college students for their quality of information, images and high level of attraction; as well as the rate of brand selection after recognizing the brand in the market is relatively high. In addition, although marketing communication efforts on brand awareness brought positive results, after officially experiencing the service at the university, the proportion of learners who suggested their own brands dropped sharply (accounting for rate 69.81%).

On the basis of evaluating the effectiveness of marketing communication activities in student enrollment, the author proposes three groups of solutions: (1) Group of marketing communication solutions to increase the level of brand attraction: brand repositioning, build a marketing communication strategy associated with core values; (2) Group of marketing communication solutions to enhance the brand's customer relationship level: improve the quality of customer care services, build a customer loyalty program and create a customer relationship management system (CRM); (3) Group of solutions to support marketing communication activities in university enrollment, including: fostering high-quality human resources, building working processes that meet professional characteristics and modernizing facilities quality suitable for marketing communications 4.0.

Due to limitations in capacity and implementation time, research certainly cannot avoid shortcomings and inadequacies. In the future, in order to do more perfect the research subjects, expand the scope of both space and research content, aiming to perfect the solution system to develop enrollment communication activities and brand communication activities of higher education and training institutions, legacy researches related to marketing communication activities at university can focus on exploring issues such as marketing communication goals and strategies, evaluation and insight analysis into current customer satisfaction and the system of related partners in the process of providing higher education services. In addition, this study has a shortage because it has not been deeply studied before as the effectiveness and productivity theories measured using PAR and BAR metrics are still new. So, it needs to be further investigated by other researchers using a larger sample in a longer time.

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FINANCIAL SUPERVISION FOR STATE-INVESTED ENTERPRISES IN LAO PEOPLE'S DEMOCRATIC REPUBLIC; REALITY AND RECOMMENDATIONS

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Abstract : *Undoubtedly, state-invested enterprises (SIEs) have become more prominent in the global economy over the last decade. A growing role for state-invested enterprises in the marketplace is not in itself onerous. According to an OECD consensus, as expressed through the Organisation's legal instruments, SIEs can be operated according to similarly high standards of governance, transparency and efficiency as private companies, in which case the ownership issue is moot. Nevertheless, in order for SIEs operate in harmony, it is suggested that financial supervison should be executed in reality. In fact, financial supervision for state-invested enterprises helps state management agencies, capital owner representative agencies and enterprise management entities to come up with effective management solutions to ensure safety and develop state capital as well as improve the efficiency of business performance of enterprises. The empirical analysis of the research depicts the reality of financial supervision for state-invested enterprises as well as the demerits when applying this concept. As a result, the article indicates some effective suggestions for enhancing the efficiency of financial supervision for SIEs in Lao People's Democratic Republic.*

Keywords: *Enterprise, corporate finance, corporate financial supervision, state- invested enterprises, governance, objectively verifiable Indicators*

1. INTRODUCTION

In recent years, the Party and Government of Lao People's Democratic Republic (Laos) have paid great attention to the reform and development of state-owned enterprises, which are clearly shown in the Party's policies and guidelines to promote and develop state-owned enterprises. Starting from the Party's innovation policy and the 5th Conference of the Central Executive Committee of the Lao People's Revolutionary Party, term IX, it was implemented into Resolution No. 05 on innovation and enterprise building in the new period. In the resolution of the 7th Conference of Lao People's Party Central Committee, term X, the Government has had variety of solutions to promote the improvement and recovery of state-owned enterprises, which are the foundation of the economy to recover state-owned enterprises. Then, it helps to create favorable conditions for business activities and increase competitiveness with other enterprises participating on the market. As a result, state-owned enterprises may bring benefits to society, create a stable and sustainable source of revenue for the state budget.

By the end of 2022, there are a total of 162 state-invested enterprises, including 89 centrally-run and 73 locally-run enterprises. 89 centrally-run enterprises do business in three sectors such as trade-service, financial-banking, and strategic-public service ones.

Among the 89 centrally-run enterprises, excluding enterprises under the Ministry of Public Security and the Ministry of National Defense, there are 39 enterprises operating in 3 sectors such as: 18 enterprises in trade-service, 5 enterprises in financial and banking sector, 16 enterprises in the public service sector.

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Table 1: Overview of the scale of centrally-run state –invested enterprises

Unit: Kip

Sector	Charter Capital	Equity	Total asset	Total Liabilities	State dividends
Trade-service	959.091.814.993	(176.936.001.213)	11.327.812.219.044	11.537.990.876.723	202.927.396.285
Financial-Banking	2.432.675.935.412	3.851.562.652.975	94.378.800.245.286	90.918.553.558.802	81.210.492.139
Strategic-Public service	9.462.335.817.087	593.015.923.151	88.578.142.582.644	87.936.400.717.725	322.090.859.847
Total	12.854.103.567.492	4.267.642.574.913	194.284.755.046.975	190.392.945.153.249	606.228.748.271

Source: Data collected from the Department of State Reform and Insurance,

Ministry of Finance of Laos

The negative equity in the trade-service sector is due to the negative equity of the Lao Airlines, Post Office, Import-Export Enterprise and the Fertilizer Enterprise with the total amount of -2,280,617,530,830 kip, of which Lao Airlines alone accounts for -2,277,414,096,566 kip.

State dividends are only 0.14% compared to equity capital, which is a very small proportion. Because various businesses are making losses such as: 10 businesses in Trade and Service sector, 2 businesses in Financial-Banking sector, and 6 businesses in Strategic-Public Service sector.

2. OBJECTIVES OF FORMING AND DEVELOPING STATE-INVESTED ENTERPRISES

The formation and development of state-invested enterprises helps to build strong economic entities with the ability to compete well in the context of international economic integration and to effectively serve the industrialization and modernization of the country. To achieve long-term goals, in the immediate future, state-invested enterprises must promote economic growth, improve operational efficiency, management, technology, and competitiveness.

There is a need to promote the formation and development of a number of state-invested enterprises operating in multi-industries and multi-sectors, including main industries with many kinds of owners but state ownership plays a dominant role. Thus, the policy of forming enterprises must be in industries and sectors with favorable conditions and strengths, where state ownership is crucial. To do that, it is necessary to limit the number of businesses that have the abilities to invest capital, technology, human resources... to create real strength to first compete in the domestic market and create benefits for people and society.

- Building key and selective state-invested enterprises: Although in the world, state-invested enterprises have had a history of development for hundreds of years, the model of state-invested enterprises is still quite new in Laos and some other countries. The issue is still debated, therefore the Government and chosen businesses have not had enough necessary experience. To the Government as well as the Ministry of Finance: Policy mechanisms are trying to build and amend to create a legal corridor for relationships in the most suitable model. The complicated relationships in the model of state-invested enterprises based on ownership by the entire people have not been fully revealed, along with limitations in management, which are issues of concern. Besides, resources for developing enterprises with state investment capital need to be carefully calculated to be effective.

Regarding state-invested enterprises: They have not had much time to accumulate experience in global competition, and their internal relationships are still in the process of being built. Their current scale achieved mainly thanks for the investment and support from the state. The capacity of many state-invested enterprises is still limited. The formation and development of economic corporations in Lao People's Democratic Republic needs to be begun from the requirements of the economy, and should not be constrained by the impacts of private investors. The Government needs to grasp development trends based on scientific reports and analysis. On that basis, it is necessary to implement mainly promotion and support measures, creating favorable conditions, transparency, and equality to promote state-invested enterprises to be established and develop.

- Creating a good connection between the development of state-invested enterprises and the process of innovating management mechanisms. The model of state-invested enterprises with new relationships must be consistent with the process of innovating management mechanisms in the context of current reform pressure. That does not mean building state-invested enterprises according to its own methods and criteria, but it is necessary to pay attention to widely recognized standards, thereby creating pressure for institutional reform and the impact of institutions contributes to promoting the development of every state-invested enterprise in Laos today.

3. THE REALITY OF FINANCIAL SUPERVISION FOR STATE-INVESTED ENTERPRISES

The financial supervision for state-invested enterprises in Lao People's Democratic Republic is expressed through the supervisory subject, supervisory methods, content and objectively verifiable Indicators (OVIs):

➢ ***Supervisory subject***

In state-invested enterprises, the State is the owner, so the State is the subject of financial supervision. The State assigns financial supervision tasks to the Ministry of Finance. With the assigned task, the subject of financial supervision for state-invested enterprises is the Ministry of Finance, and the Department of State Enterprise Reform and Insurance is the advisory unit in financial supervision. The Ministry of Finance organizes the implementation of financial supervision for enterprises with state investment capital through the establishment of a subcommittee to be in charge of collecting information and data of enterprises and sending documents to Ministries, provinces, localities and enterprisess to submit financial reports and information of enterprises as required by the Ministry of Finance.

In reality, financial supervision of enterprises with state investment capital has not yet established a mechanism or financial supervision system. At the same time, awareness of financial supervision as well as the role of financial supervision has not been properly recognized both in its nature and importances among enterprises.

➢ ***Financial supervisory methods***

The Ministry of Finance carries out the financial supervision for enterprises with state investment capital after the business activities of the enterprises have ended, and then requires enterprises to submit financial reports. Basing on the financial information, the Ministry of Finance evaluates the performance of enterprises.

➢ ***Content and objectively verifiable Indicators (OVIs)***

The content of supervision is used to monitor the business performance of enterprises and to monitor the management and preservation of state capital and assets in the enterprises.

+ In terms of business performance content, the applied criteria are Return On Equity (ROE), Return On Assets (ROA) and total revenue to total expenses.

+ Regarding the content of monitoring the management and preservation of state capital and assets in the enterprises, the ability to repay debt has been monitored through the debt-to- asset index D/A, debt-to-equity index D /E and current assets to current liabilities ratio.

Table 2. Criteria for evaluating and ranking businesses

1	Debt repayment ability criteria	Sectors	Evaluation Result		
			A=Good	B=Average	C=Bad
	Debt-to-total asset index D/A		≤1	>1-≤1.5	>1.5
	Debt-to-equity index D/E	Trade-Service	≤1	>1-≤2.5	>2.5
		Financial-Banking	≤5	>5-≤10	>10
		Strategic-Public service	≤1	>1-≤2.5	>2.5
2	Profitability index	Sectors	Evaluation Result		
			A=Good	B=Average	C=Bad
	Return On Equity (ROE)	Trade-Service	≥14%	≥10%-<14%	<10%
		Financial-Banking	≥14%	≥10%-<14%	<10%
		Strategic-Public service	≥10%	≥7%-<10%	<7%
	Return On Assets (ROA)	Trade	≥5%	≥2%-<5%	<2%
		Banking	≥1.5%	≥0.5%-<1.5%	<0.5%
		Public service	≥2%	≥1%-<2%	<1%
	Total revenue and expenses	Trade-Service	≤75%	>75%-≤85%	>85%
		Financial-Banking	≤75%	>75%-≤85%	>85%
		Strategic-Public service	≤85%	>85%-≤90%	>90%

Source: Ministry of Finance, Department of State Enterprise Reform and Insurance

4. LIMITATIONS OF FINANCIAL SUPERVISION FOR STATE-INVESTED ENTERPRISES IN LAO PEOPLE'S DEMOCRATIC REPUBLIC

- Regarding the legal framework: the mechanism and legal framework greatly affect the organization and implementation of financial supervision. In countries in the region, there are guiding documents and legal mechanisms on financial supervision of state-owned enterprises. The functions and tasks of each agency are clearly defined and the legal system is always reviewed to suit the socio-economic situation of each period.

- In terms of supervisory methods, content and objectively verifiable Indicators (OVIs) which are being implemented are not consistent, comprehensive, and too few. They do not clearly reflect the financial situation of state-invested enterprises

- Supervision support tools: The Ministry of Finance is using manual tools to synthesize supervision. Currently, there is no software installed for financial monitoring. Compiling data into Excel tables for each enterprise affects the effectiveness of financial supervision and when entering data, it can cause confusion.

- With regard to information disclosure of enterprises with state investment capital after supervision: After financial supervision of enterprises with state investment capital, the results of supervision work are not published on the website of the Ministry of Finance. There is only a general report on completing supervision to the Minister of Finance or reporting to the National Assembly as required and there are no comments or opinions for state agencies and businesses about the status, risks, financial threats what are happening.

5. ORIENTATION FOR IMPROVING FINANCIAL SUPERVISION FOR STATE-INVESTED ENTERPRISES

Firstly, strengthen financial supervision capacity for state-invested enterprises

Currently, financial supervision of state-invested enterprises in Lao People's Democratic Republic is carried out by the Ministry of Finance. The Department of State Enterprise Reform and Insurance is an apparatus that helps in the financial management and supervision of enterprises with state investment capital. Therefore, in order to improve the effectiveness of monitoring financial activities for enterprises with state investment capital, in the upcoming time it is necessary to strengthen the ability to monitor financial activities of organizations. Supervision here is also understood as improving the qualifications and supervision capacity of the officers in charge of performing this task.

Secondly, concerning financial supervision organization

Every year, the Board of Directors and General Directors of enterprises with state investment capital must organize financial supervision of their enterprises and send the results of financial supervision to affiliated ministries. Then the ministries must be responsible for synthesizing and sending them to the Ministry of Finance.

Financial supervision for state-invested enterprises helps state management agencies, capital owner representative agencies and enterprise management entities to come up with effective management solutions to ensure safety and develop state capital as well as improve the efficiency of business operations of enterprises. In addition, the rights and obligations of the representative of state capital in enterprises have been more clearly established, the management and supervision methods have been changed in association with the classification and evaluation of enterprises, etc. Especially, with enterprises operating ineffectively, showing signs of financial insecurity, there must be clear regulations to include special financial supervision, moreover, state audit or government inspection must be allowed to inspect that enterprise.

Thirdly, synchronously develop the content, methods, and targets of financial supervision activities

The financial supervisory system of state-invested enterprises in Lao People's Democratic Republic has not been a complete supervisory system to reflect the risks and problems businesses are facing. It also has not helped to show a comprehensive picture of the financial situation of businesses. Therefore, Laos needs to focus on researching, building and synchronously developing a financial monitoring system which is more suitable for state-invested enterprises.

6. RECOMMENDATIONS TO IMPROVE THE EFFICIENCY OF FINANCIAL SUPERVISION FOR STATE-INVESTED ENTERPRISES IN LAO PEOPLE'S DEMOCRATIC REPUBLIC

- The function of representing the owner of state capital invested in an enterprise must be separated from the function of state management and business administration of the enterprise; Clearly define state management functions and corporate governance functions to end the direct intervention of state administrative agencies in production and business activities.

- Accelerate the process of restructuring state-invested enterprises. Ministries as well as localities, and Member Councils have to proactively research and propose to competent authorities measures to resolve arising problems and issues together with issues that need to be adjusted relating to mechanisms and policies.

- Financial supervision of enterprises with state investment capital must have a mechanism, clearly defining the subject of supervision, the contents and methods of organizing supervision. Each country has different mechanisms, management policies and financial management requirements appropriate to the economic, political, social situation and traditional customs of that country. When there are legal mechanisms, state-invested enterprises operating in Lao territory must comply with Lao law. They must fully comply with the State's regimes, policies and regulations, and be the subject to inspection and control by Lao competent functional management agencies.

- To identify financial risks of enterprises with state investment capital, it is necessary to supplement and complete a number of contents and indicators such as: capital mobilization situation such as debt ratio; indicators reflecting solvency such as current ratios (short-term debt payment ratio), cash ratios; indicators reflecting capital use efficiency such as business efficient capital, working capital turnover; Profit indicators such as operating Earnings Power, asset Earnings Power, and equity Earnings Power. In addition, monitoring indicators need to be supplemented with indicators related to the specifics of the business industry, because the specifics of the business industry will affect the performance and operational efficiency of enterprises. They are indicators that relate to exploitation and exploration output; labor productivity on revenue, etc. Besides, strategic enterprises that perform public services must develop non-financial targets.

- Strengthen the activities of inspection, supervision, and financial audit for enterprises to prevent loss of state capital and state assets; Implement openly, transparently, and legally in investment, financial management, procurement, and income distribution. Complete internal control and audit mechanisms, strictly implement financial supervision regime, evaluate operational efficiency and disclose financial information. Strictly handle business leaders and representatives of state capital in enterprises who do not seriously implement or do not comply with regulations, for wrong purposes, ineffectively, causing loss of capital and assets of the State...

- Develop regulations on equitization, sale, dissolution, and bankruptcy of enterprises in accordance with the newly issued law system. Focus on removing difficulties and obstacles in the process of arrangement and equitization;

- The system of financial supervisory indicators is established in association with the sectors and industries of the enterprise and the requirements of the owner's representative agency. Accordingly, for manufacturing enterprises, they will have to be associated with indicators for evaluating results (profit of the production and business process in the period). On the contrary, businesses operating with the goal of providing goods, and public services are associated with public performance indicators (the quantity as well as the quality of goods and services, etc.). Therefore, supervisory indicators need to include both financial and non-financial indicators.

- Financial supervisory indicators include both general monitoring indicators and specific supervisory indicators. In which, general supervisory indicators are the most basic, most popular indicators which also most generally reflect the operating situation, production and business efficiency. Specific indicators reflect the particular contents of an enterprise in its production and business activities that have an important impact on the results of the enterprise's production and business activities.

- The supervision report form needs to be full of general and specific financial supervisory indicators, in which the relationship between specific indicators in terms of value and quantity is the foundation criterion, the basis to determine criteria for general ones. The establishment of a form system should originate from the management requirements of the enterprise and follow the pyramid shape, in which the top of the pyramid is the requirement of the national financial management agency.

To implement the above recommendations, the Government and enterprises with its investment capital need to:

- **To the Government:**

Financial supervision for enterprises with state investment capital is one of the important tasks of the process of enterprise reform, innovation and improvement of enterprise performance. This work has been actively implemented for several years and the Government hopes to bring positive results. However, facing the current modern situation, it is necessary to strengthen financial supervision for enterprises with state investment capital.

- The Ministry of Finance and other Ministries together with provinces must proactively monitor macro-financial activities on the basis of innovating strategic policies to suit the innovation situation.

- The Ministry of Finance must quickly develop and promulgate full regulations on financial supervision for state-invested enterprises. It also needs to have mechanisms and policies to enhance the transparency of financial reports, financial information, business and administration of state-invested enterprises. It is necessary to trengthen the responsibilities of the Board of Directors and Executive Board and decide responsibilities if they do not comply with regulations; Along with that, it is also important to develop a form for financial supervision by state management agencies for enterprises with state investment capital;

- Guide, urge and inspect the implementation of legal regulations in financial supervision at enterprises with state investment capital.

- Restructure the organization, apparatus and corporate governance capacity of each state-invested enterprise such as reviewing and redefining their main business tasks.

- The Board of Directors of enterprises with state investment capital should not be allowed to hold two concurrent positions: civil servant and member of the Board.

- **To state-invested enterprises**

- Restructuring the organization within the enterprise, assigning tasks to leaders and employees in the enterprise in the direction of combining benefits with responsibilities.

- Researching, developing and promulgating new regulations as a legal basis for supervision activities.

- Enterprises must regularly organize supervision, and periodic inspection of their law enforcement and the implementation of their goals, strategies, plans, and tasks.

- Training and fostering financial supervision knowledge and skills for specialized departments in financial supervision.

- Enhancing dissemination and raising awareness for officers in charge of supervision as well as those in charge of finance.

- Complying with regulations of state management agencies and requirements of competent authorities.

To carry out supervision task, supervisors need to be trained with the necessary knowledge about reading financial reports such as reading balance sheets, reading business results reports, cash flow statement to explain. Moreover, they need to understand about financial analysis such as analysis content, how to determine indicators, economic content of indicators, analysis methods, financial analysis process. Last but not least, they must update knowledge regularly and continuously. It is also a part of professional ethics so that they will have the appropriate knowledge to advise and give the most reasonable supervision opinions.

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APPLYING FINANCIAL ANALYSIS METHODS AND PROCEDURES FOR SMALL AND MEDIUM ENTERPRISES (SMES): LESSONS FOR VIETNAM

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Abstract: *The importance of financial analysis in assessing the performance of Small and Medium Enterprises (SMEs) is undeniable. This research delves into the traditional and contemporary financial analysis techniques, applying them to SMEs in Vietnam to gain a deeper understanding of their financial situation and operational efficacy. Through extensive analysis, the study offers insights into crafting a conducive business environment for Vietnamese SMEs. Simultaneously, it serves as a comprehensive guide for enterprise managers and investors to understand the potential and challenges faced by SMEs in Vietnam's current economic scenario.*

Keywords*: Financial analysis, Commercial banks, Effectiveness, Analytical methods, Organizational culture, Technological advancements*

1. INTRODUCTION

The role of Small and Medium Enterprises (SMEs) in the economic landscape is undeniably pivotal, serving as the backbone for many emerging and established economies. Particularly in developing countries like Vietnam, SMEs play a crucial role in employment generation, GDP contribution, and social stability. Despite their significance, these enterprises often grapple with numerous challenges, among which financial management stands out prominently. Efficient financial management and analysis can be a determinant factor in the sustainability and growth of SMEs.

In essence, this research not only contributes to the academic discourse on financial management for SMEs but also offers practical insights for enterprise managers, policymakers, and investors keen on understanding and navigating the vibrant SME sector of Vietnam.

2. LITERATURE REVIEW AND PREVIOUS RESEARCH STUDIES

Financial analysis has long been a central theme not only for researchers but also for businesses and policy-makers due to its broad application in extracting insightful financial information. A plethora of studies concerning methods of financial analysis have emerged both internationally and within Vietnam. This review delves into some of the most pivotal contributions in this realm.

The DuPont Model (1914): Crafted by scientist F. Donaldson Brown in 1914, the DuPont model stands as one of the most acclaimed methodologies for financial analysis in contemporary times. The model elucidates the intricate interrelationships between various financial metrics, primarily concentrating on assessing a company's return on equity.

Accounting, Auditing, and Financial Analysis of Enterprises (1995): Authored by Prof. Dr. Ngo The Chi, Prof. Dr. Doan Xuan Tien, and Prof. Dr. Vuong Dinh Hue, this seminal work accentuates the significance of financial analysis for businesses. It delves deep into a myriad of analytical methodologies aimed at evaluating a company's financial standing.

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Accounting and Economic Activity Analysis in Construction Enterprises (2005): A dedicated exploration by Prof. Dr. Nguyen Dinh Do and Assoc. Prof. Dr. Nguyen Trong Co, this work applies numerous analytical methodologies to dissect the economic endeavors of construction-centric enterprises, underscoring the sector-specific relevance of financial analysis.

World Bank Research (2008): The study titled "Bank Financing for SMEs around the World: Drivers, Obstacles, Business Models, and Lending Practices" by Thorsten Beck, Asli Demirguc-Kunt, and Maria Soledad Martinez Peria articulates the burgeoning role of SMEs in the global financial landscape. Analyzing empirical findings from 91 banks spanning 45 countries, the researchers spotlight the paramountcy of financial analysis for banking institutions when formulating financial resolutions related to SMEs. A notable revelation from the study is the global predilection of banks to bifurcate sales from assessment, championing centralized risk assessment juxtaposed with decentralized sales strategies. Furthermore, the research evinces the widespread employment of scorecard methodologies to appraise SME loans.

Forecasting and Data Analysis in Economics and Finance (2009): In this intricate exploration by Nguyễn Trọng Hoài, Phùng Thanh Bình, and Nguyễn Khánh Duy, the spotlight is on forecasting models, emphasizing their indispensable role in financial analytics.

Financial analysis, while universally essential, varies in its application and interpretation across different contexts and regions. This literature review delves into various studies and practices related to financial analysis, focusing on its applicability to Small and Medium Enterprises (SMEs) globally and its specific relevance to the Vietnamese context.

Global Credit for SMEs:

World Bank Study (November 2008): An extensive investigation conducted by the World Bank, surveying 91 banks from 45 countries worldwide, shed light on the financial patterns and creditworthiness of SMEs on a global scale. This study provided a holistic overview of the financial health, credit risks, and financial behaviors of SMEs, emphasizing the importance of robust financial analysis to ascertain the creditworthiness and viability of these enterprises.

Financial Analysis Techniques:

Thornson Reuters Approach: In collaboration with Thornson Reuters, financial reports were constructed based on primary accounting frameworks. These included the Balance Sheet, Profit and Loss Statement, and a meticulous analysis of financial ratios and their corresponding trends. An in-depth case study of the Liberty Medical Group demonstrated Thornson Reuters' approach to financial analysis. By juxtaposing the company's financial reports over several fiscal years, a comparative analysis was conducted, offering insights into the financial dynamics, year-on-year growth, and potential areas of concern for the enterprise.

Specific Analysis Framework:

Asian Development Bank (ADB) Methodology: The method proposed by Yoshino and Taghizadeh-Hesary at the ADB introduces a comprehensive set of financial indicators. The five key financial metrics included liquidity, profitability, leverage, impact level, and operational ratios. These indicators are instrumental in assessing the credit risk of SMEs. By leveraging these metrics, analysts can gain a more profound understanding of an enterprise's financial health, thereby making informed decisions about credit risks and investment potentials.

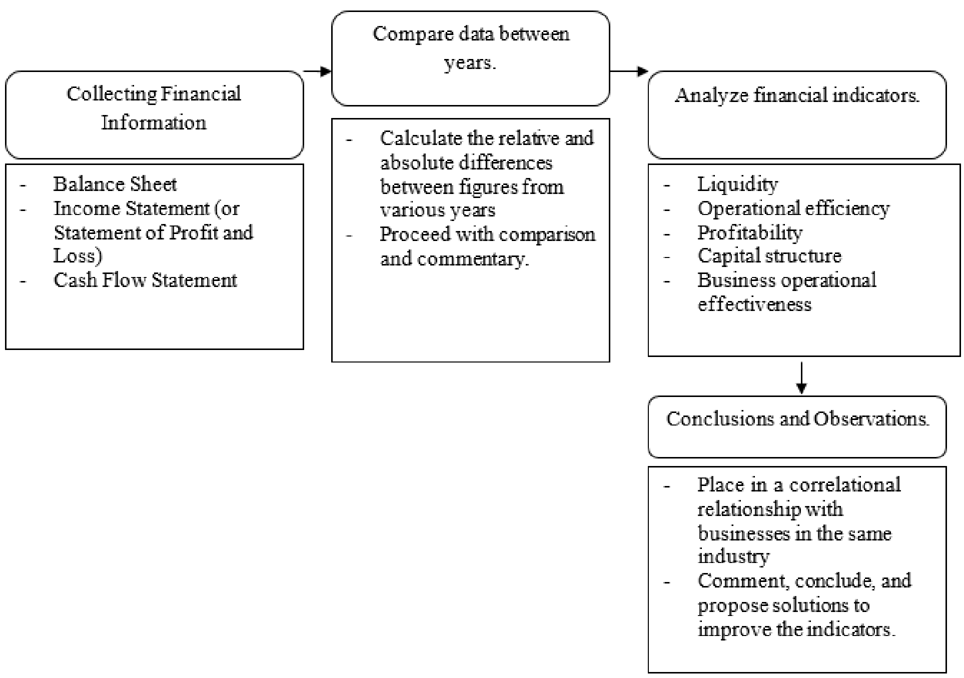
3. FINANCIAL ANALYSIS METHODOLOGIES AND PROCEDURES OF FOREIGN INSTITUTIONS

According to the World Bank's study "Lending to Small Enterprises Worldwide" (November 2008), based on a survey conducted across 91 banks from 45 countries, the SME (Small and Medium Enterprises) segment was perceived to offer high profitability. However, it was also viewed as less stable under the volatile macroeconomic conditions prevalent in developing nations. One of the principal concerns of foreign financial institutions when lending to SMEs is the credit assessment and risk management. To accurately assess loans and manage potential risks associated with lending to SMEs, it is imperative to conduct financial analysis through a structured, scientific, and efficient approach.

3.1. Experience of Thomson Reuters in Financial Analysis

For the financial organization Thomson Reuters, financial analysis reports are formulated based on key metrics derived from the Balance Sheet, Income Statement, Ratio Analysis, and the trend variations of these ratios. As a case in point, the analysis for the Liberty Medical Group was undertaken by Thomson Reuters by accumulating data from the firm's financial statements and placing it in a comparative annual framework. The process of constructing such an analytical report can be expounded as follows:

Figure 1: Financial Analysis Process for Enterprises by Thomson



Above is the financial analysis procedure of the company Thornson Reuter, aiming to gain a quick and comprehensive perspective on the financial status of Liberty Medical Group operating in the pharmaceutical field.

3.2. Experience from the ADB Bank

The financial health of a business can be evaluated based on its credit risk. At the Asian Development Bank (ADB), the method proposed by Mr. Yoshino and Taghizadeh-Hesary employs five financial indicators: liquidity, profitability, leverage, volatility, and operational ratios to analyze the overall credit risk perception of businesses in the market. Two statistical techniques, namely principal component analysis (PCA) and cluster analysis, are used to simplify data and reduce the complexity of economic variables utilized to evaluate a company's financial condition. These techniques are employed by the ADB to classify SMEs based on financial strength and potential.

PCA is a standard data simplification technique. This method identifies factors in the data, emphasizing the similarities and differences between observations. When the data comprises many variables, PCA can be seen as a valuable tool for data analysis in such situations.

With cluster analysis, SMEs with common characteristics are grouped together. This method is beneficial when comparing businesses with similar features, grouping them together, and comparing businesses across different clusters.

3.3. Experience from Japanese Commercial Banks

With 99.7% of Japanese businesses being SMEs, Japan has significant experience in implementing a relatively standardized procedure across commercial banks in analyzing financial reports, specifically for SMEs. In 2001, the Japanese government established and developed the Credit Risk Database project. This project gathered data of SMEs in Japan from 52 credit institutions and credit rating agencies, forming the Credit Risk Database (CRD). Commercial banks, as CRD members, can easily access and utilize this data to evaluate a business's financial status. As of July 1, 2015, the association had grown to 175 members. These members have collected data from 2,210,000 affiliated SMEs and 1,099,000 private SMEs. With a large reference sample and government support, the input database of Japanese commercial banks is deemed reliable, comprehensive, and assured for assessing the financial condition of SMEs. This model is also being studied and implemented in Thailand.

CRD Construction Process

The Credit Risk Database (CRD) system's establishment is a meticulous and multi-step process aimed at comprehensively assessing the financial health and credit risk of SMEs. This process can be broken down into the following detailed steps:

**** Comprehensive Data Collection***

- Financial Data Collection:

Balance Sheet and Income Statement: These provide a snapshot of the financial position and performance of SMEs.

- Key Financial Ratios Calculation:

Capital to Asset Ratio: Measures how much of the company's assets are financed by equity.

Degree of Borrowing on Lending: Assesses the extent to which an entity relies on borrowed funds to finance its operations.

Ratio of Interest-Bearing Liabilities: Provides insight into the company's debt levels relative to its assets.

Ratio of Current Profit to Assets: Indicates profitability concerning the assets employed.

- Non-financial Data Collection:

Real Estate Ownership: Helps determine the tangible asset base and collateral potential.

Succession Status: Determines if the business leadership is hereditary, which can impact business continuity and strategy.

CEO's Year of Birth: Can provide insights into leadership experience and generational business perspectives.

- Loan Data Collection:

Short-term Liabilities: Debts that are due within a 3-month timeframe.

Legally Mandated Defaults: Debts recognized as defaults by legal standards.

Actual Defaults: Amounts that have not been paid as agreed upon.

Debt Collateral Rights: Pertains to the rights of credit guarantee institutions to seize assets if the debtor defaults.

Sub-standard Debts: Debts that show signs of becoming unrecoverable.

Potential Bad Debts: As categorized by Basel II guidelines, debts that might become irrecoverable after April 2003.

**** Database Construction & Model Development***

- Initial Data Storage:

All raw data collected from SMEs, including both financial and non-financial metrics, are stored in a preliminary, unprocessed state.

- Data Cleaning & Consolidation:

The raw data undergoes rigorous cleaning to remove discrepancies, errors, and outliers.

It is then consolidated to ensure a coherent and comprehensive dataset that ensures the integrity and consistency of information.

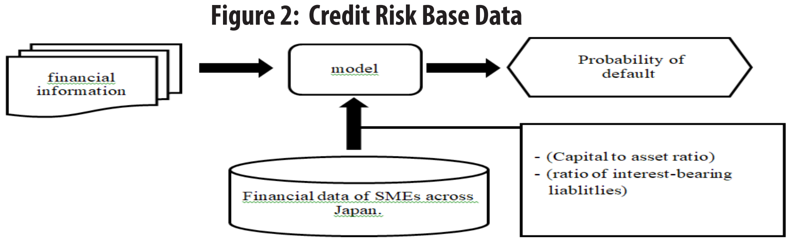
- Scoring Model Development:

With a rich and cleaned dataset in place, scoring models are crafted to evaluate SMEs' credit risk.

These models leverage vast amounts of data to provide accurate, consistent, and predictive insights into SMEs' creditworthiness.

Regular testing and validation processes are carried out to ensure the models remain robust and relevant, adjusting for changing economic conditions and company dynamics.

Figure 2: Credit Risk Base Data



3 types of construction models:

Table: Scoring Model

Model Type	Base Data	Analysis Method
Type A	- Macroeconomic environment; Market conditions	- Expert assessment
	- Payment history data	
	- Financial reports	
Type B	- Payment history data (Primary data)	- Statistical model analysis and event impact assessment
	- Financial reports (Alternative data)	
Type C	- Financial reports	- Statistical model analysis

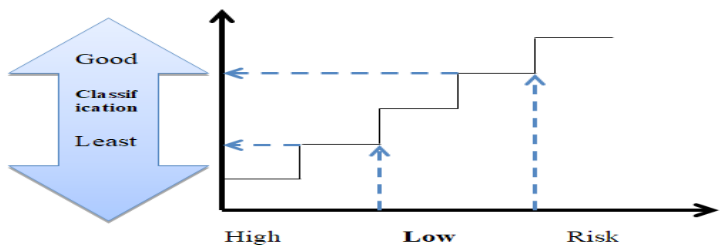
(1) Type A Model: Expert-based assessment model

Experts analyze and evaluate the macro environment and the market conditions of the business, scoring component (0-30 points) <1>

Experts review the company's payment history and transactions, scoring component (0-30 points) <2>

Experts assess the company's financial statements, scoring component (0-40 points) <3> From the total of <1> + <2> + <3>, the company's rating is classified based on the following model:

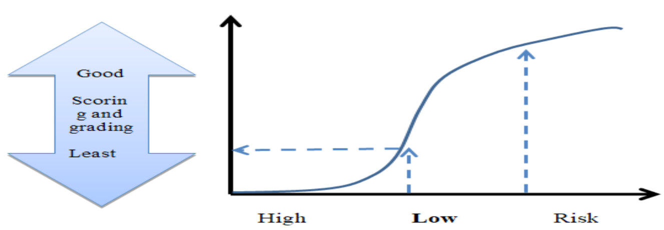
Type A model



(2) Type B Model: Model based on credit history assessment data: Using financial statement data and evaluating impactful events to input into statistical model analysis: The business's default probability (Probability of default) is calculated according to the following logistic model formula: P = 1/(1+e^(-βX))

From the model analysis and impact event assessment, the company's classification score is constructed as follows:

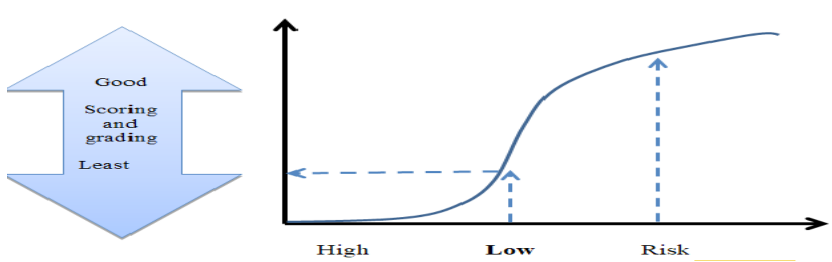
Type B model



(3) Type C Model: Model based on CRD credit risk foundational data: Using financial statement data to compute statistical model analysis figures: The business's default probability (Probability of default) is calculated according to the following logistic model formula: P = 1/(1+e^(-βX))

Based on the logistic model analysis, the company's classification score is structured as follows:

Type C model



(4) Providing Data to CRD Members As members of the CRD, banks and credit institutions, as well as credit rating companies, can avail services from the CRD, including: i. Credit scoring activities:

Members of the association can utilize the CRD scoring models to assess the default potential of borrowers and prospective borrowers. From April 2006 onwards, CRD models were integrated for evaluating credit guarantee fees within the credit granting system. ii. Provision of reference data: Member banks of the CRD can leverage reference data from the CRD repository to: Evaluate essential data in internal credit scoring activities.Conduct individual bank's internal credit scoring.

Develop new financial products. iii. Providing statistical information: Association members can use statistical data like businesses' financial indicators to compare figures with other companies within the CRD database, aiming to enhance credit risk management. iv. Management consultancy support system: Association members can utilize consulting tools built from the CRD scoring models and CRD data analysis. The CRD scoring model employs financial indicators computed from financial statements, considering aspects like profitability, stability, growth potential, efficiency, and the business operations of SMEs. These financial metrics closely interrelate and are chosen as explanatory variables for the scoring model. For an accurate scoring model, data is aptly processed given the distribution characteristics of the financial metrics. Miyamoto et al. (2012) scrutinized and compared data processing methods like the Box-Cox transformation, neglog transformation, common neglog transformation using the CRD. A downside to bank-constructed scoring models is their inability to assess exclusion conditions from variables and their inapplicability across all SME conditions. Hence, the Bank of Japan often encourages these banks to supplement their analyses with additional risk factors beyond the model.

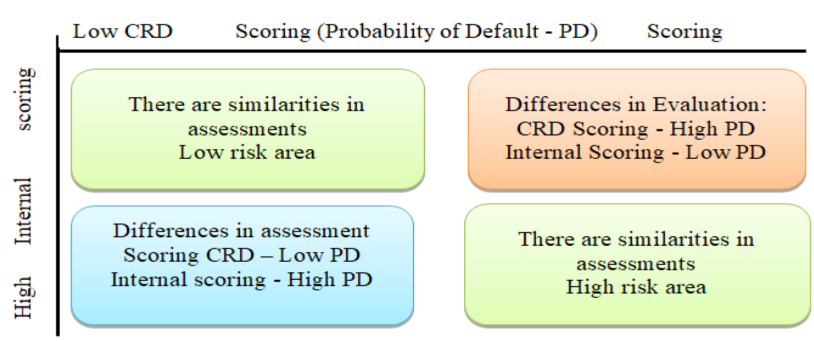
(5) Update and Maintain CRD Scoring Model Quality To manage the quality of CRD's scoring model and data updates, the CRD undertakes:

Quality management guideline development: issuing model development, operation, and approval guidelines; establishing a third-party evaluation committee for CRD scoring models.

Regular approval and evaluations: the CRD models are annually approved based on issued guidelines and regulations from FSA and Japan's SME credit charter: reviewing actual transactions compared to model data; model accuracy checking; comparing default probabilities with real default rates; model stability assessments; explanatory variable reasoning checks for errors. Moreover, the third-party evaluation committee re-examines approval results.

Publicizing the third-party evaluation committee's reviews. Most Japanese banks adopt the CRD scoring model, integrating it into the bank's internal scoring model as a basis for assessment; a benchmark or a comparison standard; focusing on the difference in the outcomes of the two scoring models and understanding the reasons behind such disparities.

Identifying risk areas through CRD scoring



3.4. Experience of ICICI Bank

India Established in 1955 as a development financial institution, ICICI Bank has since grown to become the second-largest bank in India. In the Indian market, approximately 70-80 banks have approached the SME customer segment, with ICICI Bank holding around 4-9% of this market share, serving nearly 1 million SME businesses.

ICICI classifies its SME customers into three groups: (1) commercial establishments affiliated with companies: these are SMEs linked to ICICI's current corporate clients, whether as sellers or distributors of products and services, (2) Branch Banking Transaction Group which includes pre-selected customer branches in identified industries, representing potential market opportunities in India, and (3) Business Banking Service Group, encompassing the remaining customers.

This segmentation approach helps ICICI overcome challenges like risk management and knowledge development. For instance, SMEs affiliated with corporate clients are a lower risk segment since ICICI is familiar with the corporate clients and can offer lending products based on this information. Similarly, by choosing 12 sectors out of 165 to focus on at a national level, ICICI can delve deeper into understanding the most potential SME groups.

4. LESSONS LEARNED FOR CONSTRUCTING FINANCIAL ANALYSIS METHODS AND PROCEDURES FOR SMES IN COMMERCIAL BANKS

Drawing from the financial analysis experiences of international financial institutions, several recommendations can be made for the financial analysis of SMEs in commercial banks of Vietnam:

Segmentation and Risk Assessment Using PCA and Cluster Analysis: Vietnamese commercial banks could analyze the operations of groups of SMEs with similar characteristics using methods such as PCA (Principal Component Analysis) and Cluster Analysis to derive evaluations of credit risk of the enterprises studied. In the case of the Asian Development Bank (ADB), both PDA and Cluster Analysis methods were employed to provide general financial assessments of SMEs by ranking their creditworthiness. Specifically, PCA is a statistical technique used to transform a group of correlated observations into a set of values of linearly uncorrelated variables, often referred to as principal components.

Data Center Development: There's a need to either establish new or improve and develop enterprise data centers (following the Japanese model – Data Association) to provide a rich database for banks. This would not only expedite data collection but also diversify data sources, providing a comprehensive view of clients and a reliable basis for evaluations and business analyses.

Diverse Analytical Methods for SMEs: Financial analysis of small and medium enterprises necessitates the use of various analysis methods such as evaluation methods, factor analysis, and forecasting. Comparative methods offer insights into the fluctuations of metrics when assessed horizontally. To ascertain a company's position within its industry, comparisons can be made with the analytical metrics of competitors.

These lessons underscore the importance of adopting advanced analytical techniques, fostering a data-driven culture, and ensuring diversified approaches to gain a comprehensive understanding of SMEs' financial health and associated risks.

5. DISCUSSION AND CONCLUSION

In the realm of financial analysis, especially concerning SMEs within commercial banks, the dynamics present an intriguing confluence of statistical methodologies, information architecture, and industry benchmarks. This discussion seeks to delve deeper into the lessons drawn from the experience of international financial institutions, juxtaposing them with the unique socio-economic landscape of Vietnam.

* Statistical Methodologies in SME Analysis: The adoption of PCA and Cluster Analysis underscores the increasing complexity of financial behaviors exhibited by SMEs. While traditional financial metrics and evaluation methods continue to be foundational, the nuances and inherent variations within the SME sector necessitate a more granular approach. The use of PCA, for instance, can help banks dissect the multifaceted financial behaviors of SMEs, streamlining them into principal components that are easier to monitor and evaluate. This becomes especially pivotal in a market like Vietnam, where SMEs often display a wide range of operational modalities, stemming from factors like regional disparities, varied access to resources, and differences in business culture.

* Data-driven Approach: The mention of constructing or refining enterprise data centers resonates with the global shift towards data-driven decision-making. With the digital transformation wave sweeping across sectors, the banking industry cannot remain immune. Establishing robust data centers would not only centralize information but also enable banks to leverage data analytics and machine learning tools for predictive analysis. This is crucial in a dynamic market environment where risks and opportunities evolve rapidly.

* Comparative Analysis and Industry Positioning: The significance of understanding an SME's position vis-à-vis its competitors cannot be overstated. This provides banks with a dual advantage. Firstly, it helps gauge the SME's industry relevance, offering insights into its operational strengths and weaknesses. Secondly, it aids in calibrating the bank's risk parameters, ensuring that credit decisions are aligned with industry benchmarks.

The landscape of financial analysis for SMEs in commercial banks, particularly in Vietnam, poses unique challenges and opportunities. Drawing from international experiences and methodologies provides invaluable insights, yet a one-size-fits-all approach may not yield the desired outcomes in a distinct market ecosystem like Vietnam's.

Embracing Advanced Methodologies: The need for advanced statistical methods, such as PCA and Cluster Analysis, is no longer a luxury but a necessity. The varied financial behaviors of SMEs demand sophisticated tools to effectively discern patterns and predict trends. This not only helps in robust financial analysis but also in tailoring financial products and services that resonate with the unique needs of SMEs.

The Power of Data: In today's digitized era, data is undeniably the most valuable currency. Vietnamese commercial banks should prioritize establishing and enhancing their enterprise data centers. Such a data-driven approach will empower them to make informed decisions swiftly, anticipate market shifts, and enhance their customer experience, especially for the SME segment.

Contextual Analysis: While international benchmarks provide a direction, it's imperative for banks to conduct a contextual analysis, understanding the SME's relative position in its industry and the local market. Such a perspective offers a more holistic view, ensuring that banks are not just reactive but also proactive in their strategies.

In essence, as the Vietnamese commercial banking sector navigates its journey towards better serving the SMEs, it must marry global best practices with localized insights. Such a harmonized approach will not only propel the growth of SMEs but also fortify the banks' position in a competitive market, ensuring they remain agile, resilient, and responsive to evolving market demands.

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FINANCIAL LEASING VIEWS FROM FOREIGN ENTERPRISES AND SUGGESTIONS FOR VIETNAMESE PRIVATE COMPANIES

Dr. Tran Duc Trung[1]

Abtract: For private enterprises, especially small and medium-sized enterprises, approaching capital from banks and the stock market still faces many barriers. In fact, one of the biggest difficulties for businesses is lack of capital. Lack of capital, especially medium and long-term capital, leads to lack of financial capacity, difficulty accessing modern technology, high-quality human resources and reaching out to large markets. Financial leasing, also known as capital leasing, for businesses is both a capital source decision and an investment decision. Faced with the strong demands of the integration process, financial leasing is considered one of the smart choices of corporate finance directors. The research paper's main content revolves around the experience of raising capital by financial leasing of businesses in a number of countries, thereby providing suggestions for businesses in Vietnam, helping businesses can access this source of capital with much room for development.

Key words: Financial leasing, capital mobilization, corporate, private, leasing

1. Introduce the research problem

In the market, a necessary and sufficient amount of capital is always an urgent requirement for most businesses. To be able to turn business ideas and plans into reality, businesses need to mobilize financial resources and organize those resources well. The business development of enterprises on an increasingly large scale also means expanding the scale of capital and diversifying funding sources. Business capital of an enterprise is considered to be the parts and elements containing capital, which can meet the needs of the enterprise when administrators use appropriate methods to mobilize. Currently, with the strong development of the economy in general and the financial market in particular, the diversification of both capital sources and mobilization methods has helped businesses be proactive in choosing Choose appropriate capital sources.

Financial leasing is a form of medium and long-term capital mobilization. In other words, a financial lease is the receipt of a medium or long-term credit through leasing machinery, equipment and other real assets from a financial leasing company, through which the lessee can use leased property and pay the rent in installments throughout the agreed term. The financial lessee does not have the right to cancel the contract. When a financial lease is signed, the tenant immediately receives an inflow of cash, so the tenant does not need to spend money to buy the asset. The tenant must commit to paying the rental fees specifically specified in the rental contract. Therefore, the cash flows of financial lease contracts and loans are similar.

In recent times, access to and use of financial leasing has helped solve capital difficulties for businesses and the whole economy. However, besides the advantages and benefits, financial leasing, like all other financial activities, has certain potential risks and limitations. Reality in Vietnam shows that complex problems arise such as: credit supply and demand imbalance, bad debt or risks, legal or operational limitations of entities that have been and are being posed.

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Difficult problems need solutions... On the other hand, capital mobilization by financial leasing is still in potential form, in terms of both scale and its impact on the economy. For many businesses, financial leasing is still a new concept. Recently, in addition to practical issues, there have also been a number of domestic and international scientific works, topics, and conferences researching this issue. The conclusions may be different, but all aim to evaluate the current situation, identify causes and propose solutions to help stabilize and develop the financial leasing market, improving the ability to mobilize capital. business through financial leasing. However, for solutions to be feasible, there needs to be orientation and necessary conditions.

2. RESEARCH CONTENT AND RESULTS

2.1. Some basic issues about financial leasing and the financial leasing market

Financial leases are viewed from many angles, but we can mention some of the following concepts: According to Standard No. 06 (Asset Lease) - Vietnam Accounting Standards System (VAS): "A financial lease is an asset lease in which the lessor transfers most of the risks and benefits associated with ownership of the asset to the lessee. Ownership of the asset can be transferred to the lessee at the end of the lease term". The International Accounting Standards Committee (IASC) has issued four standards. All asset lease transactions that satisfy one of these four criteria are called financial leases. The remaining transactions are called operating leases (operating leases). Some main features: (i) Property ownership is transferred to the tenant at the end of the lease contract. (ii) The contract stipulates the option to buy the asset at the end of the contract at a symbolic price. (iii) The term of the lease covers the majority of the useful life of the leased asset. (iv) The current value of the entire minimum rent paid by the tenant is greater than or equivalent to the market value of that asset at the time of signing the contract. Based on the IASC classification standards, each country has specific regulations on standards for recognizing financial leases suitable to the specific conditions of their country. From the business side, managers need to identify methods of leasing assets to take advantage of the advantages of leasing methods suitable to the situation of the business, as well as to have appropriate management measures to adapt to the situation. State characteristics and regulations for each form of lease.

Table: Distinguishing financial leasing from some forms of capital mobilization other medium and long term

Types and requirements and procedures for businesses	Medium and long-term loans at banks	Issuing stocks and bonds	Financial lease
Requirements for businesses	- The enterprise has experience in business activities; - Profitable business operations, healthy financial situation; - Have mortgaged assets.	- The enterprise has experience in business activities; - Profitable business activities, attractive stocks in the market; - The minimum level of equity capital must comply with regulations.	- Irrespective of the type and length of operation of the enterprise; - Effective projects and investment plans; - The investment in leased assets is feasible and balances the source of debt repayment; - There is reciprocal participation money set at a flexible level.

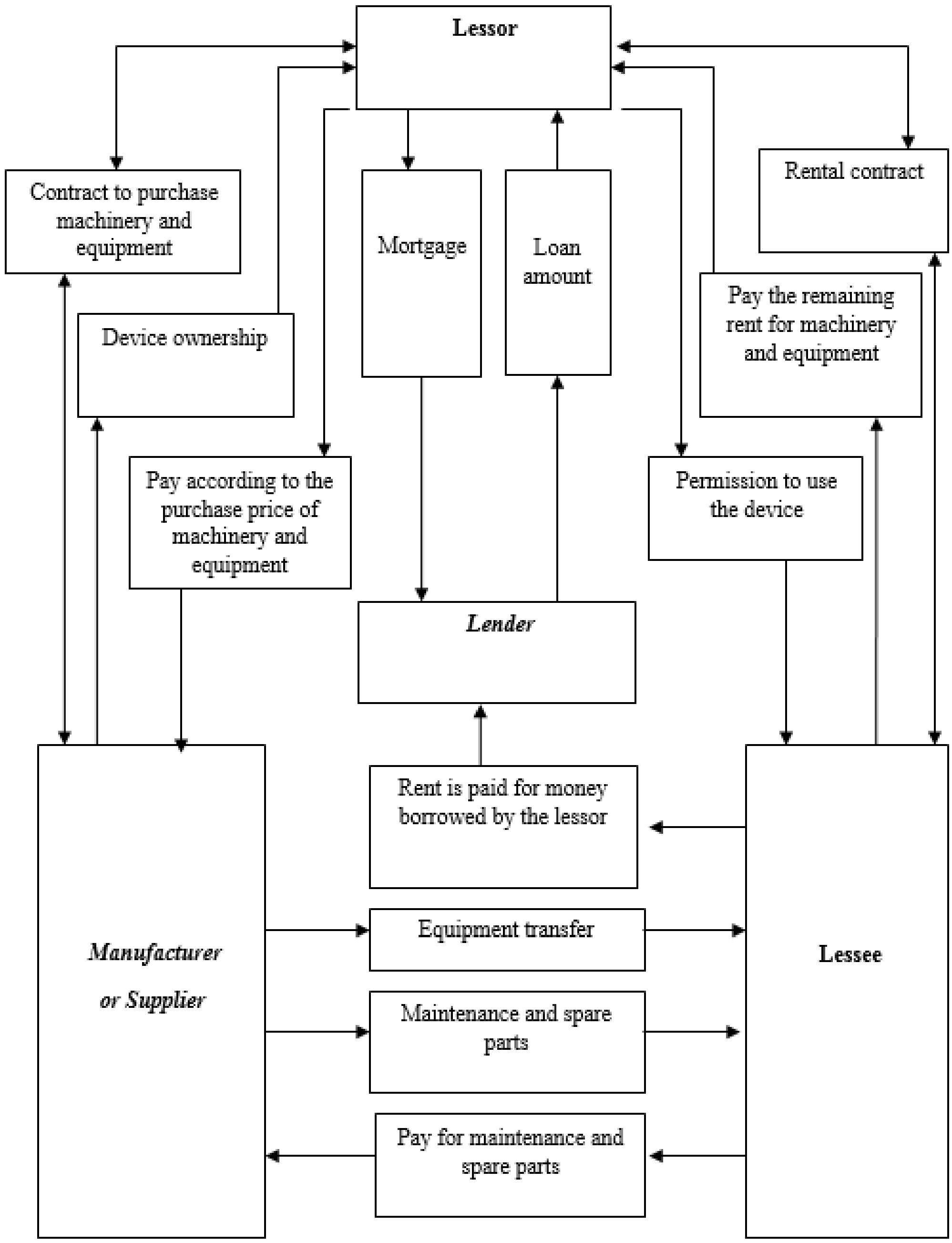
Procedure	Complex, including: - Legal and financial records; - Investment project profile; - Mortgage property records.	Complex, including: - Legal and financial records (audited); - Investment project profile; - Documents and legal procedures as required by the State Securities Commission.	More simply, including: - Legal and financial records; - Investment project profile.

Source: Author's compilation

With the current trend of integration and high competition, the need to innovate machinery, equipment, and technology lines of businesses in Vietnam is becoming increasingly urgent. Some businesses operating in key sectors of the economy are always required to be equipped with modern assets in order to initially improve their competitiveness in the market, especially the international market. Some businesses in the fields of transportation, telecommunications, construction... have pioneered financial leasing such as leasing aircraft for the purpose of transporting passengers, goods and services; renting ships by installment purchase method; renting telecommunications equipment and satellites under business cooperation contracts; renting bored pile concrete drilling equipment for hydroelectric projects from hydroelectric construction companies, etc.

Regarding financial leasing, an indispensable part of the financial leasing market and directly linked to financial leasing: This activity has been around for a long time in the world. Currently, financial leasing is being used in hundreds of countries and has an annual transaction value of over trillions of USD. This is considered a highly developed form of hire-purchase credit because of its unique advantages. Therefore, it can be said that the presence of financial leasing in Vietnam is a turning point in the process of diversifying banking and financial services. It contributes to creating diversity and increasing choices for Vietnamese businesses before deciding to mobilize capital. Since its inception, financial leasing has always been evaluated as a new form of credit financing with much potential compared to traditional methods. With outstanding advantages such as proactive selection, limited risk, cost savings, relatively simple procedures, no mortgage, modernization of production... this will be a type of business. The service is popular around the world, especially in developing countries or economies in transition, including Vietnam. However, the Vietnamese financial leasing market has undergone more than 20 years of formation and development. But up to now there are only 8 companies operating in the market. Although still small in scale, the compounded annual growth rate (CAGR) in the past 5 years is relatively high at 20.4%. Among them, a significant contribution to the overall growth of the market is BIDV Financial Leasing Company Limited - SuMi TRUST (BSL) with a CAGR of up to 110% in the past 3 years. This shows that, if there are reasonable policies to promote and promote, financial leasing will be an effective tool to mobilize medium and long-term resources, helping to reduce the burden of financing the system. bank.

Diagram: Relationship between parties in a typical financial lease transaction



Source: Author's compilation

In fact, the total annual sales of the top 50 financial leasing countries in the world amount to more than 1,300 billion USD (at the end of 2019) . In the US, over 30% of all equipment is equipped under lease contracts, more than 80% of companies - from small start-up companies to enterprises on the Fortune 500 list - rent part or all of the equipment. hook their equipment. In Japan, annual financial leasing sales are around 50 billion USD and more than 90% of businesses use financial leasing to invest in machinery and equipment. Meanwhile in Vietnam, financial leasing is still a small-scale market, with the entire market's outstanding debt by the end of 2020 only at 29,500 billion VND (about 1.27 billion USD), accounting for only about 0 .3% of total outstanding loans to credit institutions. With those advantages, small and medium-sized businesses are considered the most suitable customers for this type. By the end of 2022, outstanding financial lease debt will reach nearly VND 45,000 billion, equivalent to 0.33% of the total outstanding debt of the entire economy. While in many other economies, such as China, financial leasing accounts for 10% of outstanding debt, Germany 18% of outstanding debt, and the United States about 22%.

Currently, in Vietnam there are more than 800,000 businesses, of which small and medium enterprises account for over 98% (according to the Vietnam Association of Small and Medium Enterprises). From the above numbers, it shows that the potential to develop financial leasing in Vietnam is huge . Therefore, researching and understanding financial leasing activities of businesses in countries around the world is an important and necessary requirement for businesses, especially private businesses in Vietnam. The lessons learned will help managers and businesses effectively select and access capital from financial leasing.

2.2. Financial leasing from businesses in some countries in the world

2.2.1. Financial leasing in American businesses

Financial leasing is very developed in the US. This form was born with the leasing of assets to finance capital for businesses in the transportation industry. After that, capital mobilization in the form of financial leasing really developed in most other industrial countries after World War II. According to statistics, the total value of machinery and equipment rented annually in the US reaches trillions of dollars and has an increase rate of 8% each year. The value of leases in the US accounts for approximately 30% of the total amount financed for annual equipment purchases. The main form of financial leasing in the US is two-party, three-party leasing or sale and re-lease, in which the option to buy the asset belongs to the lessee. The lease term is usually over 75% of the useful life of the leased asset and must not exceed 30 years. Financial leased assets with less than 25% of their useful life remaining cannot be used in financial lease transactions. In 2022 alone, the scale of capital mobilized from financial leasing in US businesses has reached 473 billion USD, accounting for about 1/3 of the total capital mobilized from financial leasing globally.

Unlike many businesses in developing countries, most American businesses prefer to rent rather than buy assets. For businesses in the US, business efficiency and time saving are top priorities. When the need for assets arises, businesses often offer options: new purchase and financial leasing. Before renting, corporate financial administrators often carefully consider the benefits of each option, based on the analysis of financial coefficients and financial indicators related to the leased assets. In particular, the effects of inflation, interest rates... on leasing contracts and financial reports are also paid close attention to by leasing businesses. Searching and selecting suitable assets is one of the tasks that businesses in the US pay a lot of attention to when the need for financial leasing arises. In addition to collaborating with financial leasing companies, businesses in the US also hire consulting companies to search, select, and independently value assets to meet financial leasing requirements in the policy. sponsor. In the US, the development of the rental-purchase industry also means the birth of many rental companies, up to tens of thousands of businesses. Due to the large number, after making the decision to lease finance, leasing businesses in the US attach great importance to choosing capital and asset supply partners. The service of providing capital in the form of lease-purchase credit in the US is very convenient for leasing businesses, from which financial leasing businesses can be proactive and save a lot of time in negotiating and finding earn assets.

Financial leasing for businesses in the US is understood in a broad sense as asset leasing. For businesses, from large corporations, famous brands such as Southwest Airlines, Johnson & Johnson cosmetics, General Electric electronic equipment, Bechtel construction... to small and medium enterprises. are familiar customers in the financial leasing market. Renting equipment, real estate, especially headquarters, offices and factories... are transactions with huge quantity and value. These are also types of financial leased assets favored by businesses in the US, especially small and medium-sized private enterprises. In addition, large assets such as aircraft to specialized means of transport, even airline tickets... are also rented by companies in the US as capital financing options for production and business activities.

2.2.2. Financial leasing in Japanese enterprises

Since the early 70s, raising capital in the form of financial leasing has gradually become popular in Japan. In Japan, leasing businesses have the right to proactively choose leased assets and are not subject to any influence from the leasing credit grantor. Leased businesses can choose from many different service packages from consulting departments that represent the provision of credit to businesses. Besides, in Japan, businesses that lease finance often have to work with brokers and valuation organizations to be able to make the most reasonable and objective decision for the finance lease option.

The rapid growth of Japanese businesses causes them to face a shortage of capital, so raising capital through financial leasing is an attractive form of financing. It can be said that financial leasing has become an effective capital mobilization tool for the Japanese economy, from large corporations with Japanese characteristics (Keiretsu) to small and medium-sized enterprises. Famous businesses in fields such as Japan Airlines, electronics Sony, Hitachi, Panasonic or automobile companies Toyota, Yamaha... have all used financial leasing. The financial leasing market in Japan has become one of the world's largest markets, ranking second after the US. According to statistics from the Japan Leasing Association (JLA), the total value of financial leased assets in 2022 in Japan will reach nearly 65 billion USD. The proportion of financial leased assets varies between industries and focuses on leasing machinery and equipment in manufacturing industries and commercial service industries. Financial lease assets in Japan are also very diverse such as transportation equipment, information technology, medical equipment, industrial production and especially real estate with high value contracts. Always innovating science and technology is one of the top goals of Japanese businesses, that's why businesses often lease assets for a minimum term of 60 -70% of economic life and no more than 120%. design service life (technical life).

The legal environment in Japan is quite stable, legal documents provide very detailed regulations and support for lease-purchase credit, but there is a similarity with developing countries that is the support for the lessee, Specifically, businesses are still not strong enough. Enterprises that mobilize capital from financial leasing mainly still proactively search for assets, choose capital (asset) supply partners and negotiate and sign contracts. Risk management is one of the highlights in financial leasing of Japanese businesses. From assessment and identification to forecasting and risk management... related to leased assets, businesses pay close attention. Therefore, risks from financial leasing in Japan are often very tightly controlled by the leasing businesses themselves and do not leave serious consequences like in countries with transition economies.

2.2.3. Financial leasing in Chinese enterprises

China is an Asian country with many similar characteristics to Vietnam. Currently, China is a country with the world's leading economic development rate. Mobilizing capital through financial leasing has been used by businesses in China since the early 1980s. With the fastest economic development in the world, the need for capital mobilization by Chinese businesses is also increasing at a rapid pace. The strong development of the financial leasing market has contributed to releasing capital for the economy and creating conditions for businesses to expand and invest deeply in machinery and equipment.

Financial leasing has become a popular financing option for Chinese enterprises, especially small and medium-sized enterprises. When the need to hire-purchase arises, only a small number of businesses hire independent companies for valuation and guarantee consulting, the remaining businesses often receive support from hired credit officers at the same time. Benefits from financial leasing are also carefully considered by financial directors compared to financing from other capital sources. In 2022, the total value of financial lease contracts in China will reach over 341 billion USD, accounting for more than 10% of total outstanding debt in the country. In particular, financial leasing deals focus on groups of small and medium enterprises, fields such as transportation, construction, information technology... account for a large proportion, about over 30% of the total contract value. financial leases of businesses.

Mobilizing capital through financial leasing for Chinese businesses helps businesses and the banking system relieve credit pressure, on the other hand, it helps businesses innovate machinery and equipment, improve their capabilities. compete. In China, although businesses are free to compete, and improve business efficiency. However, the use of financial leasing by enterprises always receives quite specific management and guidance from the State. In many cases, leasing businesses must cooperate with suppliers and credit providers to be able to operate equipment and assets, bringing greater efficiency to the lease contract. Due to the dynamism of the economy and due to the intangible depreciation characteristics of fixed assets in enterprises, the financial lease term of Chinese enterprises is often limited, fluctuating between 3 and 7 years, more specifically for some specific types of assets with great value such as aircraft and commercial complexes. It can be said that financial leasing has become a highly competitive choice compared to other forms of capital mobilization for businesses in China in the trend of integration and development.

2.3. Some suggestions on financial leasing for private companies in Vietnam

Financial leasing has been used by many businesses around the world as an effective capital mobilization option. In fact, financial leasing also has international practices with large cross-border contracts. However, businesses as well as corporate financial policies in each country and in each period have their own characteristics. To contribute to promoting capital mobilization by financial leasing for private enterprises, through lessons from foreign enterprises, we can apply them selectively, flexibly, creatively and effectively. suitable for actual conditions in Vietnam. Some suggestions for businesses in Vietnam:

Firstly, businesses need to clearly identify their asset needs and financing options through financial leasing. Referencing financial leasing activities of businesses in countries with developed economies, we see that determining capital needs and corresponding assets is of top concern to businesses. Financing policy and the principle of financial balance can only be clearly expressed when leasing finance and other capital mobilization options must be based on the actual situation of the enterprise. Financial leasing is a form of capital mobilization, an option for capital financing. Therefore, corporate financial administrators need to quantify and carefully consider the benefits that can be brought and the risks that may occur during use.

Second, businesses should hire independent consulting partners when accessing and using financial leasing. In raising capital through financial leasing, issues related to leased assets, from asset selection, cash flow calculation to asset use, are very important and comprehensively affect the business. value and terms of the lease contract. Therefore, businesses should look to independent consulting organizations and units with high expertise in related fields to support, ensure objectivity and limit risks for businesses in setting up projects. Establishing and implementing financial lease contracts.

Third, businesses need to be responsible in using leased assets, proactively balance resources, and effectively manage financial lease risks. Risks can be hidden at any stage, stage and financial lease contract. Risks can originate from objective or subjective reasons, from the capital raising enterprise or supply company. Judging, identifying and preventing risks is very important for financial leasing businesses. Businesses need to consider applying modern risk management models or software. On the other hand, the connection between Vietnamese businesses is also very necessary in the current situation when mobilizing capital through financial leasing. For businesses choosing financial leasing, balancing resources to ensure periodic rental repayment according to the contract is an issue that needs attention. Because the financial capacity of businesses is different and the business situation is volatile, businesses need to prioritize and be flexible in balancing resources and cash flow to ensure good contract performance. financial lease.

Economy is continuing to grow steadily, creating great demand for machinery, equipment and technology. It is forecasted that in the period 2021 - 2025, Vietnam's GDP growth rate will reach about 7%/year (National Center for Socio-Economic Information and Forecasting - NCIF). The macroeconomy is basically stable, inflation is at 3.5 - 4.5%/year, creating great demand for machinery and equipment, especially in the manufacturing, construction, and processing industries. processing, manufacturing... and road transport vehicles for investment and development. Therefore, mobilizing capital by financial leasing is assessed to have much potential for application and development in Vietnam. Financial leasing has a relatively flexible rental period and simple administrative procedures. Renting businesses can also own and receive back the leased assets at a symbolic price. In particular, this is also a sales promotion channel for businesses. Financial leasing will be an important solution to help businesses overcome barriers to accessing capital, especially medium and long-term capital. In the context of banks increasing risk control over credit granting, small businesses will face more difficulties due to lack of collateral, as well as financial capacity and solvency when considering loan. At that time, raising capital by financial leasing is necessary and will be effective.

3. CONCLUSION

In recent times, the number of businesses in Vietnam has tended to increase rapidly. Besides the benefits to the economy, the rapid increase in the number of businesses also poses many problems that need to be resolved. High capital needs, the impact of the pandemic and changes in the economy, as well as the business environment, make the operations of Vietnamese businesses face many challenges. This situation leads to potential financial and business risks for businesses. Reviewing and evaluating the advantages and limitations of financial leasing, combined with consulting the experiences of businesses in a number of countries around the world, will help businesses' financial leasing activities. Vietnam is increasingly expanding and becoming more effective.

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EXPERIENCE IN FINANCIAL SUPERVISION OF STATE-OWNED ENTERPRISES - LESSONS FOR THE LAOS PDR.

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Abstract: Apparently, state-owned enterprises (SOEs) or the enterprises having state-owned capital are a type of enterprise existing nations worldwide. Some of which even are large-scaled pillars of national economy. Nevertheless, these enterprises, due to their different characteristics from the ones of private sector enterprises, pose numerous drawbacks and challenges in the management and supervision of activities. In reality, financial supervision of state-owned enterprises (SOEs) is seen as one of the useful management tools, in which management agencies and owners adopt the content, methods and monitoring indicators to carry out financial supervision of the enterprises activities. Through this process, the companies can evaluate operational efficiency and detect risks to warn businesses. In the introduction part, the article indicates the definition of SOEs. The second part of the article introduces the role of state-owned enterprises. This part is also a premise for the next part: the experiences of countries in the world including countries in the Organization for Economic Cooperation and Development (OECD) in operating and applying models that picture. The last part is the valuable things that Lao PDR can learn from the experiences of these countries.

Keys word: Financial supervision, Lao PDR, State-owned enterprises, OECD, experience

1. CONCEPTS

Regarding the concept of state-owned enterprises, differences in each country, although in terms of management regime, researchers will come up with different concepts.

As underlined in the SOE Guidelines, national practices differ with respect to which entities the authorities consider "SOEs", and Asia is no exception. The SOE Guidelines offer detailed guidance in this respect, putting forward that an SOE is "any corporate entity recognised by national law as an enterprise and in which the state exercises ownership. This includes joint stock companies, limited liability companies and partnerships limited by shares. Moreover, statutory corporations with their legal personality established through specific legislation should be considered as SOEs if their purpose and activities, or parts of their activities, are of a largely economic nature". Activities of a "largely economic nature" are defined as those which involve "offering goods or services on a given market and which could, at least in principle, be carried out by a private operator in order to make profits".

In Lao PDR, the state capital held in an enterprise may not be the state but has invested financial resources from the state budget or other capital sources, it may be state assets, resources that the state allows domestic and foreign investors to operate and exploit or the state allows or licenses investors to establish a company operating in the Lao PDR, then those investors give a portion of capital to the state to hold and will divide profits according to its capital portion.

So a state-owned enterprise can be a state-owned enterprise that holds 100% state capital or a portion of state capital, can operate according to its charter but must be in accordance with the law that has been promulgated and the state may promulgate it. Decree law to manage and operate under separate laws depending on the field in which the business is established.

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2. ROLE OF STATE-OWNED ENTERPRISES

The role of state-owned enterprises is linked to participation in economic activities of the State. This game can take place in three aspects: economic, political, and social. The content of these three roles can be displayed as follows:

It is the main tool to create material strength for the State to maintain social stability, regulate and guide the economy to develop in a socialist direction.

support other economic sectors to develop, promoting the rapid growth and development of the entire economy.

Undertake strategic areas of activity for socio-economic development. Providing essential goods and services, especially in the fields of infrastructure (transportation, irrigation, electricity, water, communications), society (education, healthcare) and security, naitional defense.

3. THE SUPERVISION OF STATE-OWNED ENTERPRISES

Financial supervision of state-owned enterprises is an activity carried out continuously to collect and analyze information, thereby helping management agencies and owners know for sure the financial activities of enterprises. With foreign investment capital, will it be implemented on schedule and with results according to the plan and will the necessary intervention measures be promptly taken to overcome difficulties and problems.

Financial supervision is carried out to obtain an appropriate picture of the economic and financial situation of State-owned Enterprises, reflected in the level of profitability, efficiency and financial risk.

4. EXPERIENCE OF COUNTRIES IN FINANCIAL SUPERVISION OF STATE-OWNED ENTERPRISES

4.1. Korean experience

As per the Act on the Management of Public Institutions in Korea, the Ministry of Finance and Strategy designates which public institutions are classified as SOEs, according to their relative levels of self-generating revenue and government grants. SOEs are then classified into three categories according to their asset value, level of self-generating revenue and number of employees: (i) public corporations; (ii) quasi-governmental institutions; and (iii) and non-classified public institutions.

❖ **Subjects and methods of supervision**

In Korea, financial supervision and performance evaluation of businesses are supervised by the Ministry of Strategy and Finance. Every year, the Ministry will establish a subcommittee to be responsible for evaluating each enterprise, in which the Ministry of Strategy and Finance is responsible for the overall assessment, while ministries and branches carry out supervision from a professional perspective.

Evaluation of the performance of SOEs is carried out annually for the previous financial year. For example, the performance of state-owned enterprises from January 2022 to December 2022 must be evaluated for performance in 2023.

❖ **Content and monitoring criteria**

Every year in Korea, we will evaluate and re-research the situation of businesses and the economic prospects of the industry in the following year to build a set of targets/indicators for each business in the coming year. However, some indicators can be removed to reduce pressure on businesses.

Monitoring the operations of businesses in Korea is conducted at three levels: evaluating the effectiveness of the entire enterprise, evaluating the operating effectiveness of the CEO and evaluating the effectiveness of the auditor. For each level, qualitative and quantitative indicators are used, and for each group of indicators, different financial monitoring methods are worked.

Financial indicators include basic financial indicators such as: Number of employees, revenue, profit, profit margin, wages...; Non-financial indicators: Non-financial indicators are established specifically for each enterprise to evaluate the performance of that enterprise. In addition, non-financial indicators also include indicators such as "Customer satisfaction level", business impacts on society...

4.2. Experience from China

❖ **Subjects and methods of supervision**

China established the State Asset Supervision and Administration Commission (SASAC) to operate under a ministerial-level mechanism, directly under the State Council (Government) but different from the Government's administrative agencies. SASAC is an organization with special authority. The functions of this Commission include managing and supervising owned assets, promulgating relevant policies and mechanisms, appointing and dismissing key positions in SOEs.

In China, supervision will be carried out according to the management order. In the "pre-supervision" stage, businesses autonomously decide according to pre-standardized regulations and procedures (different from before when reporting was required and awaiting approval from SASAC). The "internal supervision" stage will be strengthened by supervision agencies; while the "post-supervision" stage will be enhanced with questioning and prosecution (especially with the participation of the Party inspection committee). As for "post-supervision", China has introduced stricter regulations on the feedback mechanism in supervision and the mechanism to question the responsibility of supervising state assets in enterprises; The anti-embezzlement and corruption mechanism is effective in the long term.

❖ **Content and monitoring criteria**

SASAC is responsible for monitoring the preservation and development of the value of State assets at enterprises, building and improving an index system to monitor the preservation and development of the value of State assets. At the same time, it also establishs criteria for evaluating enterprise efficiency, monitor and manage the preservation and growth of the value of state assets at enterprises through statistics and conducting audits. In addition, this commission is in charge of salary management , wages at businesses, building adjustment policies, income distribution of business leaders and organizing the implementation of these policies.

Over the past many years, China has improved and applied a set of criteria to evaluate the performance of state-owned enterprises. Indicators to evaluate the performance of SOEs are divided into 4 levels, including 2 large groups (level 1) on capital management situation and capital use efficiency. The scoring rate for these two groups of criteria is 30 - 70%. Each group of level 1 indicators is divided into 2 groups of level 2 indicators.

The financial indicators applied to monitor SOEs are built on the 80 - 20 principle, evaluated at a rate of 100% of all groups, of which quantitative indicators account for 80%, quantitative indicators account for 80%. calculated to account for 20%.

Quantitative indicators include 10 groups: (1) Capital use situation; (2) Profit indicators (value); (3) Solvency (20%); (4) Revenue; (5) Capital preservation criteria; (6) Indicators of receivables/payables; (7) Enterprise development capacity; (8) Current use of short-term assets; (9) Targets on budget collection and payment; (10) Targets on income of employees and management board.

Qualitative criteria are divided into 5 levels: Excellent (A), good (B), average (C), low (D) and other. Each level corresponds to a parameter: 1; 0.8; 0.6; 0.4 and 0.2.

4.3. Experience from Vietnam

In Vietnam, financial supervision of SOEs is currently carried out in accordance with Decree 87 and Circular 200. In addition, the Ministry of Finance of Vietnam has also developed a handbook to guide financial supervision.

❖ **Subjects and methods of supervision**

The Ministry of Finance is responsible for monitoring and supervising the performance assessment of SOEs. Performance evaluation is carried out annually according to a three-step process: (1) self-assessment of state-owned enterprises; (2) assessment by a line ministry or provincial government, State Capital Investment Corporation (SCIC) or State Economic Group (SEG) responsible for state ownership in SOEs ; and (3) assessment by the Department of Corporate Finance, Ministry of Finance. Evaluation reports prepared by relevant ministries and local authorities as well as appraisal reports prepared by the Ministry of Finance are mainly based on the self-assessment of SOEs.

Regarding financial supervision methods in Vietnam, there are direct supervision methods, indirect supervision methods, prior supervision, internal supervision, and post supervision. There is also special financial supervision with this method, which is a supervision process for businesses showing signs of financial insecurity that need to be monitored and corrected by competent authorities. Cases where businesses will be subject to special financial supervision include: businesses operating at a loss, having a debt-to-equity ratio that exceeds the safety level according to regulations; There are losses arising from 30% of equity or more or accumulated losses greater than 50% of equity; Have a debt repayment capacity ratio of less than 0.5; Inaccurate financial reporting, greatly distorting the business results of the enterprise.

❖ **Content and monitoring criteria**

- Supervise the preservation and development of state capital at enterprises.

- Supervise the management and use of state capital and assets at the enterprise according to the following contents: Investment activities of capital and assets at the enterprise and capital investment activities outside the enterprise (mobilized capital sources attached to the enterprise, investment project implementation progress, investment capital disbursement progress); Situation of capital mobilization and use of mobilized capital; release Stock; Situation of asset management, debt management at the enterprise, ability to pay debt of the enterprise, ratio of liabilities to equity; Cash flow situation of the enterprise.

- Supervise the business activities of the enterprise: Business performance results: Revenue, profit, return on equity (ROE), return on total assets (ROA); Fulfillment of obligations to the state budget.

- Supervise the implementation of plans to divest state capital, recover state capital, collect profits and dividends distributed from enterprises.

5. SOME LESSONS FOR LAO PDR

Many governments in Area have taken important steps towards improving performance monitoring systems for SOEs, in most cases bringing practices more in line with relevant recommendations of the SOE Guidelines. The SOE Guidelines notably call for the state as an owner to (i) set SOEs' financial and non-financial objectives; (ii) establish reporting systems to monitor performance against those objectives and (iii) report to the public on results. By establishing and formalising performance evaluation systems, most of the countries surveyed in this stocktaking have, to varying degrees, taken steps forward in all of these areas.

Firstly, Performance contracts and Performance indicators.

Performance contracts: A few Asian countries have formalised performance evaluation systems through performance contracts or their functional equivalent, such as agreements or memorandums. These are generally documents outlining yearly performance targets, usually signed between the ownership entity and executive management. This approach has reportedly been useful in clarifying objectives, strengthening the accountability of SOE managers for enterprise performance and granting them greater autonomy to oversee daily operations. By helping to clarify objectives, the use of performance contracts has arguably facilitated the implementation of one fundamental recommendation of the SOE Guidelines, notably that the state should "allow SOEs full operational autonomy to achieve their defined objectives and refrain from intervening in SOE management" (Guideline II.B). However, it is essential that boards of directors play an adequate role in this process, thus fulfilling their essential functions of setting strategy and supervising management.

Performance indicators: All countries undertake performance evaluations against quantitative indicators measuring both financial and non-financial performance. Examples include standard financial performance indicators as well as numerical indicators of customer satisfaction or number of beneficiaries served. A smaller group of countries also uses qualitative indicators to measure financial and non-financial performance, for example assessments of SOEs' risk management or corporate governance practices. Assessing the effectiveness of individual indicators is beyond the scope of the present stocktaking. However, it can be concluded that better defining the state's objectives through clear performance indicators – including those related to financial performance, but also non-financial performance such as the delivery of public service obligations – introduces greater transparency to the process and is in line with international good practice.

Second, Auditing and reporting on performance

Reporting on SOE performance – at both the company level and through annual aggregate reports on the SOE sector as a whole – is an important means to strengthen the accountability of the state as an owner and ultimately promote improved performance. To ensure the accuracy and quality of reporting, SOEs should establish an internal audit function and subject SOEs' financial statements to an independent external audit.

Third, Linking evaluation results to executive incentives

A majority of the Area countries s of performance evaluations to inform executive incentives and/or sanctions. In a plurality of cases, this takes the form of performance-based pay for senior management. This practice diverges somewhat from the standards of the SOE Guidelines, which would normally call for the SOE board of directors (and not the state ownership entity) to oversee and incentivise management. However, given the relatively weaker degree of corporatisation of SOEs in the region, and the more limited mandates of boards, it can reasonably be concluded that this reflects differences in corporate governance arrangements rather than fundamental policy divergences. Formalising performance-based pay systems through explicit, published pay scales has arguably introduced greater transparency to the state's policy on executive remuneration levels, bringing practices more in line with the SOE Guidelines.

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BOARD INDEPENDENCE AND THE PERFORMANCE OF STATE-OWNED ENTERPRISES: AN ANALYSIS OF VIETNAM

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Abstract: *This study assesses the relationship between board independence and board size on the business performance of state-owned enterprises in Vietnam. With a dataset of 50 state-owned enterprises listed on the stock market during the period from 2016 to 2020, the research employs Ordinary Least Squares (OLS), Fixed-effects, and Random-effects regression models to examine the relationship. The regression results indicate that the relationship between independent members and firm performance is not statistically significant. However, board size exhibits a statistically significant negative relationship with firm performance.*

Keywords: *board independence; board size; firm performance; Vietnam state-owned enterprises.*

1. INTRODUCTION

The issue of board independence holds a central position in the ongoing corporate governance reform initiatives globally. This concern is grounded in the fundamental problem of corporate governance, which stems from the separation of ownership and control within organizations. The board of directors plays a crucial role in mitigating this problem, as it is responsible for overseeing the management and aligning the interests of shareholders with the decisions made by the executives (Sarkar, 2009). A board that comprises outside independent directors is perceived as being more effective in addressing agency conflicts compared to boards with predominantly executive directors (Weisbach, 1988; Fama, 1980). Beyond its role in resolving agency conflicts, independent directors offer additional advantages through their experience and connections with other companies, enabling them to bring valuable resources, suppliers, and customers to the organization (Pfeffer, as cited in Sarkar, 2009). Consequently, this institution is believed to enhance the overall performance of the firm.

However, an alternate perspective questions the true independence of these directors from the management and controlling shareholders. This skepticism arises from the fact that independent directors are typically nominated, selected, and appointed by the management in alignment with the majority shareholders (Varma, 1997; Varottil, 2010). This perspective casts doubt on the effectiveness of boards in promoting good governance within organizations. The existing empirical literature also fails to provide a definitive answer regarding the impact of board independence on firm performance.

Several studies have found that board independence has a positive impact on firm value (Jackling and Johl, 2009; Black and Khanna, 2007; Chakrabarti et al., 2010; Brown and Caylor,

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2006; Black et al., 2006). Weisbach (1988) has noted that boards dominated by outside directors can enhance firm value through their influence on CEO changes. However, other research, such as studies by Dey and Chauhan (2009), Prasanna (2006), Bhagat and Black (2002), and Lawrence and Stapledon (1999), have found no evidence to suggest that firms with a higher proportion of independent directors achieve improved profitability. Some studies, like Rebeiz (2008), have even reported non-linear impacts, while Garg (2007) and Ghosh (2003) have explored non-linear influences of board independence on Indian firms. These conflicting findings highlight the need for further exploration and understanding of the benefits and effectiveness of independent directors.

In light of these gaps in the existing literature, this research aims to empirically investigate the impact of board independence on firm value in the context of Vietnam. The following sections will provide an in-depth examination of the relationship between board independence and firm performance, and the subsequent development of hypotheses. The research methodology, data analysis, and conclusions will also be presented in subsequent sections to contribute to our understanding of corporate governance and its implications for business operations in Vietnam.

2. LITERATURE REVIEW

Corporate governance is a fundamental aspect of modern business management, and the composition of a firm's board of directors plays a pivotal role in shaping its performance and decision-making. One of the key elements in corporate governance is the inclusion of independent board members, whose primary role is to provide objective oversight and guidance to enhance a company's performance and protect the interests of its shareholders. This literature review examines various studies and perspectives on the relationship between independent board members and firm performance.

Several theoretical frameworks inform the relationship between independent board members and firm performance, including Agency Theory, Resource Dependency Theory, and Upper Echelons Theory. Agency Theory posits that the presence of independent board members can mitigate agency problems by aligning the interests of managers (agents) with those of shareholders (principals). Independent board members, not having substantial ties to the company, are expected to monitor management more effectively and reduce agency costs. This theory suggests that firms with a higher proportion of independent board members are likely to exhibit better performance. Resource Dependency Theory emphasizes the external resources and expertise that independent board members bring to a firm. These individuals can provide valuable knowledge, networks, and legitimacy, which, in turn, enhance a company's performance. Their external connections may help firms access essential resources and navigate a competitive business environment. Upper Echelons Theory posits that the attributes, experiences, and cognitive frames of top executives, including independent board members, influence decision-making and, consequently, firm performance. The theory suggests that independent board members' backgrounds and experiences may impact their effectiveness in shaping the strategic direction of a firm.

The empirical evidence concerning the relationship between independent board members and firm performance is multifaceted, with studies offering diverse findings. Research by Brown and Caylor (2006) in the United States found that firms with independent boards reported higher returns on equity, profit margins, and stock repurchases. This study suggests a positive association between independent boards and various measures of firm performance. In the aftermath of the Asian

Financial Crisis, Choi et al. (2007) studied the impact of introducing outside directors in Korea. They found that board independence had a significant and positive effect on firm performance. The presence of independent directors was particularly crucial in emerging markets subject to external shocks and liquidity constraints.

Numerous studies have provided mixed results regarding the value relevance of board independence. Some have shown a positive relationship between independent directors and firm performance, while others found no convincing evidence of such a relationship. The impact of independent directors may be contingent on various factors, including the type of company and its environment.

In some cases, studies have indicated a negative relationship between board independence and firm performance. For example, research conducted in New Zealand suggested that a higher number of non-executive directors on the board led to lower firm performance, particularly when they had limited influence over decision-making. In the United States, studies have shown mixed results, with some suggesting that boards with a high proportion of independent directors did not necessarily lead to improved profitability.

The relationship between independent board members and firm performance is complex, influenced by various theories and contextual factors. While some studies suggest a positive association between board independence and firm performance, others provide mixed or negative results. The effectiveness of independent board members may depend on the specific context of the firm, its industry, and the regulatory environment. Future research should delve deeper into these complexities, considering the nuances of different markets, industries, and firms, to gain a more comprehensive understanding of the impact of independent board members on firm performance.

3. DATA AND METHODOLOGY

3.1. Sample selection

The research team uses the sample of top 50 state-owned enterprises currently listed on the stock market for the period 5 year as of December 31, 2020 backward. The research team employs the definition of state-owned enterprises according to the 2020 Enterprise Law, which states, "State-owned enterprises include enterprises in which the State holds over 50% of the charter capital, the total shares with voting rights as prescribed in Article 88 of this Law." Subsequently, companies were excluded from the sample based on the following criteria: 1) Companies operating in the banking and insurance sectors were excluded due to differences in accounting methods and financial reporting indicators compared to other non-financial companies, which would affect the research results (7 companies). 2) Companies in which the state did not hold 50% of the capital during the period 2016-2020 (6 companies). 3) Companies that were not continuously listed on the stock market during the period 2016-2020 (14 companies). In total, 27 companies were excluded from the sample. Finally, the research team utilized a research sample consisting of the 50 largest state-owned enterprises listed on the stock market as of 2020.

3.2. Model specification

To examine the relationship between board independence and firm performance, we employ the following regression model:

$$ROA/ROE_{it} = B_{0\,+}\, B_1 Board\ independence_{it} + B_2 BoardSize_{it} + B_3 FirmAge_{it} + B_4\ Firm\ size_{it} + B_5\ Firm\ leverage_{it} + B_6\ GrowthOppor_{it} + Sector\ Dummy_{i} + Year + \varepsilon_{it}$$

In the above model, i represents the firm, t denotes the point in time, and ε is the error term. In this study, we utilize accounting-based measures of profitability such as ROA (Return on Total Assets) and ROE (Return on Common Equity) to proxy firm performance. ROA assesses the ability to generate profit per dollar of company assets, while ROE, crucial for shareholders, gauges profit per dollar of common equity. The primary independent variable in the model is Board Independence, measured as the percentage of independent members on the board of directors. Additionally, we investigate the relationship between board size and firm performance. This study also controls for firm-specific characteristics like Firm Age, Firm Size (Total Assets), Firm Leverage, and Firm Growth. Finally, we control for industry and time effects.

This research employs ordinary least squares (OLS), fixed-effect models, and random-effect models to analyze the association between board independence and firm performance. Diagnostic tests indicate the presence of heteroskedasticity and autocorrelation issues in the models. Consequently, the models are tested with the cluster (id) option to address these concerns.

Table 1. Variable definition

Variable	Definition
ROA	Return on Assets = Net profit (after tax) / Average total assets x 100%
ROE	Return on Equity = Net profit (after tax) / Average total owner's equity x 100%
Board independence	Proportion of independent members on the board of directors
Board size	Number of board members
Firm Age	The number of years since the establishment of the business
Firm size	Natural logarithm of total assets
Firm leverage	Debt-to-Asset ratio
Growth opportunity	Cumulative net revenue growth in the past 3 years
Sector Dummy	Wholesale, Retail, Manufacturing, Real Estate Business, Mining, Science and Technology, Agriculture, Electricity-Gas, Warehouse and Transportation industries.

4. RESULTS:

4.1. Descriptive statistics

Table 2 shows descriptive statistics for the dependent and independent variables. Firm-level variable values are restricted to the first and ninth percentiles to reduce the influence of outliers. The average ROA and ROE values in the study sample indicate that state-owned firms have profitability levels of around 8,076% and 14,605% of total assets and total equity, respectively. The percentage of board independence is around 13,649%. Companies with an average establishment age of 33 years have five members on its board of directors. The typical enterprise's three-year revenue growth rate is at 34%.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	250	8.076	8.183	-8.092	47.515
ROE	250	14.605	12.487	-30.797	59.017
BoardDe	250	13.649	16.474	0	60
BoardSize	250	5.492	.962	3	11

FirmAge	250	33.16	19.74	7	128
logAsset	250	28.503	1.178	26.183	31.756
FirmLev	250	.475	.201	.104	.867
GrowthOppor	250	34.7	139.51	-102.719	1104.557

4.2. Regression results

This section reports the findings of the relationship between board independence and firm performance. Correlation matrix and Collinearity Diagnostics is conducted to check for the correlations amongst the explanatory variables. As a rule of thumb, a variable whose VIF values are greater than 5 may merit further investigation. The results of Collinearity Diagnostics test show that all VIF values are less than 5, which indicate that there is no collinearity issue in the regression analyses.

Table 3. Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) ROA	1.000							
(2) ROE	0.851***	1.000						
	(0.000)							
(3) BoardDe	-0.137**	-0.142**	1.000					
	(0.031)	(0.025)						
(4) BoardSize	-0.206***	-0.179***	0.142**	1.000				
	(0.001)	(0.005)	(0.025)					
(5) FirmAge	-0.131**	-0.085	-0.135**	-0.146**	1.000			
	(0.039)	(0.182)	(0.033)	(0.021)				
(6) logAsset	-0.333***	-0.287***	0.136**	0.281***	-0.001	1.000		
	(0.000)	(0.000)	(0.031)	(0.000)	(0.982)			
(7) FirmLev	-0.555***	-0.222***	0.023	0.173***	0.092	0.194***	1.000	
	(0.000)	(0.000)	(0.719)	(0.006)	(0.146)	(0.002)		
(8) GrowthOppor	0.034	0.077	0.047	-0.019	-0.143**	-0.190***	-0.036	1.000
	(0.596)	(0.223)	(0.456)	(0.761)	(0.023)	(0.003)	(0.571)	
*** p<0.01, ** p<0.05, * p<0.1								

The findings of all models show that board independence negatively influences firm performance. Because of our panel data, we prefer the Fixed effect model and random effect model over OLS regression. As suggested by Hauman test, we should follow the results of Fixed effect model. The results of model (3) and (4) indicate that board independence has a negative impact on firm performance, however the coefficient is not significant at any level. The results are in line with those of (Adams, Hermalin et al. 2010) and (Rashid 2018), all of which find that board independence may not be able to improve firm performance. Even though, agency theory describes firms can improve their performance if they have a large number of independent directors (Terjesen, Couto et al. 2016) but when independent directors are from outsiders, they do not have the formal authority to influence CEOs to perform actions on behalf of them. Meanwhile, it can be observed that board size exhibits a statistically significant positive relationship with firm performance.

Table 4. Regression analysis - OLS, Fixed effect, Random effect model.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	OLS ROA	OLS ROE	FE ROA	FE ROE	RE ROA	RE ROE
Board independence	-0.0616	-0.107	-0.000724	-0.0360	-0.00690	-0.0514

	(0.118)	(0.112)	(0.973)	(0.436)	(0.708)	(0.193)
Board Size	-0.827	-1.006	0.647***	1.595**	0.401*	1.088*
	(0.215)	(0.420)	(0.00273)	(0.0211)	(0.0722)	(0.0711)
Firm age	-0.0221	-0.0366	1.089	1.135	-0.0182	-0.0261
	(0.531)	(0.525)	(0.104)	(0.338)	(0.636)	(0.662)
log Asset	-1.221*	-1.909*	-1.762	1.149	-1.622**	-1.964*
	(0.0561)	(0.0747)	(0.448)	(0.764)	(0.0289)	(0.0740)
Firm leverage	-19.07***	-12.37	-14.50***	-14.07*	-15.68***	-12.48*
	(3.87e-05)	(0.120)	(0.000646)	(0.0667)	(6.85e-06)	(0.0645)
Growth opportunity	-0.00200	1.10e-06	0.000609	0.00382	0.000586	0.00259
	(0.654)	(1.000)	(0.850)	(0.619)	(0.852)	(0.732)
Constant	56.27***	82.54***	27.08	-55.82	58.36***	72.34**
	(0.00561)	(0.00773)	(0.621)	(0.589)	(0.00770)	(0.0214)
Observations	250	250	250	250	250	250
R-squared	0.436	0.225	0.133	0.076		
Sector FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Number of CompanyID			50	50	50	50

Robust pval in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

6. CONCLUDING REMARKS

This empirical research on the relationship between independent board members and firm performance in Vietnam has provided valuable insights. While theoretical models and several empirical studies suggested that independent board members could improve company performance, our findings show that board independence is neutral, while board size exhibits a statistically significant negative relationship with firm performance in the context of Vietnam. Despite the complicated nature of this relationship, it highlights the significance of taking regional and industry-specific aspects into account when evaluating corporate governance methods. To garner a more thorough understanding of the impact of independent directors on business performance, further research is needed to delve into the complexities of board effectiveness in varied settings and regulatory frameworks. Another research direction is the extend the dataset to cover a larger set of companies of Vietnam.

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ACCOUNTING FOR ESOP IN VIETNAMESE ENTERPRISES

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Abstract: *ESOP is an Employee Stock Ownership Plan that has been introduced and implemented quite commonly by Vietnamese enterprises in recent times. However, the instructions for recording, measuring, and disclosing information about these transactions lack comprehensiveness/are not comprehensive and consistent/do not align with international practices. This has resulted in companies recording and presenting financial statements that are not genuinely useful. This study aims to analyze and assess the current actual situation of ESOP accounting in Vietnamese enterprises and also proposes some recommendations for improvement.*

Keywords: *ESOP accounting, accounting for share-based payments, accounting for share options.*

1. INTRODUCTION

ESOP stands for Employee Stock Ownership Plan. In an ESOP, the companies often commit to entitling their employees to the Employee Stock Options (ESO) at discounted prices or to issue bonus shares with additional conditions (such as a required length of employment or meeting performance targets related to profitability and stock price). ESOP is a program that benefits both companies and their employees in multiple ways. It helps companies retain talented employees, boosts motivation, and improves the overall roles, responsibilities, and rights of the employees. Additionally, it reduces the burden on the cash flow to pay employees traditional bonuses and allows the company to retain profits for reinvestment and business expansion. For these reasons, ESOP is commonly used in large corporations and companies in the world and Vietnam. According to a study by KPMG, statistics from the National Center for Employee Ownership (NCEO) indicate that in the US, there will be approximately 6,600 Employee Stock Ownership Plans (ESOPs) with up to 14 million employee participants by 2021. In recent years in Vietnam, ESOP has been widely known and used, especially in listed companies such as the Refrigeration Electrical Engineering Corporation (REE), Mobile World Investment Corporation (MWG), Elcom Technology Communications Corporation (ELC), HAGL Joint Stock Company (HAG)...

Considering the characteristics of an ESOP mentioned above, when it comes to an ESOP, it is important for the accounting ESOP to accurately record, measure, and present the company's financial statements to reflect the true nature of the transactions and provide useful information to the users of these financial statements, especially the existing shareholders of the issuing company. This study gathers existing research on ESOP accounting while assessing the current state of ESOP accounting in Vietnamese enterprises and proposes some recommendations to enhance ESOP accounting in Vietnamese enterprises.

2. RESEARCH BACKGROUND

ESOP represents a transaction where employees devote their time and intelligence to the company and in return, they are entitled to purchase the stock at discounted prices and receive shares as a reward. Thus, it is inherently a share-based payment transaction. For this reason, accounting for ESOP needs to assess the value of the stock options or stock rights given to employees as

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bonuses and record them as expenses that align with benefits brought to the companies by the employees. Therefore, the International Accounting Standards Board (IASB) started studying accounting for share-based payment transactions in 2001 and published IFRS 2 – Share-based payments with the effective date of 01/01/2015, which provides guidance on the measurement and recognition of share options or share appreciation rights fair value in expenses. This is done in line with the value that employees bring to companies. Some countries, including the US, Australia, and the UK, also published similar standards to guide the measurement and recognition of ESOP shares in 2004. These standards were applied in 2005 and had similar content to IFRS02.

After IASB published IFRS2, there have been numerous foreign studies on the recognition, measurement, and presentation of shares under ESOP. One such study, conducted in 2005 by Fayez A. Elayan, Kuntara Pukthuanthong, and Richard Roll (US), titled "*Investors like firms that expense employee stock options and they dislike firms that fail to expense*" found that the companies that choose to record expenses incurred by ESO experience an increase in stock prices compared to companies that do not record such expenses. A study conducted by Ewout de Vaere (2008) titled "*Recognizing Employee Stock Options: the impact of IFRS2 on Dutch listed companies*" reveals that the implementation of recording expenses from ESO in accordance with IFRS 2 will have a negligible effect on the financial ratios.

In Vietnam, the accounting standards and principles do not provide instructions on accounting for ESOP. However, there have been some studies that look at acknowledging IFRS02 and the orientation of applying IFRS02 in Vietnam. One such study, conducted by Ngo Thi Phuong Duyen, titled "Applying IFRS 02 in accounting for employee share options in listed Vietnamese companies". In this study, the author discusses the basic content of IFRS02, examines the current state of ESO accounting in some Vietnamese companies, and suggests the adoption of Vietnamese accounting standards based on IFRS02 for share-based payments accounting. Moreover, the author provides some recommendations and solutions for addressing the issues faced during the implementation of these standards. However, the research lacks adequate evaluation and recommendations regarding the recognition and presentation of ESOP shares for the listed Vietnamese in current times and also, directions for standards that can guide the measurement and recognition of employee share-based options.

3. RESEARCH METHOD

To conduct the research, the author uses desk research methods, which involve studying secondary documents from publicly published previous research and analyzing financial statements of Vietnamese listed companies. This allows the author to gather information, analyze, evaluate, and present the research results.

4. RESEARCH RESULTS ON ACTUAL ESOP ACCOUNTING SITUATION AND RECOMMENDATION

4.1. Research results on actual ESOP accounting situation

+ An ESOP operates in a cycle that follows these steps:

1. Issuance of share options
2. Rights Entitlement
3. Exercising rights
4. Vesting of rights
5. Selling ESOP shares.

Normally there is a period of time between when the shares are issued and when the rights are entitled. During this time, the company often requires its employees to fulfill certain conditions in order to meet (satisfy) the vesting requirements for the share options or share appreciation rights. After the entitlement date, the employees will have a period of time to exercise their rights, which will extend until the expiration date for exercising those rights. Following the exercise of rights, there are often restrictions on employees from selling the shares for a specific period, such as one or two years. Having such ESOPs, Vietnamese enterprises like Elcom Technology Communications Corporation (ELC), Mobile World Investment Corporation (MWG), etc are performing measurement, recognition, and presentation in their financial statements as follows:

+ About measurement and recognition:

Companies that offer ESOP do not perform measurement of share options or share appreciation rights at fair value at the date of right issuance. Since then, joint stock companies have **not recorded** the value of share options and granted shares given to their employees or key leaders as expenses for employee salaries which align with the revenues or other benefits that employees bring to the company during a transition period. Joint stock companies only determine the value of granted share transactions for employees when they exercise their right of share options (which also means when the granted shares are issued to employees with vested rights), the price of exercising the share options is equal to the price of the right issuance. This is done through a put-through agreement between the joint stock company and the employees (for example, ELC Corporation in 2014 and 2015). According to the price of share options, journal entries are:

Dr. 111,112: Value of exercising share options

Cr. 4111: Share capital at par value

Cr. 4112: Surplus equity

In the case where the issuance of appreciation shares or share options for employees includes conditions related to business efficiency, the accounting is determined based on the agreement between the company and the employees, the exercising prices and sources for bookkeeping:

- Issuance of appreciation shares from profit after tax:

Dr. 421: Undistributed after-tax profit

Cr. 4111, 4112: Newly issued shares

Cr. 419: Re-issuance of treasury shares

(Mobile World Investment Corporation made this journal entry in December 2016)

- Issuance of appreciation shares from Treasury shares without collecting money, the journal entry according to the accounting system is as follows:

Dr. 4112: Share capital surplus

Cr. 419: Treasury shares

- Issuance of appreciation shares with discounted prices from Treasury shares, the entity records according to the guide of the accounting system:

Dr. 111,112: Based on issuance price

Cr. 4112: If issuance price < book price

Cr. 419: Book price

Cr. 4112: If issuance price > book price

+ About information disclosure:

Listed companies that offer ESOP are required to disclose specific information as per the regulations set forth by the State Securities Commission, the resolutions made by the Board of Directors or the general meeting of shareholders; the list of participating employees, and the results of the share issuance for these employees. In the financial statements, listed joint stock companies only disclose information about the number of exercised employee share options or the number of appreciation shares that the employees received. This disclosure is similar to the ordinary issuance of common shares. Joint stock companies do not provide adequate disclosure of information related to the issuance of share options and appreciation share plans. This includes details such as determining the value of the share options and their impact on other financial information such as profits, revenue in future years, and diluted earnings per share…

4.2. Assessment of current situation

The study shows that while the guide for ESOP accounting in Vietnam's legal accounting framework is inadequate, listed Vietnamese joint stock companies with ESOPs have carried out measurement, recognition, and presentation of information in their financial statements in line with current regulations. However, the study on ESOPs and the accounting for ESOPs in Vietnamese enterprises still has some limitations:

First, in recent times, although listed joint stock companies have been actively researching and conducting share-based payment transactions for their employees, these transactions are currently facing backlash from existing shareholders (especially foreign shareholders). That is because publicly traded companies such as Mobile World Investment Corporation, Masan Group, and Vinamilk Joint Stock Company are offering share options to their key managers pricing at VND 0 or significantly lower prices which are funded from profits after tax, share capital surplus, or Treasury shares. Issuing share options at VND 0 will increase the company's charter capital, but it will not result in any new cash flow into the company. Instead, the company will allocate a portion of its retained earnings or surplus capital to owner's equity. Simply put, it is using a portion of the shareholder's fund to reward key managers. Therefore, if the percentage of ESOP issuance is 5% and the selling price is VND 0, utilization of shareholders' interests will be higher. For this reason, shareholders of many large companies often disagree with the program of share appreciation rights for key managers using profits after tax or other sources of owner's equity, without any accompanying conditions or an initial commitment to devote time or demonstrate business efficiency. This greatly affects the retention of managers and talents, as well as the company's management, operational capabilities, and overall development.

Secondly, the accounting treatment of ESOP by listed joint stock companies has not accurately reflected the nature of the transaction. The accounting treatment and presentation of the financial statements in listed companies can potentially create opportunities for executives and key managers to manipulate information in order to meet certain conditions set by shareholders. This includes falsifying information in the income statement, manipulating prices, and taking actions that allow them to purchase shares, or share options and sell them for profit. Because of this, some accounting and stock experts believe that it is crucial to establish appropriate accounting treatment for ESOPs in listed companies. One of them is Dr. Vu Thi Kim Lien, the former Vice Chairman of the State Securities Commission, whose opinion was published in Sai Gon Investment Newspaper on

October 13th, 2013 stated: "ESOP can also create incentives for manipulating prices and pushing up stock prices, especially when the rights of share options are exercised. The huge benefits of share options can lead to a willingness to violate ethical practices, such as concealing information and lacking transparency in financial statements. This can result in driving up prices until there is a significant difference between the stock price and the exercise price of the share options. In certain countries, accounting regulations specify that any discrepancies must be shown in the financial statements, which means that they will be recorded as expenses for employee salaries and bonuses. Then, investors can immediately see its impact on the financial statements. This will act as a deterrent against rent-seeking behavior when implementing ESOPs".

Thirdy, with the ESOP that listed companies are conducting, the presentation of financial statements is still incomplete. The enterprises do not disclose any information when employees are not entitled to share options or when employee share rights are not exercised, even if the conditions for entitlement may have been met or certainly have been met. In specific, when calculating diluted earnings per share, companies do not calculate the possibility of issuing share options or share rights. In the event that shares rights or share options are exercised, the company only provides a general overview in the "Situation of changes in owner's equity" section. However, there is a lack of detailed information regarding the prices for exercising the rights, the number of vested rights, the number of rights that are not vested and exercises, as well as information about the impact of vesting on stock prices and other related details.

The limitations mentioned above may originate from objective factors within the legal document system or management mechanism, as well as subjective factors that stem from within the company. Through actual surveys and references from experts, several possible causes have been identified, including:

Firstly, the system of legal documents pertaining to stocks, capital instruments, and tax legal documents related to capital instruments has not been adequately published and provided with specific instructions. As a result, businesses are still in perplexity when it comes to their application.

Secondly, the shareholders have not been fully aware of the impact of the compensation programs for the employees by means of share rights or share options, on the company's development and their own interests. As a result, they tend to easily approve programs that are harmful to them or struggle to reach an agreement on plans that would benefit both employees and shareholders.

Thirdly, Vietnam currently lacks a comprehensive system of legal documents that provide guidance on how to measure the value of share options and properly recognize and present financial statements.

Fourthly, this issue arises because senior management of listed companies does not recognize the value of share options as expenses. This is because expenses can have a negative impact on the information presented on the income statement, which in turn affects the benefits received by management personnel.

5. RECOMMENDATION

For the foreseeable future, as long as the legal documents on Vietnamese accounting, particularly the accounting standards, have not been updated or issued in alignment with international financial reporting standards, the accounting for ESOPs in Vietnamese-listed companies should follow the following guidelines:

First, ESOP needs to be included in the Notes of the Financial Statement in the "Other notes" section (Section VIII). This section should provide information on the following: Subjects eligible for the rights, vesting rights, vesting date, estimated number of vested rights, estimated number of exercised rights, prices of exercised rights and estimated number of shares to be issued for vested subjects in the upcoming fiscal year. Also, clear notes should be provided on the impact of exercised rights on the ratio of "diluted earnings per share" in the income statement. This will ensure that existing investors, potential investors, and other users of information have complete information about the financial position and operational activities of the listed joint stock companies. In addition, it can be further explained how the share-based compensation programs for key employees have improved the company's performance compared to the previous year and other companies in the industry.

Secondly, when share options and share rights are exercised, listed joint stock companies should provide more detailed information in the "Statements of Changes in Equity" section. This should include notes on the prices at which the rights are exercised, the market price at the time of exercise, and the source of the shares used for exercising (whether they are newly issued or Treasury shares). If Treasury shares are used, it is important to include the book value and issuing price of these shares. This additional information will enable investors to analyze the impact of this plan on their interests and understand the contribution of employees with vested share rights in the listed companies.

Thirdly, in order to minimize conflicts of interest between employees participating in ESOP and existing shareholders in listed joint stock companies, while also achieving growth targets, retaining talented individuals, and attracting competent employees, it is recommended that companies consider implementing ESOP programs that are linked to factors such as working time, business efficiency, and restrictions on share transfer for a specific period of time. This approach can help generate employee motivation, align their interests with those of the company, and ultimately maximize share value while also saving cash for the company. Studies around the world have shown that companies that provide share options to their top-performing employees and key managers tend to experience higher revenue growth rates, typically 2-3% higher. In addition, these companies also see a growth rate of returns on assets that is usually around 2-2.7% and their stock prices in the market tend to increase (article published on May 2nd 2003 on http://vietstock.vn/PrintView.aspx?ArticleID=1802).

Fourthly, in case joint stock companies use Treasury shares or purchase shares by cash for issuing to employees exercising share rights or share options at a price lower than the book value of the Treasury shares, recording the difference in decrease in "Surplus share capital" is not reasonable. Because joint stock companies incur costs to compensate employees for their services, these costs should be recognized as expenses rather than as a decrease in owner's equity. This recognition is necessary to match expenses with the corresponding revenues in a given period. This directly affects the interests of the current shareholders, as it inaccurately portrays the financial performance of the joint stock company during this period and also significantly influences the decisions made by users of the financial statements.

Recommendation for the future (from 2025 onwards)

The implementation of ESOP is gaining popularity among Vietnamese-listed joint stock companies. This is particularly evident as international economic integration strengthens, competition among businesses intensifies, the need for good corporate governance grows, and the importance of retaining top employees and managers is increasingly emphasized. As the stock market advances and policies for attracting foreign investment are liberalized and opened, more strategic investors and major shareholders are participating in both direct and indirect investments in listed Vietnamese companies. Consequently, the provision of information regarding the financial position of publicly traded firms in general and share-based payment transactions in particular must be transparent, comprehensible, and in line with more stringent international investment practices and standards.

In compliance with the Ministry of Finance's guidance on researching and promulgating Vietnamese accounting standards, accounting standards for share-based payment transactions require researching, promulgating, and instructing for measurement of value, recognition, and presentation on the financial statements. This should be in accordance with Vietnamese conditions and international practices to ensure that the information is sufficient, useful, transparent, and reliable for investors and other users of information. Actual surveys showed that 100% of the questioned accounting and audit experts were in favor of a comprehensive accounting system for share-based payment transactions in Vietnamese publicly traded companies. The accounting standards for share-based payments are completed based on IFRS02 with amendments so that the standards are appropriate to Vietnam's political and market conditions. Subsequently, transactions paid by capital instruments are also known as share options, with which joint stock companies must do the following steps:

- Evaluation according to one of the methods such as the Black-Scholes model, binomial models, and Monte-Carlo model. However, Vietnam currently has not provided enough factors to meet the requirements of these valuation models. Therefore, Vietnam's share-based payment standards can regulate and provide guidance on the theory of these valuation models. The businesses can also be encouraged to apply these standards if they have sufficient and reliable information. Besides, Vietnamese accounting standards for share-based payments allow the application of the method of valuing capital instruments based on their intrinsic values, which has a higher feasibility.

Intrinsic value: The difference between the fair value of the shares that the partners have the rights (conditional or unconditional) to purchase or receive and the price (if any) that the partners are required to pay for these shares. For example, one share option has an exercise price of VND 10.000, the fair value of the share on the market is VND 25.000 and the intrinsic value of the share option is VND 15.000.

Through this method, the value of share rights or share options is measured and recognized at their intrinsic value and is adjusted whenever each financial statement is presented based on the changes in its intrinsic value until the share options are exercised, canceled, or expire.

- Recorded in appropriate accounts of expenses and owner's equity

The Ministry of Finance needs to add an equity account to recognize the value of share options or share rights for the employees as below:

Account 410 – Share options/rights

Structure of this account:

Credit side: Reflects the value of share options or share rights that have not been exercised during the vesting period.

Debit side: Reflects the value of share options or share rights that have been exercised, canceled, or expire.

Credit balance: Reflects the residual value of share options or share rights that are not exercised during the vesting period.

This account must be opened in detail and tracked for each entitlement of rights in terms of both quantity and value.

The balance at the end of the period (end of quarter, end of year) of this account must be reflected as a separate item on the owner's equity section of the balance sheet, namely "Share options/rights"

The journal entries are recorded as below:

+ Record expenses during the transition period according to the value of share options allocated each year:

Dr. 627,641,642,622...

Cr. 410

+ When the share options/rights are exercised:

Dr. 111, 112: Based on the price of exercising rights

Dr. 410

Cr. 4111: Based on the par value

Cr. 4112: Surplus equity (if any)

+ In the case that the share options are measured based on their intrinsic value, it is necessary to make adjustments every time the financial statement is prepared or during the exercising period. The accounting treatment then is as follows:

+ Adjustment to an increase during the financial reporting period with unexercised share options:

Dr. Salary expense: 627,641,642…

Cr. 410

+ Adjustment to a decrease during the financial reporting period with unexercised share options:

Dr. 410

Cr. Salary expense: 627,641,642…

+ Adjustment to share options exercised at market stock price at the exercising time that is greater than the fair price during the financial reporting period of the adjacent year:

Dr. 111, 112: Based on the exercising price

Dr. 410: Based on book value

Dr. 642, 627, 641..: Difference in market price at the time of exercising - fair price at the financial reporting period of the adjacent year

Dr. 4111: Based on par value

Cr. 4112: Surplus equity (if any)

+ Adjustment to share options exercised at the market stock price at the time of exercising that is greater than their fair price during the financial reporting period of the adjacent year:

Dr. 111, 112: Based on the price of exercising rights

Dr. 410: Based on book value

Cr. 4111: Based on par value

Cr. 4112: Surplus equity (if any)

Cr. Salary expense: Difference of fair price during the financial reporting period of the adjacent year - market price at the time of exercising the rights

+ If the share options are not exercised:

Dr. 410

Cr. 4211

+ In the case that a company issues Treasury shares instead of new shares to employees with share options to be exercised, when employees exercise share options, the recording is as follows:

Dr. 111, 112: Based on the price of exercising rights (if any)

Dr. 410

Cr. 419: Based on book value

Cr. 4112: Surplus equity (if any)

+ Disclosure/presentation on financial statements:

Publicly traded companies must fully disclose information related to share-based payment transactions in accordance with the provisions of the standards, even if the share options have not been exercised, including:

+ Category and scope of share-based payment transactions.

Method for measuring the fair value of share-based payment transactions, particularly payment transactions using capital instruments, the fair value of capital instruments with specific description.

Presentation of the effect of share-based payment transactions paid by equity instruments, especially share options. This includes the effect of share options on the company's financial information such as profit and loss, the effect on diluted earnings per share, the ratio of profit growth, etc.

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PERFECTING LEGAL REGULATIONS CONTRIBUTING TO IMPROVING THE EFFECTIVENESS OF THE FIGHT AGAINST CRIMES OF MANUFACTURING AND TRADING OF COUNTERFEIT GOODS.

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Abstract: The article outlines and analyzes a number of practical issues and inadequacies when applying the Penal Code to handle crimes of manufacturing and trading of counterfeit goods in practice. The perception and application of the Penal Code in some cases does not guarantee accuracy, which may stem from imprecise provisions of various legal documents. From there, the author of the article proposes solutions that contribute to improving the provisions of criminal law and a number of other related legal documents to ensure that the provisions of the Penal Code are recognized and applied properly and synchronously in the fight against crimes of manufacturing and trading of counterfeit goods in the coming time.

Keywords: Crime of manufacturing and trading of counterfeit goods; Counterfeiting; Crimes violating economic management order in the fields of production, business and commerce; 2015 Penal Code;

1. CURRENT STATUS OF CRIMES OF MANUFACTURING AND TRADING OF COUNTERFEIT GOODS IN VIETNAM IN RECENT TIMES AND SHORTCOMINGS, LIMITATIONS IN THE LEGAL PROVISIONS ON CRIMES OF MANUFACTURING AND TRADING OF COUNTERFEIT GOODS IN THE PROVISIONS OF THE CURRENT PENAL CODE.

- Current status of crimes of manufacturing and trading of counterfeit goods in Vietnam in recent times: According to the report of the Police Department of investigating crimes of corruption, economics, and smuggling, Ministry of Public Security, from 2012 to 2022, the Economic Police force discovered and handled 9,716 cases of manufacturing and trading of counterfeit goods with 11,971 detained; Of these, 3,186 cases were prosecuted with 4,401 defendants; 6,281 cases with 7,036 subjects have been administratively handled; 349 cases with 534 subjects have been transferred to other forces to handle. The amount of goods seized was estimated to be worth over 338 billion VND (1): Crime statistics report of the Police Department of investigating crimes on corruption, economics, and smuggling). In recent years, the Economic Police force has actively and proactively conducted many activities to prevent and combat crimes of manufacturing and trading of counterfeit goods. However, in the process of fighting against the crime of manufacturing and trading of counterfeit goods, there are still many difficulties and obstacles that demand research into solutions, especially for shortcomings and limitations within regulations in criminal law and other legal documents related to the crime of manufacturing and trading of counterfeit goods in recent times.

In the chapter on economic offences, prescribed in the 2015 Penal Code amended and supplemented in 2017, crimes related to manufacturing and trading of counterfeit goods are specified in section I, group Criminal offences against regulations of law on production, business, and trade. Crimes of manufacturing and trading of counterfeit goods have particularly strict penalties, with penalties up to life imprisonment or death penalty, such as the crime of manufacturing and trading of counterfeit food or food additives Article 193 or the crime of manufacturing and trading of counterfeit medicines for treatment or prevention of diseases, with the remaining crimes of manufacturing and

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trading of counterfeit goods all have penalties of up to 15 or 20 years in prison. That demonstrates the level of danger this type of crime is. The perpetrator of the crime can leave behind particularly devastating consequences for the victim, and in many cases leading to fatalities in many cases of manufacturing and trading of counterfeit goods. That consumers can use, such as counterfeit food or counterfeit medicines for treatment or prevention of diseases.

In addition, in terms of ethics, the acts of manufacturing and trading of counterfeit goods, especially goods such as food or medicine, seriously violate human ethics. In a civilized society, those who manufacture and trade counterfeit food have full knowledge that they are dangerous to society, and consumers will peruse those foods or food additives harmful to the health and lives of consumers, yet for profit and personal gain, they still commit such acts. Even more dangerous are those who produce and sell counterfeit medicines for treatment or prevention of diseases. They prey on sick people, patients who are suffering in every way to manufacture and trade counterfeit drugs, profiting on their bodies and suffering during their illness. It can be said that these acts are immoral and are heavily condemned by society.

Therefore, regulating these crimes with very strict penalties will have a great deterrent effect on criminals, but in reality, manufacturing and trading of counterfeit goods can bring in huge profits, so the criminals still disregard the prohibition, disregard the strict penalties, trample on human dignity and morality, to commit crimes blinded by the profit brought by manufacturing and trading of counterfeit goods. It is required that the measures taken against crime must be more drastic in the coming time to minimize the consequences caused by this type of crime.

Crimes of manufacturing and trading of counterfeit products include: Article 192: Manufacturing and trading of counterfeit goods; Article 193: Manufacturing and trading of counterfeit food or food additives; Article 194: Manufacturing and trading of counterfeit medicines for treatment or prevention of diseases and Article 195: Manufacturing and trading of counterfeit animal feeds, fertilizers, veterinary medicines, pesticides, plant varieties, animal breeds

Based on the provisions of the Penal Code, it can be understood that: Crimes of manufacturing and trading of counterfeit products are socially dangerous acts, specified in Section I, group Criminal offences against regulations of law on production, business, and trade, are the act of producing (making), trading (exchanging) products with complete knowledge that they arre counterfeit goods to gain profits that violate the economic management order, through that damaging the economy and harming consumer rights.

Researching crimes of manufacturing and trading of counterfeit productse of counterfeit goods as well as the handling of these crimes in practice in recent years, the author has noticed a number of inadequacies in the provisions of law leading to incorrect and inaccurate application, causing many difficulties in combating crimes.

First, there is no specific definition of counterfeit goods, crimes of manufacturing and trading of counterfeit products.

Currently, to identify counterfeits, one can refer to account 1, Article 7 of Decree No. 98/2020/ND-CP dated August 26, 2020 of the Government regulating penalties for administrative violations in commercial activities. , manufacturing and trading of counterfeit and banned goods and protection of consumer rights (Decree No. 98/2020/ND-CP) for 06 groups of counterfeit goods. However, this is only a regulation on handling administrative violations. In addition, crime of manufacturing and trading of counterfeit products is only regulated in Article 192 of the 2015 Penal Code, amended and supplemented in 2017 (2015 Penal Code), without a specific definition of crime of manufacturing and trading of counterfeit products

According to the provisions of the Penal Code, the signs of criminal acts of crimes of manufacturing and trading of counterfeit products are quite clear, determining the crime for (convicting) the criminal violations of these crimes is (probably) undisputed. However, a rising problem is that criminals are engaged in cross-border trading of counterfeits. The act of trading counterfeit goods across borders will be prosecuted for smuggling (Article 188 of the Penal Code) or crimes of producing and trading in counterfeit goods (according to Articles 192 to 195 of the Penal Code, depending on the corresponding counterfeit goods specified in these Articles) with aggravating factor "cross-border trading" (point l, clause 2, Article 192 or point e, clause 2, Articles 193, 194, 195 of the Penal Code)?

In reality, "possibly" due to incorrect perception of the law, there are cases where criminals have committed acts of trading (importing) counterfeit medicines across the border, but during trial, the Court convicted the offender of smuggling (2 Le Dinh, former General diirector of VN pharma, having imported counterfeit cancer medicines, was sentenced to 12 years in prison http://baophapluat.vn/phap-dinh/nguyen-tong-giam-doc-vn-pharma-nhap-thuoc-tri-ung-thu-gia-nhan-12-nam-tu-351090). However, when responding to frustrations of the public about the crime in this case, there exists opinions that, "Regarding the crime, there are opinions that it should be handled as a crime of "smuggling" or "Manufacturing and trading of counterfeit medicines for treatment or prevention of diseases".

Thus, from this real case, it has been found that the provisions of the current Penal Code do not stipulate the definition of crimes of manufacturing and trading of counterfeit products or what the definition of counterfeit goods. Therefore, there are many cases where there is confusion in determining whether it is smuggling or trading of counterfeit products, because for smuggling the first and most important object is commodity. But the law does not specify or limit what kind of goods they are, must they be genuine goods or not, the law has not specified and there is no guiding document. As such, there are cases of illegal cross-border trading of goods that cannot be determined whether it is a case of smuggling or trading in counterfeit goods. Here, the key issue is whether the sign of "goods" (object of smuggling) specified in Article 188 of the Penal Code include counterfeit goods or not? If "goods" does not include "counterfeit goods", then incorrect perception of law is due to insufficient level of laww enforcement offices. However, if "goods" include "counterfeit goods", then the assessment of the act of cross-border trading of "counterfeit medicines" is possible. Because of that, iis necessary to redefine goods in smuggling to include specific types of goods, to avoid confusion in determining the crime between smuggling and manufacturing and trading of counterfeit goods when there is a factor of illegal cross-border trading.

Second, there is still confusion with some other crimes.

- Confusion with crimes of infringement of industrial property rights (3.Check Article 226 infringement of industrial property rights, 2015 Penal Code amended and supplemented in 2017): Up to now, distinguishing crimes of counterfeit goods from crimes of infringement of industrial property rights has always been a controversial issue. Based on the concept of counterfeit goods specified in Clause 7, Article 3 of Decree No. 98/2020/ND-CP, it can be classified into the following three types: (i) Counterfeit goods in terms of content (or quality, use value of goods); (ii) Counterfeit goods in terms of appearance (counterfeit designs, brands, names, origin... of goods); (iii) Counterfeit goods in terms of both content and form.

Affected objects of the crime of infringement of industrial property rights are goods with counterfeit trademarks and geographical indications that are registered for protection in Vietnam. The affected objects of counterfeit goods crimes are, of course, counterfeit goods. However, there is an overlap when there are cases of criminal acts of counterfeiting in terms of form or counterfeiting in terms of both content and form, more specifically, how to handle using counterfeit trademarks or geographical indications printed on product labels?

Up to now, the competent authority has not yet issued a guiding document unify the handling of which goods are considered counterfeit trademarks and which goods are considered infringing on industrial property rights on trademarks and geographical indications. Many people believe that if one produces goods bearing the brand name of another manufacturer or violating geographical indications that are protected in Vietnam (only counterfeit in terms of form) yet the quality or use valueof the goods is equivalent to genuine goods, that is considered an infringement of industrial property rights. In cases where goods are produced under the brand name of another production facility or the origin, geographical indication of the goods is incorrect and the quality of the goods (use value) is not guaranteed, this must be considered manufacturing of counterfeit goods

- Confusion with the crime of smuggling (4 Check Article 188 the 2015 Penal Code amended and supplemented in 2017) in the case of illegally trading goods across borders, because the determination of the content of goods in the crime of smuggling is not clear in the provisions of the current Penal Code.

- Confusion with the crime of obtaining property by fraud (5 Check Article 174 the 2015 Penal Code amended and supplemented in 2017): Because the nature of the criminal acts in these two crimes is deceitful, therefore, in theory as well as in practice, the distinction between the two is necessary.

- Confusion with the crime of deceiving customers (6 Check Article 198 the 2015 Penal Code amended and supplemented in 2017): in the crime of deceiving customers, the offender’s act of weighing, measuring, gauging, counting incorrectly is clearly distinct from the crime of manufacturing and trading of counterfeit goods, but the issue of whether the act of utilizing fraudulent tricks overlap with the act of trading of counterfeit goods needs to be clarified.

Third, there is no clear distinction between poor quality goods, imitating goods and counterfeit goods.

Regarding this issue, currently in practice and theory there is the use of terms such as imitating goods and poor quality goods, especially in cyberspace, the sale of poor quality goods is rampant on the market, but in terms of current legal regulations, there are no documents defining and distinguishing these types of goods from each other, leading to difficulties in fighting and handling these violations. . In Joint Circular No. 10/2000/TTLT-BTM-BTC-BCA-BKHCNMT dated April 27, 2000 of the Ministry of Trade, Ministry of Finance, Ministry of Public Security, Ministry of Science, Technology and Environment guiding implementation of Directive No. 31/1999/CT-TTg dated October 27, 1999 of the Prime Minister on fighting against the manufacturing and trading of counterfeit goods introduces the concept of counterfeit and poor quality goods. Currently, current legal documents no longer have records of the term poor quality goods, but only regulate counterfeit goods in Decree No. 98/2020/ND-CP. However, in practice, it is necessary to distinguish between poor quality goods and counterfeit goods. In addition, the 2015 Penal Code is in effect, but the basis for distinguishing the aforementioned crimes is unclear, and at the same time, with the current complicated crime situation, if there is no unified guidelines, it will hinder proceedings-conducting agencies in investigating, prosecuting and adjudicating counterfeit goods cases.

Fourth, problems when handling criminal liability of commercial legal entities.

A new factor in the group of crimes related to counterfeit goods is that commercial legal entities can also be the subject of this crime. However, the question is, when will the criminal liability of legal entities be handled? When researching cases of counterfeit goods, the author found that in many cases criminals established legal entities and, on behalf of legal entities, manufactured and traded counterfeit goods. So, in what cases will a commercial legal entity be criminally responsible for this act?

According to Clause 2, Article 75 of the 2015 Penal Code: "The fact that corporate legal entity has criminal responsibility does not exempt criminal responsibility of individuals," there is no change to defendants being prosecuted for criminal liability. Article 75 of the 2015 Penal Code stipulates the conditions for the criminal liability of commercial legal entities with the following three conditions: (i) The criminal offence is committed in the name of the corporate legal entity; (ii) The criminal act is committed in the interests of a commercial legal entity; (iii) The offense was committed under instructions or approval of the commercial legal entity. However, the condition of whether the criminal act is committed in the interests of the commercial legal entity or not needs to be considered.

Many commercial legal entities jointly commit crimes, the issue of personalizing criminal responsibilities of members of the criminal commercial legal entity needs to be more clearly defined to benefit the process of law enforcement.

2. RECOMMENDATIONS FOR PERFECTING LEGAL REGULATIONS CONTRIBUTING TO IMPROVING THE EFFECTIVENESS OF THE FIGHT AGAINST CRIMES OF MANUFACTURING AND TRADING OF COUNTERFEIT GOODS.

First, it is necessary to introduce the concept of counterfeit goods; Counterfeit goods that are food, and food additives; Counterfeit goods that are medicines for treatment or prevention of diseases; Counterfeit goods that are animal feeds, fertilizers, veterinary medicines, pesticides, plant varieties, animal breeds. In reality, identification of counterfeit goods is based on Decree No. 98/2020/ND-CP. However, this is only a decree regulating the sanctioning of administrative violations, and in this decree, only groups of counterfeit are introduced without a definition of counterfeits for practical application. To avoid getting overlap between laws when applied, it is necessary to soon have guiding document in regard to this. On the other hand, if the current concept of counterfeit goods is invoked, distinguishing it from some other crimes, especially the crime of infringing upon industrial property rights, is quite difficult when the object is a counterfeit product of the act of manufacturing and trading of counterfeit goods (in terms of form) and of acts of infringing upon industrial property rights both have the same content, that is, using counterfeit trademarks or illegally using geographical indications printed on goods labels. . Thus, in cases of counterfeit in terms of form and intellectual property infringement of industrial styles and commercial indication objects such as: Trademarks, names of origin of goods, address indications. ... How to handle these crimes has not yet been resolved.

Accordingly, if the concept of counterfeit goods is introduced as the object of activities of counterfeit goods crimes, it is necessary to specifically stipulate: "Goods in one of the following cases are counterfeit goods: (i) Cases of counterfeit goods in terms of content: Goods have no use value, utility or use value and utility inconsistent with the natural origin and name of the goods; has use value, utility inconsistent with declared or registered use value, utility; Goods that have at least one of the quality criteria or technical characteristics that create use value and utility of the goods only reach 70% or less of quality standards and technical regulations that are registered, declared or recorded on labels and packaging of goods; Medicines for treatment and prevention of diseases for humans and animals do not contain residues, have pharmaceutical ingredients inconsistent with the registered amounts, insufficient registered pharmaceutical ingredients, medicinal ingredients different from those listed on the label or packaging; Pesticides without active ingredients, or with active ingredients that only reach 70% or less of the registered quality standards and technical regulations, and with active ingredients different from those listed on the label or packaging rowization. (ii) Cases of counterfeit in terms of appearance (counterfeiting goods and packaging), including: Goods with labels or packaging impersonating another trader's name and address r; Goods with labels or packaging containing falsified instructions on the origin of the goods, place of production, packaging, and assembly of goods whose quality does not correspond to the quality standards of genuine goods; goods with counterfeit trade names, goods names, deed registration codes, bar codes, industrial styles, and goods packaging of other traders. (iii) In case the products are counterfeit stamps, labels, and packaging, they are also considered counterfeit goods.

It is necessary to quickly amend documents that contain (definitive) regulations on "counterfeit goods". Specifically, consider amending and introducing the concept of counterfeit goods in a number of specialized laws, such as the Pharmacy Law, foreign trade management law, and Product Quality Law. In addition to these documents, other documents with regulations related to counterfeit goods, counterfeit drugs, and other counterfeit products must also be quickly examined and edited by the agencies (which have promulgated documents) to ensure accuracy of regulations, through that enauring correct perception and unified law application in practice.

Second, it is necessary to issue an unified guiding documents to distinguish between crimes related to counterfeit goods or other types of crimes, especially crimes of infringing on industrial property rights. Currently, the 2015 Penal Code has taken effect, but the basis for distinguishing the above crimes is unclear. At the same time, with the current complicated crime situation, the lack of a guidance unified document will prove very difficult for proceedings- conducting agencies in investigating, prosecuting and adjudicating counterfeit goods cases in particular and other crimes in general.

Third, it is necessary to issue unified guidance documents on quantifying the value of goods such as "counterfeit goods are equivalent to genuine goods", "illegitimate profits" and "causing property damage" and legal responsibilities of commercial legal entities when committimg acts of manufacturing and trading of counterfeit goods to ensure consistency in the process of fighting against the crime of manufacturing and trading counterfeit goods.

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A STUDY ON ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE AT DEVELOPED COUNTRIES AND IMPROVEMENT MEASURES FOR VIETNAM

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Abstract: *Natural resources and ecological environment are the basis for human survival. With the increasing severity of the contradiction between economic development and environmental protection, the public is paying more and more attention to environmental information of the companies. From the perspective of disclosure regulation, discosure content and disclosure mode, this paper study the differences in environmental accounting information disclosure in some developed countries: the United States, Great Britain, Germany, Japan, and China, and then puts forward some suggestions for improving the environmental accounting information disclosure system in Vietnam.*

Key words: *Environmental accounting information, Information disclosure, Sustainable development, Listed Company.*

1. INTRODUCTION

In situation of development of the economy, the contradiction between human society and the natural environment is becoming increasingly obvious. As the main subjects participating in economic activities, companies must have the main responsibility in promoting sustainable development. The sustainable development of the economy cannot be separated from the behavior of companies. Environmental protection activities and environmental accounting information disclosure behavior of companies play a vital role in creating a transparent, healthy and sustainable development environment. Currently, the disclosure of environmental accounting information in Vietnamese enterprises still has many limitations, so it is necessary to improve the disclosure of environmental accounting information in Vietnam. The paper selects some of countries which have relatively good environmental accounting information disclosure systems, including the United States, Great Britain, Germany, Japan and China and then conduct to analysis the environmental accounting information disclosure systems in those countries from many different aspects including: legal regulations, accounting standards, disclosure content and disclosure forms. From the study, the author puts forward some suggestions for improving the environmental accounting information disclosure system in Vietnam.

2. THE ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE SITUATION IN DEVELOPED COUNTRIES

2.1. Environmental accounting information disclosure in the United States

Environmental accounting in the United States appeared in 1972, after the Environmental Summit in Stockholm - Sweden in 1972, but at that time it only focused on accounting at the national level, also known as Environmental National Accounting. Environmental accounting in businesses began to be researched in 1990, and the US Environmental Protection Agency conducted a project on environmental accounting in 1992. The task of the project were encouraging and promoting enterprises to fully aware of aspects of environmental costs, the relationship between environmental and cost and environmental factors in business decisions. Environmental accounting in the United

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States was born from public pressure and environmental protection movements. The public pressure requires businesses to pay attention to environmental issues during their operations, thereby it impact on the environmental policy of the US Government. The policy requires businesses to compensate for damage causing environmental incidents; the policy also requires businesses to limit waste and must clean up waste from businesses operations. It affect to businesses by increasing costs, impacting potential debt therefore affecting stock prices and shareholder benefits.

Subsequently, bills related to environmental disclosures were introduced which required companies to disclose data of pollution emissions and clarify those companies are responsible for environment pollution causing by their activities. The most important point is that government holds companies responsible for not only current environmental problems but also for pollution caused in the past which giving rises to environmental legal liability (Li, 2013). Those bills are built on the basis of a complete and synchronous legal system, primarily based on laws such as: Law on National Environmental Policy, Law on Environmental Cleaning, Law on Water Cleaning, Dangerous Species Law, Sarbanes - Oxley Law (This law affects the recording and reporting of environmental information in corporate financial statements). An important feature of the requirements of accounting system for environmental accounting information disclosure is combination of mandatory information disclosure and voluntary information disclosure, the United States has done relatively well in mandatory disclosure. The Securities and Exchange Commission requires listed companies to disclose environmental accounting information in their 10-K financial statements, a comprehensive report filed annually by listed companies to make a public of financial activities which is required by the US Securities and Exchange Commission from 1973. In addition, this agency issued "Staff Accounting Bulletin No. 92," a summary of the US Securities and Exchange Commission staff's position on how to adopt Generally Accepted Accounting Principles (GAAP) in 1993, requires companies to privately disclose information on environmental legal liability, environmental costs and environmental compensation. The environmental accounting framework issued by the US Environmental Protection Committee is the basis document for building the environmental accounting framework of the United Nations Division for Sustainable Development, the International Federation of Accountants and the Institute of Management Accountants.

The type of environmental accounting disclosure information can be divided into qualitative and quantitative information. The United States companies primarily address environmental issues from legal liability perspective, so they need to explain the impact of uncertain environmental issues on their future operations. Therefore, the United States companies take care to quantitative information. The United States companies often disclose environmental data in their financial statements because environmental liabilities and environmental costs are closely related to their financial statements. Besides financial statements, companies also disclose environmental accounting information through out other methods such as press conferences and internet (Fu, 2018).

2.2. Environmental accounting information disclosure in Great Britain

In Europe, the implementation of environmental accounting is not yet mandatory which means it is not within the scope of accounting standards. However, Great Britain is one of the countries that require businesses to publish environmental reports. In the 1950s, the London smog incident directly prompted the creation of the "Clean Air Act". Since then, the government has enacted a number of environmental laws. Among some of the bills which is most relevant to environmental disclosure is the environmental protection law introduced in 1990. The bill stipulates that companies must provide information related to environmental goals, Environmental protection measures and environmental performance results in financial reports. The act of disclosing environmental information becomes the legal responsibility of enterprises. However, accounting standards in Great Britain mainly encourage and guide companies to disclose environmental information voluntarily; there are relatively few mandatory measures. In addition to issuing guidelines, there are national competitions and awards to encourage companies to disclose high-quality environmental accounting information which Great Britain has already done. Morover, Great Britain also attaches importance to quantitative information to ensure the quality of environmental information. Enterprises can voluntarily disclose environmental accounting information in accordance with government guidance and quantitative financial information mainly related to environmental costs and environmental obligations. The disclosure methods of companies in Great Britain are similar in the US, with financial statements as the main channel and other channel as supplementary methods.

2.3. Environmental accounting information disclosure in Germany

Environmental accounting in Germany was introduced in 1980 by the Statistical Office of the Federal Republic of Germany, but they focused on the accounting for environmental costs and energy flows at the national level. Environmental accounting in Germany was raised from the pressure of global environmental issues such as: Greenhouse effect, ozone layer depletion, scarcity of water and energy resources..., these are expected to affect the sustainable development of the business in the future. In 1995, in Germany, we researched and implemented the Input - Output Table project, which reflected the flow of materials and energy within the economic system and between the economic system and the natural environment within human activities. In 1996, the Ministry of the Environment of the Federal Republic of Germany published a guidance document on environmental accounting mainly focusing on serving corporate governance. Environmental accounting in Germany was introduced and built on the basis of a complete and synchronous legal system, which is primarily based on laws such as: National Environmental Law, Recycling and Waste Law (This law stipulates that enterprises must reduce waste, analyze the Input - Output Table in each stage of operation and all activities in the enterprises), Law on environmental debts, Law binding companies to be responsible to the environment throughout the product's life cycle...

The publication of environmental accounting information mainly focuses on the content of material flows, analyzing input - output tables, determining the amount of raw material, energy, and water used annually, and determining the amount of emissions, wastewater, and solid waste every year. Environmental accounting of Germany focuses on the use of physical measures (Physical Accounting). The Federal Republic of Germany is the world's leading country in material accounting and material flow cost accounting models. According to the experience of companies in Germany, applying environmental protection measures and applying environmental accounting will increase overall costs and also environmental costs. However, this application will help businesses make decisions on technical changes, management system, product strategies towards green products, and the use of environmentally friendly materials. This change leads to the cost saving for raw materials, energy, water, waste treatment, improving productivity and operational efficiency (Huynh Duc Long, 2015).

2.4. Environmental accounting information disclosure in Japan

Environmental accounting in Japan was born from the pressure of scarcity and stress on resources and environment that affect Japan's sustainable development. A particularly urgent task for Japan is to solve the problem of waste from production and consumption processes. Every year Japan releases about 450 million tons of waste into the environment, and landfills have run out of space. This pressure requires Japanese businesses and the Government to pay attention to environmental issues and environmental accounting (Huynh Duc Long, 2015). Environmental accounting in Japan was first researched by the Ministry of Environment in 1997. In 1998, the Japanese Institute of Certified Public Accountants researched the situation of using environmental cost information to manage environmental issues. 1999 was the first year that environmental accounting was applied in Japan. In detail, in March 1999, the Committee on Environment issued guidance on measuring and reporting environmental costs in businesses. In July 1999, the Japan Business Administration Association established an Environmental Accounting research group, carrying out research projects on 12 leading Japanese companies such as: Toyota, Fuji, Ricoch, Canon, Fujitsu, etc. , this group has developed methods and techniques of Environmental Accounting to serve the internal management of businesses. In September 1999, the Japanese Ministry of Industry and Trade established a committee on Environmental Accounting to research and develop tools on Environmental Accounting. In 2000, the Japanese Ministry of the Environment released Environmental Accounting guideline to encourage companies to voluntarily public environmental information through corporate environmental reporting. In 2002, this guide was supplemented, revised, and republished. In March 2002, the Committee on Environmental Accounting of the Ministry of Industry and Trade of Japan, after 3 years of research, completed a project on environmental management accounting and in June 2002 published a document guiding accounting practices on environmental governance. The application of Environmental Accounting in Japanese businesses has the following characteristics:

According to the experience of Japanese companies, applying environmental protection measures and applying environmental accounting will increase the economic efficiency of the business and the effectiveness of environmental protection. In 2001, Toyota applied environmental accounting and benefited billions of yen each year due to reducing energy use, reducing waste treatment costs and cleaner production technology. Canon initially applied material flow accounting for a process, then for a product and expanded to the entire corporation, so it has reduced glass waste, waste, etc. and researched to produce thinner and better quality for glass material. In 2000, Ricoch implemented environmental protection measures and applied environmental accounting to calculate the cost of environmental protection and management activities to be 66 million USD, but the benefits were 79 million USD. This shows that Japanese companies apply environmental accounting focusing on material flow accounting, environmental cost and income accounting, ecological balance sheet analysis, and product life cycle analysis, determine the amount of raw materials, energy, and water used annually, determine the amount of wastewater emissions and solid waste annually. Japanese environmental accounting emphasizes the use of both physical measures and value measures in the accounting process. Japan is a latecomer in researching and applying environmental accounting, but has made the most of the experiences of other countries such as the United States, Germany, and England, so it has applied it very successfully at the business, region and country level. With various measures to encourage the disclosure of environmental accounting information, the rate of Japanese companies preparing environmental reports has increased dramatically in recent years.

Japanese environmental accounting was built and developed on the basis of a complete and synchronous legal system, with special attention from Government agencies, specifically the Ministry of Environment and Ministry of Industry. The Ministry of Environment focuses on Environmental Accounting in terms of providing environmental information to audiences outside of businesses. The Ministry of Industry and Trade focuses on Environmental Accounting in terms of providing environmental information to managers within businesses. Japanese law specifies the respective environmental responsibilities of nations, localities, businesses, and individuals, and grants local public groups certain powers to develop environmental regulations that are suitable for the locality.

Accounting standards in Japan mainly encourage companies to voluntarily disclose environmental information with relatively few mandatory measures. Authorities have established a number of guidelines to help companies know how to disclose environmental information to the public, which makes environmental information more standardized and valuable. For example, the "Environmental Accounting Guidelines" and "Environmental Reporting Guidelines" in Japan have greatly helped companies in disclosing environmental information in a standard manner.

Japan's environmental accounting information is more detailed than that of some other countries. The information includes two main parts: environmental costs and environmental benefits, divided into more detailed information types (Lai, 2016). Environmental information of Japanese companies is presented in the Annual Environmental, Social and Financial Reports.

2.4. Environmental accounting information disclosure in China

The promulgation of the "Environmental Protection Law" in the late 1970s marked the beginning of the construction of China's environmental legal system. Since then, the government has enacted a series of environmental laws and regulations to apply water management, air management, oceans management, minerals management, noise management and waste management. When it comes to the disclosure of environmental information, most of these laws reflect an administrative management perspective, requiring pollution companies to report environmental information to environmental management agencies. For companies that exceed emissions standards are required information disclosure more stringent. It shows that Chinese government is especialy interested in environmental accounting with the basis of a synchronous legal system which will facilitate for construction and development of environmental accounting.

Regarding accounting standards, agencies that build regulations to environmental accounting information disclose include the Ministry of Environmental Protection, the Ministry of Finance, the Securities Commission and the Stock Exchange. The Ministry of Environmental Protection has issued many regulations that limit companies's environmental accounting information disclosure. There are also regulations on the method and content of information disclosure as well as special regulations for enterprises causing heavy pollution and regulations related to the assessment of environmental behavior of enterprises. Compared with the regulations of the Ministry of Environmental Protection, the regulations of the Securities Commission and the Stock Exchange are relatively simple. They primarily require companies to provide necessary environmental accounting information in documents such as prospectuses and legal opinions when issuing stock to the public. The Stock Exchange also issued a number of documents regulating companies's environmental information disclosure such as "Guidelines for disclosing environmental information of listed companies". The Ministry of Finance stipulates that businesses must separately list "emission fees" and "green fees" in the notes of their financial statements.

The content of Chinese companies's environmental accounting information disclosure is quite diverse. Research by Shen & Chen (2020) clearly shows that diversity through the data in the table 1, companies are highly proactive in choosing the content of environmental information disclosure and the quality of environmental information disclosure is currently uneven. The rate of disclosure of qualitative information is generally higher than quantitative information and the rate of disclosure of beneficial information to businesses such as environmental protection certificates and awards is also much higher than negative information such as environmental protection fines and environmental violations.

Source: Shen & Chen (2020)

Content classifications			Number of companies	Proportion of companies
Monetary information	Environmental asset	Environmental facilities	139	42.12%
		Emission rights&mining rights	102	30.91%
	Environmental liability	Environmental governance deposit	42	12.73%
		Contingent liabilities	37	11.21%
	Environmental cost	Total environmental expenditure	128	38.79%
		Emission fees&greening fees	139	42.12%
		Resource tax	97	29.39%
		Environmental fines	10	3.03%
	Environmental benefit	Environmental rewards and subsidies	236	71.52%
		Tax incentives	52	15.76%
Non-monetary information	Quantitative information	Resource consumption&pollution discharge	170	51.52%
		Energy conservation	89	26.97%
	Qualitative information	Environmental concerns	312	94.55%
		Environmental risks	147	44.55%
		Environmental emergency plan	161	48.79%
		Environmental protection agency and management system	168	50.91%
		Environmental technology and facilities	249	75.45%
		Environmental protection publicity and training	75	22.73%
		Environmental violations	16	4.85%
		Environmental certification and honor	140	42.42%

Table 1: Content of environmental accounting information disclosure in China

To understand exactly how Chinese enterprises disclose environmental accounting information, Shen & Chen's (2020) study uses data from companies in heavy polluting industry listed on the Shanghai stock exchange in 2017 as research evidence. The data show that Chinese enterprises disclose environmental accounting information using a variety of means such as annual financial reports, social responsibility reports, sustainable development reports, environmental reports and governance, social and environmental reports of 330 companiesa. The data were obtained from the Shanghai Stock Exchange website and the companies' official websites. In addition to reporting on the media, social networks and other transmission methods, companies mainly disclose environmental accounting information through reports such as annual financial reports, social responsibility reports, sustainable reports, environmental reports and environmental, social and governance reports. The results of measuring the information disclosure rate of these 5 reports are shown in Table 2. It can be seen that, in addition to financial statements, companies mainly disclose environmental accounting information through social responsibility reports and sustainable development reports. It is worth noting that although environmental accounting reports are the most professional way of environmental information disclosure but the current participation rate in providing environmental accounting information is still low.

Source: Shen & Chen (2020)

	financial report	social responsibility report	sustainable development report	environmental report	environmental, social and governance report
Number of companies	322	133	6	9	5
Proportion of companies	97.58%	40.30%	1.82%	2.73%	1.52%

Table 2: Form of environmental accounting information disclosure in China

3. IMPROVEMENT MEASURES FOR THE ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE IN VIETNAM

Through the analysis of environmental accounting in some of the above countries, including long-standing developed countries and countries with similar geographical locations to Vietnam, can be applied to build environmental accounting at Vietnamese enterprises as follows:

Firstly, to apply environmental accounting in businesses requires the improvement and system of legal policies that are complete, synchronized and with close cooperation of government agencies related to environmental and accounting issues, environmental protection organizations, professional associations such as: Accounting Association, Environmental Protection Committee, etc., for developing countries like Vietnam which need support from international financial organizations such as: World Bank, International Monetary Fund, etc.

Secondly, goverment shoud be encouraging the public to pay attention to envionmental protection and disclose environmental accounting information. Because applying environmental protection measures and environmental accounting will lead to saving materials costs, energy, water, and waste treatment costs. It helps businesses to make decisions on technical changes, management organization systems, product strategies towards green products, and using of environmentally friendly materials, thereby improving business efficiency associated with effectiveness of environmental protection.

Thirdly, in the early stages, the application of businesses environmental accounting in many countries is voluntary; government agencies only issue instructions for businesses to implement environmental accounting. In reality, companies that implement environmental accounting have increasing business efficiency, creating motivation for all other businesses to apply environmental accounting, so government agencies that related to environmental and accounting issues, it is necessary to promulgate environmental accounting standards and regulate environmental information presented in reports provided to outside businesses which ensure unification of environmental management. It is also very important to promote environmental auditing to improve the reliability of environmental information.

Finally, depending on the technical facilities, capacity and management level at each period of each enterprise, contents of environmental accounting can be emphasized differently, but basically the content of environmental accounting including: material flow accounting; product life cycle analysis; environmental cost and income; evaluate responsibilities in environmental management and present environmental information in corporate reports.

Vietnamese companies still have differences, depending on the technical facilities, capacity and management level at each period; they can implement the contents of environmental accounting in each stage, each product, and each department or for whole enterprise.

CONCLUSION

Environmental information matters a lot. The government uses environmental information for decision making, the public uses environmental information to care about the earth's ecological environment, and companies shape an eco-friendly image by using positive environmental information. Knowing the source and content of environmental information, especially the environmental accounting information provided by the company, is helpful to environmental protection. Through content analysis method , this paper research the characteristics of environmental accounting information disclosure from many different aspects at some developed countries. The study concludes that there are valuable results of environmental accounting information disclose in some developed countries and proposed some improvement measures in Vietnam.

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