Financing Government in the Transition—Bulgaria
Financing Government in the Transition: Bulgaria

The Political Economy of Tax Policies, Tax Bases, and Tax Evasion

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FOREWORD

Financing government has emerged as a central problem in almost all transition countries. Under planned
communist regimes, governments directly controlled and allocated economic resources; in decentralized market
economies, they must find incentive-compatible and administratively efficient ways to extract resources from
large numbers of agents. New tax bases consistent with a market economy are required as the old tax bases,
consisting of the surpluses of state enterprises, evaporate. This volume provides a broad coverage of the problems
governments face in transforming their systems of taxation in the transition.

These problems are formidable. Tax administration will not initially be adequate to enforce compliance. Potential taxpayers in the emerging private sector will be reluctant to share their incomes with government, and tax compliance may also weaken in the state sector. Choice of the new tax bases and decisions on tax policy affect incentives for private agents and influence economic efficiency and income distribution. Moreover, tax evasion may be one factor affecting the mode of interaction between the new private sector and state enterprises, with high tax rates creating incentives for shifting profits from state enterprises to private firms in the informal sector. The problem for the government is then not only tax evasion, but the loss of income from its own state-owned firms. Tax policy and evasion can also affect privatization policies and the timing of the tax reforms themselves. A range of related questions arises about the financing of social insurance, social assistance and health care.

Deeper insights into these broad issues require case analyses of the actual issues confronted by governments and of their policies. This volume considers the experience of Bulgaria. Having experienced very large external shocks and large declines in the ratio of tax revenues to GDP, Bulgaria has attributes in common with many countries of the former Soviet Union. The answers proposed in this volume, though set against the particular background of Bulgaria, may be relevant for other countries.

Political processes may result in policy decisions that do not yield desirable efficient outcomes, particularly because of income-distribution effects. But even if efficiency is sacrificed for income-distribution, the benefit may not necessarily go to the poor but rather to those who have the means to influence policies. One question, for example, is the reason for the delay in the introduction of the value-added tax, which, when finally introduced, proved to be a very effective means of extracting revenues from the private sector. Another example in the study concerns fuel tax policy. This benefited special groups with tax exemptions, and also had adverse efficiency consequences in curtailing supplies of oil and gasoline to the domestic market. When supplies did arrive, they often evaded tax payments. Similar issues arise with respect to international trade policies that both created private rents and deprived government of revenues. The political economy approach of the study helps to provide an understanding of the divergences between actual and optimal policies as governments seek to establish a framework for resolving their budgetary problems in the transition.

ALAN GELB

PREFACE

This volume is a product of collaboration between the Country Operations Division of the Europe and Central Asia Department One and the Transitional Economies Division of the Policy and Research Department in analyzing Bulgaria’s experience with government finance reforms.

Papers in the volume cover a range of important reform issues which should be of interest to a broad audience of government officials, development practitioners and academics with interest in government finance in transitional economies. Tax base and revenue adequacy, the informal interface between private and state enterprises, and the financial transfers between households and the state are some of the issues which should be of particularly broad interest.

A distinct contribution of this book is that it takes account of political economy factors and incentives that are often critical in explaining why specific policies and reforms are adopted or delayed. In this regard, it contains a myriad of useful implications on how to design and how not to design and implement government finance reforms.
in the transition.

CHRISTIAAN J. POORTMAN

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I— INTRODUCTION

1— Summary

Zeljko Bogetic and Arye L. Hillman

The transition from socialism is accompanied by a fundamental change in the conception of government. New models of the role and financing of government are required to replace the former socialist structure. A number of alternative models are available from which to choose in making this change, ranging from the minimalist state that restricts its role to protecting private property rights and ensuring external defence and the rule of law, to the more interventionist paternalistic government of the welfare state.

Under socialism, there had been direct and all-encompassing control of economic activity. Whichever model is chosen for the new market economy, if a government seeks access to resources, means of financing are required, to withdraw the required resources from alternative market allocation. Although financing can, in principle, be provided by government borrowing and by inflationary means, the first offers limited scope in the early transition, and the second should be a last resort. With opportunities for borrowing restricted, and given the social and economic costs of inflationary financing, tax revenues have an essential role in financing adequate functioning of government.

The transition also brings special circumstances that affect taxation. The socialist social safety net disappears just when segments of society find themselves disadvantaged and even potentially destitute in the new market economy, and as the government finds itself confronting falling real output and contracting tax bases for its available tax instruments. Successful transition may itself be threatened, if the revenue needs required to contain social unrest cannot be met. Taxation further affects incentives for private sector development, for labor-market participation, and for informal-sector activity.

There are therefore important issues associated with the financing of government in the transition. In this volume the issues are identified and considered against the background of the Bulgarian experience.

The contributors to this volume have all spent time, in some cases considerable periods (and, in two cases, have lived their lives) in Bulgaria. They include the World Bank's operational country economists for Bulgaria and other specialist World Bank staff. Authors have been members of World Bank missions to Bulgaria, with the exception of a coauthor of chapter 11 (she however
had a role in the introduction of the value-added tax). Information was collected over the course of World Bank missions between 1992 and 1994. The time frame of the studies covers the first five years of Bulgaria's transition, and ends in December 1994, at which time the Bulgarian Socialist Party (the successor to the former Communist Party) secured an absolute majority in parliamentary elections. Bulgaria thus became one of many former communist countries where voters ultimately chose a socialist party to manage the transition.

Where appropriate, the analytical issues that arise in this volume are considered from a political–economy perspective that includes concern with why policies were adopted or were delayed, and looks at the relationship between efficiency and income distribution. The political–economy aspects are often implicit. Some questions that are raised are not definitively answered, because of data limitations, and also because policy motives can be ambiguous.

Chapter 2 (Bulgaria in Transition: An Overview, by Zeljko Bogetic) provides a description of economic and political developments as the broader stage for tax issues. Bulgaria differs from those countries where gradual introduction of market forces and enterprise decentralization had taken place throughout the 1980s (Hungary and Poland), or where voucher–based mass privatization schemes were implemented (the Czech Republic). The transition began in Bulgaria from a high level of planning, negligible private production, and high dependence on planned socialist international trade within the Council of Mutual Economic Assistance (CMEA). Following a 1990 moratorium on external debt repayments, access to commercial external financing was lost. The unfavorable initial conditions for transition make Bulgaria's experiences more similar to those of the countries of the former Soviet Union (FSU) than other central and eastern European (CEE) countries. The taxation issues that arise in the context of Bulgaria's transition however reappear in different degrees in all former communist economies whether they be FSU or CEE.

A common point of departure for all post–communist countries has been (a) the decline of the state–enterprise sector which was the principal tax base under the communist regime, combined with (b) restricted access of government to the potential tax base in the expanding private sector. The problems associated with transition–related tax base substitution, and the implications for choice of a tax system, are considered in chapter 3 (The Choice of the Tax System, by Zeljko Bogetic and Arye L. Hillman). The chapter describes the Bulgarian tax system under socialism, the revenue performance of the socialist tax instruments in the early transition, and the new tax system which was introduced (and amended) in the transition. Whereas privatization of large state enterprises proceeded extremely slowly, and was confined to a handful of firms, the private sector expanded rapidly as the consequence of restitution–based "small" privatization of land and property, and the establishment of many thousands of new private firms. Revenues from the private–sector tax base were below potential, because of tax evasion and because of recurring delays in the introduction of a value–added tax to replace the socialist turnover tax. The latter tax was in principle collected at the point of "sale for final consumption." This could be precisely designated in a planned economy, but left open ambiguities that facilitated tax evasion in a market economy. Bulgaria adopted a variant of a western European tax system, and increased tax rates on personal income when this was identified as a growing tax base. The message of the chapter is that the tax system could have been—and could still be— instituted otherwise, to reflect awareness of how tax–compliance incentives affect tax revenue, and with an understanding that higher tax rates and a more progressive tax system do not necessarily (and in the conditions of the transition, should not be expected to) yield more tax revenue than attainable from more simple tax structures with lower rates and lower progressivity.

Chapter 4 (The Private Sector, State Enterprises, and Informal Economic Activity, by Arye L. Hillman, Lubomir Mitov, and R. Kyle Peters) focuses on the private sector, and identifies the magnitude of the potential private–sector tax base. Official estimates of the size of the private sector are compared with inferential estimates based on measures of the "missing" labor force and incomes in informal sector activity. By any reasonable
assumptions, the informal (non−tax−paying) private sector is revealed to be a significant component of the economy. In particular, at least 90 percent of the share of profits in the economy appear to be in the informal, untaxed, private sector. Yet the real resource use of the private sector is inconsistent with this magnitude of share of profits. The profits appear to be linked to informal commercial relations between private and state enterprises that provide opportunities for profit−shifting from state enterprises to private firms, and for tax evasion. The informal relations between state and private firms also appear linked to delays in privatizing state enterprises, and delays in introducing the value−added tax.

Chapter 5 (Income Tax Reform and Investment Incentives, by George Zodrow) describes the taxation of business and capital income and considers whether tax incentives for investment are desirable in the context of the Bulgarian system. The chapter begins with a brief description of the features of taxes on business profits and individual income, and the associated economic incentives. Zodrow proposes that tax reforms be considered before the issue of investment tax incentives is addressed. He considers the place of investment incentives within the context of a reformed income tax structure, and reviews cases for and against such incentives. He then evaluates the relative advantages and disadvantages of alternative types of schemes. The conclusion is that investment incentives should be considered as part of the broad tax structure, and that improvements can be made to the manner in which the tax system chosen in Bulgaria affects investment incentives.

The chapters in Part III focus on households. Chapter 6 (Households and the State, by Michael Walton) provides a broad overview of labor−market taxes, government transfers, and households' income security. The shocks of the transition were transmitted through the labor market and reduced real incomes in the vast majority of households. At the same time, household insecurity increased as paternalistic socialist employment guarantees and provision of minimal basic con−

sumption came to an end. Walton concludes that payroll taxation, imposed in an attempt to finance social income transfers in the face of this insecurity, was too high to be consistent with incentives for formal, taxable, labor market relations. Transfer programs to maintain households' incomes were not sustainable. Transfer obligations could however be reduced to feasible levels by temporarily reducing social entitlements, even if in the future more generous social transfer programs to households were reinstated.

Chapter 7 (Household Taxation and Income Distribution, by Zeljko* Bogetic* and Fareed Hassan) reports the results of a study of how personal income taxes affected household income distribution. The results, which are based on household expenditure−survey data, indicate that the personal income tax was broadly progressive. Yet since households surveyed can be assumed to have adjusted their reported expenditures to exclude income on which taxes had been evaded, the study does not include the effects on household income distribution of the large informal sector reported in chapter 4. The conclusion that the tax system is progressive within the official economy may contribute in part to explaining the extensive scope of informal−sector non−taxed economic activity.

Chapter 8 (Central and Local Government Tax Relations, by Jorge Martinez−Vasquez) extends the framework of taxation issues to the structure of state and local government. Questions which arise here are: How should taxes be assigned between central and decentralized levels of government? Should local governments levy their own taxes or rely on redistribution of centrally levied and administered taxes? If local governments are to have their own taxes, which tax bases should be chosen? Should these be independent tax bases, or supplemental levies on central government taxes? Or should local governments charge user fees? Martinez−Vasquez considers these questions against the Bulgarian background. He describes how the transition changed the norms for intergovernmental relations, the consequent uncertainties andambiguities that arose, and the competition that took place between different levels of government for tax revenue. Policy recommendations are presented for a preferable framework of intergovernmental tax relations.
Part V looks more closely at indirect taxation. Chapter 9 (Excise Taxation of Fuel: A Case Study of Lost Revenue, by Lubomir Mitov) is a fascinating account of inopportune tax policies. Revenue was lost from what should have been a major tax base, because of a failure to adapt to market conditions and because of distortions imposed on the economy. Under socialism, differential excise taxes were used to discriminate in favor of fuel consumption by state–affiliated agencies and against private consumption. After the end of the communist regime, the prior discriminatory excise taxation was maintained. Market segmentation, which was difficult enough to enforce under planning, became virtually impossible in the new market environment. Government policies compounded existing distortions in the domestic fuel market, while revenue was lost by resale of low–tax fuel and by evasion of border taxes. Rather than the government obtaining much–needed revenue, rents were distributed. Mitov’s message is a negative one: how excise tax policy should not be implemented in an economy in transition.

Chapter 10 (International Trade and Budget Revenue, by George Fane) looks at the relation between government revenue and international trade. Taxes on international trade have historically provided governments with administratively amenable revenue, and have been tempting revenue sources because of the relative ease of monitoring and collection of revenues. Yet the taxation of international trade compromises the gains from liberal international trade policies. Experience suggests that taxes imposed for revenue purposes can become instruments for protection, and become subject to the pressure on government by domestic import–competing interests. While in the CMEA, Bulgaria had little need for market–based trade instruments: international trade was directly coordinated and regulated for consistency with the national plan, and international trade transactions were conducted by exclusive state trading organizations. The end of the CMEA necessitated the introduction of a market–based trade regime. Fane describes the post–CMEA trade instruments, which included import tariffs, import quotas, tariff–quotas, minimum export prices (in an attempt to counter under invoicing), import surcharges, export taxes, and duty drawbacks and exemptions for exporters. The message of the chapter is that international trade should not be viewed as a principal tax base for government revenue in the transition. If, however, there is to be intervention in international trade, the revenue consequences of the different means of intervention should be carefully considered. In particular, why use instruments that yield the government no revenue but are a source of rents for particular firms and agents in the private sector, when no–less–distorting explicit taxation of trade does yield revenue?

Chapter 11 (The Introduction of the Value–Added Tax in Bulgaria, by Zeljko* Bogetic* and Julia Varga) is a detailed account of the considerations encountered in implementing the (oft–deferred) value–added tax. The Bulgarian variant of the VAT is evaluated. The early revenue performance of the VAT reveals that the tax is an effective instrument for bringing private–sector economic activity into the tax base. Given the government's pressing revenue needs, one is left to wonder, if revenue motives were important, why the introduction of the VAT to replace the turnover tax was postponed so many times.

Part VI considers financing of social programs. Chapter 12 (Social Insurance and Social Assistance, by Louise Fox) describes social insurance and social assistance programs, and considers whether means of financing are consistent with delivery of the promised level of benefits. Fox also encounters the recurring picture of revenues inadequate to meet obligations. Revenue shortfalls arise in all countries, but in transition further complexities arise, as benefits which were envisaged as self–financing are subject to declining revenues because of individuals' inability or unwillingness to pay. Fox's analysis reinforces Walton's evaluation in chapter 6: more is promised by social programs than can be feasibly delivered, leaving no choice but to retreat from the promised level of paternalism to realistic levels of benefits. Costs can be contained by precise targeting of the most disadvantaged. Self–financing by potential beneficiaries of social programs also reduces the obligations of government. Fox observes, however, that while increased resort to self–financing may be possible for some social benefits, it may
be neither feasible nor morally defensible in other instances, as for example, for pension benefits for people whose income–earning lives were under the socialist regime. She also points out that, with social programs under stress because of revenue inadequacies, attempts at solving other transition–related problems should not place pressure on the already strained social transfer system, as for example, by reducing retirement age in response to unemployment. With social benefits overly ambitious and non–affordable, she views socially (and politically) costly retreat to affordable levels of social services as inevitable, and points out that lack of resolve of government to act only increases costs of adjustment to fiscal reality.

Chapter 13 (Choosing and Funding a Health Care Program, by Charles Normand) looks at financing of health services. The prior socialist regime provided universal free medical coverage. Normand describes Bulgarian health–care provision until the transition, and compares the standards of health–care services and mechanisms of provision with other countries. From among alternative schemes for health–care provision and funding, the model chosen in Bulgaria in the transition was compulsory social health insurance financed by a payroll levy, but permitting non–participation by high–income earners, thereby limiting cross–subsidization. The informal economy made the compulsory health–insurance scheme far from compulsory, even accounting for the voluntary exclusion of high–income earners. As with the tax regime, the transition provides the opportunity for a new start for a health–care system. The paternalistic egalitarian approach to health services of the socialist regime remains however ingrained in the expectations of the population in the post–communist regime, and the idea of fundamental rights of citizens to receive health care without regard for ability to pay, or costs of provision, compounds the budgetary problems of the transition.

The final chapter summarizes general conclusions that extend beyond the Bulgarian experience.
vided investment, swift privatization, management expertise, and political and institutional stability. Such conditions were not present in other transitional economies.2 Poland3 and Hungary are also somewhat unique in that they, much like the former Yugoslavia, had a tradition of worker participation in enterprise management and a decentralized, quasi-market economy. In Poland, the unions had influence in the political arena in shaping the policy agenda of the transition before and during the time of “extraordinary politics.” In Hungary, experimentation with decentralized labor-management, similar to that of the former Yugoslavia, was followed by a policy of gradualism in economic change.5 There was also substantial inflow of foreign capital. The Czech republic has, in many ways, been exemplary in the transition, privatizing by vouchers to transfer state assets to citizens, with the economy managed in a fiscally prudent manner. Slovenia also embarked on the path of transition in a relatively stable economic and political environment (Pleskovic and Sachs 1994), while Estonia and Latvia made swift strides towards a market economy. Remaining are a group of countries that include Bulgaria, Romania, Slovakia, Lithuania, and non-Baltic countries of the former Soviet Union, other countries arising from the former Yugoslavia, and the far east transitional economies, China, Vietnam and Mongolia. All, with the exception of China and Russia, where size and complexity make their circumstances special, are small open economies. All experienced a dramatic break with the former communist system, domestically and via the collapse of the CMEA and regional and inter-republican trade, and many were subjected to further external shocks. Bulgaria lags behind Poland, Hungary, the former East Germany, and Czech Republic in the progress made with transition, but leads many FSU economies. The initial conditions from which transition in Bulgaria was initiated were also more similar to FSU countries than to central and eastern European countries. This is reflected in trade dependence on Russia as great as that of soviet republics, and, as a front-line communist state, Bulgaria adhered closely to Moscow's conception of economic management. The collapse of the CMEA trading arrangement disadvantaged Bulgaria as much as the collapse of the Soviet Union adversely affected the FSU republics.6

Most importantly in the context of this volume, Bulgaria, in common with all the former communist countries has had steep declines in budgetary revenues due to collapse of traditional tax bases and the inability of tax authorities to secure alternative revenue from the growing private sector, at a time when expenditure obligations were being redefined with reference to new market-based realities. These identical revenue trends arise from similar underlying factors and pose similar policy dilemmas for fiscal authorities. The government budgetary crisis in Bulgaria has been, in particular, similar in depth and structure to revenue crises that have occurred in FSU countries, where the ratio of total revenue to GDP has fallen dramatically. Table 2.1 demonstrates the similarities in this respect between FSU countries and Bulgaria. Among the countries of eastern Europe, only Albania approaches Bulgaria's revenue decline relative to GDP, and among eastern European former CMEA economies, only

### Table 2.1: Percentage Changes in Revenue/GDP Ratio—1990-93 in Selected Transitional Economies

<table>
<thead>
<tr>
<th>Countries</th>
<th>Change in Fiscal Revenues as percent of GDP</th>
<th>Changes in Fiscal Revenues as percent of GDP</th>
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<tr>
<td>Group 2 (cont'd)</td>
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</tbody>
</table>
Group 1 (Eastern Europe)

Poland −0.90
Hungary −3.60
Czech Republic 6.60
Bulgaria −22.20
Albania −19.00
Romania −5.20

Group 2 (Former Soviet Union)

Lithuania −18.70
Moldova −22.80
Kyrgyz Republic −25.30
Kazakhstan −19.10
Belarus −7.60


Bulgaria exhibits the magnitude of the decline of revenues observed in FSU countries.

**Political Change**

As in all communist countries, the Communist Party enjoyed a political monopoly in Bulgaria, from the end of the World War II until the end of communism in 1989, when the perennial communist leader Todor Zivkov was deposed. As in Hungary, Bulgaria's break with communism took place peacefully without major upheaval, and went almost unnoticed by a world preoccupied, in late 1989, with change in other Eastern European countries. The Gulf War of 1990 then captured the world's attention at a time when more changes took place. Zivkov was forced to resign in November 1989 by his own party fellows, and an interim government was installed, led by Prime Minister Loukanov, consisting of some reform-minded socialists, as well as a number of ministers inherited from the previous regime. In the absence of well organized opposition, the successor of the Communist Party, the Bulgarian Socialist Party (BSP), won the election of June 1990, securing a majority of seats in Parliament. Three months later, unable to establish a national consensus to back market reforms, Prime Minister Loukanov resigned. In November 1990, a new caretaker government was formed, composed mainly of members of the main opposition parties (the most influential of which was the Union of Democratic Forces or UDF) but including some members of the BSP. The caretaker government viewed its mandate as initiation of a program of economic reform before new elections would take place. This government found

| Box 2.1: Highlights of Political Change in Bulgaria |
|---|---|
| **1989** | |
| November: | Zivkov resigned |
| **1990** | |
| June: | Socialist Government Elected |

Political Change
September: Socialist Government Resigned
November: Interim Government appointed

1991
June: New Constitution Passed
November: UDF Government elected

1992
January: Zelyev wins presidential elections
December: The Berov government takes office

1994
September: The Berov government resigns
December: Socialists win majority in general election

itself in the difficult position where the opposition formed the government while the BSP continued to dominate the legislative process with its majority in Parliament. In this situation, with steep falls in output taking place (see table 2.2 below) and with severe energy shortages (see chapter 9), the government embarked on a full−scale economic reform program to initiate the process of transition to a market economy. A reform program was launched in February 1991, despite inherited adverse policies and unfavorable external conditions due to foreign−debt repayment problems.

While the political parties were positioning themselves for the first truly contestable parliamentary elections in five decades, the Grand National Assembly formulated and adopted a new constitution in the summer of 1991. On October 13, 1991, general elections brought to power the main opposition party, the UDF, by a narrow majority over the BSP, while the Movement for Rights and Freedom (MRF), a party mainly composed of members of the Turkish minority, found itself holding the balance of power. The UDF and the MRF formed a tacit coalition, in which all the ministers were however from the UDF. The MRF, for its part, was promised elements of cultural autonomy for the Turkish minority, which had been denied under the communist government. The elections favored reform−minded, liberal forces, but there were uncertainties about the viability of the new coalition and the government's resolve to resist populist pressures against market reforms. The UDF government resigned following a vote of no−confidence in the fall of 1992 and, after several failed attempts to form the government, a new government led by Prime Minister Berov, a former advisor to the President, took power in November 1992. This government, which was supported by the BSP, the MRF, and a dissenting group of UDF members, became the most long−lived since the transi−

Following the failure of the major parties to form a government in the aftermath of the Berov government's resignation in September 1994, a new caretaker government was appointed and an election held on December 18. The outcome was a victory for the Bulgarian Socialist Party (BSP), which won 44 percent of the vote and an
absolute majority (one hundred and twenty-four seats) in the two hundred and forty-seat parliament. The Union of Democratic Forces (UDF) won 24 percent of the vote which translated into sixty-eight parliamentary seats, and three other parties (Bulgarian Business Block, National Union, and the Movement of Rights and Freedoms) passed the 4 percent vote threshold for entry into Parliament.

The Economic Legacy of Communism

Bulgaria's prereform economy was perhaps the most centralized in Eastern Europe (except Albania) and the most heavily dependent on trade with the countries of the Council for Mutual Economic Assistance (CMEA). As late as 1988, the state produced over 97 percent of industrial output and employed over 93 percent of industrial workers. Economic activity was effectively controlled by the state. Prices, wages,

<table>
<thead>
<tr>
<th>Box 2.2: Bulgaria: Initial Conditions at end1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ownership: Over 90 percent state-owned economy</td>
</tr>
<tr>
<td>Parallel markets: Many consumer goods</td>
</tr>
<tr>
<td>Price formation: State controlled (prices, wages, interest)</td>
</tr>
<tr>
<td>Inflation: Official 26%; unofficial over 50%</td>
</tr>
<tr>
<td>Growth: 12%; (0.3% in 1989)</td>
</tr>
<tr>
<td>Budget: Deficit: 14% of GDP</td>
</tr>
<tr>
<td>Monetary policy/Banking: Fully accommodating the fiscal deficit</td>
</tr>
<tr>
<td>Budgetary Subsidies: 16% of GDP</td>
</tr>
<tr>
<td>Undeveloped commercial banking</td>
</tr>
<tr>
<td>Strongly negative real interest rate</td>
</tr>
<tr>
<td>M2/GDP ratio over 125%</td>
</tr>
<tr>
<td>Balance of Payments: Current Account Deficit: 13.2 of GDP</td>
</tr>
<tr>
<td>Gross reserves: 0.2 months of imports</td>
</tr>
</tbody>
</table>


and interest rates were set with little or no regard for relative scarcities. Unemployment was officially nonexistent, although overstaffing was systemic in the government administration and the enterprise sector. Foreign trade was regulated via the CMEA, with little western trade. Poor remuneration, absence of a link between financial reward and effort, and poor accountability compromised the quality of governance of the state's enterprises. The economic system was stifled by adverse incentives.

Four legacies of the inherited economic system illustrate the adverse initial conditions and the magnitude of the task of reform: (a) subsidization of economic activities, reflected in ubiquitous "soft" budget constraints, resulted in an economic structure and incentives inconsistent with market values, (b) a monetary overhang complicated price stabilization, (c) an investment backlog of a large number of unfinished projects, initiated under communist planning, the completion of which was not justified under market criteria, and (d) a legislative overhang, reflected
in the inadequacy of previous legislation for market conditions. The first two issues were manageable. The third was still unresolved at the end of 1994, while progress had been made with the fourth in the creation of the institutional and legal environments for the new market system.

Subsidies

Explicit budgetary subsidies (seven categories of consumer, producer, and foreign-trade subsidies) accounted for 25 percent of government expenditures and 16 percent of GDP in 1990. Additional implicit subsidies were provided to specified sectors (for example, energy, heavy metallurgy) through a "selective credit policy" of preferential availability with negative real interest rates. Fixed non-market clearing prices of consumer goods resulted in forced saving and chronic excess demand in goods markets. The extensive subsidies reflected the state's extended role in ownership of assets, production of goods and services, and regulation of economic activity. In 1990, the ratio of central-government expenditure to GDP was over 71 percent, one of the highest levels in the world. The considerable revenue mobilization of near 60 percent of GDP was still incapable of supporting the extensive government involvement in the economy. Universal social security and large government civil services placed pressures on the expenditures of the budget. Before 1990 the budget had been kept in balance by the rigid mechanisms of central planning. With the end of planning (and the external shock of disrupted CMEA trade), output plummeted, and output-sensitive budget revenue fell while expenditures did not decline proportionately. The result was a large budget deficit in 1990. The economic structure which had been based on subsidies became non-sustainable in the new market conditions.

The Monetary Overhang

For lack of alternatives, households held their savings in the form of bank deposits which created a monetary overhang. The exact measurement of the excess liquidity of monetary overhang is complex (see Dornbusch 1991). For an

<table>
<thead>
<tr>
<th>Table 2.2: Bulgaria: Key Economic Indicators, 1990-1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Macroeconomic Aggregates (real growth rates, % change)</td>
</tr>
<tr>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td>Industry</td>
</tr>
<tr>
<td>Services</td>
</tr>
<tr>
<td>Gross Domestic Product by final use</td>
</tr>
<tr>
<td>Exports of GNFS</td>
</tr>
<tr>
<td>Imports of GNFS</td>
</tr>
<tr>
<td>Total Consumption</td>
</tr>
<tr>
<td>Government Consumption</td>
</tr>
<tr>
<td>Non–government Consumption</td>
</tr>
<tr>
<td>Gross Domestic Investment</td>
</tr>
</tbody>
</table>
II. Fiscal Balance (+,−) (% of GDP)

<table>
<thead>
<tr>
<th></th>
<th>0.3</th>
<th>3.4</th>
<th>1.3</th>
<th>−1.5</th>
<th>7.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>−4.9</td>
<td>−3.3</td>
<td>−5.1</td>
<td>−10.7</td>
<td>−6.2</td>
</tr>
</tbody>
</table>

III. Prices, Wages, Exchange Rate

<table>
<thead>
<tr>
<th>CPI (% change p.a.)</th>
<th>Average</th>
<th>Year-end</th>
<th>Average monthly wage in Lev</th>
<th>Dollar wages</th>
<th>Lev/USD exchange rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>..</td>
<td>..</td>
<td>91.2</td>
<td>72.8</td>
<td>96</td>
</tr>
<tr>
<td>Year-end</td>
<td>..</td>
<td>490.9</td>
<td>79.4</td>
<td>63.9</td>
<td>121</td>
</tr>
<tr>
<td>Average monthly wage in Lev</td>
<td>362.0</td>
<td>959.0</td>
<td>1950.0</td>
<td>3000.0</td>
<td>4450.0</td>
</tr>
<tr>
<td>Dollar wages</td>
<td>165.3</td>
<td>53.9</td>
<td>83.5</td>
<td>108.7</td>
<td>82.8</td>
</tr>
<tr>
<td>Lev/USD exchange rate</td>
<td>2.19</td>
<td>17.79</td>
<td>23.34</td>
<td>27.59</td>
<td>53.73</td>
</tr>
</tbody>
</table>

IV. Unemployment

| Unemployment | 1.6% | 11.0% | 15.3% | 16.3% | 14.2% |

V. GNP per capita (US$, Atlas method)

| GNP per capita | 2180 | 1508 | 1360 | 1172 | 1163 |

*/ preliminary data.

Source: NSI and World Bank.

indication of relative magnitudes, we can look however to the broad money–to–GDP ratio. This ratio was in excess of 109 percent in 1990, compared to the 50 percent or so in western Europe. As is well known, in economies with monetary overhang, a stabilization policy focussing only on flows (that is, a budget deficit and Central–Bank credit to the government) cannot achieve lasting control of inflation: the problem of the stock of (forced) excess saving must be solved as well. Price liberalization appears to be the most effective, fastest, and often politically the most feasible method of reducing monetary overhang; this was the means chosen by the Bulgarian authorities.

The Investment Backlog

The investment backlog of numerous projects, many of which may never be completed, posed a policy dilemma. The problem was not only the lack of viability of

many projects under market prices, but also the small size and investment capacity of the private sector. This could have been partially resolved by swift privatization to include the unfinished investment projects, but this did not happen. The general macroeconomic instability which had characterized Bulgaria’s early transition stifled incentives to save and invest.

The Legislative Overhang

Reforms need to be legislated before they can be implemented, but the legislation process is time consuming, even with the most diligent government and cooperative parliament, and can adversely affect the momentum of important components of reform (see, for example, Grey and Ianachkov 1993). In Bulgaria, the delay in passing a Value−Added Tax Law is a case in point: the law was first expected to be passed in 1990, but was not enacted until October 1993. Such delays may reflect confusion about priorities when a large number of laws require attention, but also are an indication of infrastructure and institutional weaknesses, and resistance from interest groups. With much legislation pending, its preparation and approval under conditions of political polarization...
can slow the implementation of reforms. Nevertheless, as of the end of 1994, Bulgaria had enacted basic pieces of legislation forming the legal foundation for the development of a market economy. The new constitution (1991) guaranteed private property rights, and several laws, including the Commercial Code (1991, amended in 1992), Banks and Credit Act (1991), Protection of Competition Act (1991, amended in 1992), and Bankruptcy Law (1994) were enacted to provide the legal framework for economic activity. By the end of 1994, the principal problems with legislation related to either very specific legal issues or implementation and enforcement of existing legislation.

**Economic Liberalization**

**Prices**

Liberalization of prices in Bulgaria began in February 1991, when also exchange rates were unified into a single, floating rate determined in the newly established inter−bank market. Prices for 76 percent of the 1990 retail turnover were liberalized, and the share of liberalized retail turnover was 84 percent by the middle of 1992. The remaining prices were classified into four categories in ascending degree of control: (a) forecast prices on fourteen agricultural commodities (subsequently extended on another ten commodities), (b) price ceilings on oil products, (c) state utility prices (prices of monopolies) including transport, railway and postal services, and (d) fixed prices on heating, electricity, gas and coal (see Zhecheva and Mileva 1992). Although controlled, these prices were adjusted to bring them closer to world levels and profit margin controls continued to exist on several products, including pharmaceuticals.

**International Trade Liberalization**

Foreign trade liberalization began in 1989 with the dismantling of some nontariff barriers (NTBs) and abolition of state monopoly in foreign trade. Decree No. 119 of June 1991 permitted considerable foreign trade to proceed on the basis of simple customs declarations rather than government permission. In July 1992 Decree No. 114 on regulation of foreign trade replaced the 1991 Decree and established the basis for external trade and trade barriers. NTBs were specified on a negative list so that, unless specifically identified on the negative list, foreign trade was free and subject only to customs declarations. Three types of NTBs were specified: import and export quotas, licensing and registration of some exports and imports, and minimum export prices (see chapter 10). Customs tariffs introduced in 1992 were set according to whether there was reciprocal preferential trade treatment. The unweighted average tariff rate for countries not providing preferences was 18 percent, with considerably lower dispersion than under the pre−1992 tariff regime. There were five tariff rates: 5, 10, 15, 25 and 40 percent. Bulgaria thus has a relatively low and simple (and so low−distorting) tariff structure.

**Property Rights and Privatization**

**Transformation of State Property and Competition**

Transformation of state enterprises and demonopolization of state monopolies took place under the Commercial Code of July 1991, resulting in the creation of over eleven−hundred limited−liability and four−hundred joint−stock companies. However, local monopolies and particularly agro−processing monopsonies proved resistant to the legislated framework for dismantling monopolies and fostering competition. There were no impediments to registration of new private firms with the courts, and by the middle of 1994 there were 330,000 private nonagricultural firms registered. An Anti−Monopoly Commission was in existence and functioned according to recognized procedures.
Land Reform

Land reform was codified in the Land Reform Act of 1991, which mandated the return of confiscated land to previous owners whenever possible. The large-scale liquidation of the former collective farms in order to implement the reform sparked heated debates and partly disrupted agricultural production. Although many farmers were issued "protocols" designating their rights to land, few received actual legal titles. This was a major concern since their land could not be used for collateral for loans to continue agricultural activity. As of 1994, 55 percent of 5.1 million hectares of agricultural land has been restituted, and the agriculture sector has shown remarkable resilience, despite the general upheaval of the transition in general, and institutional changes and credit problems in agriculture in particular.

Small Privatization and Restitution

Substantial "small privatization" (of small establishments) took place through the restitution of property: by 1994, approximately thirty-one thousand buildings and sites, which accounted for about 54 percent of the claimed property, have been restituted (World Bank 1995). Restitution was facilitated by well-preserved records of previous ownership and the government's resolve to pursue this type of privatization (Bogetic and Conte 1993). Also, auctions of small establishments were initiated in 1991. After delays due to a political crisis at the end of 1992, auctions of small enterprises recommenced in early March 1993 but then were halted again, reflecting the lack of political will as well as vested interests in the informal privatization of profits of state enterprises (chapter 4). As of November 1994, a total of one-hundred and fifty small units were privatized, of which sixty-seven were complete enterprises. Although these numbers are small, there was a notable acceleration in privatization during 1994 relative to 1993 (table 2.3).

Large-scale Privatization

While all political parties acknowledged the need for privatization of state enterprises, there was a prolonged debate over objectives, speed, and methods of implementation. In April 1992 a decentralized, multi-pronged, "market" approach was codified in the Privatization Law, allowing privatization by sale to be initiated by either central and local governments, the Government Privatization Agency, the Government Privatization Agency, the Government Privatization Agency, or private investors. A subsequent amendment to the privatization law allowing for mass privatization under supervision of the Center for Mass Privatization was introduced in 1994. Mass privatization was envisaged as a complementary method, in addition to other types of "market privatization."

Table 2.3: Record on Privatization

<table>
<thead>
<tr>
<th>Number of Available State Enterprises a</th>
<th>Number of Privatized Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>As of 1993</td>
</tr>
<tr>
<td>Privatization Agency</td>
<td>9001,000</td>
</tr>
<tr>
<td>(o/w whole enterprises)</td>
<td>(4)</td>
</tr>
<tr>
<td>Line Ministries</td>
<td>2,500</td>
</tr>
<tr>
<td>(o/w whole enterprises)</td>
<td>(21)</td>
</tr>
<tr>
<td>Of which:</td>
<td></td>
</tr>
<tr>
<td>Ministry of Industry</td>
<td>1,500</td>
</tr>
</tbody>
</table>

Land Reform
The Privatization Agency is in charge of privatizing and coordinating the privatization of large state enterprises with fixed assets over 70 million leva. Sector ministries are responsible for privatization of state enterprises which fall below the above threshold level, and municipalities are in charge of privatizing municipally−owned enterprises. Since small nonrestituted enterprises could be privatized by direct auctions, the law targeted primarily medium−size and large state enterprises.

As of November 1994, a total of twenty medium and large privatization transactions of whole enterprises had been completed under the supervision of the Privatization Agency, and there were hundreds of transactions under preparation. Seven enterprises had been sold to majority foreign buyers. Privatization of enterprises under municipal ownership resulted in one−hundred and sixty−nine completed transactions by 1994, although all the data on municipal privatization are not available.

Overall, formal privatization in Bulgaria has been slow. The slow progress with privatization partly reflects political factors, such as the lack of political will, the absence of champions of privatization and frequent political reshuffles which left major reform initiatives without leadership and a clear constituency. At the same time, the de facto transition without formal privatization has created powerful local incentives not to formally privatize those state enterprises that engaged in informal profit shifting to private enterprises. Whether formal privatization will accelerate in Bulgaria depends on the credibility of the privatization program of the new socialist government that took office in January 1995.

Financial Sector Reform

Under the financial sector reform, two laws established the new legal basis for the operation of the financial system: the Law on the Bulgarian National Bank (BNB, June 1991), and the Law on Banks and Credit Activity (March 1992). The law on BNB aimed at establishing an independent central bank with the objective "to contribute to the maintenance of the internal and external stability of the national currency." The law specifies the ceiling on the volume of short−term, three−month advances to the government as the sum of 5 percent of total annual revenues in the state budget, and the Statutory and Reserve Funds. The Credit Law regulates the creation and transformation of banks (including their liquidation), relationships with bank clients, banking supervision, and related matters. It also regulates the requirements for granting of operating licenses by BNB to foreign banks.

In 1991 the authorities initiated comprehensive financial sector reforms by the creation of the Bank Consolidation Company with the mandate to merge the many small, undercapitalized banks into a relatively small number of banks with stronger financial positions. By the end 1994, seventy−one banks had been consolidated into thirteen banks with two more bank consolidations in progress. In addition, two banks were closed. It was also decided to begin dealing with the difficult problem of nonperforming loans in the banks' portfolios, by replacing non−performing bank loans extended before 1991 with government bonds. Since 1991,
banks have continued to extend loans to state enterprises which were not repaying, and as a result, the bad-loan problem in the banking sector is severe and widespread. Banks have viewed state enterprises, particularly the large ones, as better risks than the small and medium size private enterprises, because state enterprises are backed by the state. This perpetuates the moral hazard problem, and makes for a situation where little formal bank credit is extended to the private sector. Supervisory functioning of the Bulgarian National Bank has improved very slowly, despite issuance of a number of formal regulations which should guarantee standards of commercial bank behavior.

Credit problems are aggravated by the system of collateral regulation and contract enforcement. There is little or no collateral-based lending by banks in Bulgaria, because of the lender's inability to repossess or resell the collateral in case of borrower default. This, in turn, reflects institutional failure to set in place mechanisms whereby lenders can securitize loans without necessarily having to physically remain in possession of collateral. As a consequence, bank loans to the private sector are still based largely on personal trust and history of the borrower rather than on collateral and sound business plans.

Despite progress with consolidation of banks, the financial sector's problems remain significant. In essence, it is a part of the larger problem of the transition: imposing a hard budget constraint on banks and enterprises in the absence of a critical mass of private or privatized banks and enterprises that face hard budget constraints and react to market prices (Hinds 1992). The umbilical cord between large state enterprise loss makers and the state banks is at the heart of the problem. Until demand for subsidies generated by the non-viable state enterprises is restrained by explicit government controls or privatization, the already weak banks will find it difficult not to respond with new credits. This problem extends beyond the state banking system and enterprise sector, and has implications for allocation of credit and development of the private sector.

**Stabilization Policies**

Bulgaria's stabilization program commenced under extremely unfavorable conditions (World Bank 1991). Yet the program averted the hyperinflation which threatened in 1991. By the end of 1994, problems of potential price instability (and actual) were still present. Stabilization is as much an ongoing process as it is an element of a program of reform.

The transition began in Bulgaria, as elsewhere, with output declines. A 9 percent output decline in 1990 was followed by a 12 percent decline in 1991, with both external and domestic shocks contributing. The external shocks were particularly severe, because of Bulgaria's high dependence on CMEA trade, and the cessation of western trade credits after its 1990 moratorium on most external debt payments. The Gulf War increased oil prices, and Bulgaria also found itself with repayment arrears from the Middle East debtor countries, particularly Iraq.
Domestic political uncertainties and contractionary monetary policy further contributed to the downturn of the economy during the first half of 1991. Paralleling the February 1991 price liberalization and the unification of the exchange rates within a market-based, inter-bank exchange rate system, a comprehensive stabilization program included restrictive monetary and fiscal policies, and tight incomes policy. By measures of speed and comprehensiveness, the policies were an attempt at a "big bang" similar to that of Poland a year earlier. External support was provided by the IMF through a standard, twelve-month stand-by arrangement (SBA), and by a structural adjustment loan (SAL) from the World Bank, followed by two more stand-by agreements and several World Bank loans.

As in other eastern European countries, the success of structural reforms is heavily dependent on the early creation of a stable macroeconomic environment with a set of market-based relative prices and market incentives. Structural reforms cannot succeed without effective and sustainable stabilization. While it will take some time before it is possible to assess the effects of the initiated and planned structural reforms in Bulgaria, it is possible to review the record on stabilization policies and their initial outcomes.

Financial policies and an income policy were the core of the stabilization program. In February 1991 the Bulgarian National Bank (BNB) increased its basic interest rate (refinancing rate) tenfold and employed a tight monetary policy based on bank-specific credit ceilings consistent with the sharp fiscal restraint. An ambitious fiscal framework was adopted, aimed at reducing budgetary subsidies, budgetary investment, and other categories of expenditure. As one of the cornerstones of the stabilization program, the government reached a broad social consensus with the unions and state-enterprise managers on a one-year incomes policy framework which sought to reduce the real wage by about 30 percent. Price liberalization, aimed at a fast introduction of a market-based set of relative prices, was also directed at quick reduction of the monetary overhang. In contrast to earlier Polish and Yugoslav stabilization programs (see Coricelli and Rocha 1991), the Bulgarian program included a market-based, floating exchange rate regime, and by implication, placed considerably greater emphasis on incomes policy, and monetary and fiscal policies as the key policy instruments for breaking inflationary inertia and controlling inflation after the initial corrective price shock.
The program emphasized *simultaneity* of stabilization policies and price liberalization. During the first half of 1991, the incomes policy limited the *level* of wages by imposing ceilings on the nominal wage bill of individual enterprises24 and by requiring that an absolute amount of wage compensation be granted to each worker, to partially offset the initial adjustment in relative prices. As in Poland, the government planned to enforce compliance with the wage bill ceilings by a tax on excess wage bill increases.25 The level of wages also reflected a newly established minimum monthly wage and a hiring freeze. Past-quarter changes in average wages and anticipated inflation motivated any *adjustment* in wage bill ceilings.26 After price liberalization, most of the price adjustment was expected in the first half of the year, thus allowing the elimination of compensatory payments. Subsequently, the income policy framework relied on a decentralized, enterprise−level bargaining framework with periodic adjustments in the minimum wage.

Key elements of the incomes policy in 1992 included: (a) enterprise−specific wage bill ceilings which maintained real wage bills approximately constant at third quarter 1991 levels27 and (b) quarterly adjustment in wage bills, based on

![Figure 2.2](image1)

**Figure 2.2**
Unemployment Rate, 1990–1994

![Figure 2.3](image2)

**Figure 2.3**
Budget and Trade Balances as % of GDP

changes in the average wage rate in the past three quarters, anticipated quarterly changes in inflation, and a partial allowance for divergence between anticipated and actual quarterly inflation. In addition, a universal minimum wage for full−time work in both the state and private sectors was set at 750 leva per month, or 3.44 leva per hour, during the first half of 1992.

From the middle of 1992 until the end of 1993, incomes policy and budgetary restraint substantially weakened, and the final budgetary outcome in 1993 was worse than before 1991. Double deficits—budget and trade—increased, fueled by expansion of domestic demand and by the lax wage and fiscal policies (figure 2.3). A cash budget deficit of 12 percent of GDP placed the stabilization effort on the verge of collapse. Significantly, the nominal exchange rate remained stable while real exchange rate appreciated rapidly (figure 2.4). The situation
became unsustainable in the last quarter of 1993 when a full exchange rate crisis emerged. The lev began to depreciate rapidly due to a combination of factors, including dwindling reserves, rising macroeconomic uncertainty, and speculation against the government's attempt to administratively control the now destabilized foreign exchange market. A new agreement with the IMF reestablished monetary and fiscal control and replenished international reserves, while modest real depreciation provided a temporary impetus to export earnings in 1994.

Bulgaria's stabilization policies until the end of 1994 can be divided into three identifiable stages. The first was that of intensive liberalization along with stabilization, which lasted from February 1991 through June 1992. The second stage was characterized by weaker stabilization effort and a general slowdown in reforms, including privatization. This stage culminated in the foreign exchange crisis in the last quarter of 1993 and early 1994, which resulted in resurgence of inflation to the annual level of over 100 percent, for the first time since the initiation of the 1991 program. The third period began in Spring 1994 with considerably tightened monetary and fiscal controls and the new incomes policy framework, backed by the new IMF stand–by arrangement. As of the end of 1994, despite the severe confidence crisis and the uncertainty associated with the resignation of the government in the fall and the December election, the authorities reduced the budget deficit to around 7 percent of GDP and contained inflation at approximately 125 percent on an annual basis, with most of the inflation having occurred in the first half of the year. The earlier disbursements of the IMF funds and the successful conclusion of the Debt and Debt Service (DDSR) agreement with commercial creditors, with the support of the World Bank and the IMF, contributed to the stabilization of the lev and the slowdown in inflation in the second half of 1994.

An interesting aspect of Bulgaria's stabilization program was that a strong fiscal policy and incomes–policy framework was possible during the first eighteen months of reforms, despite the legacy of past subsidization. Interest groups understood the danger of hyperinflation, and that a meaningful disinflation program required an effective incomes policy. Differences were in rhetoric rather than support for policy. The issue was only how much of a burden to place on incomes policy relative to other anchors. As a result of the almost complete depletion of international reserves, fixing the exchange rate was not an option, and there was no alternative to relying on fiscal–monetary restraint, accompanied by nominal wage ceilings, to secure the required decreases in real wages.

The labor market in Bulgaria responded with considerable flexibility to the adjustment of the domestic economy. As output continued to decline, unemployment increased rapidly, reaching an official unemployment rate of 10.8 percent in 1991, up from only 1.6 percent in 1990. The unemployment rate continued to rise until 1993, before levelling off and somewhat declining in 1994. Given the labor market adjustments that occurred, there was
relatively little social unrest to undermine the implementation of economic reforms. One explanation is that reliance on official statistics for output and employment gives an incomplete picture of employment, because of the expanding informal sector which provided alternative non−recorded employment.

Concluding Remarks

At the end of 1994, the Bulgarian economy had been considerably liberalized, including foreign trade activities. Output had begun to increase, with decreases in (official) unemployment being registered for the first time since the onset of transition. The country was on the path to a market economy, albeit with a large and expanding (if substantially informal) private sector, and a relatively liberal (if uncertain) overall economic environment. Conservative financial policies and incomes policies, which were at the core of the early stage of the stabilization program, had succeeded in avoiding hyperinflation. Past international problems had been ameliorated by the agreement with commercial creditors on the reduction of the country’s commercial debt. Slow privatization and financial aspects in the state enterprise and banking sector remained significant problems, raising the question of sustainability of stabilization.

All the components of the complex process of the transition have significant implications for the new role of government in Bulgaria and, more specifically, the national economy. Against this background, the subsequent chapters in this volume examine in detail a fundamental problem of the transition, how to finance government in the transition.

Notes


2. See Balcerowicz and Gelb (1994) who also note the limited generality of the East German transition for other transitional economies.

3. See , for example, Lipton and Sachs (1991) for an early analysis of the transition in Poland.
4. Balcerovicz and Gelb (1994) refer to the period between the collapse of the previous political formation and the emergence and consolidation of the political arena into clearly defined opposing groups.


6. Further difficulties for Bulgaria arose because of the Gulf War of 1991 and the disintegration of the former Yugoslavia, which blocked transportation routes and resulted in the cessation of a lucrative transit trade from western Europe to Iraq.

7. Passing of the Constitution was preceded by a brief political tug−of−war between the BSP and some members of the opposition over the legal immunity of certain actions by government officials under the previous regime.

8. The election was won by a "dark blue" faction of the UDF, with one hundred and ten seats in the two hundred and forty−seat parliament. The BSP won one hundred and six seats, while the MRF won twenty−four seats. Given the historical tensions between Bulgaria's communist party (of which BSP is a direct descendent) and the Turkish minority, this delicate balance of power resulted in a coalition between the UDF and the MRF, which lasted until October 1992.

9. The Agency for Economic Coordination and Development, an economic think tank providing periodic analyses for the government, described 1993 as "the lost (year) for the economic reform" (see Agency for Economic Coordination and Development 1993).


11. The former CMEA trading arrangement, based on non−market prices, was also an extension of an internal characteristic of the previous system: its propensity towards systemic subsidization. As such, it was not a purely external arrangement, independent of the domestic economy (see Schrenk 1992).


14. These include, for example, lacunae in collateral−related laws and procedures which inhibit collateral lending in Bulgaria (see the World Bank 1995).

15. See Center for International Economics: 16–17. In this document it is argued that the extent of reduction in tariff dispersion (generally considered a good proxy for tariff−related distortions) in Bulgaria in 1992 was significantly larger than in Indonesia, which is often cited as a country with a liberalized trade regime.
16. During 1991, a highly selective import surcharge was imposed on a number of goods, primarily as a revenue measure, but was subsequently revoked.

17. The Privatization Agency has a supervisory role and is directly accountable to the Council of Ministers.

18. The total proceeds were approximately 4.8 billion leva or nearly $700 million using the September 1994 exchange rate (World Bank 1994).

19. Law on the Bulgarian National Bank, Art.2, line (1); Sofia, July 1992. Interestingly, the objective of maintaining low inflation is not explicitly mentioned, although it is implied in the above formulation.

20. The Statutory Fund was established at 200 million leva and the Reserve Fund was developed from 15 percent of Central Bank profits. The remaining 85 percent of the BNB profits are transferred to the government at least four months before the end of the fiscal (calendar) year.

21. This also often eliminates entire classes of borrowers, such as farmers who need tractors in their possession, not in the lender's possession, to maintain farming activity.

22. This section is partly based on the World Bank (1992, 1993), and Bogetic and Fox (1993).

23. See, for example, Borensztein, Demekas and Ostry (1993), and Calvo and Coricelli (1993). While there is no doubt that some dampening effect on economic activity resulted, one should not, however, overplay the importance of restrictive financial policies in explaining the depth of the output decline. First, these policies were necessary and timely to avoid hyperinflation following the price liberalization. Second, much if not most of the decline in output is structural rather than cyclical, reflecting the inviability of many state enterprises under the new ownership, incentives, management and price structures of a market economy; as such, more relaxed fiscal and monetary stances could have been particularly damaging as they would have perpetuated the support of inviable enterprises and sectors, while limiting the access to credit by the private sector.

24. Given the adopted wage bill ceilings, enterprises could choose between a compression of within−firm wage differentials and a reduction in employment.

25. For an excess increase of up to 1 percent, the marginal tax rate was 60 percent; for an excess increase of between 1 and 2 percent, the marginal tax rate was 100 percent; for an excess increase of 2–3 percent, it was 200 percent; between 3 and 5 percent, 300 percent; and over 5 percent, 400 percent.

26. The anticipated inflation component in the indexation formula played the role of reducing inflationary inertia and lowering inflationary expectations. The elimination of inertia is particularly necessary in any disinflation

Concluding Remarks
program (see Dornbusch and Fischer 1993).

27. This allowed some increases in the average real wage due to the further decline in employment in the state sector.

28. It should be noted however, that the official figure most likely overstates the true unemployment rate due to the extent of the informal, private sector employment, and the incentives for people to register as unemployed, even when they have secondary employment: spouses of registered unemployed are less likely to be laid−off.

References


II—
TAXATION AND INCENTIVES

3—
The Choice of the Tax System

Zeljko* Bogetic* and Arye L. Hillman

This chapter considers the choice of a tax system in the transition. A socialist tax system is inappropriate for a market economy. The necessity of change permits governments to start anew in choosing tax rates and revenue bases, without the impediments implied by the proposition that "the only fair tax is an existing tax." The transition could well require a special type of tax system. Subsequent amendments to the tax system would then encounter the difficulties associated with tax reform in market economies, and also, if not preannounced, future tax amendments would introduce uncertainty into the tax system. There are thus disadvantages to a transition–specific temporary tax system. It would be consequently advantageous if the tax system appropriate for the conditions of the transition were also appropriate in the longer run.

We begin this chapter with a description of the tax system inherited from socialism and the tax revenue achieved in the early transition, and proceed to describe the relatively high tax–rate, western European–type tax system introduced in Bulgaria to replace the socialist tax system. The question which we seek to answer is whether, in the light of tax evasion and the limited administrative and enforcement capabilities of the tax authorities, a more modest tax structure might not have been more appropriate.
Socialist Tax Instruments and Tax Revenue in the Transition

As was characteristic of socialist countries, the tax base in Bulgaria under the socialist regime consisted principally of surpluses of state and municipal enterprises (Chand and Lorie 1993); there was insignificant legal private-sector activity and illegal private economic activity was by its nature not taxed. In 1988, the last complete year of communist single-party rule, profits and turnover taxes together with excises accounted for some 60 percent of government revenue and the revenue collected from these taxes was equal to some 33 percent of GDP (see table 3.1). A turnover tax was levied at numerous different rates which reflected

Table 3.1: Consolidated Government Accounts 19881994 (Percent of GDP)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenues</td>
<td>56.9</td>
<td>58.3</td>
<td>52.8</td>
<td>42.3</td>
<td>38.3</td>
<td>36.7</td>
<td>39.2</td>
</tr>
<tr>
<td>Tax Revenues</td>
<td>47.4</td>
<td>49.7</td>
<td>40.5</td>
<td>37.5</td>
<td>30.8</td>
<td>33.5</td>
<td>35.6</td>
</tr>
<tr>
<td>Profits Tax</td>
<td>21.2</td>
<td>23.4</td>
<td>16.7</td>
<td>17.3</td>
<td>8.3</td>
<td>5.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Income Tax</td>
<td>4.0</td>
<td>4.2</td>
<td>4.2</td>
<td>3.8</td>
<td>5.4</td>
<td>5.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Turnover Tax/VAT</td>
<td>11.6</td>
<td>11.3</td>
<td>4.0</td>
<td>3.8</td>
<td>3.5</td>
<td>7.6</td>
<td>10.9</td>
</tr>
<tr>
<td>Social Security Contributions</td>
<td>9.8</td>
<td>10.0</td>
<td>9.6</td>
<td>7.8</td>
<td>9.1</td>
<td>10.5</td>
<td>8.6</td>
</tr>
<tr>
<td>Excises a/</td>
<td>..</td>
<td>..</td>
<td>5.0</td>
<td>3.6</td>
<td>2.6</td>
<td>1.3</td>
<td>1.2</td>
</tr>
<tr>
<td>Customs Duties</td>
<td>0.8</td>
<td>0.8</td>
<td>1.0</td>
<td>1.2</td>
<td>2.0</td>
<td>3.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Non−Tax Revenue</td>
<td>9.5</td>
<td>8.6</td>
<td>12.3</td>
<td>4.8</td>
<td>7.5</td>
<td>3.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>58.4</td>
<td>58.9</td>
<td>57.8</td>
<td>45.6</td>
<td>43.5</td>
<td>48.0</td>
<td>46.2</td>
</tr>
<tr>
<td>Total Non−Interest Expenditure</td>
<td>51.0</td>
<td>50.3</td>
<td>52.5</td>
<td>38.9</td>
<td>37.1</td>
<td>38.2</td>
<td>32.4</td>
</tr>
<tr>
<td>Current Non−Interest Expenditure</td>
<td>51.0</td>
<td>50.3</td>
<td>49.4</td>
<td>36.9</td>
<td>34.3</td>
<td>36.3</td>
<td>31.1</td>
</tr>
<tr>
<td>Wages and Salaries</td>
<td>4.6</td>
<td>4.7</td>
<td>5.5</td>
<td>5.0</td>
<td>5.7</td>
<td>6.7</td>
<td>5.3</td>
</tr>
<tr>
<td>Maintenance and Operations</td>
<td>13.5</td>
<td>14.6</td>
<td>12.2</td>
<td>9.5</td>
<td>8.5</td>
<td>7.4</td>
<td>7.2</td>
</tr>
<tr>
<td>Social Security and Social Assistance</td>
<td>10.2</td>
<td>10.4</td>
<td>12.0</td>
<td>14.2</td>
<td>14.1</td>
<td>15.8</td>
<td>13.4</td>
</tr>
<tr>
<td>Defense and Security</td>
<td>5.0</td>
<td>4.9</td>
<td>4.8</td>
<td>4.1</td>
<td>4.1</td>
<td>4.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Subsidies</td>
<td>17.6</td>
<td>15.6</td>
<td>14.9</td>
<td>4.2</td>
<td>1.8</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Interest paid</td>
<td>2.1</td>
<td>3.1</td>
<td>5.3</td>
<td>6.7</td>
<td>6.4</td>
<td>9.8</td>
<td>13.8</td>
</tr>
</tbody>
</table>
### Revenue in the Transition

With the onset of the transition, the tax structure was retained, but the composition of revenues changed (table 3.1). The changed revenues reflected a number of influences. State–enterprise output and profitability declined, diminishing the base for the profits and turnover taxes. Also, tax obligations were simply not honored as financial discipline and enforcement of contracts broke down. The tax administration continued to seek revenue basically from traditional state–enterprise sources. The private sector, which was expanding while the state–enterprise sector was in decline, provided little revenue because of tax evasion (see chapter 4). Tax enforcement was ineffective, and personal self–interest combined with distrust of government made for little obligation to pay taxes. The end of the CMEA contributed to the revenue decline. Inflation, too, had a role. Real values of tax revenue fell because of collection lags (an Olivera–Tanzi effect) and the complex inflation provisions of the tax system (inventory accounting, depreciation method, and interest payment deductibility). The Olivera–Tanzi effect

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</tr>
</thead>
<tbody>
<tr>
<td>Foreign paid</td>
<td>..</td>
<td>..</td>
<td>0.4</td>
<td>1.6</td>
<td>1.1</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>Domestic paid</td>
<td>..</td>
<td>..</td>
<td>6.2</td>
<td>4.8</td>
<td>8.7</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>5.4</td>
<td>5.5</td>
<td>3.1</td>
<td>2.0</td>
<td>2.8</td>
<td>1.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Budget balances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget balance–cash</td>
<td>−1.5</td>
<td>−0.6</td>
<td>−4.9</td>
<td>−3.3</td>
<td>−5.1</td>
<td>−11.2</td>
<td>−7.1</td>
</tr>
<tr>
<td>Primary balance</td>
<td>5.9</td>
<td>8.0</td>
<td>3.4</td>
<td>3.4</td>
<td>1.3</td>
<td>−1.5</td>
<td>6.8</td>
</tr>
</tbody>
</table>

/a Excises for 1988 and 1989 are counted as part of Turnover tax/VAT.

Source: National Statistical Institute, Sofia, and World Bank staff estimate.
reduced real tax revenues in 1991 when inflation was over 300 percent, and also in 1992 and 1993 when inflation was in the annual 90 percent range. In 1994 inflation escalated to an annual average of around 120 percent, mainly as a result of an exchange rate collapse in the early part of the year. Since there are no data on collection lags, it is impossible to compute directly inflation–related real revenue losses.

The structural changes of the transition had a fundamental role in the revenue decline. The most significant effect was the erosion of the tax base of state and municipal enterprises, and the failure of the expanding private sector to provide a substitute tax base. State and municipal enterprises, which were accustomed to guaranteed state orders (whether for domestic production or CMEA export), were obliged to seek market sales. The end of the CMEA also eliminated cheap raw material sources. In some sectors, the previous reliance on CMEA trade made adjustment extremely difficult. Some state enterprises simply foundered. Others entered into arrangements whereby many of the services which had been provided by the planning authorities were provided by private–sector firms. In the absence of the direct supervision of state enterprises that had accompanied state orders, profits could be shifted to the private sector and taxes evaded (see chapter 4). Even where profits remained with the state enterprise, taxes were often not paid, reflecting a general pattern of maintained arrears. Enterprise arrears included payments due to other enterprises, banks, private individuals, and employees, as well as taxes. The interlocking arrears tied enterprises to one another, and in the absence of financial discipline, the threat of penalties for non–payment, including taxes due, lacked credibility.

The changes of the transition presented collection problems for tax administration. The private–sector expansion created many thousands of new potentially taxable entities that previously had no tax files, and whose tax obligations could not be readily determined or enforced. The tax administration had been designed for, and had the resources appropriate for, direct monitoring of state and municipal enterprises conducted in the course of comprehensive mandatory field audits and inspections. Under the socialist regime, an enterprise's output was specified by planning. Auditors knew what should have been produced and shipped, at what prices, and to whom. Output statistics preceded market sales (see Hillman 1991), making calculation and enforcement of tax obligations relatively simple. In the new expanding market economy, too many individual agents incurred tax obligations for such a direct comprehensive auditing system to be effective. Administrative specialization was now required for assessment and collection of taxes. Self–assessment and random audits would have to replace the previous detailed direct calculations of tax liability. Cultural and historical considerations were also not conducive to widespread voluntary tax compliance. Cynicism regarding government under socialism carried over into the transition, making individuals reluctant (or more reluctant than usual) to cooperate via voluntary self assessment of tax obligations.

Table 3.1 shows how these influences affected revenue. Revenue from the profits tax declined from over 21 percent of GDP in 1988 and over 23 percent in 1989, to 5 percent of GDP in 1993, before somewhat recovering its share in 1994. Revenue from the turnover tax declined from 12 percent in 1988 to under 8 percent in 1993. The decline in revenues from these two taxes in the early transition was the principal cause of the decline in the ratio of revenue–to–GDP, from 57 percent in 1988 to some 37 percent in 1993. This decline was arrested only in 1994, principally because of the revenue from value–added tax (VAT) which replaced the turnover tax in 1994, and also an increase in revenue from the profits tax. Social security contributions remained around 10 percent of GDP, although declining below this level in some years. Non–tax revenue declined, in particular, because of the end of the CMEA; and reflecting the growth of market–based international trade, revenue from customs duties increased (see chapter 10). Excises, particularly on fuels, could have provided more revenue, had policies been more attuned to market conditions and had there been better enforcement (see chapter 9). Revenue from the personal income tax remained relatively stable at around 4–5 percent of GDP throughout the early transition years. The personal income tax was levied on wages, salaries, and incomes of owners of small businesses in the private sector.
Table 3.1 also reveals the government's budgetary problems. The proportions of revenue-to-GDP and taxes-to-GDP declined dramatically at the onset of transition. The relative significance of direct and indirect taxation also changed, with that of direct taxes declining and indirect taxes increasing (figure 3.1).

The Tax System Chosen in the Transition

We now turn to the tax system chosen in the transition. Principal revenue sources were the profits tax, the turnover tax and its replacement (in 1994) the VAT, and the personal income tax. The tax structure at the end of 1994 is described in table 3.2.

The Profits Tax

As of the end of 1994, state enterprises were taxed at the rate of 52 percent, consisting of a 40 percent standard tax rate accruing to the central government, 10 percent to the municipality in which the enterprise was located, and a 2 percent irrigation tax. Enterprises owned by a local municipality were taxed at the rate of 42 percent, made up of the 40 percent standard rate to the municipality and the 2 percent irrigation tax. The tax rate on profits of private enterprises depended in a complex way on the extent of private and/or foreign ownership and the value of profits. There were exemptions for agricultural cooperatives and for the few foreign joint ventures in food processing and "high-technology" industries. Additional taxes levied by off-budgetary means on profitable enterprises were used to subsidize loss-making enterprises. Different tax rates applied to financial enterprises, many of which were state-owned (commercial banks were taxed at 50 percent, and the Bulgarian National Bank at 100 percent through quarterly transfers of profits to the Treasury). A draft profits tax law proposed replacing this structure in 1995 with a uniform 40 percent rate for all enterprises, whether state, municipal, or private. Exemptions were also to be reduced, and confined to sheltered workshops, approved investments for environmental objectives, charitable
Table 3.2: The Tax Structure in Bulgaria, 1994

<table>
<thead>
<tr>
<th>Type of Tax</th>
<th>Rates</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profits Tax</td>
<td>40% standard rate for non-financial enterprises.</td>
<td>Profits of all SEs, MEs*, and private enterprises</td>
</tr>
<tr>
<td></td>
<td>50% rate for banks and insurance companies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30% for private companies with profits below 1 million leva</td>
<td></td>
</tr>
<tr>
<td>Social Security</td>
<td>Pension: 42% (average)</td>
<td>Gross wage</td>
</tr>
<tr>
<td>contributions</td>
<td>Unemployment: 7%</td>
<td></td>
</tr>
<tr>
<td>Income Tax</td>
<td>Marginal rates from 20% to 52%</td>
<td>Individual income</td>
</tr>
<tr>
<td>Turnover Tax/VAT</td>
<td>Standard rate: 22%</td>
<td>Retail turnover of all enterprises: lower rates apply to food and select sectors (construction)</td>
</tr>
<tr>
<td></td>
<td>(lower rates: 2%, 10%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAT (1994) Single rate: 18%</td>
<td>Value added of goods and services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excises and customs</td>
<td>Ad valorem excise rates vary from 35% (diesel fuel) to 70% (alcohol, jewelry)</td>
<td>Turnover of select goods</td>
</tr>
<tr>
<td>Non-tax revenue</td>
<td>Various fees, charges on services</td>
<td>select public services</td>
</tr>
</tbody>
</table>

* SEs denotes state enterprises, MEs denotes municipal enterprises. Municipal enterprises and state enterprises with more than 50 percent municipal participation in ownership were liable for an additional 10 percent tax on profits payable to their municipalities. Source: Bogetic and Hillman (1994), World Bank (1994a), and Tax Notes International (1993).

donations, and dividends received on which taxes had been paid. A 20 percent tax was to be imposed on distributed dividends. The new simplified structure accordingly had a uniform rate for non-financial enterprises. For commercial banks, insurance companies, and the State Savings Bank, there was also to be a uniform rate, of 50 percent. Unresolved issues remained regarding treatment of incentives for investment (see chapter 5).

Despite these changes, the base for the profits tax remained the state and municipal enterprise sector. This sector provided a smaller potential tax base than budgetary statistics suggested. Figure 3.2 shows the net contribution to the budget of state enterprises, when net flows from state enterprises to the budget are recalculated to include the difference between profits taxes and turnover taxes, and subsidies and debt write-offs. As a result of reduced subsidies, the state enterprises' budgetary contribution increased from minus 2 percent of GDP in 1990 to 8.4 percent in 1991. Then, as a result of the significant economic decline, the state enterprises' budgetary contribution fell to around 5 percent of GDP before increasing to close to 10 percent in 1994. State enterprise cross-subsidization further reduced the revenue contribution of the state enterprise sector. If the profits tax was to become a significant revenue source, taxes would have to be paid by firms other than in the state and municipal
enterprise sector. That is, the private sector would have to contribute more to tax revenue. Figure 3.2 also indicates revenue problems.

![Figure 3.2: Flows Between SEs and Budget](image)

Indirect Taxation: From the Turnover Tax to the VAT

In October 1993, Parliament passed a law replacing the turnover tax with an 18 percent VAT, implemented in April 1994 (see chapter 11). The turnover tax had then been levied at three rates: 2 percent on construction material and buildings for dwelling purposes; 10 percent on food, children's goods, eyeglasses, sanitary and hygienic appliances, rent paid for residential purposes and passenger transportation; and 22 percent on all other goods and services not exempted (28 percent when measured as a proportion of the producer price); and was also levied on imports. The turnover tax was subject to an extensive list of exemptions. The most significant broad exemption was on goods intended for resale. The tax was based on a ring system, and the term "turnover tax" was misleading. In effect, the turnover tax was levied when a good was sold for final consumption. The new VAT had fewer exemptions.

Under central planning, the turnover tax permitted the authorities to ensure "socially correct" prices at the level of final consumption, by the differentiation of tax rates. Although a VAT is less distorting and offers a revenue potential superior to the type of turnover tax used in Bulgaria (Tait 1988 and Gilles, Shoup, and Sicat 1990), replacement of the turnover tax by the VAT was deferred a number of times. There had been a draft law to introduce a VAT as early as 1986. In 1990 it had been envisaged that the VAT Law would be passed at the beginning of 1991. A number of "deadlines" were passed before the VAT was finally introduced in 1994.

Why the VAT should have been deferred, given its evident superiority on both efficiency and revenue grounds over the turnover tax, is a question of some interest. Chapter 4 suggests a political–economy explanation based on the interface between state and private firms, and identifiable gainers and losers from the change from the turnover tax. Planning procedures under the socialist regime designated when "sale" was for final consumption. It appears that after planning ended, "sale for final consumption" became a more flexible conception that permitted...
sellers to claim that sale was for further resale, with the tax then being evaded when indeed sale was for final consumption. Evasion was easier in the private sector, and was facilitated by commercial relationships between state enterprises and private firms. Since these relationships tended to leave state enterprises with low or no value added, and private firms with high value-added, substitution of the VAT for the turnover tax would subject private firms to high tax liability.

The introduction of the VAT also involved central–local government relations (chapter 8). All VAT revenue accrued to the central government, whereas revenue from the turnover tax from sales of municipal–owned enterprises was received by the local municipality.

Revenue from the VAT would depend of course on compliance. Reporting to the tax authorities by buyers entitled to tax refunds makes VAT evasion difficult relative to other taxes. Compliance problems arise when sale is for final consumption.

since the final purchaser may not report the transaction to the tax authorities because there is no rebate. The seller for final consumption cannot unreasonably report purchases for purposes of rebate without reporting corresponding sales. Experience from other countries suggests that extensive compliance with the VAT develops gradually over time, in line with the administrative capabilities of the tax authorities and the development of the appropriate taxpayer ethos (Tait 1988). Indications of the revenue potential of the VAT are provided by a study by Bogetic and Hassan (1993), who investigate the relation between VAT revenues and VAT rates in twenty–two countries that had single VAT rates in 1988, and find that revenue from an 18 percent single rate yields revenue of approximately 6–7 percent of GDP. This is similar to the estimated Bulgarian VAT revenue for 1994 (table 3.1).

The Personal Income Tax

The personal income tax base was levied on wages and salaries of employees and incomes from sole–proprietor private businesses. The maximum marginal rate was increased to 52 percent from 40 percent in 1993, and the number of brackets increased from five to nine, to take advantage of tax–base expansion. A proposal for 1994 was a simplified structure with three marginal rates of 15 percent, 30 percent, and 40 percent. While the profits and turnover tax bases were eroding, the personal–income tax base was expanding. There were exemptions for agricultural cooperatives, "young families" (defined as having one spouse less than 35 years of age at the time of marriage) earning income from agriculture, income from social service payments, and income from production of consumer goods (a 25 percent exemption). The central–local government sharing arrangement for revenues from the tax was subject to negotiation (in 1992, 70 percent of revenue from the tax was for example allocated to the municipality and 30 percent to the central government).

In principle the personal income tax was levied on incomes of self–employed individuals as well as employees. In practice, the tax administration could not monitor the large number of small businesses. Employers have an incentive to report the personal income tax obligations (and make the tax payment via withholding) of employees. Hence the personal income tax base not was not subject to the same tax–base erosion as the profits and turnover taxes. But then, as we have observed, revenues from the personal income tax did not increase as a proportion of GDP. Yet recorded employment in the private sector was expanding (chapter 4). Employment in the private informal sector of the economy was moreover greater than indicated by the official statistics (see the computations reported in chapter 4).

Incentives for employer and employee jointly to evade the personal income tax increase with the difference between net wages received by employees and the gross cost of labor to the employer. Incentives for evasion are further increased by the addition of labor–market taxes for funding social security payments, contributions to unemployment and retraining funds, and health fund payments (see chapters 6, 12, and 13). The illegality of such an informal employment relation also
creates incentives for the employer to favor employment of family members and close trusted friends (see chapter 4).

**A Tax System for the Transition**

Bulgaria's tax system and rate structure chosen in the transition take as a model tax systems of high–tax burden western market economies. Is a personal income tax structure with maximum marginal rates around 50 percent, a profits (or corporate tax rate) of 40 percent, a value–added tax of 18 percent, and, in addition, labor market taxes that can drive wedges in excess of 100 percent between gross and net wages (chapter 3), an opportune tax system for the transition, and beyond? High marginal tax rates have distortionary influences on factor–supply and allocation decisions, and also underlie informal economic activity because of the incentives for tax evasion (see Cowell 1990 and Tanzi 1993b).

Figure 3.3 illustrates the indicative extent of tax evasion in Bulgaria. It is striking that in the 1991–1993 period, despite the growth of private activity and the increasing contribution of the private sector to GDP, the private sector contributed on average only some 10 percent of total revenue for each of the three major taxes, the profits tax, indirect taxes (including turnover tax and excises, and VAT and excises in 1994), and social security taxes. The tax evasion implicit in figure 3.3 is consistent with the high estimates of the size of the informal sector reported in chapter 4. The introduction of the value–added tax, which had been deferred (or resisted), is the source of the large increase in the contribution of the private sector to indirect–tax revenues in 1994. The VAT was thus significant in bringing the private sector into the tax base.

Although the VAT proved quite effective in this regard, tax evasion remained substantial for personal income tax on incomes earned in small businesses, and also for profits taxes. Chapter 4 suggests that in 1993–94 more than 90 percent of profits in the economy were in the non–taxed informal private sector, although not necessarily directly earned in that sector. Reducing tax evasion has a direct bearing on resolution of the budgetary pressures evident in table 3.1. The temptation is to attempt to increase revenue by taxing those who can be taxed (as for example reflected in the decision to increase personal income tax rates in 1993). Such policies increase the inequities associated with tax evasion: taxes are increased, but only for those taxpayers, principally employees,
who pay at source (or whose taxes are paid by employers).

Setting equity considerations aside, do higher tax rates provide more revenue, in the short and long run? In the short run, individuals may be in the tax net, but in the longer run adjustments become possible (Buchanan and Lee 1982). The inequities (perceived or true) of taxation can in themselves provide a self-justification for individuals' increasing tax non-compliance. Evasion conventions can become established; as noted, Bulgarian citizens began the transition with a convention of evading taxes where possible. Beyond the self-interest of avoiding taxes, government is not trusted to use the taxpayers' money for social betterment. Because of imperfect information (or rational ignorance) regarding how government spends tax revenue, the distrust may persist even for a benevolent government. Traditions may simply point to an association of taxes with personal political gain.

There are of course means of attempting to reduce tax evasion. Penalties can be increased. This may however be a difficult course to take in the transition, since the government may not wish to associate itself with repressive punishment, and may not wish to provide arbitrary "examples" of punishment of offenders as a deterrent. The tax administration can also be improved, to increase the probability of detection. This however takes time and so is not an immediate remedy (see Bird and Casanegra de Jantscher 1992). Presumptive income taxation is another possibility (see Tanzi and Casanegra de Jantscher 1987).

The choice of the tax structure is also a means of influencing tax compliance. The question here is whether lower tax rates discourage tax evasion and provide more revenue. Empirical evidence confirms that tax evasion is reduced by lower tax rates (for example, Clotfelter 1983 and Crane and Nourzard 1986). Lowering tax rates decreases revenue from those already paying taxes. The empirical question is whether lower tax rates will sufficiently discourage evasion and thereby expand the tax base, so as to more than compensate for the reduced revenue from the preexisting tax base. We do not have access to data that would permit calculation of intermediate-term tax-revenue elasticities. Such data do not exist. Circumstantial judgements and informed guesses therefore become the basis for tax policy, and presumably also underlie the tax rates chosen. With these circumstantial groundrules, a strong case can be made that reducing tax rates increases tax revenues. With the private sector for the most part outside the base for the profits tax and the personal income tax, the prospective revenue gains from shifting activities from the informal to the formal sector are substantial, while the preexisting tax base provided by formal-sector activity is small. A lowering of marginal tax rates to modest maximum levels of 20–25 percent appears more likely to increase than decrease revenue.

Within the limitations of the tax administration's enforcement of private-sector tax compliance, the case for more modest taxation rests on attempts to change behavioral norms. Tax evasion is subject to a demonstration effect, or social convention. An individual may regard it as a civic duty to pay taxes, but if many others in the taxpayer's reference group are known to be evading taxes, sentiments of civic responsibility erode as individuals perceive themselves to be exploited as a consequence of their own sense of social responsibility. The ease of evasion also affects voluntary compliance. In the absence of explicit communication among prospective taxpayers, each individual's perception of his opportunities for evasion leads to the inference that similar opportunities confront other individuals who, following their individual self-interest, evade tax payments. Individuals perceiving this may do likewise, particularly in an economy where distrust of government is high because of past experiences under socialism. If the social stigma of being subject to publicized penalties is a deterrent to evasion, this stigma is greater, and the moral basis or justification for evasion is smaller, when it is moderate taxes that an individual has been caught evading (see Harberger 1993 for sentiments on the moral aspects of tax evasion).
Conclusions

There is a well-founded case for modest government and modest taxation (see for example Brennan and Buchanan 1980). The case is reinforced in the transition from socialism. With the prior socialist economic system as the frame of reference, citizens can view high tax rates as exploitative and unjust. Low tax rates provide a counter to lack of trust and the perception of "exploitation".

When the informal sector is as large as in Bulgaria (see chapter 4), policies which improve tax compliance are an important part of any strategy to widen the tax base. Although low tax rates are supportive of an ethos of tax compliance, taxpayers need to be assured that complying with modest taxation will not result in their being subjected to higher taxation in the future, as a consequence of exposure of income–earning activities to the tax administration. That is, modest taxation may be viewed as a strategy by the government to entice prospective taxpayers into participation in the tax system. The requisite assurances are provided by constitutional limitations that constrain governments' discretion with regard to future increases in taxes.

Notes

1. For a more detailed description than presented here, see World Bank (1994). For comparison with other post–communist tax systems, see Shome and Escolano (1993).

2. This was to be achieved by elimination of the 10 percent of profits tax paid by state enterprises to municipalities and abolition of the 2 percent irrigation tax.

3. Conventions and tax compliance have been studied as explanations for why individuals do pay taxes: see Gordon (1989) and Myles and Naylor (1995). The same consequences of establishing social norms of behavior apply to individuals' refusal to cooperate with tax authorities.

References


The Private Sector, State Enterprises, and Informal Economic Activity

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In the previous chapter it was observed how in the transition the surpluses of state and municipal enterprises decline, eroding the former socialist tax base. The emerging private sector in principle provides an alternative source of tax revenue, but difficulties are encountered in realizing revenue from this newly available tax base.
This chapter considers in more detail taxation of the private sector. We report independent estimates1 which indicate a private–sector contribution to GDP substantially in excess of the official estimates of the National Statistical Institute (NSI) of Bulgaria. Our estimates also suggest that in 1994 at least 90 percent of profits were in the informal sector. This share of profits is inconsistent with the private sector's considerably smaller share of credit and capital usage. The quest to locate the sources of informal–sector profits leads to the interface in commercial relations between state and private enterprises. The interface in turn suggests political–economy explanations for the slow pace of privatization of state enterprises, and the successive deferrals of introduction of the value–added tax.

The Private Sector

When the communist regime ended in 1989, Bulgarian industry consisted basically of state and municipally owned enterprises. Initial circumstances therefore differed from Hungary and Poland, where a private sector consisting of many small firms developed during the 1980s. The substantial informal (or spontaneous) privatization that had taken place in Hungary and Poland before the end of the communist regimes did not occur in Bulgaria. Circumstances in Bulgaria were similar to those of (former) Czechoslovakia and the German Democratic Republic, in that the transition began from a more or less orthodox socialist economy, with no private sector presence either in terms of small independent firms or private assets secured by informal transfers from formerly socialist enterprises.

After the end of the one–party communist regime, opportunities in Bulgaria for informal privatization of state and municipal assets were also limited: some small informal transfer of assets of state enterprises to private ownership took place up to August 1990, and thereafter transfer of state assets to private ownership was prohibited and the prohibition enforced (see Jones 1993; Jones and Rock 1994). Privatization of land and buildings proceeded by restitution. However, privatization of state factories proceeded at a slow pace, and by the end of 1994 only a small number of state enterprises had been privatized, many of the larger ones were sold to foreign investors,2 supplemented by a handful of formally approved joint ventures between state enterprises and private firms (domestic and foreign).

By 1994, there were, however, a multitude of small domestically owned private enterprises; 330,000 private firms were registered with the courts by mid–1994, and 147,000 firms reported their activities to the NSI. There were, as well, a small number of large private enterprises, also domestically owned. The most prominent had formed an organization, the G–13, to further their policy priorities. Official NSI statistics revealed a size distribution of private firms extremely skewed by sales revenue and labor employment (see World Bank 1995). A great majority of private firms were small single–proprietor or family businesses. In 1992 more than 90 percent of private firms reported having fewer than 5 employees, and less than 0.1 percent of firms had more than 50 employees; in June 1994 38 percent of individuals earning income in the private sector reported they were self–employed, with 6 percent indicating that they were family members of the owner of the business (the remainder being employees).

Private firms were primarily engaged in trade and services; in 1993 60, percent were in this sector, accounting for 75 percent of the private–sector's sales revenues; 15.5 percent were in industry, accounting for 9 percent of the sector's sales revenue. Industrial production remained the predominant domain of large state enterprises. In fact, the economic structure of production has remained similar to that which prevailed under planning, other than that private firms had replaced state agencies in input provision and marketing.

As noted in the previous chapter, the state enterprise sector was unprofitable: estimated losses on an accounting basis were 13 percent of GDP in 1993, and 26 percent on a cash basis. There were also significant arrears in payment by the private sector to the state firms. While the state–enterprise sector was financially distressed, official NSI statistics indicated that the private sector was in aggregate profitable. In 1992 aggregate profits were reported as some 3.4 billion leva on turnover of 67 billion leva, and in 1993, 7.1 billion on turnover of 128 billion.
Of course, not all private firms were profitable. Some reported losses, with others just breaking even. In trade and services in 1993, 55 percent of firms reported to the NSI that they were profitable, 39 percent reported losses, and 6 percent reported breaking even: for the small proportion of private firms engaged in industrial activities, 68 percent were profitable, 26 percent reported themselves as unprofitable, and 6 percent as breaking even (for more detailed data, see World Bank 1995).

The Informal Sector

The above values for profits of the private sector and losses of the state−enterprise sector are consistent with the phenomenon of tax−base erosion and substitution observed in chapter 3. However, since the official private−sector profit figures are derived from self−reporting of firms to the NSI, there is a question whether the profit declarations are credible. By a number of tests for consistency with other known attributes of the economy, they do not appear to be.

It appears that wages and incomes are higher in the private sector than in the state−enterprise sector. The income differential, along with dismissals of workers from state enterprises, underlies the growth of private−sector employment. In 1993 the average wage paid in the state sector was 3145 leva. Reported private−sector profits for that year imply a monthly average wage for employed and self−employed persons in the private sector of 2597 leva, which is less than the average wage in the state sector. Employment in the state sector yields at least the minimum wage, whereas reported private−sector profits incredibly suggest an average monthly income of self−employed persons and workers in the private sector below the minimum wage.

The magnitudes of losses reported by firms in the private sector are also not credible. Such losses require an offset somewhere in the economy. Bank credit to the private sector could not finance the reported losses. Were official data to reflect private−sector losses, the losses would equal virtually all long and short−term bank credit to the private sector. Private−sector firms reported to the NSI that they received 6.9 billion leva of new credits in 1993. 2.1 billion was used for financing of long−term assets, leaving 4.8 billion in short−term credits. Yet total reported private sector losses (of loss−making firms) were 6.1 billion leva. The long−term assets of small private−sector firms are basically capitalized from personal and family sources. In the absence of bank credit, the reported losses would be reflected in a corresponding write−down of firms' own capital. We can only conclude that the private sector's continuing performance and existence is inconsistent with the losses claimed (by the loss−making firms). From another vantage point, the official private−sector profit data imply an extremely low return on investment on privately held long−term assets. The low rates of return would not provide the incentives for the revealed expansion of private sector activity.

The official NSI estimate of the contribution of the private sector to GDP in 1993 is 20 percent. The decline in GDP since the end of socialism has been moderated by private−sector expansion. However, an estimate of a 20 percent share for the private sector in GDP does not reflect this. The 20 percent estimate also places Bulgaria well behind Hungary and Poland (both over 50 percent), the Czech Republic (60 percent), as well as Romania (30 percent) in the share of the private sector in GDP.

The official profits data and GDP shares for the private sector suggest an incomplete picture. Missing is the informal sector, to which we shall subsequently return.

Reasons for the Observed Structure of Firms

The general picture of the economy is one of private firms specialized in trade and services, while non−privatized state factories continue, as far as demand allows, in their prior roles of producers of industrial output. There could in principle be a number of reasons for this structure.
The existence of the many small private firms reflects, in part, the "entrepreneurial spirit" of the population. Individuals perceive that under capitalism it is the "capitalists" who are well-off. They consequently prepare themselves for a capitalist market economy by becoming "capitalists," the first step to which is registering their own private company. Unemployment also makes the opportunity cost of "going into business" low.

There were also substantive incentives for registering a private business. Registration with the Chamber of Commerce permitted foreign-exchange transactions to be conducted via the commercial banking system, and the tax laws permitted a registered business to import motor vehicles at preferential rates of import duty, and allowed businesses to write off all investment outlays in the year incurred (cars and apartments purchased by the business thereby reduced tax obligations). Such investments generated "losses" that could be carried over to following tax years.3

The tendency for private firms to be small can be explained, at least in part, by choice. By staying small, firms can remain in what is known in local terminology as "the shadows of the economy." Such firms are less likely to attract the attention of the tax authorities, who rationally devote their limited resources to the large potential sources of tax revenue. In the past, this was the state enterprise sector which, because of institutional inertia, remains in the early transition a focus of the tax authorities' attention. "Smallness" has allowed private firms to function to a large extent as if in a "laissez-faire" economy, albeit one with no long-term capital markets.

The large increase in the number of small firms in the private sector (from 24,500 firms registered at the end of 1989 to the 330,000 in mid-1994) also reflected the relative labor-intensity of the trade and services sector and associated low capital requirements. The usually fast turnover of stock in trading activities could provide returns sufficient to cover high nominal commercial bank interest rates. Restitution of nationalized property to former owners provided land and premises for private business. In the new market environment, private entrepreneurs could accordingly respond to demand for diversity that was absent under socialism, with new restaurants, retail outlets, and small scale provision of various services.

Restitution as a means of privatization was, in contrast, not applicable to state enterprises, which generally date from after the mass nationalization of land and premises. The centrally planned distribution system of the socialist regime placed little emphasis on finance, marketing, and sales promotion activities by state enterprises. The latter enterprises did not have to change their mode of operation if private firms came forward to provide these services.

The Interface Between Private and State Firms

The above circumstances make it quite reasonable that state enterprises should have continued to concentrate on industrial production, while new private firms should concentrate on trade and services, except that in western market economies there is usually substantial vertical integration of production activities and trade and services. The activities are undertaken within the one firm, rather than with the functional specialization observed in Bulgaria between state and private firms. With privatization delayed, vertical integration, which requires common ownership of the functional divisions of the firm, cannot take place. The policy delays in privatization may be endogenous, as the outcome of political–economy processes. The same is the case with regard to delay in tax reform.

There is a further hint of a link between privatization and tax reform. For a number of reasons—opportunities for tax evasion by the smaller private firms, the exemption from the VAT of small-turnover businesses, and the tax–base erosion of the loss–making state sector—large private firms viewed tax reform and the tax burden as inequitable. Being large and visible, these firms encountered greater difficulty in circumventing tax obligations. After the eventual passage in Parliament of the many–times deferred value–added tax law (of October 1993), the small group of large private firms which opposed the value–added tax took a policy position which favored hastening of privatization of the state enterprises. Implementation of tax reform was thus, as viewed by the large
private firms, tied to privatization of the large state enterprises. Why should this linkage be present? A quest for an answer leads us to the interface between private firms and state enterprises, to associated opportunities for profit shifting and tax evasion, and to the inconsistencies observed regarding the private sector's officially reported profits.

In the absence of privatization, the private sector and state enterprises in Bulgaria usually cooperated informally, in many instances as if vertically integrated (that is, as if transactions took the form of non−market relations between different segments of the one firm). Under these conditions, the private sector does not require financial resources for privatization, since private and state enterprises can integrate their activities without the former needing the resources to buy the latter. With the private sector largely outside of the tax regime, profit shifting to private firms from state enterprises facilitates tax evasion. The profits so acquired can provide the basis for future privatization, by providing the means of financing private firms' purchases of state firms' assets. If this is the case, there is no incentive to further defer privatization, if profits are compromised by tax reform. The value−added tax, in particular, falls directly on the high value−added of private firms in the informal joint ventures, and if private firms cannot evade the VAT with the ease with which they could transfer state−enterprise profits by internal pricing from state firms, the previous incentives for deferring privatization are no longer present. VAT revenue is independent of the degree of vertical integration of the firm, whereas the turnover tax which the VAT replaced could be readily evaded, since the turnover tax was levied on sales for final consumption, and state enterprises never needed to declare that they were selling to private−sector firms for final consumption, since legitimately they could not know whether the private firm will sell again for further resale. Once the goods were in the private sector, surveillance of the tax authorities was insufficient to allow the goods to be sold for final consumption without payment of the turnover tax. Such shifting of value−added from state to private firms also entailed shifting of profits. The evident private incentive was to ensure that the state enterprise had minimal tax obligations, which could be facilitated by the discretionary pricing in the transactions between state and private firms.

Under this system, taken to its limit, the state enterprise had no need to engage in market transactions, just as it did not engage in market transactions under planning. Private sector firms could arrange the delivery of intermediate inputs to the state factory, and after transformation of the inputs, take delivery of the output. This is consistent with specialization of the private sector to trade and services, and of the state sector to industry or material production.

Private firms were, in some instances, formed by vertical disintegration of state enterprises, as employees set up private companies to continue the commercial relationships of state enterprises with suppliers and sources of demand that had existed under planning. In rarer instances, there was horizontal disintegration as well. Whether or not consisting of a former department or former employees of a state enterprise, private firms formed symbiotic relationships with state enterprises, and replaced the planning authority in the former system of state orders for output and state supply of inputs.

Integration between private and state firms was often more complex than suggested by patterns of specialization to market−related activities and material production. In services, in particular, joint ventures between state enterprises and state firms would make use of the state enterprise's capital equipment, and sometimes the state enterprise's employees. More rarely, such joint ventures also entailed physical production, with the private firm located on the premises, and using the equipment of the state firm. In these relations, both in services and production, there was often de facto vertical integration, the de jure vertical integration being preempted by the absence of privatization.

Statistical information on this phenomena does not exist, given the informal (and illegal) nature of the activities. We are, however, able to present indirect evidence, by inferential estimates based on economy−wide data. To
provide focus, we first present a case study. The study is not representative; in this instance resources of the
private and state firms were combined to produce physical output. It does however reflect the pattern of
specialization to market and non–market activities, with the private firm providing inputs and marketing the final
product.

An Example of the Interface Between State and Private Firms

A private firm, owned by three partners, makes use of the facilities of a state enterprise to produce a range of
products requiring knowledge of industrial chemistry. The company produces both consumer and industrial
goods. The consumer goods are the principal revenue source, because of curtailed demand by

state enterprises which are the potential users of the industrial products. The company was founded in 1989, when
one of the partners left a state research institute which had been the industrial research laboratory for the state
enterprise producing the same range of products as produced by the private firm. The private company was
obliged to relocate production facilities a number of times between different producer cooperatives until an
agreement for use of facilities was reached with a state enterprise. The state enterprise whose facilities the private
firm contracted to use was not producing the same line of products as the private firm. By the end of 1993, the
private firm was using 70 percent of the production capacity of its host state enterprise. The private firm
eventually displaced from the market the rival state producer. Consistent with the aggregate data, the tax base
available from state–sector production eroded, and in this case disappeared.

The joint venture between the private and state company is informal. There is no formal jointly–owned company,
and the activity does not have the approval of the Ministry of Industry, the de jure owner of the state enterprise.
The private firm makes a regular payment to managers of the state enterprise. The state enterprise pays the wages
of the non–skilled production workers in the factory. The private company hires and pays complementary skilled
workers, who are present on the production site. There are economies of scale in the production within the same
facility of the two products, that of the private firm and that of the state enterprise. For example, the state
company uses the private company's delivery trucks for deliveries of its own product.

The owners of the private company had intentions to purchase the state company, via privatization at some time in
the future. Such a purchase had not been financially feasible for the private firm in the past, but became
increasingly more so as the it accumulated profits. When sufficient funds were available to match market
valuation, the private firm intended to approach the Ministry of Industry with a proposal for purchase of, or a joint
venture with, the state company.

In this example, relation between the private and state firms goes beyond profit shifting. Opportunities for profit
shifting are however present. The owners of the private firm describe themselves as in the "shadows" with regard
to taxation. The firm is one of the many thousands of new private enterprises with which the tax authorities must
contend, whereas the state enterprise is subject to a preestablished, traditional relationship with the tax authorities
extending back to the previous regime. Thus, the incentives were to transfer profits to the private firm from the
state enterprise. The need for consensus regarding terms of operation suggests mutual incentive for owners of the
private firm and managers of the state enterprise, the latter requiring minimally compensation for personal losses
incurred because of reduced reported state–enterprise profitability.

If, further, losses by the state enterprise could be the basis for government subsidies, there were incentives for
pricing of the state firm's inputs that result in losses.

The losses or low profitability of the state enterprise are also be reflected in valuation of the enterprise for
privatization. There could be a further private gain, in the price which the private firm could anticipate paying for
the state enterprise when privatization eventually occurred.
Incentives to Delay Reform: Privatization and Taxation

We have observed that in Bulgaria privatization of state enterprises was slow, compared for example with Hungary where substantial privatization took place by direct sale to foreign investors, and the Czech Republic where mass privatization occurred via the issue of vouchers to the population at large, allowing citizens to become owners of the state's assets (although there was also foreign investment). If we look for the sources of the differences in privatization, we must posit a theory of endogenous privatization, that is, a theory explaining the different policies adopted. Why should Hungary have wished to sell to foreigners, the Czech Republic to give, as much as possible, state assets to the people, while in Bulgaria privatization was delayed? In Bulgaria, privatization could have proceeded more extensively and quickly, if the Privatization Agency had been able to secure required documentation from enterprise management. A mass−privatization voucher scheme, for a select list of enterprises, was announced in Bulgaria in the latter half of 1994. After the announcement of the scheme, the Privatization Agency received some 100 proposals for management−initiated privatization and a further 100 proposals from outside non−enterprise affiliated private agents, with documentation. There is therefore a correlation between announcement of a mass−privatization program, and a newly present demand for privatization. Was there also a causal relationship?

The causal relation is founded on preemption. Taking our above case study as representative, the informal vertically integrated structure of economic activity was threatened by privatization of the state enterprise. As long as privatization was not perceived as imminent, the status quo provided mutual gain for the private firm and state enterprise, via complementaries in production, and via profit shifting and tax evasion. The perceived imminence of privatization gave rise to a preemptive response. After milking the cow, the time had come to buy the cow.

As we have observed, the introduction of the VAT also affected privatization incentives. The value−added tax (passed by Parliament in October 1993 and implemented on April 1, 1994) had been deferred a number of times, but once it was evident that the turnover tax on sale for final use was to be replaced by a value−added tax, the benefits of shifting value−added out of the state sector decreased, since passing a VAT obligation on to private firms would not yield the gain possible from passing on (evaded) turnover−tax obligation. While the value−added tax could still be avoided by private firms if a firm had a sufficiently low turnover, or if the firm remained in the shadows of the tax system, there was now an incentive to request receipts for tax credits. After the introduction of the VAT, the private−sector indeed provided some 40 percent of VAT revenue (chapter 3), reflecting the enhanced enforcement and compliance compared to the turnover tax. The latter tax was, organizationally and administratively, a vestige of the prior socialist system, and was designed as an instrument for collection of revenue from state enterprises. The value−added tax reduced the benefits from tax−evasion opportunities provided through the informal commercial arrangements between state and private enterprises.

For illustration, consider the firms in our case study. The private firm marketed its output by direct sale of the packaged good for final consumption, but also had a regional network for the sale of concentrate and packaging material to small regional private (family) firms, which then proceeded to sell the product for final consumption. The private firm was not liable for turnover tax on these latter sales. The value−added tax made irrelevant, for purposes of tax liability, whether the private firm itself packaged and sold the final product, because the degree of vertical integration does not affect tax obligations. The private firm, under the VAT, would now wish to minimize its value−added tax liabilities by reporting the costs incurred in payment to the management of the state enterprise for the use of the state enterprise's equipment and labor; and it would also want to report true costs, since the higher the cost, the lower its value−added tax liability. An enforced value−added tax thus transformed into a zero−sum game what had been a cooperative game among all those involved except for the government and the tax authorities. Under the conditions of this zero−sum game, there is no longer a collective benefit from maintaining the informal internalization of transactions between the state enterprise and the private firm. Where efficiency warrants, there is a gain from formally merging the two enterprises via privatization.
Efficiency and Social Justice

The Coasian theory of the firm indicates that firm size is determined by the relative costs of market and internal transactions. Firm size in a market economy is efficient, in that decisions based on comparisons of transactions establish the cost-minimizing degree of vertical and horizontal integration. The informal ventures we have described have not been subjected to market transaction alternatives, and yet are also not internalized within the one firm, at least formally. There are however transition-related efficiency benefits. Private firms lack access to capital, and state firms may have excess productive capacity but little market-related expertise. Our example demonstrates the efficiency of the symbiotic relationship which makes resources available to the private enterprise for productive purposes when such resources might otherwise find no alternative employment, and which provides private firms with access to resources which otherwise they might not have. The state should be supportive of or indifferent to the informal joint venture, if the alternative were an idle state enterprise that provided no employment (and no profits or tax revenue).

In effect, the arrangement functions as if there were a single vertically integrated enterprise. Transactions are "internal" to the combined "firm," composed of two "divisions," one engaged in physical production and the other performing the functions of input-purchasing, marketing, and financial divisions; although in our example above, this specialization was not complete. Nonetheless, the informal joint venture requires, to be functional, the specification of the equivalent of a legal contractual relationship. There is, however, no legal supportive and enforcement mechanism. Problems of potential opportunistic behavior and contract enforcement therefore need to be resolved and contingencies accounted for, without legal recourse. Formal joint ownership of the combined enterprise (production, input-purchasing, marketing activities, etc.) would eliminate the potential for opportunism and so is more efficient.

The informal arrangement is not subject to competitive bidding for access to the state enterprise's resources. Once management of the state enterprise has entered into an agreement with a private firm and a working relationship has been established, the incentive is to continue the relation, because of trust (or transaction-specific capital) that sustains the informal non-contractually binding agreement. The two firms function as one, on the basis of established precedents. The viability of cooperation in the face of potential opportunism and moral hazard deters state managers' from seeking alternative partners. The threat of "outside" privatization provides an incentive to proceed with "inside" privatization, because of the transaction-specific capital of the preexisting insiders. Also, one expects in these circumstances that management of state enterprises and ownership of cooperating private firms may coincide. If so, privatization has effectively taken place, albeit without formal purchase of assets and transfer of ownership. Outside privatization would then be particularly disruptive.

Beyond efficiency, issues of social justice also arise. The profit transfers taking place involve appropriation of income due to the state as de jure owner of the state enterprise, and the transfers of income also result in tax evasion. This is not spontaneous privatization as occurred elsewhere. The cow has not been appropriated although the milk was. There is an incentive for those taking the milk to feed the cow. The time horizon and prospects for eventually securing ownership of the cow determine the quality of the care received by the cow while it is still de jure owned by the state.

Indicative Evidence:
Consumer and Producer Price Indexes

Indicative evidence supporting the broad applicability of the above model of economic activity is provided by a comparison of consumer and producer price indices in Bulgaria. The rate of inflation measured by the producer price index has been considerably lower than that measured by the consumer price index. Jeffrey Miller (1994) suggests some alternative explanations for this phenomenon, including quality changes in the goods constituting

Efficiency and Social Justice
the baskets for the indices. The differential in inflation measured by the producer and consumer price indices is consistent with the internal transfer pricing between state and private enterprises which we have described above. As a consequence of inflation, market prices rise, but the state enterprises do not transact at market prices, and there is no market pressure to increase producer prices received by state enterprises.

The different inflation rates, as measured by producer and consumer price indices, also affect measurement of real interest rates, which are low when computed against consumer price increases but high when computed against producer price increases. Credits for the purposes of financing trading activities are thus subject to lower real interest rates than "production" activities, when private firms are engaged primarily in "trading" activities and state enterprises primarily in "production." The real−interest rate differential, and the respective specialization of state and private sectors to material production and trade and services, are consistent with the outcome which we have described. State enterprises which are the principal (for all intents and purposes, only) physical producers are, in general, not attractive candidates for the provision of further credit by the banking system, but would in any event confront extremely high real interest rates measured by the producer price index.

The private sector cannot afford to, and does not, borrow for physical production, which in any event it does not engage in.5 The high turnover, high−return trading activities of the private sector can however yield profits consistent with the real cost of credit measured against the consumer price index.

**The Size of the Informal Sector**

We now turn to evidence on the informal relationships between state and private enterprises. We have observed that the official data on private−sector profits appear to understate private−sector profitability. What then are the true profits of the private sector, when profit−shifting from state to private enterprises is taken into account? And if the state's cow is being fed and milked, is the cow also being maintained, that is, what investments are made in state enterprises under this system of informal arrangements?

To answer these questions and establish orders of reasonable magnitude of the private sector, we have attempted to measure informal economic activity in the Bulgarian economy under different scenarios regarding informal private−sector labor force participation. The orders of magnitude for the informal sector which are obtained extend beyond the profit−shifting between state and private enterprises. Since we measure the informal sector as a residual, included are incomes and profits from unreported economic activity, such as small scale activities outside the tax net, smuggling, bribes, unlicensed sale of tobacco and liquor on which excise taxes have not been paid, security and protection services, etc.

Our valuations of informal activity are based on data and inferences regarding labor−market participation and wages. The demographic and labor−force data show large numbers of people leaving state−sector employment in the course of the decline of the state sector but not showing up as employed elsewhere. The number of individuals reporting themselves as employed in the private sector is considerably fewer than those released from the state sector. The large number of people who in the labor−market surveys report they are outside of the work force is inconsistent with living conditions in Bulgaria, which require earned income. There are insufficient financial and real assets to provide capital income as a replacement for the wages which individuals received when employed in the state sector. We therefore infer that individuals who have left employment in the state sector must have found replacement sources of income in the private sector. In many instances, private−sector wages are informally paid, to evade social−security and social−insurance payroll taxes. There are no available data on the true wage differential.
Given the data inadequacies for measuring informal activity, three different possible states of the (not–directly–observable) world were considered. An extremely conservative scenario assumes that reported employment in the private sector is accurate, and that wages (and in the case of the private sector, incomes of self–employed individuals) are equal in the private and state sectors. These assumptions are likely to be a lower bound, since they imply a large population without a source of earned income, and are inconsistent with observed income differentials in favor of the private sector. A second scenario assumes that half of the persons declaring themselves in labor surveys to be outside the work force (net of discouraged workers) were, in fact, informally employed in the private sector, with an income differential favoring the private sector of 20 percent. A third scenario assumes a 45 percent wage–differential with 75 percent of the people declaring themselves outside of the work force, in fact, employed in the private sector. This latter scenario is not unreasonable as data from the Labor Survey (based on reporting by individuals) suggest that between 50 and 70 percent of private–sector employment in 1993 was informal. The survey also indicates 45 percent more private–sector employees and 50 percent more family members working in private–sector firms than reported by firms to the NSI.

We define the informal sector as the difference between economic activity based on these scenarios and official data. In so doing, we are confronted with the complexity that different official sources indicate different sizes for the private sector. In particular, official GDP statistics include some informal sector income.

The computations (see the appendix) reveal a significant informal sector even under the more modest medium or baseline scenario. The private sector grew more substantially than indicated by official data, and the major part of this growth was due to the informal sector. By 1993 the informal sector provided two–thirds of the private–sector's contribution to GDP. The recorded NSI private sector contribution to GDP increased from 6.7 percent in 1991 to 22.3 percent in 1993, and official GDP statistics report an increase of the private sector's share in GDP over the same period from 11.2 percent to 31.4 percent. The difference is that part of the informal sector is included in official GDP. The informal sector's share in official GDP thus increased from 3.8 percent to 11.7 percent between 1990 and 1993. When that part of the informal sector not within the official GDP statistics is added, the baseline scenario shows that the private sector share's in GDP increases from 15.6 percent in 1990 to 42.5 percent in 1993. The informal sector increases from 9.6 percent to 26.0 percent of GDP. Preliminary data for the first six months of 1994 are consistent with these estimates, with the baseline private–sector share in GDP yielding 46.6 percent, compared to NSI's estimate of 32.9 percent. Measuring the size of the private sector as a residual from official GDP yields similar results, with the private sector accounting for 48.8 percent in GDP in 1993 and 50.2 percent by mid–1994. Again, some two–thirds of private sector activity is informal. These estimates closely approximate our calculations in the high–case scenario.

From 1992 on, the private sector became virtually the sole source of operational surplus in the economy (profits, plus incomes of unincorporated private companies, entrepreneurs, and self employed), accounting for 67 percent to over 100 percent of total surplus, depending on the method of measurement and assumptions used. Our calculations indicate that some 90 percent of the estimated operational surplus was in the informal sector (thus not subject to taxation). Yet the private sector accounted for only 5 percent of long–term assets, less than 10 percent of total credit, 22–26 percent of employment, 10–12 percent of labor income, and had a share in gross fixed capital formation in the range of 10–18 percent of total investment in 1992 and 1993. Private sector's profits were inconsistent with such low use of capital and labor inputs, but are consistent with the picture of profit–shifting from state to private enterprises, large reported losses in the state–enterprise sector, and large unreported private–sector profits. Our estimates indicate that the process of profit shifting appears to have been underway in 1991 (based on the private–sector estimate as residual), and that it accelerated in 1992 and 1993.

This profit shifting was not accompanied by any significant new investment. Under the most optimistic estimates, private–sector investment did not exceed 12 percent of total investment in 1993 (equal to 1.9 percent of GDP). Such investment is inconsistent with maintenance of the capital stock of the state–enterprise sector, and leaves no scope for positive net investment. The level of investment by state enterprises is also too low to maintain the

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existing capital stock.

The small labor share in private−sector income also suggests that wages in the private sector are low relative to the high share of profits or surplus accruing to private entrepreneurs. Aside from distributional concerns, these profits are not taxed, and the shift to informal employment places a heavy burden on the social security system. The private−sector share in social security revenues was less than 9 percent, while official recorded NSI private sector employment was 22 percent, and our estimate of private−sector employment inclusive of persons reporting themselves outside of the work force is 35 percent.

By looking at the components of GDP by final use, we can infer how income earned in the informal sector is allocated. Most is used for consumption (we estimate informal consumption to be 14−17 percent of GDP). The large and increasing discrepancy in the balance of payments (reflected in the large unexplained residual in the capital account) suggests that between 4 percent to 6 percent of GDP is transferred abroad. Another 4 percent to 7 percent of GDP appears in the banking system as net increase in savings. A small proportion (less than 0.4 percent of GDP) is informal investment.

The order of magnitude of these estimates is consistent with the public's share of holdings of total money assets. Savings increased in real terms after 1991, despite a decline of more than 30 percent in real incomes. Most of this is not households savings, but private firms taking advantage of preferential conditions for household deposits, including interest rates, deposit insurance, and tax provisions, and also using to advantage income−protection effects of private accounts (deposits in private accounts could not be seized in case of business default). The private sector's share of total money assets, combined with an extremely low share of outstanding credit, confirms that the private sector is predominantly cash−based and self−financing, as is expected of informal activity.

Conclusions

Chapter 3 indicated how revenue lost from the decline of state enterprises could only be replaced by taxation of the private sector. This chapter has examined more closely private−sector taxation. Profit−shifting from state to private firms appears to be a significant factor underlying the informal sector's share of operating surplus in the economy. Although the informal relationships between private firms and state enterprises may be efficient in providing private firms with access to capital and permitting utilization of state production facilities resources that might otherwise be idle, there are other inefficiencies associated with this system. There are also equity and legal considerations. From the budgetary perspective, revenue is lost as a consequence of the profit−shifting and poor tax administration. There is therefore a strong case to proceed with privatization that will eliminate informal arrangements between state and private enterprises, by internalizing activities within the decision calculus of private owners (who, if milking the cow, should preferably also feed and own the cow). In the absence of privatization, and with persistence of the low investment in state enterprises, revenue will remain lost in the informal sector, and revenue potential will be diminished as the state enterprises are decapitalized.

We have also observed how tax reform can be politically endogenous and be postponed when interests with sufficient influence gain from deferment. Likewise, privatization can be politically endogenous, and be deferred. Once tax reform takes place, private incentives with regard to privatization can change. However, whatever these private incentives, privatization is necessary to transfer informal activity and non−taxed surpluses to the formal private sector.
Appendix: Methodology and Assumptions in Estimating the Size of the Informal Sector

Calculations of the size of the informal sector are based on alternative estimates of the private sector's share in GDP, both by source of income and final use. Where official statistical information is available, the official source is used. When there is no reliable source of information, the estimates are based on assumptions derived from related data or other information. All estimates are made according to minimum, baseline, and maximum case scenarios. The estimates cover the period from the beginning of 1991 through the second quarter of 1994. For 1991–1993 the estimates are on an annual basis, and for 1994 for each quarter individually, and for the first half year. Because of the seasonal effects of tourism and agriculture (both with a very high private sector share), and the absence of reliable quarterly information on many economic variables, the quarterly and the half-year estimates should be interpreted with caution.

Each year’s estimate consists of three sections: (a) labor income, (b) estimates by source of income, and (c) estimates by final use and comparison with the income accounts.

**Labor Income**

The estimate of labor income is based on the number of persons engaged in the private sector. The sources of the employment data are (a) the annual private sector survey, summarizing the number of persons employed (and self-employed) in firms submitting annual reports to the NSI; and (b) data from the 1993 labor survey. The discrepancy between both sources is immense, a factor of two. The labor survey data should be considered as more reliable, as they do not depend on reporting by enterprises.

Estimates of the wage bill in the private sector are based on the following assumptions:

Employees' wages are assumed to be equal to those in the state sector, 3487 leva (as defined by the national account statistics of the NSI) under the minimum variant, and to be greater by 20 percent and 44 percent in the baseline and maximum scenarios. (The average wage for 1993 reported by firms to the NSI equals the minimum wage, which forms the basis for our minimum scenario.)

Incomes of self-employed and owners of companies are assumed to be equal to the average household income for 1994 (6247 leva) under the minimum variant, and respectively greater by 50 percent and 125 percent under the baseline and maximum scenarios.

Unpaid family members are assumed to be paid the minimum wage.

For persons outside the labor force (minus discouraged workers), under the minimum scenario, half receive the minimum wage, under the baseline, 60 percent receive the minimum wage, and under the maximum scenario, 75 percent receive the minimum wage.

Unemployed (as defined by the labor survey): none are working under the minimum scenario; baseline, 25 percent are receiving the minimum wage; maximum, 50 percent are receiving the minimum wage.

**Social Security Contributions**

Employed pay the average rate of 42 percent.
Self employed pay 20 percent on two minimum wages (the minimal possible contributions) under the minimal variant, 20 percent of the average state sector wage under the baseline variant, and 20 percent on the average household income for 1993 under the maximum variant.

Unpaid family members, people outside the labor force, and unemployed do not pay social security contributions.

**GDP by Source of Income**

Operational surplus is divided into three parts: profits of incorporated companies, mixed income of non-incorporated companies, and imputed rent.

Profits are estimated in the following ways:

as presented in the official national accounts statistics

as submitted by the reporting companies to the NSI

as submitted by the reporting companies to the NSI, adjusted for the higher private sector employment reported by the labor survey (assuming the same productivity per worker in state and private employment in the minimum scenario, respectively increased by 20 percent and 44 percent in the baseline and maximum situations)

based on the volume of sales and an assumed gross return on recorded sales (15 percent, 20 percent and 25 percent under the different programs respectively).

Mixed incomes (profits of owners of non-incorporated companies and self-employed persons) are derived from the labor accounts as explained above. Total private sector operational surplus is the sum of the profits of incorporated companies plus mixed incomes plus imputed rent (the official rent has been assumed to be correct).

Total private sector surplus has also been derived as the residual between total surplus as recorded by the NSI (which has been assumed correct) and the operational surplus of the state enterprises, as recorded by the NSI enterprise statistics [in three variants, on an accrual basis, on a cash basis, and net basis (less indirect taxes)].

**Depreciation**

Depreciation consists of two components, depreciation of housing stock and depreciation of long-term assets, and was estimated in the following ways:

**Depreciation from Business Activity**

This is calculated as:

reported in the official national accounts statistics

reported by the companies to the NSI

reported by the companies to the NSI, adjusted for the higher employment under the labor survey (minimum variant), respectively increased by 20 percent and 44 percent under the other two variants

linear depreciation of long-term assets as reported by companies to the NSI with a 5 year depreciation period applied (under the minimum scenario), adjusted for higher employment as recorded in the labor survey (baseline),
with another 20 percent increase under the maximum situation

residual from the NSI recorded depreciation (here assumed to be correct) and the depreciation reported by the state enterprises.

**Depreciation of Housing Stock**

The NSI calculates depreciation of housing stock based on a one-hundred year depreciation period and reference prices (substantially lower than actual market prices). We estimated the range of depreciation values of housing stock under the following assumptions: (a) assuming a fifty, forty and thirty-five year depreciation period under the different estimates and (b) market prices as recorded in actual sales of property (from notary declarations, which are significantly lower than actual realizations because of fee and tax evasion), respectively increased by 20 percent and 44 percent under the other two variants.

**Indirect Taxes**

Indirect taxes as presented in the national accounts differ significantly from budget reporting and enterprise reporting in the enterprise statistics. We therefore estimated the indirect–tax contribution of the private sector to the GDP in the following ways: (a) as presented in the official NSI statistics, (b) as given from private companies' reports to the NSI, (c) as reported by the reporting companies to the NSI, adjusted for the higher employment under the labor survey, (d) as a residual from recorded taxes, reported in the national accounts, and reported by the state–enterprise statistics (cash basis, accrual basis and as recorded by the state enterprises' own accounts) and (e) as residual from the total taxes, collected by the budget, and the state–enterprise reporting (cash, accrual or own state–enterprise accounts).

**GDP by Final Use**

**Consumption**

Consumption was estimated by two approaches: type of products and services, and via net disposable income estimates.

Consumption by type of goods and services was estimated in four ways: (a) as reported by the national accounts statistics, (b) derived from the household budgetary survey data per capita, expanded for the whole country, (c) based on other official source of information (such as retail trade statistics, reporting of utilities' consumption, and average prices, etc. and, (d) imputed rent estimated on the basis of average rent, as reported by specialized real estate publications.

**Net Disposable Income**

Net disposable income was estimated in the following ways:

State wages, as recorded by the national accounts statistics, by the household survey, and by the NSI employment statistics

Private sector wages and entrepreneurial income as recorded by the national accounts statistics, household budgets, official private sector reporting, and

the three private sector estimates from the incomes accounts (minimum, baseline and maximum scenarios)
Social payments, as recorded by the household budgets and the budget statistics

Property income, own production in kind, property sale, insurance and other income, from household budget data

Interest income, as reported in the household budget data and based on the stock of savings and average monthly interest rates in leva and foreign exchange.

Gross incomes, as calculated above, were reduced by the amount of income and property taxes paid by the population (derived from the budget) and the increase in savings (as presented in the household budgets and from the monetary statistics). We do not know the portions of interest earned that have been capitalized and used for consumption. The net increase in savings (the gross increase of savings minus interest accrued) is relevant for determination of disposable income. In order to match derived disposable income with the national accounts concept of consumption, imputed rent has been added to estimated net disposable income.

**Investment (Gross Capital Formation)**

This has two components, housing investment and investment in long–term assets. As there are large discrepancies between the investment statistics reported to the NSI and the state–enterprise sector reports to the NSI, we estimated public investment based on the two sources.

For the private sector, the following approaches were taken:

**Housing**

Official investment statistics

Estimates, based on the number of square meters commissioned in 1993 and the average construction price per square meter in 1993 (differentiated between rural and urban areas), in three variants, based on three different price assumptions (low, baseline and high).

**Economic Activity**

As reported by the NSI national accounts

None (as there is none in the official NSI investment statistics)

Based on the 1993 reports of the reporting companies (equal to 65 percent of actual 1993 investment expenditures, which is feasible, given that this excludes real estate)

As estimated on the basis of official private sector reporting, adjusted for higher employment as reported by the labor survey

As a difference between the 1992 reported stock of long term assets and the 1993 stocks, adjusted for inflation by the producer price index.

**Collective Consumption**

This includes government consumption, plus budgetary–provided goods (education, health, etc.), and has been estimated in two ways: (a) as reported by the national accounts of the NSI and (b) as the sum of operation and maintenance, defense and security, and net central budget transfers, as reported by the budget.
Changes in Stocks

Changes in stocks were estimated in two ways: (a) as reported by the national accounts statistics and (b) as reported by the state enterprises (for the public sector) and private companies (official reporting by the private sector) in the minimum scenario, adjusted for higher private-sector employment under the labor survey (baseline) and another 20 percent increase (under the maximum scenario).

External Accounts

These were estimated in the following ways: (a) as reported by the NSI, adjusted for non-factor services, reported in the balance of payments (the official estimate does not include nonfactor services), (b) as reported by the BNB, (c) as reported by the custom statistics and, (d) by the balance of payments, with travel accounts adjusted by the BNB.

The final use accounts also contain a comparison of public and private sectors as estimated by the incomes and final-use approach. The summary table lists the results under all scenarios and both approaches. With the exception of 1991, where the incomes accounts yield much higher GDP than the final use accounts, the final-use accounts are slightly higher than the incomes estimates. The discrepancy is especially large if incomes are estimated based on the official data (32–35 percent of official GDP), which could be used as a first-round proxy for the informal sector share. Some of this share is reflected in the NSI GDP estimates (about 15 percent), while another 20–25 percent is hidden and is not reflected in the official GDP figure.

Another problem is the nominal value of the GDP, which, in the case of 1992 and 1993 (to a lesser extent in 1994), is much higher by almost all estimates than the official figures. While in some cases this reflects an adjustment in the public-sector figures (as outlined above), it is mostly due to the private sector contribution. Thus, the private sector is not only a much higher contributor to GDP than official statistics indicate, but is also a much higher than previously believed contributor to GDP growth.

This is supported by statistical checks. The standard deviation of the various estimates is very low (around 3 percent) for 1991, but increases to over 13 percent for 1992 and is almost 12 percent for 1992. This could serve as an indicator of the increasing importance of the unrecorded private sector share in the economy.

The savings dynamics and the share of the savings of the population support this conclusion: savings increased substantially, despite the recorded decline in real incomes. If the gross incomes of the population are adjusted for taxation, minimal essential expenditures to support physical existence (the so-called lifeline minimum) and interest incomes (which is an accounting category), net savings are in the range of 40–100 percent of remaining disposable income. If, however, the alternative incomes estimates (as outlined above) are used, savings are in the range of 8–10 percent, which more or less conforms with what one could expect.

Analysis of the share of the cash in total money also indicates a dramatic increase in the population's share of total money holdings. While there is no substantial increase in M1, the increase in M2 (currency plus demand deposits plus time deposits) has expanded rapidly, almost exclusively due to the time deposits component. The share of currency plus time deposits in total domestic money surged from 13.4 percent at the end of 1990 to 64 percent in June 1994; its share in total money (foreign exchange included) also increased, from 7.8 percent to about 25 percent in mid-1994. The behavior of savings confirms these are not only personal savings: the only period with dissavings was the first quarter of 1994, when businesses were building up inventories in anticipation of the introduction of the VAT.
Notes

1. There is a substantial literature on estimation of the size of the informal sector or shadow economy. On informal economic activity in developing countries. see for example Clark 1988; Turnham, Salome, and Schwarz 1990; and Chickering and Salahdine 1991. For developed economies examples are Kirchgässner 1983; Tanzi 1983; Frey and Weck–Hannemann 1984; and Schneider 1989, 1994.

2. These included a maize production facility, two chocolate and confectionery factories, and the Bulgarian international road haulage company, all sold to foreign companies.

3. In some cases registered businesses were transaction–specific, with the owner disappearing before tax and other financial obligations had been settled. Registered firms could also be interlocked to provide anonymity for capital transfers from abroad.

4. For example, two small private companies were formed in Plovdiv to produce fork–lift trucks, the owners and workers having left the large state Balkancar enterprise.

5. The few private firms engaged in physical production have been the beneficiaries of subsidized credit programs.

6. The 1993 Labor Survey indicates that 50 percent of the population engaged in private–sector activity were employed under labor or civil contracts, 43.6 percent were self–employed, with the remainder family members. By mid–1994 the share of employees was 56.1 percent, with fewer self–employed both in absolute numbers as well as in share of total employment.

7. This is reflected in a higher private–sector component of GDP than indicated by recorded private–sector activities reported by the National Statistical Institute.

8. The private sector estimates are calculated on the basis of the income accounts, which are a more reliable basis than the sectoral GDP estimates due to widespread under–reporting and the limited scope of recorded private–sector activity. The large difference between the measures reflects the statistical discrepancy between the two estimates (in particular in 1992 and 1993), as well as the share of the privately owned housing stock which is inadequately accounted for in the sectoral estimates.

9. Profits were calculated by assuming the same labor productivity as reported to the NSI and increasing profits by the difference in employment between that reported to the NSI by the private sector and estimated private–sector employment based on the Labor Survey, assuming a 15 percent to 25 percent average return on sales.

10. The private sector was the source of 15 percent of profit taxes collected in 1992 and 1993. For indirect taxes, the private sector's share was 10 percent in 1992 and 16.2 percent in 1993; after the introduction of the VAT in
the second quarter of 1994, the share of private sector in indirect taxes increased to 43.2 percent, which accords
with the baseline estimate of the private sector share in GDP.

11. Labor income is defined as the sum of the wages of employees under labor or civil contracts and social
security contributions paid by all persons employed in the private sector.

12. Bulgarian monetary statistics do not differentiate between private and public companies. Deposits of
unincorporated private companies are included in the "savings of the population," which increased substantially,
from 13.9 percent of savings in 1990 to almost 40 percent by the end of 1993, and to 54.2 percent by June 1994.
The same pattern arises for the leva component of credit alone, that is, excluding credit in foreign exchange. Here
the increase is more dramatic still, from 13.4 percent in 1990 to 64 percent by June 1994. These values are
consistent with the estimates of the share of the private sector share in GDP.

13. Over 75 percent of money assets of the population are held in high−yield time deposits which yield higher
interest than company deposits. The same is true for demand and checking deposits.

14. For a different picture drawn from Polish experience, see Bienkowski 1992, who describes tendencies of "self
destruction" of state enterprises.

References


Clark, G., ed. 1988. Traders vs the State: Anthropological Approaches to Unofficial Economies . Boulder, CO:
Westview Press.


### Appendix Table A4.1

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References
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<tr>
<td>Low estimate</td>
<td>5.3</td>
<td>15.5</td>
<td>10.7</td>
<td>5.2</td>
</tr>
<tr>
<td>Baseline estimate</td>
<td>8.3</td>
<td>24.2</td>
<td>15.7</td>
<td>12.9</td>
</tr>
<tr>
<td>High estimate</td>
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<td>31.0</td>
<td>21.4</td>
<td>13.1</td>
</tr>
<tr>
<td><strong>External Sector Discrepancy, % of GDP</strong></td>
<td>0.0</td>
<td>4.2</td>
<td>6.9</td>
<td>1.4</td>
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</tbody>
</table>

Share of population in:

<table>
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<tr>
<th></th>
<th>1991</th>
<th>1992</th>
<th>1993</th>
<th>1994 S1</th>
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<tr>
<td>total money assets</td>
<td>10.0</td>
<td>13.0</td>
<td>17.2</td>
<td>17.1</td>
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<td>domestic money assets</td>
<td>24.3</td>
<td>31.0</td>
<td>39.5</td>
<td>54.2</td>
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<tr>
<td>Leva money</td>
<td>32.5</td>
<td>41.2</td>
<td>50.6</td>
<td>64.0</td>
</tr>
<tr>
<td><strong>Net increase of savings, % of GDP</strong></td>
<td>4.2</td>
<td>6.7</td>
<td>3.6</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Share of private sector in tax collection:

References
As detailed in chapter 3, Bulgaria, in common with most countries in transition from socialism, has progressed from a tax system characterized by turnover and profits taxes on the surpluses of state enterprises and social security payroll taxes on individuals, to a market-oriented system that includes a value-added tax, a tax on business profits, and an individual income tax in addition to the payroll tax. In making this transition, the Bulgarian government faces two particularly difficult dilemmas. First and most important is the concern that the imposition of an income tax will discourage saving and investment in Bulgaria—both foreign and domestic. This concern has been met in Bulgaria (as it has in many developed and developing countries around the world) by introducing provisions in the business profits tax that are more generous to investment income than the treatment that would occur under a comprehensive tax on economic income. These provisions are usually idiosyncratic (especially so in Bulgaria) and, as will be discussed below, result in a variety of problems. Despite the existence of these provisions, concerns about the potentially deleterious effects on investment of the current tax system have led to calls for additional “investment incentives” beyond those provided under current law; again, this situation is fairly typical of many countries. Boadway and Shah (1992) provide a review of the use of investment incentives in developing countries.

The second major issue is that adoption of a fairly conventional business income or profits tax implies that Bulgaria has to some extent “imported” the standard problems of income taxes around the world. The most important of these is the need for inflation adjustment. Accurate income measurement in an inflationary environment requires an inflation-adjusted measure of annual income. This requires inflation adjustment of any quantities that are stated in nominal terms (for example, personal exemptions and income brackets). In addition, accurate measurement of capital income is especially difficult in the presence of inflation; for example, depreciation deductions, the costs of goods sold from inventories, interest income and expense, and capital gains should all be adjusted for inflation. Unfortunately, the mechanisms for accurate inflation adjustment—either indexation of the items noted above or a comprehensive adjustment of all items on the balance sheet and income statement as is done in Chile—are quite complicated, and are thus undesirable in a country like Bulgaria that has limited tax compliance, administration, and enforcement capabilities. Another standard problem under a “classical” income tax that couples a tax on corporate profits with individual level taxation of dividend income is that of integrating the business and individual level taxes to avoid double taxation of distributed equity income. Although a number of solutions have been proposed and utilized to address this problem (U.S. Treasury 1992), none is entirely satisfactory.

This chapter examines these issues in the context of the current system of income taxation in Bulgaria. The chapter consists of two parts. The first focuses on the current income tax structure and options for reform, and begins with a brief description of the features of the existing taxes on business profits and individual income that are most critical in determining the tax burden on investment income. This is followed by an analysis of the
economic effects of this tax system. The chapter then provides recommendations for reform of the existing tax structure. Although investment incentives are often discussed within the context of the current system, it must be stressed that reforms such as these should be seriously considered before the issue of investment tax incentives is addressed.

The second part of the chapter focuses on the use of investment incentives within the context of a reformed income tax structure. It begins by reviewing the cases for and against the use of investment incentives under a reformed income tax. This discussion includes an analysis of the relative advantages and disadvantages of alternative types of incentives. I conclude with recommendations for the design of investment incentives in a reformed tax system in Bulgaria—if such incentives are deemed necessary.

The problems of the current tax system in Bulgaria, as well as the perceived need for additional investment incentives, are common to many countries in transition from socialism. The discussion in this chapter focuses on the Bulgarian example. Nevertheless, aspects of conditions in Bulgaria are typical enough to make the recommendations worthy of consideration in other countries in transition.

The Income Tax System in Bulgaria

I begin with a brief overview of the main elements of the current income tax system that affect investment decisions. I then consider the tax on business profits and the individual income tax.

The Profits Tax

Most importantly, the treatment of completely private firms is much more generous than the treatment of firms that are partially or completely state or municipally owned enterprises (hereafter, SMOEs). Although both types of firms can take deductions for depreciation which are not indexed for inflation, only completely private firms can also choose between (a) expensing (immediate deduction of the full purchase price of a depreciable asset) and (b) deductions for repayments of principal of loans used to finance asset purchases. Deductions under these two special provisions are allowed only to the extent of taxable profit, with no provision for carrying forward losses. Also, only private firms are allowed to deduct the costs of land purchases under the two options described above: SMOEs receive no deductions for land purchases. Firms that are completely private are allowed to deduct all nominal interest expense, while firms with any state or municipal participation are allowed to deduct only 75 percent of nominal interest expense. Firms are generally allowed to carry losses forward for five years. These deductions must be distributed equally over the period. For inventory accounting, firms may use either FIFO, LIFO, or average cost accounting.

Enterprises that are at least 50 percent private, including foreign entities and private joint ventures with foreign entities are taxed at a 40 percent rate (with a 30 percent preferential rate for enterprises with profits of less than 1,000,000 leva in the previous year) whereas SMOEs with 50 percent or more state or municipal ownership face a tax rate of 52 percent (equal to 40 percent plus 10 percent to the municipality in which the firm is located plus 2 percent to the national irrigation fund). SMOEs must also pay a supplementary tax on wages in excess of those established by the state incomes policy. Finally, 50 percent of the distributed earnings of a SMOE are returned to the state (as a return on the state's equity). In addition to the profits tax, a 15 percent withholding tax is applied to repatriations to foreigners. This tax may be deferred by reinvesting the repatriated funds in Bulgarian equity or debt securities. Earnings distributed to Bulgarian residents by firms with foreign participation are subject a 10 percent withholding tax.

All firms must pay customs duties on imported inputs, and foreign firms must pay customs duties on inputs contributed by parent firms, unless these inputs are used to produce exports. Such customs duties are deductible...
from the profits tax base. In general, firms must also pay VAT on imported inputs, but VAT payments are credited against future tax liability. However, firms that are not registered for the VAT do not have to pay VAT on imported inputs.

**The Individual Income Tax**

There are two separate schedular individual income taxes—a monthly tax on wages and salaries that is withheld at source and an annual tax on other individual income, including certain capital income, income from sole proprietorships (which is not subject to the profits tax), and income from service contracts. Capital income includes dividends. However, capital gains and pensions are not taxed at the individual level and most interest income is not taxed. The same rates that vary from 20 percent to 50 percent and exemption amount (approximately equal to one minimum wage, with no additional personal exemptions) apply to each schedule. Bracket amounts are indexed for inflation. Taxation is applied on an individual, worldwide basis.

The provisions for calculating sole proprietorship income are approximately the same as used for calculating income for wholly private enterprises under the profits tax. Sole proprietorships receive an exemption equal to one minimum wage per month for each month remaining in the fiscal year for each new job created.

**Effects of the Current Tax Structure**

**The Private Sector**

By international standards, the basic business tax structure in Bulgaria is quite generous to completely private firms, even though the 40 percent tax rate applied to private firms is typical of those found in other countries. Three features of the tax code are critical for achieving this result.

The first is the allowance of expensing of purchases of depreciable assets. A true income tax requires deductions for economic depreciation, indexed for inflation; under such a system, equity financed investment will be taxed at the statutory tax rate. By comparison, it is well known that expensing is sufficiently generous, relative to economic depreciation and implies a marginal effective tax rate of zero on equity financed investment; that is, a tax system that allows expensing imposes no burden on an equity financed investment that just breaks even in the sense of covering all of its opportunity costs, including the cost of equity capital (Zodrow and McLure 1991).

In general, the profits tax does not discourage private investment in Bulgaria. However, an important qualifying statement must be made because expensing is allowed only to the extent that it reduces taxable profit in the year of purchase; if taxable profit is less than the amount to be expensed, the excess of cost over profit must be depreciated. Since depreciation allowances are not indexed and inflation is currently very high in Bulgaria (approximately 60 to 80 percent annually), the present value of such allowances is rather low. The special provision in the law that allows deductions for investment that correspond to principal repayments of loans could, in theory, offset the negative effects on investment of denial of expensing; that is, firms could move their deductions for investment to future years by arranging their loans accordingly. However, since credit markets in Bulgaria are severely limited and there are very few long term loans, this technique is not generally applied.

The implication of such treatment is potentially very serious. Although the tax system is unlikely to discourage private investment by firms with taxable profits that are sufficiently large to offset their deductions for new investment, it is very likely to delay investment by those private firms without taxable profits; that is, such firms are likely to defer investment until they have sufficient profits to qualify for the benefit of expensing. Since the availability of expensing implies that the measured taxable profit of private firms in Bulgaria will generally be rather
low, a large number of firms may find themselves in this undesirable situation. Accordingly, the negative effects on private investment and thus on the private sector potentially could be quite significant.

A second feature of the current tax code is also quite generous by international standards. Specifically, since land does not depreciate, income taxes typically allow no deductions for land purchases. In marked contrast, purchases of land can be expensed under the Bulgarian profits tax; alternatively, debt financed purchases can be deducted as the principal of the loan is repaid. Such treatment also implies that the tax system is overly generous for land-intensive activities.

The third critical feature is full deductibility of nominal interest expense. In the presence of high inflation, the majority of interest expense merely reflects compensation paid to the lender for the loss in the value of principal attributable to inflation. Accordingly, accurate measurement of real economic income requires that the inflationary component of interest be nondeductible to the lender and non–taxable to the borrower. In marked contrast, the Bulgarian tax code allows firms full interest deductibility, while very little interest income is subject to taxation at the individual level. As a result, given expensing, the marginal effective tax rate on debt financed investment is generally quite negative; that is, the tax system actually subsidizes investment. (Subsidization occurs as long as the firm has positive taxable profits against which to use the interest deductions.)

In summary, the basic Bulgarian tax system is quite generous to private investment. Equity financed investment faces a marginal effective tax rate of zero under the profits tax, or is subsidized to the extent that land is an important factor of production. Debt financed investment is heavily subsidized. Thus, the current basic tax system is sufficiently generous to make investment incentives redundant. Small firms that currently receive a 'preferential’ 30 percent tax rate would, in many cases, benefit from facing the higher standard 40 percent rate, since the value of their deductions for expensing and nominal interest payments would be greater.

These characterizations are accurate only when the firm has enough taxable profits so that it can utilize the deductions for expensing (or deduct investment expenses very rapidly by using the “loan principal repayment” deduction described above) and for interest expense in the case of debt financed investment. Otherwise, the firm faces strong incentives to defer investment until it can use the deductions for expensing at the time of investment and for interest expense and is thus subject to the generous system described above.

Private firms do have to pay customs duties on imported inputs, which are then deductible against profits tax liability. To the extent that these duties are not shifted forward in the form of higher consumer prices, they impose an additional tax burden on private firms which may, in turn, reduce private incentives to invest.

Finally, although payment of the VAT on imported inputs is generally not problematical (since such payments are subsequently credited against VAT liability), a problem arises if there are significant delays in providing firms with VAT refunds. This seems to be the case under current administration of the VAT in Bulgaria.

**Public Enterprises**

In marked contrast, firms with any public sector participation—state or municipal—face a harsh tax system. This state of affairs presumably reflects a conscious policy decision to use the tax system to encourage the development of the private sector as well as foreign joint ventures with private rather than public enterprises, and to actively discourage investment in public sector enterprises. Given the economic performance of the public sector, this is a reasonable strategy.

It should be realized that the tax burden on the public sector is quite severe, and the treatment of private and public firms in no way resembles a "level playing field." Public sector firms face a relatively high tax rate of 52 percent. More importantly, they do not benefit from the three tax preferences detailed above (expensing, the loan...
principal repayment deduction, and expensing of land purchases). Rather, they are required to take deductions for depreciation that are not indexed for inflation and thus lose value rapidly; they receive no deductions whatsoever for land purchases. In addition, the state takes 50 percent of distributed earnings as a return on its share of equity, even if the share is less than 50 percent. Finally, public sector enterprises are only allowed to deduct 75 percent of nominal interest expense.

The net result of these provisions is that equity investment in the state sector is very heavily taxed. The situation is less clear for debt financed investment. Although interest deductibility is limited for public firms, the remaining deductions are sufficiently generous so that a significant portion of the inflationary component of interest expense is still deductible. (Given current inflation rates, only a very small fraction of interest expense would be deductible under a tax system that taxed real economic income.) As a result, the net effect on investment incentives is unclear; at a sufficiently high inflation rate, debt financed investment in the public sector is probably taxed relatively lightly.

An Option for Reform of the Existing Tax Structure

Although it may be natural for countries in transition to consider implementing investment incentives in an attempt to attract desperately needed foreign capital as well as managerial skills and foreign technologies, consideration should first be given to reform of the basic income tax structure. Any plan to attract and maintain long run investment capital will be more successful if it operates within the context of an income tax structure that is sound in the sense that it is generally consistent with the basic principles of income taxation and conforms to international practice. This is especially true in Bulgaria, where a number of reforms of the current income tax are required before this could be implemented. The following discussion recommends a set of such reforms, focusing on the tax treatment of the private sector, under the assumption that differentially harsh treatment of the public sector is desirable to encourage privatization and foreign joint ventures with private rather than public sector firms.

The proposed reforms are not intended to provide a complete blueprint for a thorough overhaul of the existing tax structure; rather, they represent a set of significant changes in the basic structure of the profits tax, as it applies to private sector non-financial firms, that would move the current system considerably closer to a tax on real economic income. In particular, the reforms would: (a) eliminate the incentive for firms to defer investments until they have taxable profits and are therefore able to use the deduction for expensing, (b) eliminate—to a first approximation—the inflation sensitivity of the tax system, without resorting to a highly complicated inflation indexing scheme, and (c) eliminate the current tax bias favoring debt over equity finance. All of these reforms could be enacted at a single point in time, as part of a comprehensive reform of the income tax system. If enacted, the next issues then would be whether investment incentives should be added to such a system and, if so, how they should be designed. Resolution of these issues, to which I now turn in the following two sections, should be deferred in the short run (three to five years), to allow time to identify the level and pattern of investment flows under the reformed income tax system.

Depreciation Allowances/Loss Carryforwards

The current tax treatment of investment is at the same time too generous and too harsh. It is too generous in that expensing results in a deduction far greater in present value than real economic depreciation, but too harsh in that, if taxable profit is too low so that expensing is unavailable, then the taxpayer generally must take deductions for depreciation that are unindexed for inflation in a highly inflationary environment.

The recommended solution to this problem is that expensing be replaced with a similar approach known as “first year capital recovery.” With this method a deduction is granted in the year in which an investment is made, equal to the present value of all future scheduled depreciation deductions attributable to the asset and discounted at a
real after-tax interest rate (Auerbach and Jorgenson 1980). By definition, this would be less generous than expensing. At the same time losses would be carried forward with interest; that is, losses would be adjusted for (a) inflation and (b) the time value of money, using the same real after-tax interest rate applied in calculating the amount of first year capital recovery. Asset sales would result in the inclusion in the tax base of an amount equal to the present value of the future depreciation deductions attributable to the asset, based on its sale price. Such treatment, which is symmetric to that applied to the buyer of the asset, is essential to preclude tax avoidance schemes involving asset churning—sales designed to take multiple depreciation deductions for a single asset.

There are several advantages to this strategy. First, since the deduction is granted in the first year, this system for capital recovery is immune to inflation. The same result obtains for loss firms since losses are carried forward in constant present values. Second, since first-year capital recovery is equivalent in present value to economic depreciation, the tax base would be real economic income. Thus, in contrast to the current overly generous system, firms would face a positive marginal effective tax rate and the revenue base would be positive. Third, such an approach would equalize the tax treatment of investment by all private firms, regardless of whether they have taxable profits or are in a loss position, and would thus avoid discriminating against new and emerging firms and high growth firms that are relatively unlikely to have taxable profits. Fourth, to the extent that reasonably accurate estimates of economic depreciation are available and are used in the calculation of the amount of first-year capital recovery, uniform treatment will be provided for all assets. Thus, the tax system will not distort private investment decisions across assets or across business sectors. Finally, recall that since expensing is already granted under current law, the move to first-year capital recovery would not represent a large change.

The primary problem with this approach is that a real after-tax interest rate must be chosen to calculate the value of the first-year capital recovery allowance and in the calculation of loss carryforwards. In principle, the relevant interest rate should be a medium-term commercial rate. However, until credit markets are more fully developed in Bulgaria, it may be necessary to use a rate tied to conditions in international capital markets. It is clear that any rate so chosen will, to some extent, be arbitrary. A second important problem is that the "up front" nature of first-year capital recovery implies that many firms may be in a loss position. As a result, the choice of the interest rate for loss carryforward—and indeed the entire concept of loss carryforward with interest—will be both critical to ensuring a coherent system and contentious from a political (and revenue) perspective. Finally, the tax authorities would have a significant monitoring problem in that they would have to ensure that the proceeds of asset sales were included in the tax base as required. The use of first-year capital recovery results in a significant incentive to "forget" to report such sales, although this incentive is smaller than under the current system of expensing.

**Land**

Deductions for purchases of land are inappropriate under an income tax system, since land does not depreciate. Accordingly, such deductions should be eliminated from the profits tax in Bulgaria. Note that this requires that the value of land be determined separately any time a parcel containing improvements is sold.

**Loan Repayments**

The treatment of investment in depreciable assets described above—first-year capital recovery and loss carryforward with interest—is all that is required to ensure appropriate deductions for investment. Any deductions for loan principal would be redundant and inconsistent with the principles of income taxation; the current provisions allowing such deductions should be eliminated.
Interest Income and Expense

Full deduction of nominal interest expense is generally much too generous in an inflationary environment. However, the theoretically correct treatment—inflation indexation of all loans—is inappropriate for Bulgaria because it is far too complex. In addition, approximate schemes involving fractional deductions of interest expense and fractional inclusions of interest income are inaccurate, subject to abuse and generally inappropriate for financial institutions (McLure and Zodrow 1987). Accordingly, an alternative treatment that approximates the theoretically appropriate result is recommended instead.

Specifically, the recommended treatment would continue to allow firms a full deduction for nominal interest expense, but at the same time they would also be required to impose a final withholding tax on all interest payments at a rate equal to (or closely approximating) the business tax rate. Such treatment would apply equally to Bulgarian residents and to foreigners. No additional taxation of interest income would be imposed at the individual level. This treatment is roughly similar to that proposed by the U.S. Treasury (1992) in its recent study of alternative methods of integrating business and individual income taxes.

There are the following advantages. First, explicit inflation indexing of interest income and expense would no longer be necessary, as long as the business and withholding tax rates were equal or very nearly so. Borrowers and lenders would each take into account the same tax and inflation effects in determining the terms of a loan, and interest rates should adjust to reflect the full deductibility of interest expense to the borrower and the full taxation of interest income to the lender. Thus, inflation indexing would be unnecessary in the sense that it would be done implicitly in the form of interest rate adjustments.

Second, the tremendous tax incentive for debt finance (relative to equity finance) under current law would be greatly decreased or eliminated. The deduction of nominal interest expense at the firm level would in effect be offset by the taxation of nominal interest expense at the level of the saver—as should generally occur under an appropriately designed income tax system. (By comparison, under current law, firms receive full deductions for nominal interest expense, but interest income is taxed very lightly.) Thus, the marginal effective tax rate on debt financed investment, taking into account the withholding tax imposed by the firm, would no longer be extremely negative; indeed, it would equal the withholding rate on interest income which would, in turn, equal or approximate the business tax rate. Moreover, as will be discussed immediately below, the recommended treatment of interest income and expense, when combined with the associated treatment of dividends, would eliminate the current tax distortion favoring debt over equity finance.

Third, the proposed treatment would not require the taxation of interest income at the individual level, since such taxes would be withheld at the firm level. This would greatly simplify tax administration, since interest income is relatively difficult to monitor.

The main problem here is that some low−income individual recipients of interest income would be taxed at too high a rate, assuming that the business and withholding rates were equal. That is, individuals in tax brackets lower than the business rate would effectively be taxed at a rate higher than their individual rate. Since most interest income in Bulgaria is presumably earned by individuals who are in relatively high tax brackets in any case, this problem is not likely to be a particularly serious one. At the same time, if the maximum tax rate under the individual income tax exceeds the business tax rate, high income individuals would be taxed at too low a rate on their interest income. This suggests that the differential between the two tax rates should be fairly small. Another argument in favor of a small differential is that it would avoid
tax-induced distortions of the decision to incorporate. In any case, the benefits of this approach described above clearly seem to outweigh these associated equity costs.

In addition, note that the proposed treatment works accurately only for relatively stable inflation rates. If the inflation rate changes unexpectedly, borrowers and lenders would experience windfall gains and losses that would not be taxed accurately. Thus the proposed treatment of interest income and expense would not be likely to change the current tendency in Bulgaria for debt to be of extremely short maturity.

A third potential problem is that the proposed treatment of interest income would raise effective tax rates on (as well as revenues obtained from) such income, especially since interest income is largely untaxed at the individual level under current law. Alternatively, while investment incentives are largely redundant under current law, full taxation of interest income under the proposed reform would reopen the question of whether investment incentives are desirable. This issue is discussed below.

Finally, the proposed tax treatment of interest income and expense will yield satisfactory results only if market interest rates adjust to reflect the effects of inflation in the manner described above which would require reasonably well-functioning capital markets in Bulgaria. Accordingly enactment of the proposed tax treatment of interest income and expense should be accompanied by reforms of financial markets in Bulgaria.

**Dividends**

The proposed treatment of dividends is exemption from tax at the individual level. Such treatment would be consistent with an "integrated" approach to income taxation in Bulgaria—that is, a combined business and individual level tax system that avoids double taxation. To envision this, recall that full deduction of nominal interest expense, coupled with the application of withholding taxes to interest income, implies that the income earned by debt-financed investment is effectively taxed at the withholding rate, which equals (or approximates) the business tax rate. Since dividends are not deductible from the business level tax, the income from equity-financed investment is already fully taxed at the business level. Accordingly, no further taxation is required if only a single level of tax is to be imposed on the income from equity financed investment. This ensures that the treatment of debt and equity financed investment would be comparable under the reformed tax system which would eliminate tax-induced distortions of decisions regarding the use of debt and equity finance. It does, however, raise the same equity issues discussed above; dividends would be taxed at the business tax rate even if received by individuals with lower marginal tax rates.

The logic of this argument extends to dividends paid to foreigners. Nevertheless, Bulgaria may wish to follow international practice and impose a withholding tax on dividends paid abroad (to the extent that such treatment would be consistent with international treaties). This is not recommended, however, because it would represent double taxation of foreign equity income and would be very likely to impede foreign investment. This argument must be qualified to the degree that withholding taxes are subject to foreign tax credits in the capital-exporting country. This issue will be addressed in detail below. By comparison, the absence of dividend withholding taxes would suggest a favorable investment climate for foreign investment.

**Inflation Adjustment**

It must be emphasized that, despite the fact that the system described above has no explicit provisions for inflation adjustment, the recommended treatment of depreciation deductions, interest income, and expense imply that effective tax rates would be largely independent of inflation. However, two additional factors related to inflation adjustment must still be considered.
The first is inventory accounting. The current tax code allows the taxpayer to use either the FIFO or LIFO approaches, as long as the chosen method is used for both financial and tax accounting. Only the latter method approximates accurate measurement of income in an inflationary environment (and even LIFO does not work well when firms are drawing down inventories). Accordingly, firms should be required to use LIFO accounting. Although the LIFO approach is slightly more complicated than the FIFO alternative, its use will result in much more accurate measurement of income for both tax and financial accounting purposes.

The second issue is the tax treatment of capital gains. Under current law, capital gains are taxed at the business but not the individual level. The proposed tax system would closely approximate full taxation of business income. For financial assets of firms subject to the profits tax (or the assets of sole proprietors subject to the individual income tax), capital gains taxation would represent a second layer of tax and is not necessary provided that adequate safeguards could be instituted to prevent the conversion of ordinary income into capital gains. This logic does not apply for assets not subject to the profits or individual income taxes, especially owner-occupied homes and foreign portfolio holdings. Accordingly, capital gains taxation is arguably desirable for such assets, although such gains should be indexed for inflation.

For domestic assets, the inflationary component of any capital gain would be very large, and revenues obtained from the taxation of indexed capital gains are likely to be relatively small. In the interest of simplicity capital gains taxation is not recommended in this case; such treatment is generally consistent with current law. Capital gains taxation is also not recommended for foreign assets, primarily because enforcement of such taxation is so difficult. Note that since inflation may not be such an important issue for many foreign assets, one could argue that unindexed taxation of capital gains is not too problematical.

Sales Taxes and the VAT

Finally, consideration should be given to reducing or eliminating customs duties on imported capital goods. Such treatment would be appropriate since the proposed reforms would in many cases considerably increase the burden of the income tax, and the current system discriminates against firms that use production processes that are intensive in imported capital goods. In addition, delays in refunding credits should not be viewed as an appropriate means of increasing government revenues.

In summary, if these reforms were enacted, Bulgaria would have a tax that accurately measured economic income. The next issues would then be whether investment incentives should be added to such a system and, if so, how they should be designed. These issues are discussed in the remainder of the paper.

Evaluation of the Case for Investment Incentives

Proponents of investment incentives—tax treatment of investment income more generous than that prescribed under a country's regular income tax—offer a number of rationales for their use. This section examines the validity of these arguments, both in general terms and in the Bulgarian context.

General Perceptions

The extent to which investment incentives (or reductions in the cost of capital generally) are effective in meeting their primary goal of increasing new investment or increasing investment at a reasonable revenue cost is open to debate. Many practitioners of tax reform in developing countries could be characterized as skeptical at best regarding the use of investment incentives. For example, after surveying the recent literature on investment incentives, Bird and Oldman (1990, p. 141) conclude that "the case for specific tax incentives to encourage either
savings or investment seems at best weak." Gillis (1985, p. 234) notes that in the recent Indonesian reform, "all such incentives were abolished, but only after decision-makers had vetted both empirical and theoretical evidence of their ineffectiveness in achieving purposes intended." McLure and Zodrow (1995) note both a general loss of faith in the use of investment incentives and the decision to avoid such incentives in the enactment of recent tax reforms in Colombia.

Hulten and Klayman (1988, p.335) survey investment incentives in theory and practice in the United States and conclude that "the societal costs of investment incentives . . . outweigh their benefits" so that "those responsible for enacting tax legislation would be well advised to adopt a general rule that investment incentives should be avoided." Concerns that are common to many of these studies (dis-

cussed in more detail below) are that even if incentives are used for the best of theoretical reasons, in practice it is unclear as to what extent they stimulate investment. They are difficult to design, distorted by the political process, costly in terms of foregone revenue, complex to administer, and subject to manipulation by firms. Many observers have stressed the administrative and enforcement problems associated with implementing investment incentives; for example, Kurtz (1988) argues that incentives should be avoided because administering them effectively gives rise to "mind numbing complexity."

An important general argument in support of investment incentives is that they can act to offset imperfections with the existing income tax code. For example, incentives might lower the overall tax burden on capital income or the tax distortion favoring debt over equity finance. Thus, to the extent that direct reform of the tax system is impossible, investment incentives may provide an indirect means of improving the tax system (Shoven 1988). If tax exemption of capital income is deemed desirable, the implementation of a cash flow tax is likely to be superior to the use of investment incentives (Aaron and Galper 1985; Bradford 1986; Zodrow and McLure 1991). More generally, as argued above, if reforms of the income tax are deemed desirable, they should be enacted directly rather than indirectly through the introduction of investment incentives.

In most developing countries, and also economies in transition from socialism such as Bulgaria, the primary rationale for introducing investment incentives is to stimulate foreign investment. It must be noted that non-tax factors are likely to play a much more important role in the early stages of development than is the level of taxation. Fear of political instability, fear of expropriation, exchange rate risk, a lack of information about local economic conditions, a lack of familiarity with local laws and traditions, poor infrastructure, poor availability of credit from local banks, uncertainty regarding the ownership of land on which industrial enterprises are constructed, requirements for official valuations of nonmonetary equity contributions, and delays in receiving required approvals for new installations and expansions of existing facilities are likely to result in much more important barriers to foreign capital to Bulgaria than does the taxation of foreign source capital income (see Foreign Investment Advisory Service 1994). Because lower revenues imply less governmental effort in these areas, for example, less expenditures on infrastructure or on facilitating entry by foreign enterprises, the use of tax incentives may actually decrease the level of foreign investment. Finally, even if investment incentives are deemed desirable for theoretical reasons, administrative concerns may preclude their use. This is especially true if business taxes are the only "tax handle" that can readily be administered.

**Optimal Taxation Arguments**

For a country such as Bulgaria which approximates a small open economy, optimal taxation analysis provides a potentially strong argument in favor of investment incentives, or, more generally, low tax rates on capital income. Taxation of foreign source investment income is likely to be counterproductive; that is, under
certain circumstances, if a capital importing country faces a perfectly elastic supply of capital in international markets, the optimal tax rate on imported capital is zero (Slemrod 1988). This implies that the capital stock in a capital-importing nation will be less than optimal if it imposes a positive tax rate on capital income.

The intuition behind this result is that perfect capital mobility implies that the imposition of a capital income tax in Bulgaria will drive capital out of the country, raising the after-tax rate of return on the remaining capital until it is the same as in the pre-tax equilibrium (which is equal to the rate determined in the international capital market). As a result, the tax on foreign source capital income is fully shifted to domestic residents in the form of lower factor returns or higher prices. Moreover, local residents must also bear the "excess burden" of the tax—the efficiency cost associated with the tax—induced outmigration of foreign capital. Accordingly, it is simply preferable to tax local residents directly and exempt foreign capital income from tax. If political considerations imply that the tax treatment of domestic investment will be at least as favorable as that of foreign investment, then domestic capital income should be exempt from taxation as well.

These arguments enforce standard optimal taxation arguments which indicate that production taxes in general should be avoided (Slemrod 1990b). Similarly, although optimal taxation analysis does not necessarily imply that full exemption of the returns to saving and investment is desirable, that is, taxation on the basis of consumption rather than income, this result obtains for various "plausible" parameter values. For a recent discussion of these results, see Zodrow 1990.

This optimal taxation argument is subject to several criticisms. A positive tax rate on capital may be desirable (a) if Bulgaria offers investors the opportunity to earn significant economic rents and the government wants to obtain a share of them, (b) if investment in Bulgaria allows investors to diversify their portfolios in some unique way (Gordon and Varian 1989), (c) if it is desirable to introduce indirectly a tax in a market for a commodity in which Bulgaria has some market power (Burgess 1988), or (d) if taxation of capital income within the corporation is typically viewed as desirable on equity grounds within the context of a comprehensive income tax because it prevents avoidance of the personal tax through the accumulation of income within corporations. On the other hand, foreign uncertainty about market conditions in Bulgaria may be sufficiently great that subsidies of foreign source capital income are desirable to attract foreign capital (Gordon and Bovenberg 1994). The quantitative importance of these various qualifications for Bulgaria is far from clear and it seems unlikely that their net effect would imply that a significantly positive tax rate on capital income would be desirable.

A potentially more serious qualification arises from the fact that many capital-exporting countries, especially the U.S., allow their multinationals a credit for foreign taxes paid, to the extent that foreign tax liability does not exceed domestic tax liability on the same income. Under certain circumstances (discussed immediately below), this implies that taxation of capital income results in taxes being paid to Bulgaria that would otherwise be paid to the treasury of the capital-exporting country. In this case, Bulgarian taxes do not discourage foreign investment and taxation of such investment provides an essentially "free" source of revenue—a transfer from the treasury of the home country of the investing multinational.

This "treasury transfer" effect appears to provide an extremely compelling argument against the use of investment incentives and indeed against the application of low tax rates to foreign source income. However, there are three important reasons for its often overstated importance. First, in the case of the U.S., many multinationals are in an "excess foreign tax credit" position; that is, due to the relatively low rates in the U.S., they have accumulated more credits than they can use currently. As a result, more credits from Bulgaria will not be of any current value, and may never be used. (In the U.S. foreign tax credits may be carried forward five years and carried back two years.) Some estimates suggest that nearly 70 percent of foreign tax credits to U.S. multinationals go to firms that are in an excess foreign tax credit position (Altshuler and Newlon 1993). On the other hand, this situation may not
persist forever, since other countries may over time reduce their tax rates and thus reduce the extent to which U.S. firms are in an excess foreign tax credit position (Slemrod 1992).

Second, although host country taxes are paid currently, foreign tax credits are deferred until funds are repatriated to the capital exporting country. As a result, the present value of foreign tax credits may be significantly less than the present value of taxes paid to the host country, in which case reductions in host country taxes would affect investment decisions. (Note that this argument does not apply to foreign tax credits granted for withholding taxes, since deferral is not an issue for such taxes.) Hartman (1985) argues that deferred foreign taxation of dividends upon repatriation is irrelevant for investment financed with retained earnings, which in turn implies that only source country taxes affect investment decisions financed from retained earnings.

Third, some countries, such as France, apply a "territorial" tax system to their multinationals—that is, they exempt foreign source earnings. The treasury transfer effect is clearly irrelevant for multinational residents of such nations.

The extent to which Bulgaria would be forgoing a "free" source of revenue if it were to exempt foreign source earnings from tax is far from clear. The desirability of investment incentives is clearly reduced by their interaction with the tax systems of countries that provide foreign tax credits for their multinationals. The optimal taxation arguments described above thus provide qualified support for the use of investment incentives to lower the taxation of capital income.

**External Effects on Growth**

Another argument that has been used in support of investment incentives is based on the proposition that capital investment results in an important externality. The argument is that investment spurs technological advances, but that the advances accrue not only to the firm making the investment but to other firms in the industry and to society as a whole in the form of a higher steady-state rate of economic growth. If the magnitude of the external benefit is sufficiently large, government subsidies of some form can be justified to avoid a suboptimally low level of investment. In the context of a country in transition from socialism, these external effects may be greater than normal to the extent that foreign investment is accompanied by increased transfers of existing technology and managerial skills and training.

Unfortunately, it is rather difficult for the government to accurately identify which firms or investment activities will generate technological improvements, to identify and measure the magnitudes of the externalities caused by such improvements, and to design a tax preference that will stimulate the desired activity but not subsidize a great deal of unrelated investment.

One prominent candidate for an activity that might generate technological externalities and increase growth rates is investment in equipment. The literature suggests that, although the determinants of growth are not well understood, taxes are not likely to be an important factor (although they may affect capital intensity and the nature of the time path to an equilibrium growth path). One recent exception is Scott (1989), who estimates that nearly half of the growth rates in a sample of ten developed countries can be explained by differences in investment patterns. The most provocative contribution to this literature is by DeLong and Summers (1991), who examine the relationship between growth in GDP and investment in equipment over the period 1960–85 in a large sample of developed and developing countries. They argue that there is a strong association between growth and investment in equipment—with a one percent of GDP increase in equipment investment being associated with an increase of one-third of one percent in GDP growth. Their results suggest that the social return to investment in equipment (which includes about a 10 percent private return) is approximately 30 percent per year. These results imply that a
sizable subsidy to investment in equipment may be desirable. However, the DeLong and Summers results have been challenged by Auerbach, Hassett and Oliner (1993), who argue that they are primarily due to the inclusion in the data set of a single country in which returns to investment were extraordinarily high due to the existence of monopoly rents (Botswana); they show that once this outlier is removed from the sample, the external benefits of investment in equipment are virtually non-existent. Lucas (1988) argues that exactly the same externality arguments apply to investment in human capital; this argument could of course be used to justify tax incentives for investment in human capital, including differentially low rates on labor income rather than the low rates on capital income associated with investment incentives. On balance, it would appear to be premature for Bulgaria to institute a system of investment incentives in the hope that the associated external effects on growth rates would offset the revenue costs.

Reducing Unemployment

Although reducing unemployment is clearly an important social goal in Bulgaria, the use of investment incentives does not seem to be an appropriate vehicle to achieve this objective. Even if tax incentives are successful in increasing investment, their effect on the demand for labor is likely to be quite muted. Although tax-induced increases in output will stimulate demands for both capital and labor, the fact that the incentive takes the form of a capital income tax preference implies that it will encourage capital-intensive rather than labor-intensive activities. As a result, the net effect on labor demand may be quite small.

Empirical Evidence

A number of attempts have been made to test empirically the basic premise underlying the use of investment incentives—that they will stimulate the overall level of investment in a country by lowering the cost of capital. These analyses have focused on the extent to which a lower cost of capital induced by investment incentives results in additional investment beyond that which would occur in their absence; a few of these studies have examined the related issue of whether the benefits of any increased investment are large enough to offset their revenue costs. However, there are relatively few analyses of investment incentives in developing countries. The conceptual difficulties in determining the effectiveness of tax incentives in attracting investment are too great and data are too limited in developing countries so that a consensus has not yet developed in the literature.

This lack of consensus is not surprising since, despite far better data and much more academic attention, the controversial issue of which taxes affect investment is far from resolved in the U.S. For example, Feldstein (1982, 1987) argues that taxes are a very important determinant of investment, while Chirinko and Eisner (1983) and Chirinko (1987) conclude that other factors are far more important than any tax effects. On a related issue, most early studies indicated that state taxes in the U.S. had little if any effect on industrial location decisions across states; however, more recent results suggest that tax effects may be important for certain industries (for example, see Papke 1990, 1991). Nevertheless, as noted by Wasylenko (1991, pp. 26–28), "findings for the fiscal variables from these studies are perplexing and do not leave us with a clear conclusion.”

In addition to the standard difficulties in formulating a generally acceptable model of investment behavior, a number of other difficulties plague attempts to ascertain the effects of tax incentives on investment. One important complication arises because the benefits of certain types of tax preferences, especially tax holidays, may be considerably less than anticipated by their proponents. This occurs because firms lose the benefit of deductions for nominal interest expense and all other deductions including accelerated depreciation and any special investment allowances; as a result, they may actually prefer to be under the regular tax system than to be subject to a tax holiday when they are using debt rather than equity finance. This suggests that the benefits of receiving a tax holiday may be fairly small for established firms with access to debt finance, so that determining the effects of the tax holiday on the level of investment is quite difficult (results suggesting small effects are not
surprising and do not necessarily imply that taxes have small effects on investment decisions).

Another problem arises because the dynamic nature of the use of investment incentives is difficult to model. For example, the enactment of tax holidays in one
country may come at a time when other countries are also enacting tax incentives. In this case, their estimated impact on investment would be gauged to be rather small, but a significant reduction in investment might occur in the absence of such a tax incentive.

Generally, the relevance of tests based on the standard assumption that investment decisions can be described in terms of the neoclassical model is inevitably somewhat suspect in the developing country context. In particular, developing countries are typically characterized by imperfect capital markets, and cash flow and the availability of foreign exchange may be important determinants of investment that are ignored in most analyses. Finally, the role of other market distortions, such as the existence of tariffs, price controls, and the existence of state and municipally owned enterprises, is ignored in most analyses but quite important in most developing country contexts. All of these factors suggest that any empirical results on the effectiveness of investment incentives should be viewed as tentative.

Nevertheless, it will be useful to review briefly the results of these studies. The simplest approach used has been to survey business leaders in an attempt to elicit the factors that affect investment decisions. In a survey article, Shah and Toye (1978) conclude that the consensus of these studies is that business executives seldom claim that tax incentives are important in decisions to invest, and seldom list them as highly important when asked to rank criteria important to the decision-making process. (This result is similar to that obtained in surveys of U.S. business executives regarding the effects of state taxes on location decisions.)

The vast majority of research has focused on econometric estimates of the effects of taxes or investment incentives on the level of investment. Shah and Toye (1978) come to the conclusion in their survey that such incentives appear to have "very little impact on the level of aggregate investment, but might be somewhat more influential in steering investment" and that the evidence suggests that "the most that can be said is that their impact is either slight or unknown." Similarly, Usher (1977, p. 119) surveys the use of incentives in developing countries and concludes that "we typically do not know and have not the means to discover the effects of these programs upon the economies where they are adopted." Ebrill (1987) examines data on thirty-one developing countries in 1980 and is unable to find a statistically significant relationship between the cost of capital and the level of investment. Boadway and Shah (1992) review a large number of studies of investment incentives in developing countries that use marginal effective tax rate analysis to gauge the effect of incentives on the cost of capital. They argue that the main message of these studies is that investment incentives generally have little impact on new investment but result in large windfall gains to investments that would have occurred without the incentives.

Several studies support the notion that foreign investment is sensitive to tax factors. In particular, Hartman (1984), Slemrod (1990) and Scholes and Wolfson (1991) find that the level of foreign direct investment in the U.S. is strongly affected by changes in the level of U.S. taxation—although these results have been questioned by Newlon (1987) and Auerbach and Hassett (1993). Similarly, Ondrich and Wasyleanko (1991) and Hines (1993) find that the location of foreign

direct investment in the U.S. is sensitive to state tax policies. Shah and Slemrod (1992) find evidence that foreign investment in Mexico is quite sensitive to tax considerations.
Finally, several researchers have utilized economic models to simulate the effects of various types of investment incentives in several developing countries; these studies also yield mixed results. For additional details on some of these models, see Boadway and Shah (1992). For example, Thirsk (1991) examines the net social benefits of investment incentives in Jamaica. He concludes that the net benefit of incentives designed to promote import substitution is virtually always negative, but that gains (up to twenty-nine cents per dollar) are more likely for export promotion. Bernstein and Shah (forthcoming) estimate that investment allowances, investment tax credits and accelerated depreciation allowances in selected industries in Mexico, Pakistan and Turkey had mixed success in terms of investment stimulated per dollar of revenue loss, while corporate rate decreases were very cost–ineffective (since, in contrast to the other mechanisms described above, they apply to all old capital). Trela and Whalley (1992) conclude that less than 10 percent of the growth of the Korean economy over 1962–82 is attributable to tax policy. Finally, Feltenstein and Shah (1992 a,b) analyze various incentives in Pakistan and Mexico and conclude that although an investment tax credit ranks highly in terms of stimulating investment, corporate rate reductions result in the largest increases in output and welfare.

Investment Incentive Options

The discussion of the current tax system in Bulgaria presented above suggests that investment incentives would be largely redundant under current law and that the existing system is sufficiently generous in its tax treatment of private enterprise so that any additional incentives are unnecessary. The primary exception is firms that do not have enough taxable profit to qualify for expensing. This problem is better handled with appropriate loss carryforward provisions rather than with general investment incentives; without such provisions, tax incentives would have little or no effect on the investment decisions of such firms.

The same cannot be said of the tax structure that would exist if the package of reforms proposed in this paper were adopted, since it would impose income tax on the income from both debt financed and equity financed investment at roughly the statutory business tax rate. This would be in marked contrast to the current system which, as described above, generally exempts the income from equity financed investment and subsidizes debt financed investment.

Thus, imposition of the reformed system with the current business tax rate of 40 percent would imply a very significant increase in the tax burden on investment by the private sector in Bulgaria. The following discussion considers, under the rubric of investment incentives, several ways in which this tax burden might be reduced. The discussion assumes that any investment incentives that are enacted will apply to all firms. The use of discretionary incentives administered by some newly created "investment authority" would introduce new elements of industrial planning into the capital allocation process and be inconsistent with the move to a market economy in Bulgaria. Such a discretionary approach is open to corruption. Bulgaria would be well advised to avoid such an approach to investment incentives.

Rate Reduction

The recommended investment incentive is the most straightforward one—a significant reduction in the profits tax rate. Since profits tax revenues are currently quite low and the expansion of the tax base under the proposed reform would be quite large, a dramatic reduction to a rate as low as 20–25 percent might be possible and yet achieve sufficient revenues. Simultaneously, consideration should be given to reducing somewhat the top rate under the individual income tax; as argued above, a large differential between these two rates is undesirable.

There are numerous advantages to the reduced rate approach. First, it is the simplest type of investment incentive—it applies uniformly and does not create the avoidance opportunities and complexities associated with rate differentials across assets or industries or selective incentives. In addition, the effects of the incentive on the
cost of capital are relatively easy to interpret (which is not necessarily the case with more complex incentives), and thus provide a clear signal of a friendly investment climate to both foreign and domestic investors.

Second, a rate reduction is fairer—and is so perceived—in that it applies uniformly to both new and old investment. As a result, firms that have made previous investments do not feel that they are getting harsh treatment relative to new firms, and new firms do not anticipate that in the future they are likely to be subject to harsher taxation once their capital investments are in place.

Third, the application of a uniformly low rate is relatively easy in terms of administration and compliance and there is no need to determine which investments by which firms qualify for the incentive. The transfer pricing problems that plague international tax administration are minimized with a low tax rate; since a low rate provides an incentive for declaring income in Bulgaria while allocating costs to other higher rate countries, the effect of transfer pricing manipulations by multinationals will likely be to increase revenues in Bulgaria.

Fourth, unlike some other investment incentives, a rate reduction applies uniformly across all assets and industries, and thus results in fairly few distortions of the allocation of investment. In particular, tax holidays (discussed below) are relatively more beneficial to "footloose" industries that can move easily after the holiday expires, while rate reductions are more conducive to encouraging long-lived investment. Although other incentives can in principle be designed to be neutral across different types of assets, this can be moderately difficult, especially in an inflationary environment. In contrast, the deleterious effects of inflation on investment incentives are minimized in a low tax rate environment.

Finally, the basic approach suggested by this approach—a broader base coupled with a lower tax rate—is consistent with recent reforms in many developed nations, including the U.S. Such reforms are generally believed to be consistent with both efficiency and equity goals.

However, a rate reduction is not without its problems as an investment incentive. The primary objection to low rates as an investment incentive is that they are too expensive because they apply to the income from old investments; that is, unlike relatively generous investment allowances that apply only to investments installed after the enactment of the investment incentives, lower rates are not targeted to new investment. However, the relevance of this argument in Bulgaria is open to serious question, since so little of private income is currently subject to the profits tax; therefore, if the move to a lower rate were enacted at this time, fairly little revenue would be lost from the rate reduction. (It might, however, be desirable for revenue reasons to maintain relatively high rates on the income earned by state or municipally owned enterprises.) Moreover, this position is reinforced by the argument made in chapter 3 and by Bogetic and Hillman (1994), who conclude that a low rate is desirable in Bulgaria as an inducement for private firms who are currently evading taxes to enter the tax system. A permanent rate reduction is desirable because it both encourages investment and coupled with improved administration and increased penalties for tax evasion may significantly increase participation in the formal taxpaying economy.

A second potential problem with rate reduction is that it reduces the tax burden on the income from foreign direct investment. It has already been shown that this is desirable, except that the home countries of investors in Bulgaria allow foreign tax credits. In this case, the adoption of a relatively low tax rate would imply that Bulgaria is forgoing some of the "free" source of revenue associated with the "treasury transfer" effect. However, as previously stated, it is easy to make too much of this argument. Accordingly, reductions in the treasury transfer effect do not necessarily provide a compelling argument against the use of a lower profits tax rate in Bulgaria.
A third objection is that lower rates apply to both normal returns to investment and to above-normal returns or economic rents; this is problematical because investments that are expected to earn above-normal returns are relatively insensitive to taxes, and thus reduced taxation of such returns is undesirable. This is a potentially important point; however, it is not clear where this would apply in Bulgaria outside of the fairly limited natural resource sector. In any case, a significant fraction of economic rents would still accrue to the state in the form of tax revenues even with a tax rate in the 20–25 percent range.

Finally, it should be noted that the enactment of an investment incentive in the form of a relatively low tax rate should be accompanied by an explicit commitment on the part of the government to keep the rate fairly constant over time. If firms perceive that current low rates are temporary, a serious disincentive to investment would result; that is, the perceived effective tax rate would be high, since the first-year capital recovery allowance would be taken against the relatively low current rate, while the returns generated by investment would be subject to a future higher tax rate. It would be important for the government to make a credible commitment to low rates, or to promise some form of compensation for old investments if tax rates are raised significantly in the future. This would also mitigate another problem sometimes mentioned in connection with low tax rates as an investment incentive—that alternative incentives that are more front-loaded are preferable because they are more certain than the incentive associated with low rates of taxation for future income.

The arguments made above suggest that, on balance, uniform rate reduction is the investment incentive that should be utilized in Bulgaria. The following discussion outlines the advantages and disadvantages of two alternative general forms of investment incentive.

Additional or Accelerated Investment Deductions

A common form of investment incentive is the allowance of deductions for investment in excess of indexed economic depreciation, including investment tax credits, accelerated depreciation, and investment allowances. For such incentives to be useful to new and emerging firms or those with large amounts of investment, losses should be refundable or carried forward with interest.

The primary advantage of these deductions is that they are targeted only to new investment, thereby having a lower revenue cost per dollar of new investment generated than a generally applicable investment incentive such as a rate reduction. In addition, since their use occurs within the context of high tax rates (relative to those that obtain under the rate reduction option), extraordinary returns to investment are taxed at a relatively high rate, while ordinary returns are subject to a low effective rate (because of the additional deductions). Differentially high taxation of economic rents is desirable on both efficiency (investments expected to generate economic rents are relatively insensitive to tax factors) and on equity grounds. The importance of this argument depends on how much of the investment in Bulgaria might be expected to earn extraordinary profits.

The use of additional and accelerated deductions has a number of problems. First, as mentioned above, the stimulative impact of the incentive may be reduced significantly if firms expect that countries typically employing such incentives will have to introduce future rate increases. Second, it is moderately difficult to design additional or accelerated deductions in such a way that they will be neutral across assets and business sectors, especially in a high and highly variable inflationary environment. See the discussion below for a neutral scheme. Third, this incentive may be perceived as unfair since it does not benefit investments made under a prior, less favorable tax regime.

Note that although the discussion in the previous section is not particularly favorable to the use of investment incentives, it might be concluded that additional investment incentives are desirable, beyond the relatively low
rate recommended above. If so, additional or accelerated deductions would be the best means of achieving this goal. These deductions should be designed so as to avoid distorting the allocation of investment across assets and business sectors. Specifically, the allowance could take the form of "partial expensing"—an immediate deduction for some fraction \( f \) of the cost of an investment, with deductions for economic depreciation for the remaining \((1-f)\) of the cost of investment. If the latter deductions are indexed for inflation, Harberger (1980) and Bradford (1980) show that partial expensing is neutral across assets and methods of finance; alternatively, inflation problems could be eliminated by using the "first-year capital recovery" method recommended above for the portion of the investment that is not expensed. If adopted, it should be tried on an experimental basis; that is, as stressed by Bird and Oldman (1990), investment incentives should expire after a fixed number of years unless they are renewed (a "sunset" provision), therefore they must be continually evaluated in an attempt to gauge if they are achieving their goals at a reasonable revenue cost.

**Tax Holidays**

The final incentive is the tax holiday, a tax exemption that is usually applied to specific activities or specific firms. New enterprises and foreign enterprises are often targeted for tax holidays. Mintz (1992) provides a general discussion of the effects of tax holidays on investment. Although Bulgaria has experimented with this in the past, the current tax system does not utilize tax holidays. This decision appears to be a wise one.

The primary advantage of the tax holiday is that it quickly provides firms with a fairly large benefit; that is, firms that qualify for the holiday immediately face a very low effective tax rate. (This is not true if the existing tax system is already so generous that tax exemption is not beneficial; as discussed above, this would be the case for many firms for debt financed investment under the current tax system in Bulgaria.) By comparison, much of the benefit of a general rate reduction is delayed until the firm receives the future income generated by the investment. This feature may be important in attracting the relatively "footloose" industries that are the most likely to respond to investment incentives. In addition, tax holidays result in roughly equivalent tax rates on debt financed and equity financed investment. Thus, for the firms affected, the tax distortion favoring debt finance that characterizes most income taxes is eliminated. A further advantage of tax holidays is that—to the extent that it is feasible to extend them only to foreign firms—they provide a means of taxing domestic investment (which may be desirable on equity grounds) while exempting income from foreign investment. As argued above, this is likely to be desirable on efficiency grounds.

The advantages of tax holidays are outweighed by their considerable disadvantages. First, they are difficult to administer because firms will try to rearrange their affairs in order to qualify for the incentive. For example, if a tax holiday applies only to new firms, old firms will attempt to liquidate and reconstitute to enable them to become subject to the holiday provisions. Such schemes are quite difficult to police, and could have potentially serious revenue consequences. In addition, firms will face an obvious incentive to allocate income from other affiliates (including those in other countries) to the entity subject to the tax holiday, while diverting expenses from the tax holiday firm to taxable entities. Second, tax holidays exempt entirely from tax any extraordinary profits or economic rents. As argued above, such an exemption is undesirable on both efficiency and equity grounds. Third, since their provisions apply for only a finite period of time, the effects of tax holidays are not uniform across assets and industries. Thus, tax holidays typically distort the allocation of investment. Fourth, tax holidays apply to the income from any old investments made by qualifying firms. Their revenue cost per dollar of new investment may be relatively high if the qualifying firms have significant amount of existing investment. Fifth, although a relatively low tax rate is likely to be desirable because it will encourage firms to use transfer pricing to allocate income to Bulgaria and costs to other countries and thus increase tax revenues in Bulgaria, this advantage
Financing Government in the Transition—Bulgaria

disappears under the tax holiday. That is, with a zero tax rate, such a transfer pricing reallocation raises no revenue for the government offering the tax holiday (until the tax holiday expires).

References


References


III—

GOVERNMENTS AND HOUSEHOLDS

6—

Households and the State

Michael Walton

Bulgarian households have been through wrenching transitions in the past few years. There have been gains—in political liberties and in the removal of rationing. Many people have experienced increases in wealth through the transfer of housing rights and the restitution of property. The boom in services from a very low base suggests that a few have exploited the new economic opportunities of a market economy. The dominant phenomenon, however, has been a decline in incomes and a rise in insecurity. A declining economy inevitably hurts households, but there are also important developments related to changes in the relationship between households and the state. Significant changes have been initiated in the nature or terms of the contracts (explicit or implicit) between households and the public sector. These changes are linked to the revenue capacity of the state. The prior employment guarantee no longer exists. There has been, at the same time, a rise in the share of resources devoted to transfers, although transfers to households have fallen in real terms. This shift may not be sustainable: contributions to social insurance are highly fragile as the tax base of formal employees falls, and there is little hope that other revenue instruments will rise to keep the economy at socialist spending levels—as other chapters have amply shown. More adjustment is inevitable as fiscal pressures increase, although the nature of the adjustment will be conditioned by the nature of labor and transfers policy. This chapter reviews the history of the labor market and transfers, and outlines strategic issues for the future. Chapter 12 goes into the detail of transfer programs for social insurance and assistance and discusses some of the particulars of reform.
Bulgaria represents an early extreme in the adjustment of the labor market and transfer system. It has had the fastest shakeout of labor and, through a combination of demographic structure and policy choices, may have the highest old age dependency ratio of any country in the world. Superficially, its trajectory looks like a more marked version of that of Poland: sharp liberalization of prices and trade, followed by sharp output decline. This brings the hope that a recovery in output and labor demand may be on the way as occurred in Poland. There are, however, two linked time bombs: the necessity of a further shakeout if a financially collapsing enterprise sector is not to pull the whole economy down; and a fiscal crisis due to the scissors movement of revenues and spending. The latter is discussed elsewhere in this volume; here I will explore an important underlying cause—the fall in formal employment (and so also in payroll taxes) and the rise in transfers to those out of work.

The formulation of an effective strategy requires a vision for the long term and careful management of the transition path. Since Bulgaria is a small trading nation, competitiveness and labor productivity will be key to long-run growth. This will require a much lower role for state spending, greater reliance on household coping, more reliance on informal private activities, and a closer link of transfers to poverty. In the transition, substantial labor market changes will continue to occur: there will, in all probability, be a further shift toward dualism as employment in the state enterprise sector declines and the non-unionized (and often non-taxpaying) private sector expands, especially in services. A key choice is whether this is approached in a confrontational or cooperative mode. It is likely to be best achieved by deepening the social pact, taking it beyond nominal wage management to deals on restructuring, the labor shakeout, the real wage, and effective fiscal and enterprise reform. The heritage of high educational attainment will help, but only when (or if) Bulgaria undertakes the structural changes needed to avoid fiscal crisis and spur production and accumulation in the enterprise sector.

This chapter is organized as follows: in the first section the heritage of widespread security and stagnation is contrasted with the initial turbulent period of decline in the early 1990s. The second section surveys labor market developments, private coping, and transfers in the transition. The third section turns to the future, outlining the direction of long-term changes in the relationships between households, enterprises and state that are likely to be necessary if Bulgaria is to become a dynamic market economy; this section draws out the implications of this vision both for labor market developments and the future of transfers. The last section provides a brief summary.

The Legacy and the Beginning of Transition

The Old Days:
High Security with Stagnant Income Growth

Households under socialism enjoyed two apparent advantages over households under capitalism at comparable income levels: good social indicators and high income security. All of this flowed from the public sector, through the employment guarantee and a blend of direct services and transfers coming from the government and state enterprises. Bulgarians enjoy lower infant mortality, live considerably longer and are better educated than people living in market economies at a comparable income level. Like other former socialist economies, most socioeconomic indicators are significantly above the norm for market economies.
Incomes and Secondary Enrollments in Bulgaria and Other Countries

(see figure 6.1 for secondary school enrollment). An important consequence is that Bulgaria has fully passed through the demographic transition. The natural population growth is now slightly negative and its old age population ratio is amongst the highest in the world—a fact to which we will return later.

The principal reason for this success was the high priority given by the state the health needs and educational qualifications of the population. The Bulgarian government spent about 8 percent of GDP on health and education in the late 1980s. This compares with some 5 percent of GDP for middle income countries (although if an unweighted average is used the latter comes to 12 percent). This was a common feature of socialist economies. The success in social indicators was not unqualified, however. For example, it is becoming increasingly clear that the health system in Bulgaria, as in other socialist economies, did a poor job of dealing with some of the diseases of a population that had gone through the health transition and it was unusually inefficient by standards of health systems elsewhere.

The picture is more mixed pertaining to incomes. Socialism assured a substantial degree of security. Everyone was employed and, in the late 1980s, virtually the entire labor force was in the public sector (government, state enterprises or cooperatives). In common with other socialist economies, there was also an unusually high labor force participation rate of women, accounting for about 50 percent. Those without a wage income enjoyed transfers from the state. The employment contract brought with it an entitlement to a range of transfers when not working: two years paid maternity leave (and one unpaid) and an old age pension at age fifty–five for women and sixty for men (with earlier retirement for

Table 6.1: Spending on social sectors and cash transfers under socialism: Bulgaria, Poland and Market Economies (as percent of GDP)

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<td>6.8</td>
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<td>8.6</td>
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</table>

a. 1987
many professions). There were also transfers for children (with a higher transfer after the first two children). There was a small program of social assistance for the destitute, but most of the population was protected by the effective employment guarantee, and the transfers to the old and young. In addition to direct transfers, there were also very large indirect transfers via subsidies to the prices of wage goods, estimated at 15 percent of GDP at the end of the 1980s.

Transfers of all kinds took an unusually large share of resources, less than in rich OECD economies, but much more than in developing market countries of comparable income levels. Actual spending in 1987 was over 11 percent of GDP, compared with less than 2 percent for a comparable group of developing market economies (see table 6.1).

Income growth, by contrast, was slow in the latter part of the socialist period, as the inefficiencies of the socialist system hampered aggregate growth in output and productivity. The picture of slowly rising incomes under the previous regime is actually optimistic. First, there was a smaller range of available goods than in developing market economies, and rising shortages occurred toward the end of the decade. More important to the present analysis, Bulgaria was living on borrowed time. Bulgarian workers were engaged in the production of goods that were uncompetitive on international markets, and the Bulgarian government was sustaining demand by external borrowing. The problem was the same as that of Latin American countries prior to 1982—only much more severe. There was an unsustainable (if slow) growth path, because of internal inefficiency and what, in retrospect, can be seen to be unjustifiable borrowing. The state was, in part, borrowing abroad to effect transfers to households, both via wages in inviable production and high transfer levels. But this could not be sustained. By 1989–90 the system was in crisis, and nominal incomes were increasingly meaningless to households because of widespread rationing.

**Early Days in the Brave New World: High Insecurity and Falling Incomes**

The time bomb of an unsustainable growth path exploded at the end of the decade. The opening of markets that accompanied the political transition only made transparent the underlying fall in welfare that was already occurring in 1989–90. All the Eastern European and ex–Soviet countries suffered large recorded income declines after the transition (substantially larger, on average, than for Latin America countries after the 1982 debt crisis). Bulgaria's output fell by more than most. The unwinding of past problems coincided with the new shock of the collapse of CMEA trade. Bulgaria was almost totally dependent on the rest of the CMEA (and especially the former Soviet Union) to sell its otherwise uncompetitive goods. Through a combination of necessity (no reserves) and choice the Bulgarian government liberalized foreign exchange and most product markets. Output decline by 24 percent between 1989 and 1992 and there was a substantial nominal devaluation of the official exchange rate and inflation of over 300 percent in 1991, subsiding to 50–100 percent. All this had profound effects for households.

Average GDP per capita fell by 21 percent in 1989–92, continuing a rapid decline since its peak in 1982 (figure 6.2). Economic welfare of households undoubtedly fell by less than measured incomes per head. With the fall in investment and government consumption, nongovernment consumption per capita fell only by 6 percent between 1989 and 1992. There were, in addition, benefits from the growth in unrecorded incomes and the removal of rationing. One measure of the effects of rationing is given by the black market exchange rate: if this is used to deflate prices, incomes per capita actually recovered in 1991. This is too extreme as assumption, since this price reflects asset demand for dollars and capital flight, but the "true" indicator from the point of view of household
consumption lies between the official and black market rates.

Despite these qualifications, households undoubtedly suffered adverse shocks. The primary mechanism was the fall in labor income in the state sector, because of the combination of falling real wages and transfers (see table 6.2). Events in the labor market in these three years lie at the center of the story of household welfare.

Bulgaria was a high transfer society under socialism. Two changes occurred in the initial period. First, there was a very sharp decline in transfers via subsidized

![Figure 6.2](image)

Bulgaria: GDP and non-government consumption per capita

Source: National Statistical Institute.

<table>
<thead>
<tr>
<th></th>
<th>Change in percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>18.1</td>
</tr>
<tr>
<td>Pensionsa</td>
<td>23.6</td>
</tr>
<tr>
<td>Child allowancesa</td>
<td>9.3</td>
</tr>
</tbody>
</table>

a. Calculated as total transfers divided by total numbers or recipients.

Source: Ministry of Labor and Social welfare; National Statistical Institute.

goods, with a decline in consumer subsidies from some 15 percent of GDP in 1989–90 to around 4 percent in 1993. Second, there was an increase in recipients of direct transfers in the early days of the transition, through early retirement as well as welfare. Total cash transfers actually increased as a share of GDP to about 14 percent in 1993. The value of the pension became a key welfare indicator. Average pensions fell in real terms. Social assistance to the poor has continued throughout, but is, so far, not of major quantitative significance. How households and the state coped with the loss of labor income is reviewed below.

**The Labor Market, Private Responses and State Transfers**

**Anatomy of a Labor Market Crash**

The crisis in the labor market was driven by the abrupt decline in labor demand in the public sector. Nearly two million people lost their jobs, almost half the initial employment. Enterprises and cooperatives shed labor very quickly even while real wages were declining. Government employment fell by less, but government wages fell by more. In this section, we review this process and its consequences. There were radical shifts in the activities of
the labor force. As figure 6.3 illustrates, the fall in public employment led to large rises in unemployment, private-sector employment, and withdrawal from the labor force. Why did employment fall by so much (apparently faster than in other Eastern European economies)? Where did those who lost work go? Who was unemployed? How important were private and informal activities? And how is the process of wage and employment determination in firms evolving? We first look at what happened in the public sector, and then at the rest of the economy.

In 1989, the public sector, including cooperatives, accounted for virtually all recorded employment. While there was probably some unrecorded informal private employment, the vast bulk of Bulgarian households with members of working age were engaged in public sector employment. Total recorded employment (in the public sector) fell by an extraordinary 47 percent between 1989 and the third quarter of 1993, while total production fell by an estimated 25 percent. In every other Eastern European country, employment contracted at a substantially lower rate than output, at least in the early years of the transition.

The decline was not uniform by sector. Three sectors collapsed—agriculture, construction and trade, all to about one-third of their initial levels. Industry and

![Figure 6.3](image)

Bulgaria: Registered Unemployment
Source: National Statistical Institute.

fining experienced a very large shakeout—47 percent of initial employment. By contrast, the number of government employees (including health and education) fell by only 10 percent. Financial services expanded. In contrast to some other transition economies, there is little evidence that women were affected disproportionately by employment losses in this phase.

The employment decline occurred in a burst in 1991 with the initial shock, and continued steadily throughout 1992 and 1993 (figure 6.4). Unemployment increased in the wake of the initial fall in employment, but remained more or less steady in 1993. Wages fell during the initial phase, largely because of the jump in prices.

The pattern of decline in employment and wages can be interpreted in terms of the shocks and responses of the various sectors. The primary influences were the huge demand shock due to the loss of markets, first with the collapse in demand from the former Soviet Union, followed by the shocks due to the Gulf War and the collapse of the former Yugoslavia. The exogenous shock of the end of CMEA trade alone decreased GDP by 16 percent compared with 9 percent for Czechoslovakia and 4 percent for Poland (Bruno 1993). A large fall in the wage bill was inevitable, even with a squeeze in profits. The pattern of response was sector specific.

Industry was the largest sector, and was representative of the entire state enterprise sector. There was a huge shakeout, but not a total collapse in employment. In 1991–92 the loss in traditional markets, the rapid opening up
of the economy, and a measure of fiscal discipline caused a severe revenue shock with a relatively hard budget constraint. The union movement realized that wage–bill declines were unavoidable, and the fall in employment and wages can be interpreted as representing a balance between the objectives of trying to maintain employment and moderate the severity of the wage decline. This was linked to economy–wide understandings in a tripartite social pact: a social contract, focused primarily on nominal wage changes, has been an important part of the management of the tran–

Figure 6.4
Employment by Sector, 1980–93

sition. The net effect was that enterprises' profits declined significantly but, on average, profits were moderately positive in 1992. After the initial crash, there was de facto indexation of wages, and the subsequent shocks were not met with a further real wage adjustment. However, by 1993, the enterprise sector had moved heavily into losses. While wages were at or near the top of the priorities for payments by firms, arrears in wage payments became significant in 1993 for firms that lacked the cash to pay.

In the government sector, there was also a sharp fall in real revenues resulting from the combination of the aggregate demand shock and the decline of revenue from enterprise profit taxes. Here the response was quite different. Employment levels remained stable. Large cuts in other public spending moderated the decline in the wage bill. But the net outcome was an even faster fall in wages—a fall that could in the future put the state sector dangerously out of line with private sector wages, creating the preconditions for a brain drain to the private sector, decline in work effort, and moonlighting, all very costly for the quality of government services. There is some evidence that large differentials for skilled personnel have already emerged between public and private wages. The difference in response of the state reflects a broad concern with maintaining employment.

Where did those who left the public sector go? While there is no information available on individuals (for example, from a panel survey), it is possible to make

a rough estimate in terms of net changes. As figure 6.4 illustrates, there were three outcomes. First, there was a surge in private employment, especially in services. According to the 1993 labor–force survey, this sector grew from close to zero to almost 20 percent of the 1993 potential labor force. Second, according to the labor force
survey recorded unemployment rose from zero to 20 percent of the active population; unemployment was at the 15 percent level. Third, about 10 percent left the labor force—with about 5 percent accounted for by the rise in pensioners primarily due to early retirement, and 5 percent due to reduced labor force participation of the working age population. Finally, significant numbers emigrated to other countries.

Bulgaria has the unhappy privilege of being the leader among transition economies in the pace of transition to high unemployment. The regular official statistics experienced a sharp rise followed by a leveling off (see figure 6.3). These numbers are based on the number registered as unemployed and include some who may be working in informal activities, and exclude discouraged workers. However, it is not obvious that there is widespread over-reporting. It is well-known that some unemployed are in informal work. Since the large withdrawal from the labor force is probably attributed to, in part, to discouraged workers, the extent of unemployment could be even higher than in the official statistics. As noted, the 1993 labor force survey, based on household-based interviews, indeed found a higher unemployment rate of 20 percent although, as the first survey of its kind in Bulgaria, results need to be treated with caution.

The leveling off of unemployment in 1993 looks surprising in the context of the continuing fall in employment. This applies even if we standardize for labor force participation, by using the 1990 labor force. This can be explained in terms of the patterns of gross flows and the incentives to be registered. The numbers receiving benefits had already leveled off in 1992 and actually declined in late 1993, as the first round of individuals without jobs went beyond the limits for unemployment benefits and the pace of layoffs declined somewhat. After unemployment benefits run out, the financial incentive to stay registered derives primarily from the reduced probability of a family member being laid off, as embedded in layoff policies. By contrast, there were probably low incentives to stay on the register: the pool of state jobs had fallen, and other mechanisms, for example, word of mouth and advertisements, were much more important ways of finding private sector jobs. By 1993, it was very clear that registering for unemployment was not a good way to get a good job.

Unemployment is high among the young, which is true in almost all countries. Women were disproportionately represented in the early months, but subsequently accounted for slightly over half the unemployed (slightly above their share in employment) (figure 6.5). Unemployment is increasingly of long duration and increasingly concentrated among the unskilled. Initially, there was a relatively large share of unemployed skilled workers but they appear to have been more successful in finding new jobs. The dominant pattern is a one-way entry into unemployment of relatively unskilled workers, with a very small transition back into work (a pattern shared by most other Eastern European economies). This potentially has costly long-run consequences. It is similar to a more severe version of the European unemployment problem: in the European Union long-duration unemployment (more than one year) is now of the order of 50 percent and it is well recognized that this has pernicious consequences for individuals, who become increasingly unemployable, and for the unemployment–inflation tradeoff, since the long-term unemployed exert little pressure on wage settlements.

Was the shakeout too fast? Were there alternative policies that could have smoothed the decline and prevented a second-round Keynesian shock? It would have been better if a softer transition could have been designed. In most areas, the Bulgarian government had little or no choice, given the severity of the aggregate budget constraint on the economy. The major open question is whether it could have been possible to remove protection from enterprises more gradually, for example, with higher initial tariffs. This might have shielded employment somewhat since the pace of the employment shakeout is strongly related to the fall in real revenues of firms. But, it would have also led to greater smuggling, which is widely perceived to be a problem at existing tariff rates. It could also affect adversely economy-wide efficiency. Beyond that, the only alternative would be to do what Russia did—let credit increase to enterprises. Given the size of the shocks and the economy's small size, Bulgaria would undoubtedly have hit hyperinflation quicker than Russia.
Macro and enterprise conditions dominated outcomes for labor. Labor policy per se did not play a direct role in the evolution of labor outcomes. What was important was the behavior of unions, especially within the context of the overall social contract, in accepting the employment shakeout in the state enterprises, and the principles of wage guidelines that led to an initial wage cut and supported a steady decline in inflation (supplemented by the excess wage tax). It is noteworthy that union membership has remained high and active, as evidenced by the fact that the bulk of workers chose to join unions affiliated with one of the two major new union confederations. Surveys of worker attitudes suggest continued strong belief in the value of unions (see Jones 1993). Circumstances would have been much worse in the absence of this social contract: either with higher wages or higher employment (as in Russia).

**Private Coping and Public Transfers**

Households responded to the large drop in public–sector wages by seeking transfers from the state, for which they had extensive entitlements, and by attempting to increase private sector incomes. As noted above, transfers were always high in Bulgaria, running at some 10 percent of GDP during the 1980s. They are financed either from pay–as–you–go payroll contributions (for pensions, family allowances, sick and maternity leave and unemployment), or direct revenues (for social assistance including some child benefits). Since contributions have no direct links to benefits, we treat them as a form of earmarked taxation and aggregate over all revenues and spending related to transfers. Social security contributions constitute 42 percent of wages, and contributions to the unemployment and retraining fund have increased from zero to 7 percent, for a total payroll tax of 49 percent.

Pressures mounted in the early days of the transition. The number with some entitlement to transfers increased (the combined total of pensioners and unemployed receiving benefits rose by over 20 percent in 1989–92) as government revenues fell. Pensions are the most important spending category in transfers, followed by child allowances. The total of all transfers increased from close to 10 percent of GDP in 1989 to 14 percent in 1993 due to growth in the share of pensions, and the emergence of unemployment (figure 6.6). Meanwhile total revenues of the funds (almost entirely from payroll taxes) recovered to nearly to 12 percent of GDP, following a temporary decline in 1991. This followed rises in rates. Transfers as a share of consolidated government revenues increased.

The share of public spending on transfers increased because of falling GDP and increasing numbers of transfer recipients. All categories of transfer payment declined in real terms, but the average relationship with
contemporaneous wages only fell slightly, for example, from around 40 percent to 37 percent for pensions, while unemployed benefits were on average just over 30 percent of average wages in 1991 and 1992. The real fall represented a significant drop in relation to past wages of individuals—and correspondingly to the expected entitlement. Transfers were received by a large proportion of those who lost public employment, whether they retired, became unemployed, or, for a few, received social assistance. This provided a substantial shield against the shock of lost wage income. But for the most part the effect was at lower real incomes.

The net effect of these changes was a further rise in spending on transfers as a share of GDP. Dominance of the wage bill in health and education caused spend-

![Figure 6.6](image)

**Figure 6.6**

An important question for policy is the distributional incidence of transfers. Transfers have multiple objectives—including reducing risk, and encouraging families to have children—but income effects are clearly central. Time series on incomes from household surveys are not yet available, but the cross-section evidence for 1992 found significant variations across different categories of transfer. Figure 6.7 (Hassan and Peters 1995) shows the proportion of the population receiving transfers: below the diagonal line implies the rich receive disproportionately more, above the line the opposite. Unemployment benefits are distributed with about the same degree of inequality as total income—and more unequally than all other categories of transfers; it should be noted that the distribution of total income is much more equal than in a market developing economy. Pensions are actually redistributive. Child allowances and other transfers fall in between: richer households obtain a disproportionate share, but somewhat less than wage income.

Public transfers are only part of the response. In most developing market economies, private coping strategies are of equal or greater importance. Households
respond to adverse shocks by drawing down savings, shifting jobs, and increasing labor force participation, notably of women. Participation rates were already high. There is, however, evidence of considerable private sector activity. As seen above, by 1993 20 percent of the labor force already characterized itself as being in the private sector. A much larger proportion had some private income, especially from household plots. By 1991, 60 percent of urban households had “significant” contributions from this source (see Rose 1992). The available income data do not allow us to gauge the magnitude of this. It is probably broad but shallow, that is, for the bulk of the population such household and informal sector income is an important supplement, but rarely goes beyond that.

**The Future of Transfers and Labor Policy**

**Contracts with the State and Enterprises:**
*From Universal Security to Where?*

The transition involves a substantial change in the set of household contracts. As we have seen, Bulgarian household incomes at the end of socialism were affected by two categories of (explicit or implicit) contracts.

First, the majority of households (some 46 percent of the population, and 95 percent of the labor force, see table 6.3) had one or two members with labor contracts with state enterprises or collectives. These contracts were long–term and secure, and brought both wage income and a range of associated benefits, such as housing, child care, maternity benefits, sick leave and, sometimes vacation. Turnover was quite high, but within the context of workers knowing there would always be a job for them, because of the structural excess demand for labor. Wage differentials were low by the standards of market economies with a much higher premium for skilled and unskilled manual industrial workers.

Second, households had a range of contracts with the government for transfers: some of these were a matter of universal right—access to education and health service; some were linked to employment (and so de facto universal)—especially pensions and disability benefits. Those not included had some rights to social assistance, but this was of minor importance under socialism—a feature Bulgaria shared with all other economies. Over two–thirds of the population received some transfers from the state.
As we have seen, the implicit guarantee of employment has gone; and the unemployed have some rights to transfers (conditional on work history and time unemployed). However, these are only part of the changes that are likely to take place as a market economy progresses in its development.

The share of public employment was unusually high compared to market economies. Bulgaria's 95 percent (including cooperatives) in 1989 compares with an average of about 20 percent in public employment for market-middle income countries. The share of public employment has fallen to about 60 percent of the labor force. However, there are two other features of the transition that are of relevance. First, it is likely that the share of "formal" employment will decline. Second, the share of transfers in national incomes must fall.

Private formal employment in market economies has some of the characteristics of state enterprise employment: it frequently involves long-term relationships, or implicit long-term contracts; non-salary benefits are common (though usually less extensive than under socialism); significant earmarked payroll taxes are often paid for pension and health services. The latter is linked to the share of transfers in the economy. Bulgaria and other former socialist countries have unusually high

**Table 6.3: Share of population with contracts with the state, 1989**

<table>
<thead>
<tr>
<th>Share of population (in percent)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages contracts</td>
<td></td>
</tr>
<tr>
<td>with state enterprises</td>
<td>43</td>
</tr>
<tr>
<td>with collectives</td>
<td>3</td>
</tr>
<tr>
<td>Transfers</td>
<td></td>
</tr>
<tr>
<td>pensions</td>
<td>25</td>
</tr>
<tr>
<td>child benefits</td>
<td>20</td>
</tr>
<tr>
<td>maternity</td>
<td>22</td>
</tr>
<tr>
<td>social assistance</td>
<td>na</td>
</tr>
</tbody>
</table>

*Source: Author's estimate.*

transfers for two reasons: high payments per recipient; and near-universal entitlement. A third factor, demography, has ambiguous effects: many old people implies many potential pensioners and fewer children. In fact, Bulgaria's overall dependency ratio is not much higher than other middle income developing economies. However, transfers to children are much more robust than transfers to aging patients, especially in societies in which traditional arrangements for supporting the elderly have declined. Also, for most middle income countries there is a strong linkage between participation in the formal economy and participation in social insurance mechanisms.

Contracts of households will thus be changed because of the structure of labor use in the economy. Another change will occur due to the decline in public intermediation of resource allocation via taxes and spending. As discussed earlier, in Bulgaria, by the standards of developing economies, spending on health and education and spending on transfers is very high. This was manageable when the state had a massive intermediation function, but the scale of total revenue and spending (inclusive of transfers) that Bulgaria can afford is likely to be closer to 30 percent than 50 percent of GDP.
The transition to a market economy should involve a number of changes in the set of household contracts with enterprises and the state that go beyond a shift from public to private employment. There should be (a) a smaller formal sector and correspondingly larger participation in informal activities, (b) two broad types of contracts for employment are required: one formal and long−term, the other personal, informal and probably with less security (but, both types would share, in contrast to socialist−era contracts, a link with labor productivity as determined by the market). (c) a link between a formal labor contract and involvement in social insurance systems and, (d) a rising need for a separate set of transfers provided directly by the government based either on a rationale of economy−wide gains (especially for health and education) or on grounds of poverty (parts of the entire set of in−kind and cash transfers).

The link between formal employment and social insurance is obscured in most OECD economies by the predominance of formal employment. Once formal employment becomes dominant, universalizing social insurance systems that cover the formal work force may be a good way of meeting poverty and redistributive objectives. For both health and pension spending, there is no intrinsic reason why poverty−oriented spending has to be maintained in a separate account.

The growth of employment in the informal sector should not be viewed as adverse. Up to a point, it is part of normal evolution. The process of development from middle income to high income status generally involves a reduction in informal employment, but no market economy has been able to leapfrog to large formal sectors. There are potentially important costs in foregone tax receipts, to the extent that the informal sector usually does not pay direct or payroll taxes (it does pay indirect taxes on purchased goods).

These issues can be further illuminated by looking at the dual objectives of income promotion and income protection. Income security was high under the socialist system. Maintaining it would require some form of employment security (for example, by making it difficult to fire workers) that intrinsically requires high formal coverage of employment (since informal work by definition is not covered by such contracts or regulations) and an extensive transfer system. That certainly seems attractive but is in conflict with the objective of promoting incomes and employment. The greater the attempt to provide various forms of security for the formal work force, including through high payroll taxes to finance benefits, limitations on firing workers or minimum wage policy, the greater the incentives for informalization of private sector activity.

The conflict between income promotion and security is acute in Bulgaria. Bulgaria can ill−afford excessive transfers that divert resources from accumulation. Also, Bulgaria's unusually high old age dependency ratio implies an even greater need for high productivity, for those who do work.

Transition involves an increase in informal employment and a reduction in the size and scope of transfers. Attempts to maintain the proportion of formal employment at its current high level are likely to be self−defeating, raising labor costs, and harming the economy's competitiveness. Even a successful transition will involve a general rise in insecurity, but compared with the alternative of falling incomes it is clearly better on grounds of income protection since households cannot be shielded from an economy−wide decline. More importantly, some groups will either be left out of the process, or will be especially vulnerable to shocks.

The Future for Labor and Labor Policy

Employment and labor incomes critically depend on macroeconomic management, enterprise reform, and policy on product and capital markets. Labor policy is important, but it is only one factor influencing labor market outcomes.
Steady, sustainable improvements for workers will only come with an overall expansion in aggregate demand. Achieving sustained growth requires competitiveness, structural transformation and technical change. This will only occur with reductions in public spending and deep structural reform.

One of the few positive factors is that in Bulgaria, as in virtually all former socialist economies, the service sector is highly undeveloped. The labor force employed in services is lower than in similar market economies and this sector will continue to absorb workers.

If fiscal and structural reforms are taken, labor policy will need to be formulated in a manner which will support the development of broad–based employment growth and fewer labor market rigidities. If labor market policy is designed such that high payroll taxes are maintained to finance generous pension schemes and unemployment benefits, and perhaps, to emphasize job security, it is likely to result in a larger, non–tax paying informal sector, as well as higher unemployment because of the benefits of waiting for a formal sector job. This could lead to a situation in which permanent high levels of unemployment persist.

A broad–based strategy, by contrast, would link economy–wide reform with the avoidance of high degrees of labor market segmentation. Some informal activity is inevitable, and is indeed desirable, since it provides employment and output.

However, it is preferable to have a larger, more flexible and tax–paying formal sector, than a smaller protected formal sector and a large second economy. Such a strategy might involve somewhat greater insecurity for workers in the formal sector during the transition, but would be likely to result in gains in overall labor demand.

There is a range of policy that will support a broad–based path: (a) a shift to lower payroll taxes, combined with strengthened tax administration, (b) light regulation for small–scale informal sector activities, (c) increasing flexibility in wage structures and rising differentials to meet the new pattern of demands for skills in a market economy, (d) designing transfers for the newly unemployed that provide limited incentives to remain unemployed, for example, through some tightening of duration of unemployment benefit, placing more emphasis on once–off severance pay of moderate levels (for example, equivalent to six months benefits), and experimentation with transfers that are conditional on employment (such as wage subsidies or public works) and, (e) resolving the housing problems, to facilitate geographic mobility.

The contractual framework for collective bargaining in the formal sector is important for outcomes. It is desirable to shift from a substantially managed system toward a more decentralized system, with collective bargaining likely to remain important in the formal sector. Maintaining open markets is a key factor in avoiding outcomes that protect existing unionized workers at the cost of employment. The union movement will then have to take a long–term view on the economic viability of activities. Special protection of unions is probably not desirable (New Zealand recently moved to a system that allowed workers to choose any agent to negotiate their labor contracts: effective unions have prospered, while the others have lost out).

No matter how effective is economy–wide reform and flexible labor policy, the continuation and probable deepening of the severe shock to the labor market is unavoidable. To ease the effects of the transition, while not adversely affecting the functioning of labor markets, the government could consider allocating a larger amount of public spending that is directly employment–promoting, but of a clearly transitional character. This could take a number of forms. One would be increased public works activities, especially in areas where there is a need to maintain or expand infrastructure. Provided wages are set at low levels, this can be an effective mechanism of targeting the poor with the capacity to work. Another would be a phasing down of payroll taxes (of up to 25 percent of wages) with two categories moving immediately to the lower rate; new employment, irrespective of ownership; and selected existing employment where social conditions warrant, for example, in company towns.18
A broad segment of the population will be hit by the drop in labor demand that has followed the macroeconomic shocks. Most will gain from a broad-based recovery when this occurs. But some will not be reached by economy-wide improvements, and will continue to suffer from some combination of long-term unemployment or work at very low wages. This could be a diverse group, including those already at the margins of Bulgarian society, but also those whose skills are suited to now obsolete industries and for whom retraining for the new demands of a market economy is difficult. Sustaining incomes of these groups will involve some form of transfer.

The Role of Transfers

What kind of policy on transfers makes sense in the transition? This is determined by three considerations: the aggregate fiscal situation, the short-run needs of households, and the need for changes in household and firm behavior in the transition to a market economy. These may sometimes be in conflict with each other.

A large reduction in fiscal spending is essential to the overall transition. Failure to manage the fiscal accounts in the short run will precipitate a financial crisis (that will swiftly be transmitted into reduced wages and employment). Equally important, to avoid deeply distortionary taxes and sharply increase the role of the private sector in the economy, it will be necessary to effect a large longer-term reduction in the share of the government in the economy. Comparing Bulgaria with other middle income and rich economies, economies of Bulgaria's income level have public spending to GDP ratios of about 30 percent, compared with Bulgaria's 50 percent now. It is noteworthy that, as recently as 1960, most OECD economies had spending to GDP ratios around 30 percent (including Sweden).

How far should transfers share in an overall reduction in fiscal aggregates? They are now larger than in market economies of a comparable income level. Their sheer size necessitates some decline, if other spending categories are not to be severely crowded out. The scale of any decline needs to be assessed in light of the tradeoffs between transfers and other categories of public spending.

Will a cut in aggregate transfers be a disaster for households? There will certainly be costs through less state provision for security. But there is already evidence of strong adaptive strategies of households (see Rose 1993). Losses in short-run security pale compared with losses in future security if the adverse scenario painted above occurred. There are potentially enormous gains in incomes and security from achieving a path of rapid growth.

There are also important gains from avoiding a path of widespread public security for households, since this will tend to reduce mobility between jobs and towns, and reduce the incentive for private action to insure against adverse events, whether in the form of savings or participation in formal insurance schemes.

To illustrate the significance of a decrease in transfers we undertook a simple quantitative exercise. This should be treated as exactly what it is: an illustration of the consequences of certain assumptions. As seen above, transfers accounted for over 14 percent of GDP in 1993, with pensions by far the largest component, at about 11 percent of GDP. Bulgaria has an old age dependency ratio comparable to Belgium's, yet it also has a retirement age of fifty-five for women and sixty for men (with special earlier retirement for selected occupations). The social security and unemployment funds have not yet gone into deficit, but only with a payroll tax rate of 49 percent. This source is under pressure owing to a rapid decline in its base: the share of public wage employment in the total labor force has dropped from around 95 percent to 60 percent by 1993, and there are few collections from small private firms.
We constructed two scenarios (see table 6.4) that correspond to possible outcomes after about five years. For both we divide the population into children (below fifteen), middle or potentially working age (fifteen to sixty-five but with some of this group taking old age pensions as now) and the old (over sixty-five). The first illustrates the consequences of passive policy with no change in the share of transfer recipients from each group, (including no change in the age of retirement) and 1992 replacement ratios (the ratio of the transfer to average wages). We do assume a continuing fall in the share of the formal sector (tax-paying) in employment, to about 50 percent. The result is a share of transfers to GDP of over 13 percent of GDP and contributions of about 9 percent of GDP. The net demand for funds from non-payroll taxes rises sharply to almost 5 percent of GDP.

For the second scenario, we explored the potential for cutting back transfers in a manner that best protected the poor. We were guided in part by evidence on the distributional incidence of different transfers from the 1992 household expenditure survey, that was summarized above. This found pensions to be by far the most equitable transfer instrument, child allowances mildly disequalizing, and unemployment benefits having the same impact as the underlying wage income. We then explored the implications of cutting child allowances to 50 percent of children (through some rough means-testing), limiting old-age pensions to people over sixty five, cutting back on sick and maternity leave (by bringing the latter more in line with international norms), and reducing replacement ratios on all transfers by about a quarter. We then doubled the social assistance program to provide greater resources for strictly transitional transfers for those especially hard hit during the transition and for employment related transfers, such as public works and wage subsidies. Finally, we cut

<table>
<thead>
<tr>
<th>Age</th>
<th>Share of population</th>
<th>Current Policies</th>
<th>Radical Reform</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of group receiving transfers</td>
<td>Replace−ment ratio</td>
<td>% of group receiving transfers</td>
</tr>
<tr>
<td>014</td>
<td>19</td>
<td>100</td>
<td>12</td>
</tr>
<tr>
<td>1564</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>3</td>
<td>32</td>
<td>0.6</td>
</tr>
<tr>
<td>Old age pensioners</td>
<td>15</td>
<td>37</td>
<td>3.0</td>
</tr>
<tr>
<td>Other pensioners</td>
<td>6</td>
<td>37</td>
<td>1.2</td>
</tr>
<tr>
<td>Sick and maternity</td>
<td>—</td>
<td>—</td>
<td>1.5</td>
</tr>
<tr>
<td>65 and over</td>
<td>15</td>
<td>100</td>
<td>37</td>
</tr>
<tr>
<td>Social assistance</td>
<td>—</td>
<td>—</td>
<td>0.4</td>
</tr>
<tr>
<td>Total</td>
<td>13.4</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>Payroll tax rate</td>
<td>49</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Share of wage employment in labor face</td>
<td>50</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Tax receipts</td>
<td>8.8</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>Net financing</td>
<td>4.6</td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>
payroll taxes in half, but assumed that at the much lower rate the share of formal wage employment would recover to some 75 percent of the labor force. These measures cut total transfers to 8 to 9 percent of GDP and payroll taxes to slightly over 6.5 percent of GDP. The shortfall, of some 2 percent of GDP (that includes the social assistance budget), would have to be financed by general revenues.

What does this show? First, it indicates that continuation of past trends will take the economy toward fiscal disaster. Payroll taxes of 50 percent of wages are bad on structural grounds (through incentives for informalization and non-tax payments, and, potentially, disincentives to hire labor). Yet even with such steep tax rates the transfer system is likely to move heavily into deficit. This assumes no reversal of the real decline in transfer amounts that have occurred in the 1990s, except that associated with overall economic expansion. Note that very little of the total is associated with transitional factors: since only part of the unemployed can claim benefits, this is quite small, and social assistance has traditionally been low. With passive policy, transfers would continue to steadily rise into the future, because of the dominance of pensions and the gradual aging of the population.

This alternative program shows that a significant reduction is possible under a plausible set of assumptions. It is intended to provide an illustration of the tradeoffs if there were to be a serious reduction in transfers, but one that emphasized reorienting transfers in the direction more assistance for the poor. Such a scaling back can only be achieved if some of the entitlements inherited from the previous system are confronted as discussed in chapter 12.

Conclusions

Bulgarian households have suffered large welfare declines. It is tempting to attribute these to the attempt at radical reform but this is wrong. The driving force in the decline in welfare was the macroeconomic shock. This would have pulled down even a well-functioning economy. It hit the largely uncompetitive state-enterprises of the Bulgarian economy with force. The strategic fault in reform was not so much the pace of destruction of the old (that was largely driving itself) but the failure to effectively provide the conditions for the creation of the new that is the only source of future wage increases (and indirectly the tax base for future government services). When we look at household contracts, paradoxically it is in the interest of future welfare to move to a system with less present security and welfare. Both for the overall reform process and for the incomes of households, it is possible to envisage a temporary reprieve through inaction on policy change plus lax budget constraints, but this would only cause a sharper crash later. If Bulgaria is to move to a growth path that will raise labor incomes and provide the wherewithal for genuine security for households by private and public means, shift toward a labor market that will involve a smaller share of formal labor and a smaller share of public transfers will need to be a key part of the reform strategy.

Notes

1. Amongst transition economies, only those of the former Yugoslavia have higher recorded unemployment rates: these all had significant open unemployment prior to the transition. See Commander and Coricelli (1994) for a comparative analysis of labor market changes in transition economies.

2. For international comparisons of incomes, we use the estimates of Purchasing Power derived by the World Bank from International Comparisons Project. These have many difficulties, but are better than use of comparisons at official exchange rates.
3. Small countries in the sample have higher social spending ratios. The relatively equal income distribution of Bulgaria and other socialist countries probably interacted with social service availability to produce good social indicators: demand for health and education is income elastic, and this may have had a role even in a socialist economy.


5. Women on maternity leave are counted in the numbers for a firm's employment.

6. This is obtained by comparing the official statistics on labor force activities for 1989 with the results of the 1993 labor force survey. Since this is the first time such a survey has been conducted the results should be treated with caution.


8. The shift to de facto indexation and its corollary, a stable real wage, was probably only consistent with declining inflation because of the stability of the nominal exchange rate (fueled, apparently, by shifts into leva from Bulgarian–owned foreign deposits and from former Yugoslavia).

9. The rise in pensioners due to the aging of the population would have been a fraction of a percent in this period.

10. The labor force is measured simply as the sum of the recorded employed and unemployed.

11. *See* OECD (1993) for information on the long–term unemployed in the OECD.

12. See chapter 12 for a description of the various categories of social transfers.

13. We include allowances for children from both the social security fund and the social assistance budget.


15. Riveros (1989) found ratios of non–wage to wage costs ranging from 25 to 62 percent in Latin America and 20 to 35 percent in upper middle income East Asia, and often much higher in western Europe (over 80 percent in Austria and France).

16. Some of the employment in the informal sector may also be of a long–term character, especially when family members are involved.
17. In 1990 Bulgaria had 2.7 people aged twenty to fifty−nine for everyone over sixty; Korea had 7.3 people of working age for each old person. Similar results are found with a cutoff at sixty−five.

18. This is equivalent to having selected wage subsidies offsetting payroll taxes.

19. Two effects could operate: more firms choosing to be within the tax net and, if payroll taxes affect labor costs to the firm (theoretically an open question), higher labor demand in the formal sector.

References


### 7—

**Household Taxation and Income Distribution**

Zeljko* Bogetic* and Fareed M.A. Hassan

References
This chapter is concerned with the effects of taxation on income distribution in Bulgaria. Household budget survey data for income, expenditure, and taxes are used to analyze how taxes affect household income, and to address questions regarding the incidence of the burden of taxation and the progressivity of the income tax. That is, does the tax system contribute to achieving greater income equality, and if so, to what extent? The principal tax considered is the personal income tax levied on individuals and households. The data also permit an evaluation of the distributional impact of other taxes, including a housing tax, a farm tax, and a motor vehicle tax, and permit a comparison between effective tax rates of households in rural and urban areas. The first section provides brief background observations, the second section describes the data and methodology, and the third looks at income levels and the distribution of income. The fourth section then provides estimates of effective tax rates paid by urban and rural households and effective tax rates by ten income groups. The last section analyses the implications for the distributional impact of taxation.

Background

Under the previous centrally planned system in Bulgaria, although taxation had redistributive consequences, taxes were not a major instrument of income redistribution (see chapter 3). Nonmarket pricing and extensive explicit and implicit subsidies were used to maintain an economic system that in principle was intended to ensure extreme egalitarianism (if in practice the outcome might have been otherwise). The change to a market economy ended planning and the associated egalitarian objectives of the planning mechanism. With the introduction of market prices and the development of a significant private albeit substantially informal sector (see chapter 4), taxes took on the roles of a market economy. Questions asked in a market economy about tax burden and income distribution have consequently become pertinent for the Bulgarian economy.

Chapter 3 has described the changes in the structure of taxation in the early transition. The distributional effects of the emerging tax system against this background are far from clear. Yet it is of importance for tax policy to be aware of distributional consequences, since distributional consequences affect the political feasibility of policies and establish how policies may be sensitive to the distributional effects on different groups in society. Ideally, tax policy analysis and reform proposals should be based upon estimates of distributional effects of the tax rate structure, and so, from a normative perspective, a quantitative analysis of the distributional effects of taxation also provides information that can facilitate better tax design. Knowledge of how equally (or unequally) income is distributed is important in the determination of the desired degree of progressiveness (or regressiveness) of a tax system. When the distribution of income is extremely unequal, a regressive tax system imposes even higher burdens on the poor and lower income classes, while a mildly progressive tax system would not provide access to the tax revenue potential of upper income groups.

Data and Methodology

The study reported in this chapter is based on a 1992 sample from a survey of individual budgets of households compiled by the National Statistical Institute (NSI) of Bulgaria. The sample is random and two-tiered, involving 2,202 households (or less than 1 percent of households). Of these 2,202 households, 1,386 (or 63 percent) are urban and the remaining rural. The data are based on a sample frame developed from the 1985 Population Census. The sample was constructed from 418 sectors or census districts: each district contains about ninety households and six households were sampled from each sector. Each household was paid a nominal amount, leva 100 per month (about US$4.00), for participating in the survey. According to the NSI, the sample was "random" and was representative of the incomes and expenditures of the Bulgarian population at large.

The pattern of effective tax rates depends not only on the distribution of tax burdens, but also on the concept of income which is used to determine the underlying pattern of income distribution. The approach in the NSI survey
consists of identifying seven sources of pretax income: earned income, property income, social insurance, social benefits, income from sales, other sources of income, and income from loans, credits and savings. Some of these sources, such as income from sales of property, loans, and saving withdrawals, are not part of the more usual definition of income, and the inclusion of these sources could, in principle, alter the measure of income distribution, in particular if asset ownership were highly concentrated. Inclusion of these income sources however does not significantly alter the overall picture of the distribution of income.

Income−in−kind could also affect income measurement. Although in−kind income accounts for about 24 percent of household income, this income was not subject to taxation. Total consumption is a more reliable indicator of household well−being than annual income (which underlies the case for a consumption tax). In our empirical analysis, we used both income and expenditure measures, and found that the income approach yielded results that are not substantively different from those using the expenditure approach. To avoid duplication, only the results based on income are accordingly reported in this study.

The income unit which corresponds with the income concept employed in the Bulgarian survey is the household. The household concept adopted in the survey includes one−person households, one family households, and households composed of more than one family making common provision for food or other essentials for living. This definition corresponds closely to that of the 1980 World Population Census Program (United Nations 1978). To account for variation in the household size, we use data on annual household income per capita. Finally, we have not used adult equivalences in this analysis, as the construction of such equivalences is fraught with a number of conceptual and practical difficulties.

Our analysis uses a partial equilibrium method for estimating the distribution of tax burdens. That is, taxes on factor income such as the income tax are taken to affect households from the sources side only (the tax burden being distributed in line with earnings subject to tax). Further effects from the uses side resulting from changes in relative prices are not taken into account. If each income group spends the same proportion of its income on taxed and untaxed commodities, the uses side can be disregarded. Similarly, product taxes are taken to affect households from the uses side of the accounts only (in line with the distribution of consumer expenditures), whereas further effects on factor prices, which may affect the position of households from the sources side, are disregarded, as well as further feedback effects on relative commodity prices. This partial equilibrium approach has been used widely for policy analysis, and for assessing the relation between the tax structure and distribution for many countries.

A more complete analysis of the effects of taxation that takes into account secondary effects mentioned above requires a general equilibrium approach. A few studies (for example, Harberger 1962; McLure 1975; Fullerton and others 1979; Devarajan and others 1980) attempted to combine the uses (demand for goods and services) and sources (of income) sides of tax burdens within the standard general equilibrium framework. Devarajan and others (1980), in a comparison between different approaches, develop a simple, two−sector, two−consumer model and compare its implications with the estimation of the distribution of tax burdens derived for the U.S. by Musgrave and others (1965) on the basis of a partial approach. Even for this simple general equilibrium model, the general expression for the changes in the distribution of tax burdens is quite complex, and a wide range of results are possible.

Devarajan and others identify two parameters which might reverse the partial equilibrium outcome: the capital−labor ratio of the taxed industry and the capital−intensity of a consumer's factor endowments. However, the two−sector, two−factor model oversimplifies the process of substitution which affects both sources
and uses sides.

Devarajan and others also compare the results of the Fullerton and others (1979) model with estimates from the partial procedure for four tax changes and three tax substitutions in the United States, and conclude that the two approaches yield strikingly similar results for the income tax. In other cases, the similarity is greater for taxes on products for which capital−labor ratios are close to the average. It should be also be noted that general equilibrium tax−burden models are built on neoclassical assumptions, which include, inter alia, perfectly competitive markets with no externalities, factors of production that are perfectly mobile between industries, and perfectly inelastic supply of all factors of production in the economy—assumptions which are not necessarily appropriate for any existing economy, including Bulgaria in transition.

The partial equilibrium method that we use assumes that the distribution of a tax burden which initially affects household income from the sources (uses) side will be determined fully by the sources (uses) side effects. Our analysis does not capture other features relevant to the analysis of tax burdens, such as variations in capital−labor ratios in production activities, variations in ratios of consumer factor endowments, and longer−term effects of tax policy through changes in the level of capital formation and growth. The difficulties (and, sometimes, nontransparency) involved in working with more complex models need to be weighed against possibly over−emphasizing a single dimension of tax burden problems.

### Income Levels and Income Distribution

Household incomes in Bulgaria fell significantly in real terms during the transition. GDP fell by some 30 percent from 1989 when the political transition began, until 1993 (World Bank 1994; Rose 1993). A recent UNICEF (1994) study indicates that household incomes have fallen by approximately the same amount. One should exercise caution, however, regarding comparisons of household incomes since the onset of the transition, because of substantial changes in the structure of income and taxation. Nevertheless, it is safe to say that most households have suffered significant income losses and many face increased uncertainty regarding future incomes.

The 1992 household survey indicates average household income per capita to be 16,809 leva, or about US$709 (see table 7.1). The average household income per capita in the rural sector was 19,151 leva (about US$808), which was 26 percent higher than the urban average (15,090 leva or about US$637). For each income decile, rural household income was higher than urban income (see table 7.1), and the difference in income levels between the two sectors is statistically significant.

Income distribution is measured by groups (decile, quintiles, etc.), ranking households by their income and consumption expenditure. The distribution of household per capita income by decile is shown in table 7.1. The Gini coefficient (an index measuring the inequality of income distribution, which is equal to zero in the case of perfect equality and to 100 percent in the case of total inequality) is 25.8 percent. While the Gini index in a typical middle−income coun--

<table>
<thead>
<tr>
<th>Income Decile</th>
<th>National</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Share</td>
<td>Leva</td>
<td>% Share</td>
</tr>
<tr>
<td>Bottom</td>
<td>4.2</td>
<td>6,941</td>
<td>4.5</td>
</tr>
<tr>
<td>Second</td>
<td>5.6</td>
<td>9,361</td>
<td>5.9</td>
</tr>
<tr>
<td>Third</td>
<td>6.5</td>
<td>10,900</td>
<td>6.7</td>
</tr>
<tr>
<td>Fourth</td>
<td>7.4</td>
<td>12,387</td>
<td>7.6</td>
</tr>
</tbody>
</table>
try had ranged between 40 and 54 percent, in Central and Eastern Europe it has been between 20 and 29 percent, that is, values even lower than those prevailing in western market economies (Hassan and Peters 1995). This comparatively low income inequality, although changing rapidly, is still an important characteristic of most economies in transition. Nonetheless, the rich (top decile) received nearly 22 percent of total income, a share that exceeds substantially their population share. In contrast, the poor (the bottom 20 percent) received less than 10 percent of total income, that is, a share that falls short of their population share by some 50 percent.

Another approach to measuring concentration of income in the upper income groups is to calculate the decile distribution ratio, that is, the share of the bottom 40 percent in relation to the share of the top 20 percent. Table 7.2 shows that the decile distribution ratio is 0.66, indicating that the poorest 40 percent of households earn only two thirds of the earnings of the top quintile.

While income levels vary significantly between urban and rural areas, the analysis of income shares by decile and Gini coefficients both fail to reveal a significant urban–rural difference in terms of income distribution (see table 7.2). The fact that income inequality is not significantly different between urban and rural areas is unusual for countries at Bulgaria's level of income.

### Table 7.2: Indicators of Income Inequality in Bulgaria (National Average, Urban, Rural)

<table>
<thead>
<tr>
<th>Indicators of Inequality</th>
<th>National</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decile Distribution Ratio</td>
<td>0.66</td>
<td>0.70</td>
<td>0.65</td>
</tr>
<tr>
<td>Gini Coefficient</td>
<td>25.8</td>
<td>24.6</td>
<td>26.5</td>
</tr>
</tbody>
</table>

*Source (tables 7.1 and 7.2): Authors’ estimates from the 1992 Individual Budgets of Households Survey, NSI.*

### Table 7.3: Effective Rates of Taxes Paid by Income Decile, 1992

<table>
<thead>
<tr>
<th>Income decile</th>
<th>Bottom</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Fifth</th>
<th>Sixth</th>
<th>Seventh</th>
<th>Eight</th>
<th>Ninth</th>
<th>Top</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total all taxes</td>
<td>1.51</td>
<td>1.47</td>
<td>1.87</td>
<td>2.15</td>
<td>2.64</td>
<td>3.66</td>
<td>4.44</td>
<td>4.95</td>
<td>5.70</td>
<td>5.91</td>
<td>4.17</td>
</tr>
<tr>
<td>Urban</td>
<td>1.82</td>
<td>1.67</td>
<td>2.45</td>
<td>2.72</td>
<td>3.62</td>
<td>5.37</td>
<td>6.14</td>
<td>6.05</td>
<td>7.38</td>
<td>7.90</td>
<td>5.43</td>
</tr>
<tr>
<td>Rural</td>
<td>1.08</td>
<td>1.11</td>
<td>1.11</td>
<td>1.26</td>
<td>1.89</td>
<td>1.63</td>
<td>2.56</td>
<td>3.11</td>
<td>3.36</td>
<td>3.72</td>
<td>1.09</td>
</tr>
</tbody>
</table>
Effective Rates of Taxation

Table 7.3 sets out the percentage of income paid as taxation for the five types of taxes considered, for each income decile, from urban, rural, and all households in 1992. Whether this percentage rises or falls (or is constant) as income rises determines whether the tax system is progressive or regressive (or proportional). The tax system is revealed to be quite progressive, with the proportion of income paid in taxes rising with income. The poor (lowest 20 percent) pay as little as 1.5 percent of their per capita income in taxes, whereas the rich (top decile) pay nearly 6 percent. The tax system thus reduces ex-post income inequality. This is confirmed in the following section which examines the distributional impact of taxes.

Having established this result, we now ask why this pattern of tax burden emerges? The answer is provided by examining the remaining part of table 7.3, which shows the effective tax rates by income decile for each type of tax. With one (marginal) exception, each tax contributes to the overall progressiveness of the tax system. Most of the progressiveness can be attributed to the income tax with its progressive tax rates. A minor additional element of progressiveness originates in the taxation of motor vehicles. In contrast, housing taxation adds an element of regressiveness to the tax system. The poor pay more than three times higher effective tax rates on housing than the rich, and this regressiveness covers a broad spectrum of poor households—the bottom 60 percent. Yet in Bulgaria housing has been typically considered an element of equalization of standards of living of the population. The effective tax rates for the farm tax and other taxes appear to be proportional, more particularly...
over the lower to middle-income groups.

The relative insignificance of the progressiveness (or lack thereof) of taxes other than the income tax, is attributable to the small amounts of revenue raised by these taxes.

Table 7.3 also sets out urban and rural effective tax rates paid by households. Urban households paid 5.4 percent of their per capita income in taxes, whereas the rural sector paid less than half that amount. The disparity is attributable to several factors. Table 7.3 shows that the percentage of per capita income paid in taxes is considerably higher for the urban sector than the rural sector for each kind of tax and for each income class. The exclusion of in-kind income from taxation tends to reduce tax burden estimates, particularly in the rural sector where in-kind income/expenditure is more common. Also, many taxed commodities such as motor vehicles, entertainment, etc., are more commonly owned and/or consumed in urban areas.

The Distributional Impact of Taxation

To assess the distributional effects of taxation, we examine whether the poor and other low-income groups pay a smaller share of taxes than their share of national income. If so, the tax system reduces income inequality. Table 7.4 highlights this issue by showing the distribution of income and taxes. The tax system contributed significantly to reducing income inequality, with the poor, as well as the lower middle income groups up to the sixth decile, paying a smaller share of taxes than their share of national income. This is further confirmed by figure 7.1, which shows that the Lorenz curve for total taxes lies far below the income curve for the entire income spectrum. While the poor (bottom two deciles) pay about 3.5 percent of total taxes or less than half of their income share, the top income class share of taxes exceeds their share of income by 50 percent (see table 7.4 and table 7.1).

The income tax is accordingly the major equalizing influence in the tax system. The poor pay only 3.3 percent of total income tax, a share that falls short of their income share by 66 percent. This tax also favors a broader spectrum of poor households—the bottom 60 percent who pay less than one quarter of total income tax. As figure 7.1 shows, the income tax curve nearly coincides with the total taxes curve.

While the housing tax appears to be evenly distributed across all income classes (see table 7.4 and figure 7.1), a slightly larger share is borne by the lower end of the income scale. In contrast, the distribution of motor vehicle tax shows that, with the exception of the poor, each income class pays a share higher than its income share. The distribution of farm tax is strongly biased against the poor, who pay a share that is not only higher than their income share, but also higher than their population share (see table 7.4).
Table 7.4: Percentage of Taxes paid by Income Decile, 1992

<table>
<thead>
<tr>
<th>Income decile</th>
<th>Bottom</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
<th>Fifth</th>
<th>Sixth</th>
<th>Seventh</th>
<th>Eight</th>
<th>Ninth</th>
<th>Top</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total all taxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.51</td>
<td>1.97</td>
<td>2.92</td>
<td>3.80</td>
<td>5.27</td>
<td>8.19</td>
<td>11.29</td>
<td>14.42</td>
<td>19.65</td>
<td>30.97</td>
<td>100.00</td>
</tr>
<tr>
<td>Urban</td>
<td>1.52</td>
<td>1.80</td>
<td>3.03</td>
<td>3.78</td>
<td>5.57</td>
<td>9.28</td>
<td>11.84</td>
<td>13.50</td>
<td>19.52</td>
<td>30.16</td>
<td>100.00</td>
</tr>
<tr>
<td>Rural</td>
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<td>2.94</td>
<td>3.72</td>
<td>6.36</td>
<td>6.18</td>
<td>10.66</td>
<td>14.87</td>
<td>18.98</td>
<td>32.20</td>
<td>100.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.38</td>
<td>1.86</td>
<td>2.79</td>
<td>3.69</td>
<td>5.20</td>
<td>8.16</td>
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<td>14.53</td>
<td>19.86</td>
<td>31.27</td>
<td>100.00</td>
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<tr>
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<td>1.67</td>
<td>2.89</td>
<td>3.68</td>
<td>5.52</td>
<td>9.31</td>
<td>11.83</td>
<td>13.57</td>
<td>19.68</td>
<td>30.46</td>
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</tr>
<tr>
<td>Rural</td>
<td>1.51</td>
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<td>2.82</td>
<td>3.53</td>
<td>6.30</td>
<td>6.01</td>
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<td>14.96</td>
<td>19.24</td>
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<td>Housing tax</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
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<td>8.97</td>
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<td>11.88</td>
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Source: Authors' estimates based on 1992 Individual Budget of Households Survey, NSI.

Urban households pay a smaller share of total taxes than rural households. However, the difference is not significant. This applies to the rural poor (the lowest two deciles) as well as urban. The exceptions are the housing tax and motor vehicle tax, for which the urban poor pay a higher share of total taxes paid by the urban households,
than the rural poor's share of taxes paid by rural households. As expected, the rural poor pay a much higher proportion of the total farm taxes.

**Concluding Observations**

The component of Bulgaria's tax system studied here (including personal income tax, housing tax, motor vehicle tax, farm tax and other taxes) is overall progressive, with the poor (the lowest two income deciles) paying 1.5 percent of their per capita income to the government in taxes, and the rich (top decile) nearly 6 percent. Most of the progressiveness can be attributed to the income tax. The motor vehicle tax introduces a minor element of progressiveness. Housing taxation is however regressive: the poor pay more than three times higher effective tax rates on housing than the rich, with regressiveness encompassing a broad spectrum of poor households. The effective rates for the farm tax and other taxes are, in general, proportional to income, particularly over the lower to middle income groups.

We have also found that urban households pay 5.4 percent of their per capita income in taxes, whereas the rural sector pays less than half that amount, with income in rural areas higher than in urban areas. To the extent that urban households are beneficiaries of more government services per capita, their higher tax burden may offset the urban bias in government services favoring urban residents. The urban−rural disparity in the tax burden is present across types of taxes and income classes. The percentage of per capita income paid in taxes is considerably higher for the urban sector than the rural sector, for each kind of tax and for each income class.

The exclusion of in−kind income from taxation reduces tax burden estimates, particularly in the rural sector where in−kind income and expenditure is more common. This implies that rural households may bear even a smaller tax burden, relative to urban households than we have found.

We have also assessed the distributional effects of taxes, by posing the question whether the poor and other lower income groups pay a smaller share of taxes than their share of national income. Our results show that the tax system contributes significantly to reducing income inequality: the poor (as well as the lower middle income groups up to the sixth decile) pay a smaller share of taxes than their share of national income. Although urban households pay a smaller share of total taxes than rural households, the difference is not significant, which is consistent with the insignificant difference in income distribution between urban and rural sectors.

**Notes**

1. For other studies of income distribution in transition, see Milanovic (1992) and Coulter and others (1993).

2. The classic study by Kaldor (1963) made a similar argument for progressive taxation in the Latin American countries.

3. The distinction between urban and rural areas is based on the type of settlement (town versus village). This is not entirely based on the size of the population (the usual 5,000 people cut−off line between rural and urban settlements). There are villages with larger populations than some towns in Bulgaria.

4. The sample of 418 sectors was taken from a "control" sample of 4,000 sectors which was, in turn, taken from the 1985 Population Census of 40,000 sectors, encompassing approximately 3.2 million households.
5. It appears that some minorities, particularly gypsies, were probably under–represented in the sample.

6. To assess the effect that such an inclusion might have on income levels and income distribution, Hassan and Peters (1995) make a number of adjustments to income as defined by the survey. First, sales of property are excluded, as they do not belong to income. Second, contrary to the NSI definition of income, personal borrowing, savings withdrawal, etc., are also excluded. Theoretically, one should include income that would be received if an asset were rented—rather than sold—in the marketplace instead of being used by the owner. However, in actual practice, making this distinction is extremely difficult. In general, income is not easily observable and measurable, especially during periods of radical changes in the structure of remuneration and taxes, inflation, and rapid changes in the structure of the economy (such as the public and private mix, growing informal sector, reliance on self–employment, etc.). Altering the definition of income leads only to a change in the level of household income per capita. However, none of the adjustments mentioned above significantly affect the decile shares or income inequality as both adjustments result in a very small change in the shares of all income groups. These results indicate that asset sales were, in general, evenly distributed across the population, and not highly concentrated in any income group.

7. Since consumption reflects not only current total household income but also past savings, windfalls and expectations of future income, expenditure is a better proxy of lifetime income (see, for example, Nissen 1984). Poterba (1991) in his examination of the regressiveness of the US gasoline tax uses both household expenditure and income data and concludes that this tax appears far less regressive when expenditure rather than income is used as the basis for analysis. Of course, year–to–year fluctuations in income among poor households may exaggerate the regressiveness of taxes.

8. The literature on the best procedures is controversial (see, for example, Deaton and Muellbauer 1980; Ravallion 1992).

9. Examples of these studies include that of the U.S. (Musgrave and others 1951: Musgrave and others 1965), and the subsequent studies of Colombia (McLure 1971), Greece (Karageorgas 1973) and Tanzania (Huang 1976).

10. In his pioneering paper on the incidence of the corporate income tax, Harberger (1962) also uses a two–sector, two–factor model which is commonly used in the theory of international trade.

11. This "urban bias" in the tax burden, however, can be justified on equity grounds as there appears to be a wide belief across the country that public services have not been equal–ly distributed among urban and rural areas. Social and infrastructure expenditures were lower in rural areas with the capital of the country–Sofia–having the loin's share.

12. The effect of including in–kind income in the tax base is examined by Huang (1976) in his study of the tax burden in Tanzania. He concluded that if in–kind income were explicitly considered, the urban and rural differences in the effective tax rate would be substantially reduced.
13. Effective tax rates for the farm tax and other taxes are shown in table 7.3. Their Lorenz curves are not shown in figure 7.1, which displays only the major taxes considered.

References


Experience with decentralized government has been limited in Bulgaria, where a centralized form of government existed for centuries, including the last fifty years under the communist regime. Intergovernmental finances were, as a consequence, characterized by a high degree of centralization and low responsiveness to the preferences of the local population. After the end of the communist regime in 1989, profound changes took place in intergovernmental finances, and following the liberalization program of February 1991 (see chapter 2), there was a momentum to substantially decentralize public administration and public finances. The momentum partly reflected the government's declared decentralization objectives, and partly arose by default in the tumult of the disintegration of the prior centrally planned economic system.

The process of fiscal decentralization opened a Pandora's box of problems. The transition disrupted the former balance of intergovernmental fiscal relations, and expenditure assignments changed to increase responsibilities of local governments. The process was part of overall democratization and, in principle, increased accountability in government spending.

Five years after the end of the communist regime, one might have expected the objectives of fiscal decentralization to have been clearly specified, with tax assignments that satisfy the funding requirements of well-defined intergovernmental expenditure responsibilities. However, fiscal decentralization in Bulgaria, as in other economies in transition, has not proceeded in such an ideal logical way (see Bird, Ebel and Wallich forthcoming). Political objectives have often not been transparent, and political expediency would appear to have had a major role. Expenditure responsibilities may be reassigned as a consequence of the desire of the central
government to push the deficit 'downstairs' to local governments (see Wallich 1994). In any event, the evolutionary process of fiscal decentralization continues to take shape without a clear model. The absence of a model or paradigm makes appropriate assignment of taxes to different levels of government difficult:

...a fundamental failure of the decentralization process in Bulgaria, shared elsewhere in the economies in transition, has been absence of clear and stable expenditure assignments among the different levels of government. 1

This chapter describes the main features and problems faced by Bulgaria in intergovernmental tax relations. The objective is to draw lessons which may be of use to other countries in the early stages of the transition. 2 The first section provides background by describing the vertical government structure and the assignment of responsibilities. The second section discusses principles of tax assignments. The third section describes tax assignments and the fourth assesses tax assignments and intergovernmental transfers. The next section considers how the system might be reformed and the last section sets out lessons from the Bulgarian fiscal decentralization experience.

Background: Government Structure and Assignment of Functions

The form of the vertical structure of government in Bulgaria remained unresolved five years after the end of the communist regime. There were questions concerning the number of tiers of governments, and the size of the subnational government units. The uncertainty made complex the design of decentralized assignment of taxes and intergovernmental transfers.

Prior to 1987, the system of territorial division in Bulgaria had been in place for almost three decades. It consisted of twenty-eight intermediate units of government, both central and municipal, called districts (okruga). The district budgets were part of the central government budget, but district governments had administrative responsibility for the municipalities and provided them with services of a regional nature such as roads and hospitals. Over this period, the number of municipal governments (obshtina) fluctuated from more than a thousand to around 300 just before the 1987 reform. It is commonly held that under this regime district governments made arbitrary resource allocations among the municipalities in districts, and that a larger than warranted component of district funds often remained in district capitals.

The territorial division in 1987 divided the country in nine regions (oblast), two hundred and seventy three municipalities (twenty–four of which are in the Greater Sofia area), and 3,984 settlements (naseleno myasto). Chart 8.1 shows the vertical structure of government. The third tier of government, district or okoliija, was legislated in the 1991 Law on Local Self–Government, but has never been implemented. The regions do not have autonomous budgets, but a centrally appointed governor and function as subordinated agencies of the central government. The governor of the region is appointed by the central government together with the rest of the regional administration. Outside of Sofia, the average region has a population of 0.9 million, with thirty municipalities and six hundred and fifty settlements.

Municipalities are the first level of decentralized authority. They are governed by a democratically elected mayor and municipal council. In 1992, for the first time, municipalities had autonomous budgets. Their sources of funds included tax

...and non–tax revenues, shared taxes, and subsidies or transfers from the central government. Municipalities comprise a number of settlements (naseleno myasto) with the average municipality having a population of 30,000 and around 20 settlements.
Settlements constitute the smallest administrative unit of government and elect mayors, but do not have autonomous budgets. The 1991 Law on Local Self-Government eliminated the necessity of having settlement budgets separate from the municipal budget.

Local government is a significant component of the Bulgarian economy. In 1991 the consolidated budget for all municipalities was around 21 percent of the consolidated government budget and 11 percent of GDP. Budgeted municipal expenditures for 1992 were 22.7 percent of the consolidated government budget. The relative importance of local budgets in Bulgaria is however at times greater than these aggregate figures indicate. For example, planned investments in the local sector in 1992 were 58 percent of planned budgetary capital expenditures for the consolidated public sector. Overall, the relative size of the local government sector in Bulgaria is in line with that of other European countries. As noted, the vertical structure of government in Bulgaria remains in transition, with the number of tiers of government with autonomous authority undecided. While the 1991 Law on Local Self-Government envisioned the creation of an intermediate level of government between municipalities and the central government, the draft law on Local Finances does not refer to this level of government. The central government has unofficially postponed the reform of the territorial division of the country. Given that Bulgaria is a relatively small country, one might ask whether there is a need for an intermediate form of government. The answer is that the need is rather apparent. With the elimination of district (okruga) functions in the 1987 reform, the provision of services with a regional dimension has been assigned to some of the municipalities, leading to conflicts among local governments. Because residents of other municipalities are entitled to these services, the municipalities providing the service have complained about free riding. But rather than creating a new tier of general purpose governments, which will add to bureaucracy and duplication of functions, the government has the option of creating districts specialized in the delivery of specific services.

Simplicity and flexibility make the option of special districts attractive for Bulgaria. Associations of municipalities could fund, regulate, and control special district executive authorities for water supply, regional hospitals, or other services with regional dimensions. The boundaries of such special districts would not have to coincide for the provision of different services.

The clarification of expenditure assignment among the different levels of government is another area in which government policy has lagged. Expenditure assignment, that is, clearly specifying which level of government—local, regional, or central—should be responsible for the specific functions and activities that belong in the public sector, is both a starting point for the building of a new role for the government in a market economy and a precondition for a stable assignment of tax revenues.

Superficially viewed, the assignment of intergovernmental responsibilities in Bulgaria appears adequate. The rule of assigning expenditure responsibilities according
Figure 8.1
Republic of Bulgaria Executive Power System and Structure

to the size of the "benefit area" of the public service is respected. By and large, the functions allocated to the central government have a national dimension, and expenditures with macroeconomic and redistribu

There are, however, several problems with expenditure assignments. One is the lack of an effective intermediate level of government. As already mentioned, all public services with a regional dimension are assigned either to the central government level or, much more frequently, to municipalities. Second, the system of expenditure assignment is in a state of flux. A number of policy initiatives could improve assignment of government responsibilities: the reform of the health care system would shift the responsibility away from municipalities by creating an autonomous health system at the national level (see chapter 8), and the reforms of the social welfare system could also result in significant changes in the assignment of responsibilities (see chapter 7). Third, for several important services including education, health, and social welfare, budgetary authority and responsibility are ambiguously defined between the central and local governments. Education, health, and welfare are financed almost fully through local government budgets but the central government establishes both the level of expenditure and standards of provision for each local government. Consequently, local governments in this instance act more as deconcentrated agencies of the central government than as autonomous budget units. There is also confusion about the level of government that is responsible for water and sewage services. The Law on Local Self–Government transferred the ownership of all infrastructure related to local services to municipal
governments. However, water, sewage, and electricity continue to be provided by State Enterprises (SEs).

Before 1992, the lack of a designated assignment of expenditure responsibilities was of no practical consequence, since local government budgets were part of the central government budget. Since 1992, local governments have had autonomous budgets and, in theory, can run surpluses not subject to confiscation or extraction by the central government. However, the central government in Bulgaria, as in other countries in transition, has been tempted to shift additional expenditure responsibilities to local governments as a means of seeking to alleviate its own budgetary difficulties. The ambiguity in expenditure responsibilities has consequently become a source of conflict between the central government and local governments.4 More importantly, the experience of other economies in transition, shows that the lack of a specific expenditure assignment leads to continued changes and instability in the assignment of revenues.

Principles of Revenue Assignment

The assignment of revenue sources in Bulgaria is also in transition. Prior to 1992, local government revenues came mainly from sharing in the major central government tax revenues at rates fixed in the tax laws, and from central government subsidies. Revenue assignment meant little prior to 1992, given that local governments lacked fiscal autonomy and that their budgets were just a part of the central budget. The pro forma revenue assignment to local governments inherited from the old regime gained new meaning with the proclaimed budgetary autonomy granted to local governments in the 1991 Law of Self−Government. The newly gained local autonomy was however compromised by ongoing changes in tax assignments.

This section reviews the theoretical principles for tax assignment that provide benchmarks for identification of problems and evaluation of solutions to revenue assignment issues. The principles for revenue assignment among the different levels of government are not independent of policy objectives. The most common objectives relevant to the question of tax assignment are (see Oates 1990; Musgrave and Musgrave 1990; Bahl and Linn 1992):

**Revenue Adequacy**. First, there has to be consistency between assigned revenues and expenditure responsibilities. The persistent inadequacy of local revenues or the "vertical imbalance" in revenue sources between the different levels of government, will necessarily lead local governments to misallocate resources. These inefficiencies may take many forms such as underprovision of some services or cutting corners on less visible activities, such as maintenance of the existing infrastructure. The lack of adequate regular funding also can lead municipalities to overextend their borrowing and to pursue risky joint ventures in private markets.

**Adequate Growth Over Time**. The consistency of revenue sources with expenditure needs also has a dynamic or intertemporal aspect. Because demand for services and expenditure needs are likely to grow with population and income, local revenue sources need to be elastic and grow over time at least in the same proportion. Attaining an adequate elasticity of local revenue sources entails more difficulties than providing adequate revenues in any particular period, and often the revenue assignment will need some fine tuning to acquire the built−in capability to generate growth in revenues over time.

**Economic Efficiency**. Resources are allocated to the different levels of government in order to satisfy the preferences and needs of taxpayers at the lowest possible cost. This goal requires that the assignment of taxes and other revenue sources exhibit several characteristics. The assignment must promote accountability and responsiveness of public officials to voters. This is best achieved when at least some taxes (which are paid by residents rather than "exported" and paid by residents of other communities) are the full responsibility of local governments. The assignment of taxes should promote certainty and stability of revenue flows, so that local government officials can plan expenditures ahead of time. The promotion of economic efficiency also requires
that local governments raise their revenues with a minimum of distortions and excess burdens on taxpayers. Benefit taxes such as user charges are appealing because they promote all aspects of economic efficiency (see, for example, Bird 1992: 165–68).

**Equity.** Fairness in the assignment of revenues to local governments is also a commonly pursued objective. However, the pursuit of income redistribution objectives is generally thought better left to the central government. This goal is also interpreted as the promotion of more equality, or a “horizontal balance” in the availability of funds to local governments. Because of inequalities in the distribution of economic bases and the sharing of major taxes on an "origination" basis, the equity goal usually rests on the implementation of an equalizing system of intergovernmental transfers.5 One of the most difficult challenges in the design of a system of transfers is to achieve a reasonable degree of equalization without discouraging revenue mobilization, or the "tax effort" of local governments.

**Economic Stabilization.** Another goal in the assignment of revenue sources is the preservation of macroeconomic stability. Tax policy traditionally has been used as an instrument for stabilization policy in market economies, although discretionary fine-tuning tax changes have been more often questioned. Certain taxes may be more amenable to discretionary changes for stabilization purposes (for example, investment credits on the corporate profit tax) or may have built-in stability characteristics, as in the case of a progressive personal income tax. This concern imposes certain limitations on the types of taxes that may be assigned to the local level. In particular, the personal income tax is better assigned as a central government tax, although it can be shared with local governments; alternatively, a local income tax can "piggy-back" on the central government tax.

**Administrative Feasibility.** The assignment of revenues to different levels of government should also meet the test of administrative feasibility. Capabilities in tax administration are generally more limited at the local government level, and these limitations should be fully taken into account when assigning taxes. In some countries, such as Bulgaria, Russia, and other CIS countries, there is, at present, a single, central tax administration. Although local taxes clearly can also be collected by the central tax authority, it is unrealistic to expect that the central tax service will dedicate as many resources to collecting local taxes as to collecting central government taxes. This means that the full assignment of certain taxes to local governments (such as the property tax) will require the creation, in the longer term, of a local tax administration capacity.

No assignment of revenues can simultaneously satisfy all these objectives. There are already well-defined tradeoffs. For example, greater efficiency at the local level would be promoted by an assignment that allows local governments to rely more heavily on their own resources and taxes, although this would lead to large differences in the level of services across local jurisdictions. Because of the trade-offs, it is not possible to talk about the best revenue assignment procedure.

**Tax Assignment and Intergovernmental Transfers**

Local governments in Bulgaria have three main sources of revenues.6 The first is own revenue sources, which include some local taxes, fees, and other revenues. In 1993 these revenues were 5.1 percent of total municipal revenues (table 8.1). Own revenues amounted to 6 percent of all municipal revenues in 1991, down from 11.1 percent in 1990. The second source of revenue is the sharing by local governments in three major taxes: company profit tax, personal income tax, and turnover tax. Revenues are also shared for some excises and customs but represent smaller amounts. Shared revenues in 1993 were 46.4 percent of total revenues. The third main source of revenues was central government subsidies, which amounted to 16.7 billion leva in 1993, or 48 percent of total revenues.
Revenues from Own Sources

Cost recovery charges and user fees continue to represent a small part of local government revenues. As a percentage of total local revenues, fees and charges remained flat, around 2.8 percent of total revenues from 1990 through 1993. One explanation for the relative insignificance of this source of revenue is that many of the fees can only be changed with prior permission of the central government, which has kept them unchanged for long periods of time. Bulgaria also has had a tradition of low user fees, in line with the practice of other former socialist economies. Local governments can set environmental fees, parking fees, and sanitation fees. However, sanitation fees, for example, are levied according to assessed house values which have been outdated for many years.

Other non–tax revenues of local governments have experienced wide fluctuations, from 4.6 percent of total revenues in 1990, down to 1.1 percent in 1993. This decline in importance of other non–tax revenues occurred, despite the increase in rental income for municipalities following the liberalization of prices; the restitution of municipal property to private individuals has limited the sources of rental income for municipalities.

The third source of own–source revenues for municipalities is property taxes. These taxes are considered part of own–source revenues because property taxes are fully assigned to local governments and traditionally have been administered by local governments. However, local governments in recent times have not had discretion over rates, assessments, or any other significant aspect of the property tax. In this sense, the property tax can hardly be considered a true local own–source of revenue. Enterprises pay property tax on land and structures at a rate of 0.2 percent on the value of the assets "initially entered" in the balance sheet of the enterprise.

For property owned by individuals, the tax is computed on the basis of assessed values for land and structure, calculated in accordance with officially approved tables dating back to 1952. The tax rate for individual property is also 0.2 percent, although some luxury units are taxed at a rate of 0.3 percent. There is also a graduated surtax on larger units, with differentiated rates for Sofia and outside Sofia.

Table 8.1: Bulgaria—aggregate Municipal Budgets *1
(in millions of leva)

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<td>19,773.3</td>
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<td>1,869.8</td>
<td>3,595.9</td>
<td>3,546.9</td>
<td>9,127.7</td>
<td>16,684.8</td>
<td></td>
</tr>
</tbody>
</table>

Revenues from Own Sources
### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>5,258.6</th>
<th>14,507.4</th>
<th>10,272.4</th>
<th>19,737.3</th>
<th>34,772.9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Current</strong></td>
<td>4,487.5</td>
<td>12,873.7</td>
<td>—</td>
<td>17,614.2</td>
<td>31,267.9</td>
</tr>
<tr>
<td>1. Wages</td>
<td>1,641.7</td>
<td>4,320.3</td>
<td>—</td>
<td>6,912.7</td>
<td>11,737.7</td>
</tr>
<tr>
<td><strong>B. Capital</strong></td>
<td>771.1</td>
<td>1,651.9</td>
<td>—</td>
<td>2,123.1</td>
<td>3,505.0</td>
</tr>
<tr>
<td><strong>Deficit</strong></td>
<td>393.2</td>
<td></td>
<td></td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

*(in percent)*

### Revenues

<table>
<thead>
<tr>
<th></th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Own Source</strong></td>
<td>11.1</td>
<td>4.6</td>
<td>11.0</td>
<td>5.1</td>
<td>5.0</td>
</tr>
<tr>
<td>1. Fees</td>
<td>2.8</td>
<td>1.6</td>
<td>2.1</td>
<td>1.8</td>
<td>2.7</td>
</tr>
<tr>
<td>2. Non−Tax Revenue</td>
<td>4.6</td>
<td>2.0</td>
<td>8.0</td>
<td>2.6</td>
<td>1.1</td>
</tr>
<tr>
<td>3. Property Tax and Inheritance Tax</td>
<td>3.7</td>
<td>0.9</td>
<td>0.9</td>
<td>0.7</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>B. Shared Revenues</strong></td>
<td>50.9</td>
<td>74.9</td>
<td>56.2</td>
<td>48.7</td>
<td>46.4</td>
</tr>
<tr>
<td>1. Profit Tax</td>
<td>7.4</td>
<td>28.7</td>
<td>17.1</td>
<td>21.9</td>
<td>11.5</td>
</tr>
<tr>
<td>2. Income Tax</td>
<td>38.8</td>
<td>33.4</td>
<td>30.7</td>
<td>21.5</td>
<td>21.8</td>
</tr>
<tr>
<td>3. Turnover Tax</td>
<td>4.7</td>
<td>8.4</td>
<td>8.4</td>
<td>5.2</td>
<td>11.0</td>
</tr>
<tr>
<td><strong>C. Transfers</strong></td>
<td>38.0</td>
<td>24.1</td>
<td>32.8</td>
<td>46.2</td>
<td>48.0</td>
</tr>
</tbody>
</table>

### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>100</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Current</strong></td>
<td>85.3</td>
<td>88.7</td>
<td>—</td>
<td>89.2</td>
<td>89.9</td>
</tr>
<tr>
<td>1. Wages</td>
<td>31.2</td>
<td>29.8</td>
<td>—</td>
<td></td>
<td>33.7</td>
</tr>
<tr>
<td><strong>B. Capital</strong></td>
<td>14.7</td>
<td>11.4</td>
<td>—</td>
<td>10.8</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance

*consolidated actual budget data for 1992 were not available.*

*other shared taxes include excises and custom duties and export charges.*

Property taxes represent a trivial portion of local budgets, 1.2 percent of total local revenues in 1993. Reliance on property taxes in Bulgaria is well below that of other countries (see table 8.1). The use of the property tax in a number of small western European countries is shown in table 8.2. For example, the property tax constitutes 7.7 percent of central government revenues in Portugal and 6.4 percent in Belgium. Information is not as readily available for local taxes, but for the three countries for which information was available (Austria, Denmark and Norway), property taxes provided about half of local government revenues. This suggests that property taxes, if properly instituted with regular reassessments, could be an important source of future revenue for local governments in Bulgaria.

**Revenues from Shared Taxes**

A peculiar feature of the revenue—sharing scheme in Bulgaria is that it is based not only on the common principle of "origination"—the pooled taxes shared are those actually collected in the jurisdiction—but also on the much
less common principle of "ownership" of enterprises. Until 1992 the sharing rates were specified in the respective tax laws.

For the company profit tax, municipalities kept the entire tax levied on municipal and private enterprises in the jurisdiction, and also a 10 percent surtax levied on state enterprises in the jurisdiction. State enterprises paid the regular 40 percent company profit tax to the central government, and a 2 percent surtax earmarked for irrigation and environmental protection. The dual bases of origination and ownership did not contribute toward financial autonomy of local governments. The 10 percent surtax on state enterprises was by far a more important source of revenue for municipalities than the regular 40 percent levy on municipal and private enterprises. As indicated in chapter 2, the company profit tax was a relatively poor revenue performer in comparison with the other major taxes in 1992 and 1993, reflecting the twin phenomena of a shrinking state enterprise tax base and virtually no growth in the taxes paid by private enterprises, because of tax holidays, legal avoidance, and tax evasion.

In the case of the turnover tax, local governments received the entire tax paid by municipal and private enterprises, while the tax paid by state enterprises went to the central government. In 1993, the turnover tax gained further importance with collections representing 11 percent of total revenues. The value added tax, which was introduced in January 1994 and replaced the turnover tax, became a national tax, so depriving the local governments of their previous turnover tax revenue.

The individual income tax is the single most important source of revenue for local governments. The tax is levied on wage and salary income, has progressive rates, and is not indexed for inflation. In 1992 this tax was shared with the central government, with 70 percent of revenues collected in the municipality going to the municipal government and 30 percent to the central government. Beginning with February 1993 the sharing arrangement

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Table 8.2: Percent Shares of Property Tax Revenues in Total and Local Tax Revenues for a Selected Group of Countries in 1989

<table>
<thead>
<tr>
<th>Country</th>
<th>Share in Central Government Revenues</th>
<th>Share in Local Government Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria**</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Austria</td>
<td>3.4</td>
<td>8.3</td>
</tr>
<tr>
<td>Belgium</td>
<td>6.4</td>
<td>NA</td>
</tr>
<tr>
<td>Denmark*</td>
<td>5.6</td>
<td>8.2</td>
</tr>
<tr>
<td>Finland</td>
<td>2.3</td>
<td>NA</td>
</tr>
<tr>
<td>Ireland</td>
<td>4.0</td>
<td>NA</td>
</tr>
<tr>
<td>Netherlands</td>
<td>8.0</td>
<td>NA</td>
</tr>
<tr>
<td>Norway</td>
<td>4.9</td>
<td>8.2</td>
</tr>
<tr>
<td>Portugal</td>
<td>7.7</td>
<td>NA</td>
</tr>
</tbody>
</table>

* 1987 Data.
** 1991 Data.

changed to 50 percent for local governments and 50 percent for central government. Before 1992 the personal income tax law had allocated 100 percent of this tax to local government.\textsuperscript{8} The relative importance of the individual income tax in the total revenues of local governments has been in decline, from 38.8 percent in 1990 to 30.7 percent in the first half of 1992, and to 21.8 percent for 1993.

**Central Government Transfers**

A substantial portion of overall local government revenues in Bulgaria has come from central government transfers or subsidies. For 1993, transfers from the central government were 48 percent of total funds available to local governments. For 1992, subsidies to local governments were budgeted at 46.2 percent of all revenues. However, reflecting an arrears problem within the public sector, local governments had, during the first half of 1992, received only a little over one–third of the transfers budgeted for the entire year. The relative share of central government transfers in local budgets was at its low in 1991, when central budget reductions decreased transfers to 21.5 percent of local government revenues. By comparison, central government transfers were 38 percent of total funds available to local governments in 1990 (see table 8.1). The level of dependence of local government on central government transfers places Bulgaria in the middle range of experience of central and eastern European countries (see Wallich and Bird 1993: 41). For example, the share of central government transfers in local government revenues has varied from a low of 19 percent in Poland to a high of 82 percent in Romania.

Prior to 1993, subsidies from the central government to the municipalities were determined by the application of the following formula: \( \text{Transfer} = \text{Minimum required expenditure budget} \times \text{Own source and shared revenues} \). From 1990 onward, the Ministry of Finance (MOF) determined the minimum expenditure budgets for each municipality on the basis of the past year's budget, following an incremental approach. Before 1990 the MOF used the detailed expenditure norms described above. In 1992, for the first time, municipalities prepared their own budgets (often using the old budget norms), which they submitted to the MOF for the purpose of determining the central government subsidy. However, in reality, the figures used as the minimum budget requirements in the calculation of subsidies were those of the MOF, which were on average, two–thirds of the figures proposed by the municipalities. It appears that these differences led to some bargaining between MOF officials and those municipalities which disagreed most intensely with the MOF estimates. On the revenue side of the computation formula, municipalities provided the MOF with their own estimates of non–tax revenues for the coming year and the MOF used its own estimates of tax revenues, including the shared major taxes: personal income tax, profit tax, and turnover tax. In the computation of the subsidy the MOF had the freedom to alter the overall estimated revenues, including the forecasts of local non–tax revenues.

In field visits in 1992, local officials frequently expressed concern that the approach followed in the derivation of transfers was ad hoc, leaving room for "subjective" evaluation by the MOF in the adjustment of revenue forecasts and the computation of expenditure needs. Local officials also complained about the lack of transparency in the selection of capital projects by the MOF in areas such as education and health. Concerns also surfaced because, in addition to being cut and frequently delayed, transfers to municipalities had been paid in installments not indexed for inflation. Local officials were also well aware that the approach to the determination of municipal subsidies discouraged the mobilization of local revenues. Raising own revenues by one leva meant the loss of exactly one leva in central government subsidies.

Beginning in 1993, the MOF began using a more objective formula to determine central government subsidies to municipalities. In the most recent available incarnation of the formula, the subsidy to each municipality is computed according to
The formula used to compute the $C_2$ element employs seventeen variables, each quantified as the share of the municipality in the national total, and each entering the formula with its own weight. The variables are meant to proxy the municipality's need for public services in different areas. The adjustment factor, $A$, is intended to reflect the tax effort of the municipality, although this is a misnomer. Since municipalities have no discretion over the base or rate of any tax, the adjustment factor is computed using either of the two following formulae:

$$A = -(\text{PCT} - TL) \times N, \text{ or}$$
$$A = (BL - \text{PCT}) \times N,$$

where PCT represents per capita tax revenues in the municipality, including shared taxes, TL is a top limit for non–penalized per capita tax revenues (1.5 times for 1993), BL is the bottom limit of per capita tax revenues which triggers a subsidy and also is computed as a multiple of the national average for per capita municipal tax revenues (for example, 0.8, although this factor has not been used so far), and $N$ is the population of the municipality. The impact of the adjustment factor, $A$, is to reduce, and in some cases eliminate, the overall subsidy to those municipalities with tax bases per capita considerably higher than the national average. Those municipalities with per capita bases much lower than the national average experienced a proportionate increase in the overall subsidy.

**Assessment of Tax Assignments and Intergovernmental Transfers**

This section assesses the system of intergovernmental tax assignment and reviews areas where further reform is needed. Let us first look at how well revenue assignments comply with the general principles reviewed in the second section.

**Revenue Adequacy**

Are the assigned revenue sources adequate for the current expenditure obligations of local governments? Have local revenues grown adequately over time in line with the increase in the need or demand for services? The available data makes these questions difficult to answer. Twenty–two out of three hundred and seventy–four municipalities received no central government transfers (subsidies) during the first six months of 1992, and the number in 1991 was even higher: forty–nine municipalities. However, although central government transfers are part of the local revenue structure, their absence to certain local municipalities should not be considered prima facie evidence of the inadequacy of local government revenue sources. One approach to considering revenue adequacy is to discern whether local governments, after taking into account all their revenue sources, incur a deficit in carrying out their minimum budgetary obligations. The budgetary experience in 1991 and the findings in the field indicate a diverse picture, with some municipalities running surpluses or balanced budgets, but a larger number running deficits.

An alternative method of examining the consistency of revenue assignments with expenditure obligations is to test for the existence of a statistical relationship between determinants of expenditure needs (such as population and
income) and the distribution of assigned tax revenues to municipalities. The lack of a statistically significant relationship between tax revenues and the main determinants of expenditure needs would point to inadequacies in revenue assignment. Regression analysis the relation between total revenues of municipalities for 1991 and 1992 on the common determinants of expenditure needs (total population, population density, and average household income) indicates that municipal revenues were positively related to population and population density. This evidence therefore reveals a tendency for some match between tax assignment and expenditure needs. However, this type of analysis does not allow us to reach a definitive conclusion concerning the closeness of the match between revenue assignment and expenditure needs. Assessing the degree of this balance would require a data-intensive analysis of the costs of providing the services assigned to local governments.

Efficiency

Revenue assignment does not receive a high grade from the perspective of the efficiency criterion. Even though local governments are assigned certain levies, such as the property tax, they have no discretion over the rate or base of these taxes. Local governments even lack authority for setting most fees and user charges. Further, the revenue assignment to local governments has become less stable and transparent, precisely since local governments were granted budgetary autonomy in 1991. There is also an absence of predictability of revenue availability, due to the government's continuing to change the revenue assignment every year with the central government budget. Less stability in the flow of budgeted funds to municipalities has further impaired planning of use of resources.

Equity of the Revenue Assignment System

How equitable or equalizing has the system of revenue assignments been to local governments? There is an a priori basis for the assignment not to be very equalizing. This is because of the importance, albeit decreasingly so, of shared taxes (personal income, company profit, and turnover taxes) in local budgets, in combination with the fact that these revenues accrue to local governments on a "derivation" basis. Relatively richer municipalities would be expected to have more resources available to them. Nor is the greater availability of resources restricted to the three main taxes shared with the central government. Property taxes, fees and user charges, and revenues from other sources at the local level are all positively correlated with collections from the three main shared taxes.

Of course, unequal distribution of tax revenues among local jurisdictions is expected in most tax assignment schemes. A certain degree of inequality in tax revenues facilitates attainment of other objectives, such as efficiency. Since inequalities in the availability of tax revenues can be offset by a system of equalization transfers, the equity issue revolves around the question as to how equalizing have central government subsidies been? A priori, there is no presumption that these transfers have been equalizing. This is consistent with complaints about neglect of some regions by the center. In addition, as noted, until 1993, government subsidies were arrived at by means of a non-transparent and complex process allowing subjective judgement rather than by a transparent allocation formula. Preliminary regressions for 1991 and 1992 showed subsidies to increase with the incidence of poverty as proxied by such variables as infant mortality and average household income in the region. Data limitations, however, make these conclusions very tentative. As already discussed, beginning in 1993, the government implemented a formula-based grant system.

Macroeconomic Policy

The new system of assignment of revenues to local governments does not impose significant constraints on the pursuit of macroeconomic stabilization by the central government. In particular, since local governments have no...
discretion over tax rates or tax bases, the level of the total subsidy is decided solely by the central government, while local governments have not been able to borrow funds.

**Administration**

Administrative feasibility of the tax system is compromised by a weak tax administration. As in the case of other former socialist economies, Bulgaria did not develop expertise in tax administration, because all that was needed under the old regime were transactions in the banks from the accounts of public enterprises to government accounts. A longer term goal for the Bulgarian government is tax administration capacity at the local level to enforce locally assigned taxes, such as on property and motor vehicles, and user charges and fees. The same applies to the administration of the central government's tax administration.

**Reform of the System**

Two general issues arise in the reform of revenue assignments in Bulgaria. The first is how to reform the tax assignment to local governments: should tax sharing continue or should Bulgaria move toward pure tax assignment at different levels of government? The second issue is the role of fees and user charges in the finances of local governments.

Regarding tax assignment, there are two basic ways to grant revenue autonomy to local governments, direct tax assignment and tax sharing. Pure tax assignment gives local governments complete control over particular taxes. This control may be exclusive (as in the case of property taxes levied only by local governments), or may be concurrent, with local governments levying their own income taxes side by side with the central government, as for example in the case of an income tax. Tax sharing as practiced in Bulgaria gives local governments no control of the tax base or rate. An alternative type of tax sharing—a hybrid of tax assignment and tax sharing—allows local governments to use surcharges on top of a national tax. Usually, in this case, local governments employ the same tax base as the central government, but have discretion to set tax rates up to a designated maximum limit.

The pure tax assignment option has clear advantages. This procedure increases the accountability of local officials to voters and enhances fiscal responsibility of taxpayers. Increases in the demand for services are then more directly tied to increases in local taxes. This is the main reason for assigning property taxes to local governments, as in Bulgaria. However, the complete assignment of taxes (for example, the corporate income tax and the VAT) to local governments would give rise to problems of coordination of rates and bases across jurisdictions, although competition among jurisdictions in the presence of factor mobility would establish an equilibrium. The individual income tax does not present the same magnitude of problem, but is utilized by central governments for broader national goals of stabilization and income distribution. Another problem with pure tax assignment is that local governments may not have the experience or resources to adequately administer and enforce tax compliance; but local government may have more information to facilitate enforcement than a distant central government.

**A Desirable Tax Assignment System**

When all these influences are considered there are two recommendations for a desirable program of reform of tax assignment in Bulgaria: retain the property tax as purely assigned to local government and assign a tax on motor vehicles to local governments. A local administration should enforce the two local taxes. These two taxes will not, however, provide adequate revenue autonomy to local governments for years to come, so there is a need for a "piggyback" local personal income tax which would be administered together with the national personal income tax. The local personal income tax could have a flat rate which would be set by the local council within a range set by Parliament.
Local governments also need to develop their own sources of non-tax revenues, in particular service charges and user fees. This source of revenue, as we have seen, is very much underutilized in Bulgaria. For example, service fees for transportation and heating are only a fraction of the cost of provision. For many such services, consumers can be identified and market prices applied. The application of the "benefit principle" to local finances is attractive on several grounds. Charging a direct price rations consumption and avoids waste; local public officials are provided with indications of appropriate investment for provision of different services; and "cost recovery" or full financing for the service may be feasible.10

The argument against benefit pricing at the local level, frequently heard in Bulgaria, is the regressive impact on low-income households. It is often possible to target subsidies to needy groups by means of reduced charges for metered services or, for example, monthly transportation passes for the elderly. Even if it is not possible to target the subsidies, it is more efficient to charge full prices for the services and support low-income households with direct social assistance transfers. It is untargeted subsidies through lower fees and user charges that are regressive if high income groups use the service more intensively.

Because direct pricing is not feasible for all types of services, user fees and charges are often transformed into benefit taxes or "betterment" or improvement charges on property for services such as road paving, street lights, or sewage. These improvement taxes typically are levied at a fixed amount according to lot size, or at an ad valorem rate on the market value of the property. The improvement levies can be a one-time charge, or an annual charge paid at the same time as the property tax. Local governments in Bulgaria use some betterment charges, but these need to be updated.

The Scope of Reform in Intergovernmental Transfers

Let us now turn to the scope of reform in the system of intergovernmental transfers. How well designed is the current system of equalization grants, and how much scope is there for improvement? A system of intergovernmental transfers should make allowance for four main functions of such transfers. First, intergovernmental transfers serve as an ordinary source of funds for local governments, together with the municipality's tax and non-tax revenues. From this perspective, transfers are used to achieve a "vertical balance" in the distribution of public funds among the different levels of government, thereby complementing assignment of taxes, to provide local governments with adequate funding for their assigned expenditure responsibilities. Beyond adequacy, transfers also need to be predictable and stable. Second, intergovernmental transfers could be viewed as having a redistribututional role, to compensate for differences in income and wealth across jurisdictions. The objective would then be a more equitable or "horizontally balanced" distribution in the level of service provision. Third, intergovernmental transfers should not penalize but rather stimulate local tax effort, which runs counter to redistribution. Fourth, intergovernmental transfers are often used to encourage expenditures by local governments which the central government judges to merit expansion. Or they are used as incentives for participation in activities which are beneficial to other jurisdictions.

Regarding the above suggest reforms, the intergovernmental transfer system introduced by the Bulgarian government in 1993 represents an improvement over the previous more ad hoc system. The use of formulae to determine annual transfers provides for more certainty in projected revenue availability, makes for a more transparent system, and increases the perception of fairness in the system. The new system of transfers also offers the advantage of retaining considerable flexibility for the central government in providing discretionary grants to stimulate activity by local governments in regions where there may be significant inter-jurisdictional externalities.

The design of intergovernmental transfers in Bulgaria nonetheless remains far from fulfilling some functions of an equalization grant system. There is a problem with the adequacy and predictability of funding. Because of the adjustment factor \((A)\) in the formula, local governments may receive a substantial grant in one period but receive...
no grant or even pay an adjustment transfer to the central government in the next period. The first component of the grant formula \((C_1)\) is precisely designed to take care of this problem. However, several issues remain unresolved here. The definition of \((C_1)\) includes only non–discretionary grants from the previous period. It explicitly excludes other sources of revenues which may need to be considered, such as in the case of the preemption of revenue sharing in the turnover tax with the recent introduction of the VAT. Similar cases may emerge in the future with further reforms in the reassignment of taxes. The issue here is whether this type of preempted revenues should be taken into account in the definition of \((C_1)\) in order to provide stability and certainty in general funding. The other unresolved issue with respect to \((C_1)\) is how fast the weight given to it should decline over time (it was 0.85 for 1994) to phase in a full weight for two objective components of the grant system, \((C_2 + A)\).

Clearly, this is an area that calls for caution and evolutionary change after the MOF quantifies the implications of different alternatives by simulating the entire system of local financing over time.

Another problem with the design of the equalization grant system is that many of the norms or objective criteria used in the computation of \((C_2)\) are capacity rather than need oriented. This is the case for those criteria based on number of beds or number of available places. The problem is inherited from reliance on the budgetary norms used in the past, which suffered from the same drawback, but is also partially due to the lack of data. The implementation of a sophisticated system of equalization grants based on formulae requires a good data base, and the government will need to make the requisite investments. With better data available, it will become possible to substitute need–based for capacity–based criteria, and to reduce the number of criteria used. An accurate measure of the proportion of the population in poverty would substitute for current criteria.

A further difficulty with the equalization grant system relates to discouragement of own–source revenues. The current adjustment factor \((A)\) is based on actual revenue collections by local governments rather than on a measure of tax capacity and the relative level of tax effort of the jurisdiction as opposed to a national average for tax effort. This issue is of less importance so long as municipalities continue to lack discretion to raise taxes and even non–tax revenues, but the consequences of leaving the present adjustment factor \((A)\) in the allocation formula will become quite perverse once local governments are allowed discretion in raising local tax revenue.

**Concluding Remarks and Some Lessons**

This chapter has described the haphazard process of fiscal decentralization in Bulgaria in the early stages of transition. The process is typical of transitional economies undergoing structural changes and market reforms, and is perhaps explained by priorities which center attention on pressing issues such as liberalization and stabilization. Yet the intergovernmental structure has an important bearing on the medium–term public–finance outlook and on short–term macroeconomic circumstances, primarily via the budget. Without attention, the fragile local government fiscal balance with which countries enter the transition is disrupted, jeopardizing the overall fiscal situation. Fiscal pressures at the local level arise due to the transfer of many expenditure responsibilities (health, child care, etc.) from state enterprises to the government, particularly local government (see, for example, Hillman 1994; Martinez–Vazquez forthcoming, b) while the revenue–deficiency crisis confronting the central government may tempt withdrawal of revenue instruments from local governments without provision of substitutes. Uncertainties of the transition, including lack of clarity in tax assignments, in conjunction with the above considerations, give rise to ambiguities in intergovernmental obligations; necessary services "fall between the cracks" of unclear and non–transparent responsibilities, and are not financed or not delivered, or both.
While solutions may be difficult, inaction may compromise future reform as interests arise to protect the status quo. In considering the Bulgarian experience and the lessons that are implied, we can ask, with the hindsight of five years of post-communist government, what could policymakers do or have done? And why is it that clearly inferior options from an efficiency perspective tend to be selected in the transition process? The Bulgarian experience suggests four key lessons related to these questions.

First, it is necessary to specify the objectives of the decentralization strategy and decide on the desired "equilibrium" system of intergovernmental relations. This cannot be done by one government ministry alone, as it is likely that its proposals will become bogged down in the parliamentary backlog of legislation and the politics of the day. A high-level task force including representatives from relevant ministries and government agencies should be given a mandate to put together the "vision" of intergovernmental fiscal relations, which should then be endorsed by the government and, if possible, by parliament. This would make it possible to build the necessary political consensus regarding the complex issues associated with intergovernmental fiscal relations before draft laws begin circulating in the Parliament. Texts of the draft laws would be made more coherent, and subsequent adoption of the laws more likely. The vision would thereby be incorporated into key pieces of legislation defining intergovernmental relations.

Second, ambiguities regarding expenditure responsibilities among different levels of government, particularly in social sectors such as health and education, should be clarified. This will be possible only to a certain level of generality, as social sectors such as health and education are themselves subject to restructuring which alters financing mechanisms, organizational structure, and the system of delivery. Nonetheless, broad consensus on responsibilities for levels of government is necessary in the early transition. This underlies the case for placing local government and related social sector issues on the agenda of policymakers early in the transition.

Third, there is a need to assign adequate and stable revenue sources among different levels of government. This assignment is a part of the quest for tax bases and the adequate tax structures in the transition considered in chapter 3 of this volume. In terms of local government finance, this implies the need for the central government to assist local authorities in developing their own tax bases and revenue capabilities consistent with expenditure obligations, and the need for a transparent tax-sharing formula with suitable equalization mechanisms to address structural regional differences in fiscal performance.

Fourth, the property tax, which is a key local revenue instrument but utilized only in rudimentary form and with extremely low rates and undervalued base, should be developed as soon as is feasible into a stable local revenue base. It will also be necessary to assign to local governments responsibility for setting local levies and charges such as motor vehicle fees and other local fees and charges, with cost recovery mechanisms used whenever possible.

Notes

1. See for example, Martinez–Vazquez (forthcoming, b) for the importance of this issue in the Russian Federation.

2. This chapter draws heavily on the field work done within a World Bank mission reviewing the public finance reforms in 1992 and the subsequent report on Bulgaria (World Bank 1993, chapter four), and on Martinez–Vazquez (forthcoming, a).
3. Government policies often fail to distinguish adequately between deconcentration and decentralization. Deconcentration refers to delegation by the central government of implementation of programs to regional offices and local governments without relinquishing ultimate decision powers and budgetary controls of these programs. Under decentralization local governments are given ultimate decision powers and full budget responsibility for programs. In this latter case, central government financing may be present and may be conditional on certain standards of performance by the local governments.

4. The need of a well-defined and stable assignment of responsibilities does not necessarily mean that either the local governments or the central government has full and exclusive responsibility. Shared, but well-defined, responsibility, may be more desirable in some cases.

5. This problem is specially acute for taxes falling on natural resources (see Musgrave 1983; McLure and Mieszkowski 1983).

6. Actual budget figures were only available for 1991 and 1993. For 1992 the data are actual budget for the first six months and budgeted data for the entire year.

7. The turnover tax was a creditable sales tax, mainly applied to the single stage of manufacturing with multiple rates depending on the type of good, although most businesses pay 22 percent (see chapter 2).

8. As observed in chapter 2, the good revenue performance of the individual income tax is related to increases in wages and salaries to compensate for inflation, and to the lack of indexation for inflation. In addition, compliance may not have deteriorated as much as in the case of other taxes because of the withholding at source by employers.

9. The coefficient on average household income was positive and in some runs significant. However, this variable is measured with a potentially large error. Income data at the municipal levels were not available and regional data were used instead.

10. Water supply is an example of how user charges might be used to increase efficiency in the system of local service delivery in Bulgaria. The government is planning to spend sizable resources over the next several years to expand treatment capacity. However, estimates of waste are as high as 50 percent in some areas because of leaks and poor construction, many houses do not have meters, and more importantly, water charges are extremely low. There is wide international evidence that more realistic fees would significantly contribute to conservation and to moderate consumption. At the same time, higher fees would raise the financial resources needed for maintenance and rehabilitation of the distribution systems, and the more realistic consumption would provide authorities with a more accurate reading of the needed capacity.

References

Fuel taxation was traditionally a stable and significant source of revenue in Bulgaria, providing around one-third of excise tax revenue and between 6 and 7 percent of budget revenue under the communist regime. This chapter describes the changes that occurred in taxation of fuel in the transition, as government policy sought to maintain the previous tax regime in the face of transition to a market economy. To provide a point of departure for the events of the transition, I begin with a review of fuel taxation under the socialist regime. I then describe how failure to adapt taxes to market conditions created distortions, served special interests, and deprived the
government of revenue from a tax base which is a prominent source of revenue in market economies.

**Excise Taxes under Socialism**

Indirect taxes (turnover and excise taxes) under socialism were not intended to be major revenue instruments. Excise taxes were the difference between centrally fixed retail prices and wholesale prices, and since prices were set arbitrarily by the planning bodies in line with political and social considerations, tax rates varied widely over goods (see chapters 3 and 11). For example, rates were negative for children's food and 95 percent for imported cigarettes. In general, indirect taxes were levied on final consumption only. In the case of taxation of petroleum fuels, there were, however, several peculiarities.

Bulgaria imported crude oil via the trading arrangements of the Council for Mutual Economic Assistance (CMEA), which regulated and planned socialist trade (see Martin Schrenk 1992). Under these arrangements Bulgaria was provided with oil on preferential terms. The dollar price of Soviet oil, calculated using the cross-rates applied for commercial transactions in 1989, was about one-fifth of the world market price. Since oil was imported in exchange for overvalued Bulgarian exports of manufactured goods, the effective relative price of oil was lower still. Small quantities of crude oil were also imported from several Middle Eastern countries, by barter or as repayment of state credits extended by Bulgaria for purchase of Bulgarian manufactured goods (see the World Bank 1991). Oil imports exceeded domestic needs, and petroleum products were reexported for hard currency at world market prices. The system allowed the authorities to maintain low domestic fuel prices, and left scope for taxation of the consumption of petroleum fuels both by the public sector and households.

Public consumption by state bodies (industry, non-material employment, and the state administration) was taxed at rates considerably below private consumption, one-seventh in the case of gasoline and two-sevenths for diesel fuel. Stability of fuel and energy prices was viewed as central to overall price stability, and government policy was to maintain low fuel energy prices for industry. The excise tax was also used as a "cushion" to absorb adverse external shocks.

Since gasoline consumption by households was considered a "luxury," the government placed the greater part of the fuel tax burden on the approximately 30 percent of households owning private cars; households in 1988–90 accounted for less than 40 percent of petroleum fuel consumption, yet were the source of between 67 percent and 95 percent of fuel tax revenues (Ministry of Finance). The excise rates for household fuel consumption were among the highest in Europe (84.2 percent for gasoline and 64.1 percent for diesel fuel). Still, because of low production costs for gasoline, prices were considerably lower than in neighboring countries, and lower than in the rest of CMEA.

In the 1980s, there was thus a two-tier price system for petroleum fuels, with price discrimination between the public sector and households managed through different rates of excise taxation. For gasoline, price discrimination resulted in households paying some three times the price charged the state sector, while for diesel fuel households paid 1.8 times the state sector price. Price discrimination was not based on designated usage (final consumption as against industrial use), but on the identity of the purchasers, the public-user price applying to state and municipal enterprises and government administration, and the higher price to households and the small scale private businesses.

The fuel excise tax rates were specific, not ad-valorem, and were set by Decrees of the State Council. This mechanism for determining taxes could be used because of the long periods of relative price stability. Administration of excise taxes was not perceived to be a problem, since the sole domestic producers were two state-owned refineries which fully satisfied domestic demand, and had surpluses for export. The principal
regulatory concern was tax evasion or cheating by diversion of low priced "public" gasoline to private use.

Incentives for such diversion were naturally present, given the price differentiation by identity of the user. Wide-spread "misuse" of fuel compelled the authorities to take complex and costly measures to prevent diversion. Colored isotopes were added to gasoline for state use, in order to make such gasoline readily distinguishable from gasoline for private consumption. There was also a total separation between the distribution channels for state and private use. Although these precau-
tions were taken, and heavy penalties were imposed for use of public fuels for private consumption, substantial diversion of "state" fuel to private usage took place.

Within the rigid framework of the centrally planned economy, the system of fuel taxation was however effective in a number of respects. Price stability was sustained without subsidizing petroleum fuels or the refineries; a substantive revenue base was ensured for the budget; and stable supply was provided for the domestic market, with adequate margins for the refineries and the sole state-owned distributor.

The Transition

The above system functioned within the framework of CMEA trading arrangements. However, with the fall of the communist regimes in 1989, changes took place before the formal end of the CMEA in early 1991. Crude oil deliveries from the USSR, which had already been in decline throughout the second half of the 1980s, declined further as a consequence of internal production problems in Russia and the end of the political considerations that underlay preferential treatment of Bulgaria. To replace Russian oil, purchases were required on international markets at the world market price. The world market purchases were inconsistent with the previous low and stable domestic fuel prices, and reduced or eliminated the scope for the previous large excise duty mark-up. The transition to a market economy, and the development of the private sector, also reduced the scope of possibilities for price discrimination between private consumption and the state sector. Price equalization for private and state consumption appeared imminent. The increased fuel prices in particular compounded the problems of transition of the state and municipal enterprise sector, which confronted steep price increases from the former low prices. Revenues from the fuel excise tax were also affected by the elimination of the state monopoly in both foreign trade and fuel distribution, and the establishment of a competitive market with flexible prices and a wide range of suppliers and distributors; these changes required adaptation of the fuel-tax administration to ensure reliable tax collection.

Macroeconomic considerations also affected the fuel-tax excise system. Expectations of inflation required changes in the price and tax-setting mechanism to preserve the real value of the tax revenue. Further, the increase in cost of crude oil supplies due to the switch to hard currency oil imports changed relative prices and necessitated policies to reduce consumption to levels consistent with balance of payments and fiscal constraints.

During 1990 no adjustment measures were taken, and instead the socialist-led government attempted to postpone politically costly adjustments to the new supply conditions. Attempts were made, through palliative measures reflecting the philosophy of central planning and management, to continue to maintain price stability and to use fuel prices as a price anchor. The government retained direct control over all energy prices. Electricity, coal and district heating prices were fixed by the Council of Ministers, while petroleum prices were controlled through a ceiling on trade margins. These attempts at price regulation not only failed, but in the course of failure entered distortions into the domestic fuel market that resulted in severe shortages.
General macroeconomic deterioration and external shocks in the second half of the year, coupled with the absence of serious reforms, compromised the attainment of the government's objectives. Russian oil deliveries declined steadily throughout the year. The Gulf War adversely affected supplies: Iraq, the primary Middle East oil supplier to Bulgaria, was obliged under direct barter trade arrangements to deliver some $1.5 billion in oil as repayment for previously extended credits, but did not do so. The Gulf War deprived Bulgaria of its principal and least expensive source of crude oil, while large-scale purchases of crude oil on the world market were out of question, because of the absence of foreign exchange and the external debt moratorium which eliminated external trade financing possibilities. Limited market purchases of oil took place at the increased world prices before and during the Gulf War (The World Bank 1992).

In these adverse circumstance, rather than reforming the price and taxation system in the light of new economic conditions, the government increased excise taxes, so that gasoline prices for households rose by an average of 80 percent and diesel fuel prices doubled. Prices for state-sector consumption were also increased, but by considerably less—some 30 percent for gasoline and 40 percent for diesel fuel. The smaller increase in the state-sector price took place at the expense of budget revenue, by exempting sales to state entities from excise duty.

The intent was to use the excise tax as a cushion to soften the inflationary pressure of fuel price increases on industry, while shifting the burden of adjustment to households, with a revenue gain for the government budget as households were the main contributors of excise revenues. The strategy could not succeed, since the new prices, set on the basis of the official exchange rate, did not take account of the real price of foreign exchange, did not allow for the scarcity of petroleum fuels, and did not accommodate the inflation which gained momentum in the fall of 1990 and changed relative domestic fuel prices.

It is of particular significance that the new prices and excise tax changes failed to create incentives for the private sector to import oil and oil products. The price increase therefore did not evoke a positive supply response. Supply problems continued, leading the government to introduce an austere rationing system, first for households in September 1990 and then for public transportation in November 1990. The decline in private consumption because of the shortages offset the potential revenue gains from the higher fuel prices at the same time as a large fiscal imbalance was emerging.

Supply deteriorated to the extent that all gas stations were closed from December 1990 until March 1991. There were no sales of gasoline to individuals, and state users, including public transportation and emergency services, were subject to severe rationing. The failure to adapt fuel prices and taxation to the new circumstances resulted in substantial (though difficult to quantify) direct and indirect losses of revenue for the budget. There was also considerable social tension.

The price liberalization that took place in February 1991 did not change the basic principles of fuel pricing and taxation. Fuel prices remained under government control rather than being market determined. The discriminatory pricing system was retained, and, in an attempt to break inflationary expectations, the government continued the practice of using petroleum prices as a nominal price anchor.

The administrative increase in fuel prices was consequently lower than the overall price adjustment. In the first months after the price liberalization, the general price index increased by 300 percent, whereas gasoline prices for households doubled on average and diesel fuel increased in price by 250 percent. The price increase for public users was substantially higher, more than a fourfold increase for gasoline and almost fivefold for diesel fuel. Prices net of excise duty for households and public users were now equalized. The difference in final price between state and private users was due to the excise duty, which was set at 50 percent for gasoline and 35 percent for diesel fuel, but was charged only on household consumption while public users were exempted. The difference between prices for private and state use was consequently reduced, from the previous 400 percent to
This partial reform of fuel pricing and taxation did not resolve the problem of domestic gasoline scarcity. The new prices were set well below market clearing and did not reflect the new market based exchange rate. Fuel imports were unprofitable and supply shortages persisted.

Furthermore, to maintain the announced price levels, the government was compelled to subsidize fuel prices for several months, because of higher than anticipated depreciation of the lev. Rationing of petroleum fuels had to be continued. The generally difficult domestic energy situation did not change significantly for the better. Inflation remained higher than expected, and was driven by factors other than fuel price increases, including continued inflationary expectations. Maintained import and distribution monopolies also prevented competitive entry into the market. Consequently domestic fuel consumption remained low.

The low consumption, combined with the lower and declining real petroleum prices and the exemption of public users from excise duties, had significant effects on tax revenue. The real value of excise revenue from gasoline sales fell by 50 percent (on a due basis) in 1990, and by one third from diesel fuel sales. Most of decline occurred in the first half of the year when the fixed price system and rationing were in place.

**Policy Reforms**

The first serious reform efforts in fuel pricing and taxation took place in June 1991, while the economy was in the midst of profound transformation. The June 1991 reform consisted of the following five components: (a) equalization of household and public user prices and tax rates; (b) adoption of new excise duty rates of 35 percent for gasoline and 25 percent for diesel fuel; (c) partial liberalization of fuel prices by introducing a ceiling price to be periodically adjusted (initially monthly, then fortnightly); (d) adoption of a transparent and rule-based pricing formula linking the domestic price to the world market price and the exchange rate for the previous period, adjusted for transportation and insurance expenses, import duties and taxes, plus a fixed maximal retail margin and the excise duty; and (e) abolition of all rationing schemes and unification of the distribution chains for private users and public users.

Fuel prices doubled after the liberalization but, once the new pricing formula was in place, subsequent price adjustments were no more than 0.5 percent in either direction, and followed the usual seasonal pattern for gasoline and diesel fuel. Although there was a 25 percent import duty on petroleum fuels, the new levels of petroleum prices and the maximum—allowed retail margin of 8 percent, created incentives for imports (mostly high grade gasoline) by the private sector, and led to market saturation. Supply was normalized almost instantly. Further disruptions did not take place despite occasional problems with supply of crude oil to the local refineries due to financial problems and lack of credit.

The imports undermined the quasi—natural monopoly of the largest Bulgarian refinery "Neftochim" and the oil retailer "Petrol." Under the system of state allocations of currency for oil imports, these two state companies had been able to control the entire production and distribution chain, earning high profits. Their threatening to collapse the domestic fuel market was frequently and successfully used to force the government to provide confessional funding (especially to the refinery).

The partial price liberalization in June and the equalization of taxation thus transformed a previously monopolistic market into a competitive or contestable market, with relatively easy entry via gasoline imports. The market switched from previous chronic shortage to oversupply. This spurred intensive price competition at the wholesale level, and confronted the local monopolists with difficult marketing problems as the market share of domestic producers in the domestic market declined and their inventories increased.
Nonetheless, the intense competition on the wholesale level failed to translate into a benefit for consumers. Retail prices remained fixed at the upper ceiling despite the lower wholesale prices, because the state distributor Petrol maintained its monopoly. Some few private companies did manage to open independent gas stations but the impact on the market was negligible. Storage and transportation facilities remained under the control of Petrol, allowing it to control the national distribution system.

Complicated legal problems associated with the transfer of ownership of land and reluctance to privatize Petrol's gas stations also stood in the way of competitive fuel distribution. Market entry at the retail level was also hindered by the low retail margin, the 8 percent margin yielding an after−tax rate of return that was too low to warrant new investment in gas distribution. Large−scale investments by multinational companies which would have eliminated the state company's distribution monopoly were postponed for more than a year.

With the increase in supply prices, excise duties were decreased in order to prevent an excessive price increase; fuel prices would have tripled, had the previous rates been left in place. It should also be noted that the estimated inflationary push from the fuel price liberalization in June was 13–15 percent, and the authorities feared that a larger price increase might once again spur inflation which just had been brought under control. Inflation seemed to be by far a more important stabilization issue than the budget, which then was well in balance.

Inflationary pressures were not as great as anticipated by the government. Actual inflation following fuel price liberalization was slightly above 7 percent, half the expected rate. This, and the outcomes of the past unsuccessful attempts to use fuel prices as a nominal price anchor, suggests that fuel prices were not as important an inflationary factor as believed, and that inflationary expectations due to discretionary price changes and price controls were more inflationary than the magnitude of the price adjustments themselves.

**Liberalization and Tax Evasion**

Since the government was unable to adapt the administrative reporting and collection system for excise duties to the new supply conditions, collection of excise duties decreased significantly. The authorities could tax local producers, but not fuel imports, because of legislative loopholes and extremely weak customs administration. The weakness of the customs administration was a legacy of the past, as customs duties had not been considered appropriate regulatory instruments, and regulation of foreign trade took place through the state monopoly on foreign trade and foreign exchange allocation (chapter 10). Hence, at the outset of the reforms, there was no appropriate legal and institutional framework in place to handle trade under market conditions. The administration was also severely understaffed and underpaid, and was amenable to corruption. The situation improved in the second half of 1993 with the introduction of new regulations that restricted the scope for tax evasion.

Revenues were also decreased by underinvoicing at the wholesale level, which decreased excise revenues, as the excise rate is calculated on the basis of the invoice selling price. Also false exports took place, using to advantage the absence of excise duties on production for export.

A decision of Parliament in August 1991, which exempted students, sport cooperatives, and non−profit foundations from excise and import duties, further created extensive opportunities for massive fraud. The decision as formulated was meant to allow for accumulation of funds by these organizations, by their retaining taxes and duties. However, the consequence was unfair price competition. As is to be expected, almost all imports were re−routed through organizations with tax−free status. Although the situation was well understood, no action was taken until July 1992, partly because of the cumbersome legislative procedure, partly because of lobbying by the beneficiaries of the system.
Most affected by the competition from tax–free supply sources were the local producers and official state–owned importers. The old tax administration system was specially set up to control them, and they had to pay the full amount of the taxes and duties due. This was one of the most important factors in the sharp decline in their market share, as they could not match the prices of the tax–free importers. It took a prolonged strike in the summer of 1992 by the Neftochim refinery for Parliament to reverse its previous decision and abolish the tax–free status of student, sports, and other non–profit organizations. This raises the question as to why Parliament required this stimulus to eliminate the tax–exempt status that was not being used as officially intended to subsidize non–profit organizations, but to provide tax–free supply that compromised state supply and deprived the budget of revenue; and why this method should have been chosen as a means of subsidizing students, sportsmen, etc, in the first place.

**Further Revenue Erosion**

The new price formula linking domestic and international prices maintained stable nominal fuel prices during 1991 and 1992. In real terms, however, fuel prices declined dramatically against a background of high inflation, continuing relative price adjustments, and an unusually stable exchange rate. The nominal price of gasoline and diesel oil did not change significantly between June 1991 and February 1993, with very small adjustments taking place due to seasonal factors. In February 1993, the last month before the increase in excise taxes, the real price of gasoline had declined to approximately a third relative to June 1991 measured against the overall price index, and by some 80 percent when measured against the wage index. For diesel fuel, the declines were 60 percent and 49 percent respectively. Even when compared to 1989, fuel prices had declined in real terms: the real price of gasoline in February 1993 was 42 percent that of 1989 measured against the CPI, and 75 percent of the of the 1989 level measured against the wage index. Diesel fuel was also cheaper than in 1989.5

Excises including fuel taxes could have provided substitute government revenue as profits and turnover tax revenue plummeted (see chapter 3), given low price elasticities and the relative simplicity of collection and administration (smuggling and other border improprieties aside). The nominal stability of fuel prices in the period June 1991 to February 1993 in a highly inflationary environment however eroded the real value of excise revenues. As shown in table 9.1, compared to 1988, estimated fuel–tax revenue due declined by 40 percent by 1991, and 96 percent by 1992. For gasoline, which accounted for two–thirds of all fuel tax revenue in 1988, the decline was even greater.

Actual tax collection was, for the reasons outlined above, considerably lower than the above numbers. Estimates indicate that actual tax collection was no more than half of duties due.

The decline in real excise revenue cannot be attributed solely to the decline in consumption. The share of fuel taxes payable to GDP, which had itself decreased as the consequence of the sizeable contraction of the economy, declined in 1992 to 3.2 percent, compared to 3.8 percent in 1988, 4.0 percent in 1989, 4.6 percent in 1990, and 3.5 percent in 1991. If the poor collection rate is taken into account, the share of fuel taxes in GDP declined by half. For gasoline, the decline is even larger, from 2.3 percent in 1988 and 3.9 percent in 1990, to 1.6 percent in 1992 on a due basis, and an estimated 0.9 percent on a cash basis.

Aside from high inflation, excise revenues were reduced by the sharp reduction in effective excise duty rates. The weighted average effective excise rate declined from 61.3 percent in 1988 and 59.1 percent in 1990 to 30.7 percent in 1991 and 29.2 percent in 1992. These excise rates were approximately one–third of comparable taxes in the rest of Europe.
It had become apparent in the second half of 1991 that the budgetary situation was deteriorating, and that action should be taken to make up for the large declines in direct tax revenue, especially since it was evident that a new tax system could not be implemented before the beginning of 1993, even under the most optimistic legislative progression through Parliament. Revenues could have been available from excises on fuel. This was a ready, not politically controversial, means of raising revenue, with minimal impact on macroeconomic stability. If done in steps, by small increments and based on a transparent and pre-announced rule and schedule, this would not have been inflationary. However, for political reasons, such changes were delayed until February 1993.

From a macroeconomic perspective, the stability of fuel prices failed to maintain overall price stability, but indirectly became one of the important factors behind the rise in inflation in the fourth quarter of 1992 and the widening of the fiscal gap. The low and declining real fuel prices were also detrimental in structural terms. The low prices did not encourage improvement in energy-usage efficiency, while low retail margins discouraged market entry and long-term investment in fuel distribution, thereby effectively strengthening the state enterprise Petrol’s monopoly. Last but not least, the low fuel prices in Bulgaria compared to neighboring countries were an incentive for smuggling and large scale illegal exports abroad. These illegal exports supplemented the outflow of low-priced, low-taxed fuels by foreign and Bulgarian "tourists." The effect was to subsidize foreign consumption at the expense of government revenue.

Table 9.1: Comparison of Prices and Taxation of Fuel in Bulgaria and Established Market Economies, 1993

<table>
<thead>
<tr>
<th></th>
<th>Price ($/Liter)</th>
<th>Excise Duty (%</th>
<th>Value Added Tax ($/Liter)</th>
<th>Total Taxes ($/Liter)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gasoline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0.412</td>
<td>0.206</td>
<td>0.000</td>
<td>0.206</td>
</tr>
<tr>
<td>France</td>
<td>1.126</td>
<td>0.674</td>
<td>0.209</td>
<td>0.883</td>
</tr>
<tr>
<td>Germany</td>
<td>1.072</td>
<td>0.654</td>
<td>0.150</td>
<td>0.804</td>
</tr>
<tr>
<td>Italy</td>
<td>1.379</td>
<td>0.848</td>
<td>0.262</td>
<td>1.110</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>1.229</td>
<td>0.725</td>
<td>0.227</td>
<td>0.952</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.978</td>
<td>0.550</td>
<td>0.171</td>
<td>0.721</td>
</tr>
<tr>
<td><strong>Diesel Fuel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0.270</td>
<td>0.094</td>
<td>0.000</td>
<td>0.094</td>
</tr>
<tr>
<td>France</td>
<td>0.747</td>
<td>0.351</td>
<td>0.139</td>
<td>0.490</td>
</tr>
<tr>
<td>Germany</td>
<td>0.738</td>
<td>0.389</td>
<td>0.103</td>
<td>0.492</td>
</tr>
<tr>
<td>Italy</td>
<td>1.026</td>
<td>0.581</td>
<td>0.195</td>
<td>0.776</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>0.689</td>
<td>0.305</td>
<td>0.127</td>
<td>0.432</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.875</td>
<td>0.452</td>
<td>0.153</td>
<td>0.605</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance, Shell Bulgaria, Ltd. and World Bank Staff estimates.
At the same time, extremely poor customs and tax administration and legislative loopholes facilitated massive tax evasion. And even where tax evasion was detected, the legal and administrative framework did not allow for effective prosecution, and the penalties, not updated for years, were negligible. Thus, for example, in the first quarter of 1993, actual excise tax collection was less than 15 percent of the value projected.

In an attempt to increase revenue, the authorities raised excise duties on gasoline in February 1993. Since this required parliamentary approval, the government repealed its 1991 decision to lower excise rates, and reinstated the previous excise rates (50 percent for gasoline and 35 percent for diesel fuel) and also raised by 50 percent the retail margin ceiling. Gasoline prices increased by 45 percent and diesel prices by 20 percent. The measures raised the effective average excise rate for 1993 to 41.3 percent, but both the price level and the excise tax rate continued to be extremely low by European standards. Nonetheless, the measures were controversial with the public.

In August 1993 Parliament restructured the excise system by increasing the rate for high-grade gasoline by 10 percent and reducing it by 5 percent for lead-free gasoline. In response to the new relative prices, consumers shifted to lead-free gasoline, which marginally increased the average effective excise rate. At the same time the government undertook a number of steps to improve the customs regime and duty collection. Importers were obliged to pay duties and indirect taxes (including VAT and excises) at the border rather than the point of sale, which significantly reduced the scope for tax evasion.\textsuperscript{7} The revenue response was significant. Revenue from fuel taxes (on a due basis) increased by over 50 percent in real terms compared to 1992 (but still remained about half of 1988 revenue). The share of fuel–tax revenue in GDP increased from 2.6 percent to 4.5 percent, and the share in total budgetary revenue from 8.8 percent to 12.0 percent.

The depreciation of the lev in October 1993 increased nominal fuel prices, but preserved real values. The modest increase in consumption of fuels in 1993 and 1994 contributed to the increase in tax revenues. The effect of the introduction of the VAT seems to have been ambiguous: on one hand, fuel prices increased by about 7 percent and enforcement was improved, but on the other hand the VAT reduced the effective tax rate for industrial users (about two-thirds of total consumption) who were entitled to tax credits.

\textbf{Revenue Potential from Appropriate Policies}

At the end of 1994 Bulgaria was in the situation of being able to increase fuel taxes and still retain a level of taxes and fuel prices well below neighboring countries. The low taxes did not stimulate energy conservation and savings, and did not provide incentives for substitution towards less expensive and ecologically cleaner fuels. Furthermore, the dynamics of inflation and the exchange rate, at least in the short run, made it highly probable that nominal fuel prices would increase at near the domestic inflation rate, thus progressively reducing the real value of excise revenues. The pricing mechanism had proven its efficiency as a non-political and transparent way to set fuel prices. By contrast, semi-liberalized prices were around the estimated equilibrium level, so that full liberalization would not substantially increase prices and tax revenues; on the contrary, greater competition could reduce retail prices.

This implies that fuel taxation remained a readily available instrument to increase tax revenues. However, the necessary legislation required an act of Parliament whenever the tax rate was changed, which was complex and time consuming.\textsuperscript{8} Legislation on fuel taxation should be changed to allow government flexibility in adjusting the excise rates. One approach would be to specify by law the minimal excise harmonized with the VAT (about 60 percent for gasoline and 45 percent for diesel), plus a special surcharge within some limits to be determined by the government. The maximum level of the surcharge could be set each year with the budget law according to expected macroeconomic developments.
In order for such measures to be credible and transparent, the government should not be allowed to change tax rates at its own discretion. A specific set of rules should be established specifying how often, under which conditions, and by how much the government will be permitted to change the surcharge. The frequency of the changes could be limited to monthly or quarterly, depending on inflation, to be triggered by some threshold condition (as for example a decline of real value of the tax per liter collected by more than 5 percent compared to the same period in the previous year).

Such a scheme is feasible during transition. It could be put into effect until inflation declines to an acceptable level, revenue declines bottom out, and pressures on the budget are reduced. Subsequently, the fuel tax system could be gradually adjusted in order to attain European price and taxation levels or at least levels similar to neighboring countries. The revenue potential is considerable. An increase of excise duties of 5 percent would have yielded additional government revenue equal to approximately 10 percent of the 1993 estimated budget deficit or about 1.6 percent of GDP. The inflationary impact would have been negligible: an increase in fuel prices by less than 15 percent and the indirect inflationary impact would be less than one percent on an annual basis.

As these policy possibilities show, fuel taxes are an important and flexible instrument for countering the structural revenue shortfall in the transition. A prime lesson from the Bulgarian experience is however that the design and implementation of fuel taxes, and adaption to a market environment, is important in the early transition because of the revenue potential amidst the transitional revenue crisis. That is, this tax base should be established early in the transition and not, as in Bulgaria, later when the budget crisis erupts.

Notes

1. Gasoline and diesel fuel accounted for between 12 to 15 percent of hard-currency exports. Although a net importer of crude oil, Bulgaria benefited in years of high petroleum prices (1983–1985), when the estimated net gain from the supply of cheap Soviet oil was some US$5 billion per annum or around 20 percent of GDP.

2. This was the case in 1990 when the end of the CMEA and the Gulf War led to acute shortages of oil and caused prices to rise. The government increased prices both for households and the public sector but, as the excise tax for public users was eliminated, the price for public users was maintained at some 30 percent of that for households.

3. Under the then existing arrangements, a substantial portion of Soviet deliveries was made by Iraq against its obligations to the USSR. With the introduction of the UN embargo on Iraq, these deliveries were discontinued, but with no compensation from the USSR, which itself experienced significant energy shortages.

4. Inflation in May 1992 was less than half that projected. While there are no reliable estimates of the share of fuels in GDP, their share in gross domestic sales is in the range of 9–12 percent (7–10 percent for gasoline and diesel alone). Estimates of the National Price Commission from February 1993, based on the 1991 input–output table, suggested a 4.1 percent additional increase in the CPI from a 35 percent increase in petroleum prices. The actual response was less than 1 percent.
5. Methodologically, the new pricing formula was appropriate in linking domestic prices to the variables determining opportunity costs (and not actual processing costs). It was not however administrative intervention but market forces which caused the real erosion of fuel prices, and thereby excise revenues, that is, the decline in crude oil prices after the end of the Gulf War, combined with the unusual stability of the nominal exchange rate. This could not be corrected by simply switching from an ad−valorem to a specific excise rate, but required a change in the link via the price formula to domestic inflation.

6. The impact of fiscal imbalances on inflation is more important than an alleged positive effect of stable fuel prices. There is no statistically significant link between fuel prices and general inflation: periods with stable or declining petroleum prices (most of 1991 and 1992, the second half of 1993) did not result in lower inflation at the wholesale or retail level. Similarly, fuel price adjustments did not significantly spur inflation. At the same time, the increasing budget deficit in late 1992 and 1993 (13 percent of GDP) resulted in higher inflation, despite the deflationary impact of the stable exchange rate, declining real wages, and lower commodity prices (see World Bank 1994).

7. Total excise collection from state enterprises (both Bulgarian refineries included) measured by the ratio of the paid to accrued taxes, increased from about 43 percent in the first half of 1992 to over 80 percent in the second half of the year. After the introduction of the new tax collection system on imports, the excise arrears of state enterprises decreased from 2.1 billion leva at the end of June to 0.5 billion leva by the end of December 1993, and stabilized at this level throughout the first half of 1994.

8. The legislative process in Bulgaria is complicated and lengthy. It usually takes at least six months for a law to be adopted and promulgated. Because of the backlog of legislation to be passed, the time required might exceed a year.

References


10—

International Trade and Budget Revenue

George Fane

Taxes on international trade are easier to administer and collect than taxes on domestic market transactions, and have accordingly been an important source of revenue in the early stages of the development of most market
Trade taxes have, however, two disadvantages: first, taxing trade results in forgoing some of the potential gains from trade; second, since import tariffs are equivalent to consumption taxes and production subsidies, less revenue is raised by taxing imports than by taxing consumption at the same rate, because revenue is used up in implicit subsidies to domestic production. As countries develop more sophisticated tax systems, administrative simplicity becomes less crucial relative to these two disadvantages. Consequently, more developed countries tend to rely less on trade taxes for revenue purposes than do developing countries.

In contrast to market economies, socialist economies made relatively little use of trade taxes. The principal tax base was profits of state−owned enterprises (chapter 3). A former socialist economy in the transition confronts a difficult choice: should an effort be made to start generating substantial revenues from trade taxes, or should the trade−based stage of tax development be omitted by immediately setting up a system based on taxing consumption and income?

This chapter investigates these questions in the context of the budgetary problems which the Bulgarian government faced during the transition from socialism towards a market−based system. It summarizes the revenue role of trade taxes and the potential revenue contributions of non−tariff barriers (NTBs) both before and after the collapse of the communist system in 1989, and considers whether a precarious budgetary situation provides a justification for taxing international trade. The first section begins with a consideration of the non−tax controls on trade in the form of rationing of foreign exchange, minimum export prices, and quotas on both imports and exports which operated in Bulgaria during the early stages of transition. The second section surveys explicit taxes on trade: tariffs, import surcharges, export taxes, and duty drawbacks and exemptions for exporters. The revenue raised by trade taxes is considered in the third section and conclusions are summarized in the final section.

Non−tax Controls on International Trade

Direct Controls and Multiple Exchange Rates, 1989−1991

Before the abolition of the Council for Mutual Economic Assistance (CMEA), most of Bulgaria's foreign trade was negotiated on a bilateral, government−to−government basis, and then carried out by the state−owned foreign trading organizations (FTOs). The Bulgarian government implemented its commitments under bilateral agreements by means of mandatory state orders, that is, government purchase orders on state enterprises (see Schrenk 1992; Hillman and Schnycter 1992). As long as trade was directly controlled by the government's central planning apparatus, no purpose would have been served by the kinds of import and export licensing systems which are often used to protect favored sectors in market economies (see Hillman, 1989). In the period between the implementation of Decree 56 of 1989, which abolished the system of state orders and marked the demise of central planning, and the liberalization of foreign exchange controls in February 1991, trade was regulated by the rationing of foreign exchange, supplemented by NTBs in the form of both licensing and quotas. I propose at the end of this sub−section that Bulgaria's system of multiple exchange rates protected the industrial sector and implicitly taxed the agricultural sector, and I will show that this policy bias remained after the liberalization of exchange controls. This direction of bias in Bulgaria's trade policies is in part a legacy of the communist era and makes Bulgaria's policies more closely resemble those of most developing countries rather than most industrialized countries.
During 1989 the official exchange rate averaged 0.84 leva per dollar. Only a small proportion of imports could however be bought at this rate: and even at the "commercial rate", which averaged 1.82 leva per dollar in 1989, supply was tightly rationed as the lev became increasingly overvalued. In May 1990 the lev was devalued and a new multiple exchange rate system was introduced for payments to convertible currency areas. Using the foreign exchange surrendered to it by exporters, the Bulgarian Foreign Trade Bank (BFTB) supplied importers at exchange rates which depended on the goods to be imported. Importers of a few "essential" items, which were sold at controlled prices, were provided with foreign exchange at a basic rate which the BFTB set at 2.97 leva per dollar in June 1990. Among the items which could be imported at the basic rate were bread yeast, fertilizers and pesticides, medicines and inputs into medicines and baby foods. The next most favorable rate for importers was the "market rate," which was determined at monthly auctions at which only firms planning to import eligible items, such as raw materials and certain other priority products, were permitted to bid up to a limit of $300,000 per firm. In June 1990 the market rate was 7.06 leva per dollar. Between auctions the BFTB supplied tightly rationed amounts of foreign exchange to approved importers of eligible items at the market rate determined at the preceding auction. In addition, the BFTB set a cash rate slightly above the market rate, which was available for a small range of transactions, such as personal travel abroad. In June 1990 the cash rate was 7.17 leva to the dollar. Most exporters were allowed to retain half their export earnings, net of expenditure on imported inputs; however, for some large exporters the allowed retention proportion was smaller. Retained export earnings could be held in dollar-denominated accounts at Bulgarian banks; or sold at the company auctions described below; or, subject to approval by the BFTB, used to finance imports which were ineligible under the BFTB's restrictions on the use of foreign exchange bought at the monthly auctions. There were also "company auctions" at which the foreign exchange which exporters had been allowed to retain could be directly sold to finance imports for which licenses could be obtained, even though the imports were not eligible for foreign exchange at any of the three rates directly administered by the BFTB.

In principle, a system of multiple exchange rates is equivalent to a unified exchange rate, together with a system of import tariffs and export taxes. Relative to the average exchange rate received by exporters, imports at the basic rate were heavily subsidized, while those at the market rate and the company rate were taxed. It is impossible to give precise estimates of these implicit tax and subsidy rates, because the rules on export retentions were complex and varied among firms, and because the implicit rates changed whenever the rates at the market and company auctions changed. Nevertheless, it is clear that the rates of these implicit taxes and subsidies were large in comparison with the explicit rates of tariffs: in the period 1986–90, the average annual revenue from customs duties was only 260 million leva, whereas the average annual revenue from trade–related non–tax revenue was 1.589 million leva, and the average annual cost to the budget of trade related subsidies was 1,950 million leva (World Bank 1990, p. 157).

Bulgaria's system of multiple exchange rates preserved several important features of the former system of managed trade: first, it subsidized the inputs of the industrial sector, and the consumption of food, and fuels (see chapter 8); second, it imposed heavy taxes on imports which competed with the outputs of the industrial sector; third, these taxes and subsidies were not at explicitly legislated rates; and fourth, the off–budget implicit subsidies to the industrial sector used up most of the potential revenue from the implicit taxes on the agricultural sector.


Exchange controls on current account transactions were largely removed in February 1991, when the government adopted a managed flexible exchange rate sys–
tem, with a single market rate. By January 1992 the exchange rate had depreciated to 24.8 leva per dollar. The range of transactions which could be financed with foreign exchange bought at the market rate was expanded to include all imports, and exporters were allowed either to sell all their hard currency receipts in the spot market, or to retain these receipts in accounts denominated in hard currencies at Bulgarian banks. Capital controls still made it illegal for exporters to retain their earnings abroad, and transfers of capital abroad required the special approval of the National Bank of Bulgaria (NBB), which was not normally granted. These residual restrictions on foreign exchange transactions resulted in the survival of a black market; however, both the premium over the rate available at banks and the volume of transactions in this market appeared to have decreased considerably by 1992.

Soon after the exchange control system was liberalized, the government enacted trade decree 119, of July 1991, which revamped the system of NTBs and imposed a 15 percent surcharge on most imports of consumer goods. Effective as of July 1992, the coverage of import NTBs was somewhat expanded, and that of export NTBs reduced by the introduction of a new trade decree 114 of 1992. Under this new decree quantitative restrictions could take the form of either "quotas" or "ceilings." The quotas and ceilings imposed by the Bulgarian government by Decree 114 are referred to here as "domestic," in contrast to the "external" quotas on Bulgarian exports which resulted from the restrictive policies of Bulgaria's trading partners.

The domestically imposed export quotas and bans which were introduced by Decree 56 of 1989, and were then revised by the trade decrees of 1991 and 1992, were mainly used to restrict exports of raw materials and some items of basic food and clothing. Their effect was therefore to protect the industrial sector by holding down the domestic prices of its raw materials and of some of the foods and fuels consumed by the urban work force.

In addition to these export quotas and ceilings, Decree 114 of 1992 imposed quantitative restrictions on imports of tobacco, ice-cream, and some fruits and vegetables. Most of the imports and exports which were subject to licensing under the trade decrees of 1991 and 1992 were potentially dangerous, socially sensitive, or harmful. The NTBs on this subset of items, together with the ban on exporting items received as humanitarian aid, are described here as "non-economic" NTBs, in contrast to all other NTBs, which are classified here as "economic" NTBs.

**The Potential Revenue from NTBs**

The main types of NTBs in the immediate post-communist period were quotas and ceilings allocated on a first-come, first-served basis; quotas and ceilings allocated on the basis of past export performance; quotas allocated on the basis of contract price; and export check-prices. This sub-section analyzes the implicit taxes and subsidies which correspond to each of these NTBs.

Both government revenue and allocative efficiency could be increased by replacing export check prices by export taxes; by auctioning the quotas imposed by Bulgaria's trading partners; and by auctioning the quotas imposed by Bulgaria, or by replacing them with import tariffs or export taxes. The two main arguments for auctioning quotas are that this (a) ensures that they are used by the firms which value them most highly and (b) revenue is raised for the government. The inefficiencies induced by the other quota allocation methods in Bulgaria are analyzed later in this sub-section.

Under Decrees 119 of 1991 and 114 of 1992, the Ministry of Trade's stated criterion for allocating the entitlements to export items subject to domestic export quotas and ceilings was "first come, first served." Without explicit rules to restrict lodging applications far in advance, or to set queuing criteria, this allocation system created difficult administrative problems, and dissipated potential export tax revenue in rents that encouraged wasteful rent-seeking activity (see Shmuel Nitzan 1994 for a survey of these types of activities).
In September 1992 the problems of allocating export quotas imposed by Bulgaria were largely resolved by abolishing all the quotas and ceilings imposed on exports for "economic" reasons, except one, which was converted into a ban.\textsuperscript{10} Some of the quantitative restrictions on exports were replaced by export taxes, at rates ranging from 5 to 30 percent; others were abolished without introducing any compensating export tax.

The main criteria used for allocating externally imposed export quotas before September 1992 were contract prices and "past export performance."\textsuperscript{11} Resale of quotas was not permitted, although it is a way of ensuring that quotas are used by the firms able to make best use of them. For example, if resale were permitted, a firm with quotas whose buyer went bankrupt, or whose production was unexpectedly curtailed, could always sell quotas on the secondary market if another firm could use them more efficiently.

One of the disadvantages of allocating quotas on the basis of contract prices was that these prices could be inflated by false invoicing and side-deals. Alternatively, to the extent that genuine prices could be accurately monitored, the system created a bias away from exports of items in which Bulgaria's potential profits per unit at the margin were greatest and towards items with higher prices, but also higher marginal costs of production. In addition, the system placed an unnecessary bureaucratic hurdle in the way of exporters: foreign buyers wanted to be sure that the Bulgarian supplier would be able to obtain quotas before entering into a contract, but the Bulgarian exporter had to show the contract to the Ministry of Trade as a condition for receiving a quota.

The allocation of quotas on the basis of past export performance provided firms with an implicit subsidy to export items which were not subject to quotas, but to which quotas were expected to be eventually applied. As a result, it was privately profitable for firms to enter such export markets to preempt the awarding of quotas to other firms, even though such early entry would otherwise have been unprofitable. Since resale of quotas was illegal under Decree 119 of 1991, quota allocation on the basis of past performance tended to ossify the structure of domestic industry by preventing new entrants from competing with established exporters. In an attempt to solve this problem by bureaucratic means, the ordinances made under Decree 119 allowed the Ministry of Trade to allocate up to 25 percent of textile quotas to firms exporting for the first time. A market–based solution was adopted in the trade reform package of September 1992, which provided for the auctioning of the externally imposed quotas on exports of meat. The system for auctioning export quotas which was adopted in Bulgaria is not difficult to administer since it is similar to the systems for auctioning treasury bills which are used by central banks around the world. The administrative feasibility of using auctions to allocate trade quotas has also been demonstrated by the experience of Singapore, Australia, New Zealand and Colombia.\textsuperscript{12}

Decree 114 of 1992 set minimum prices on exports of cattle, meat, cheese, wool, firewood, and striped sunflower seeds. Two reasons for setting minimum export prices were suggested by Bulgarian trade officials: first, it was claimed to be a way of discouraging exporters from spoiling markets in which Bulgaria may have some market power, such as kashkaval and some other Bulgarian cheeses. Second, for some products, for example, poultry, the European Union (EU) would impose a special anti–dumping levy on all Bulgarian exporters if any one Bulgarian firm were found to be selling at less than trigger price determined by the EU.

To the very limited extent that Bulgaria may have market power for products such as kashkaval, there is a strong case for preferring an export tax to a minimum export price. Either the minimum export price can be circumvented by false invoicing so that the restriction on trade, optimal for Bulgaria, is not binding; or the revenue which could have been raised by the export tax is simply returned to the foreign purchaser. To the extent that the minimum export price controls cannot simply be circumvented by false invoicing, the price to exporters is above marginal cost, and the potential revenue from the optimal export tax revenue is likely to be dissipated in wasteful competition among domestic producers. One form which this competition can take is new entry, which will tend to drive down the world price of the relevant products, undoing the purpose of the control. For all these reasons minimum export prices probably do not make any significant contribution to capturing the market power...
which Bulgaria may have in particular export markets.

In cases in which minimum export prices are used to prevent any one exporter from triggering anti–dumping actions against all other Bulgarian exporters, it is important to ensure that Bulgaria's minimum export prices are country–specific and that each matches the trigger–price used by the anti–dumping agencies in that country. And even in these cases, it is desirable that export taxes be used to absorb the margin between marginal cost and the export price, so as to prevent wasteful competition among exporters for the right to export. In fact, the minimum export prices have applied uniformly to all exports of the products specified: they were not revised regularly enough to match the changes in the trigger–prices used by the EU.

Tariffs, Import Surcharges and Export Taxes

The Tariff Schedule

Because protection for industry against competitive imports was provided by the planning mechanism of the CMEA rather than by means of protective tariffs,

Bulgaria's tariff schedule was largely irrelevant during the communist period and tariff rates remained low and relatively undispersed. As long as Bulgaria was not a member of GATT, it could ignore the most favored nation (MFN) principle and define separate tariff schedules for each of four categories of countries. These categories were: (a) developing countries whose imports were not subject to duties and which allowed duty–free access to Bulgarian goods, (b) all other developing countries, (c) industrial countries which gave Bulgaria most–favored–nation (MFN) status, and (d) other market developed economies (MDCs). CMEA countries were treated as the first category of countries, and provided that they did not impose duties on their imports from Bulgaria, no Bulgarian duties were levied on their exports to Bulgaria. In quantitative terms, category (a) (plus the CMEA) was the most important: in 1989, 53 percent of all imports came from socialist countries and 15 percent from non–socialist developing countries, and most of these imports would have entered free of duty (World Bank 1990: 147). The next most important category was (c), since the only important MDC which did not grant Bulgaria MFN status was the US, and Bulgarian imports from the US were only a small part of its total imports from all MDCs.

In 1991 the tariff schedule was converted, with only minor changes in the rates of duty, from the old Cooperative Customs Council nomenclature (CCCN) basis to the new harmonized system (HS). Columns 1, 2, and 3 of table 10.1 summarize the main features of the 1991 HS tariff schedule.

The tariff reform of 1992 introduced a new and simpler tariff schedule which became effective on July 1, 1992. The new schedule had only five tariff bands (5, 10, 15, 25 and 40 percent) and the above four categories of countries were aggregated into two: those which grant preferential duties to Bulgarian imports and those which do not. Column 4 of table 10.1 gives summary data for the latter group of countries. The abolition of the CMEA at the beginning of 1991 made the rates for countries granting preferential access to Bulgarian goods temporarily unimportant, but these rates were scheduled to apply to imports from the EU once Bulgaria became an associate member. Relative to the four groupings of countries which were distinguished under the former tariff, the 1992 tariff schedule represents a move towards the MFN principle consistent with Bulgaria's accession to GATT.

Since there are no detailed import statistics which are classified according to these country groupings, it is impossible to make precise and unambiguous comparisons between the average level and dispersion of all tariffs before and after the 1992 tariff reform. A useful first step in judging this reform is to compare column 2 in table 10.1, which refers to the pre–1992 rates for MDCs which granted Bulgaria MFN status (see category c), with column 4 in table 10.1, which refers to the post–1992 rates for all countries which did not grant Bulgaria preferential duties. On this basis, the reform increased the average tariff from 9 to 18 percent, while leaving the
unweighted standard deviation of percentage tariff rates more or less constant at just under 10 percent. Since this comparison does not take account of the reduction in dispersion due to collapsing the former four country groupings to two, it is likely that the reform reduced the already low dispersion of the tariff schedule for all imports. However, the increase in the average tariff for all imports was larger than the above comparison implies, since imports from most socialist and developing countries entered free−of−duty before 1992.

Table 10.1 shows that the unweighted average tariff on agricultural products under the 1992 schedule for countries not granting preferences to Bulgarian exporters (19 percent) was actually very slightly above that for manufactured items (18 percent). Nevertheless, the overall bias of trade policy is to protect the manufacturing sector at the expense of most forms of agriculture. There are five factors which together establish this overall bias, despite the apparent evidence to the contrary provided by the average tariff rates. First, since many agricultural goods are primarily export competing, duties on imports are often of limited protective significance. Second, export taxes apply mainly to primary products, such as hides and skins, grapes, and timber. Third, on balance, NTBs assist the industrial sector, relative to agriculture, by restricting exports of primary products, many of which are inputs into industrial production. Fourth, the average tariff rate on all manufactures understates the effective rate of protection to local manufac−

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</tr>
<tr>
<td>Capital goods</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>14</td>
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</tbody>
</table>
Whole economy:

mean 6 9 28 18
standard deviation 4 8 27 9


Notes: a. The three columns for the 1991 tariff schedule are defined as follows:

LDCs= Category II, i.e., less-developed countries which did not grant duty-free access to Bulgarian imports: MFN= Category III, i.e, industrialized countries which granted Bulgaria MFN status; Other= Category IV, i.e., other industrialized countries. In 1991 the duties on imports from members of the CMEA and Category I countries, that is, developing countries which granted duty-free access to Bulgarian products were zero. The rates in the 1992 column are for what is referred to in the new Tariff Code as 'Column 2 countries', i.e., all countries which do not give preferential access to Bulgarian products. The data in the table exclude the additional import tax and do not take account of the temporary exemptions from customs duties for some goods and temporary minimum customs duties for others provided by Annexes 6 and 7 of Decree 114 of 1992.

Import Surcharges

In February 1991 an additional import tax, or tariff surcharge, at 15 percent ad valorem, was imposed on most consumer goods. Decree 114 raised the maximum rate of this tax to 25 percent, but greatly reduced its coverage to only some frozen meats and a few luxury items. This coverage was so narrow that the tax only added 0.14 percentage points (Cuthbertson, Fane and Pearce 1992: 24) to the unweighted economy-wide average tariff, not enough to affect the estimates in table 10.1, which exclude it and are shown to the nearest whole percent. However, the additional import tax was a substantial part of the total import tax on the narrow range of items to which it applied, raising the average total import tax on these items from 29 to 42 percent. In late 1992, the base of the import surcharge was broadened and the rate set at 3 percent for 1993, to fall to 2 percent in 1994 and then 1 percent in 1995, after which the surcharge was scheduled to end.

Export Taxes and Duty Drawbacks for Exporters

In February 1991 export taxes were imposed at 20 percent on twenty-six items, most of which were industrial raw materials and clothing. The Customs Department collected so little revenue from these taxes that they were abolished in July 1991. Export taxes were reintroduced in September 1992 when some of the former export quantitative restrictions were replaced by export taxes, at rates ranging from 5 to 30 percent.

A temporary admission regime exempted imports from both customs duties and the additional import tax if goods were to be re-exported or used as inputs into exports. The main users of this system were firms in the electronics and textile sectors. In principle, indirect exporters were entitled to duty exemptions under the temporary admission regime. In practice, the administrative procedures for indirect exporters were unworkable because the appropriate regulations and ordinances did not exist. There were, therefore, substantial incentives for firms whose inputs are imported and then domestically processed, to locate in one of the free trade zones (FTZs).
also existed in the Customs Law for the rebating of import duty on inputs used by exporters, but because of the absence of regulatory administration, the scheme was never used in practice.

The Revenue from Trade Taxes

The revenue from import taxes in the 1980s was usually of the order of only one percent of the revenue from all taxes and also only one percent of total imports of goods and non−factor services. As a proportion of GDP the revenue from import taxes in the 1980s was between 0.4 percent and 0.8 percent. In addition to the low rates of most tariffs on imports from countries in categories (c) and (d), the amount of revenue raised by the tariff in the period before 1989 was low also because imports from most socialist countries and some developing countries were exempt from tariffs. Another factor was that no customs duty was payable if the cost of an imported product, inclusive of customs duties and turnover tax, would have exceeded the government−controlled price at which the product was supposed to be sold on the domestic market (Word Bank 1990:24). Finally, according to officials in the Customs Department, duties were regularly avoided even on items which were nominally dutiable, since there was no requirement that duties be paid before goods were cleared from customs. In part, the non−payment of customs duties was tolerated because it was felt that the revenue lost by the government in this way would be recouped in higher profits for its own trading companies. This anomaly was ended in 1992.

It was previously noted that, in the 1980s, the magnitudes of trade related non−tax revenues and subsidies were very much larger than the revenue from customs duties. The two main sources of trade−related non−tax revenues and subsidies were "coefficient differences" and "price equalization". The BFTB's purchases and sales of foreign exchange in its dealings with state−owned enterprises were conducted mostly at the commercial exchange rate, but the BFTB valued foreign exchange for accounting purposes at the official exchange rate, which was usually half the commercial rate during the late 1980s. The revenue derived from coefficient differences can be thought of as the revenue from the implicit import duties, net of the cost of the implicit export subsidies, which, when expressed relative to the official exchange rate, would have produced the same prices of foreign exchange to importers and exporters as they actually paid and received under the multiple exchange rate system. When state enterprises imported at the commercial rate, the difference between the commercial rate and the official rate was recorded as a credit item in the government budget; similarly, when a firm received the commercial rate on an export sale, the difference between the value of the foreign exchange at the two rates showed up as a debit item in the budget. The net amount of all such transactions was recorded in the budget as revenue from "coefficient differences".

The revenues and expenditures from price equalization arose in CMEA trade because Bulgaria's controlled domestic prices generally differed from those of other CMEA countries, when converted at the commercial exchange rate. If the price in leva received by a state enterprise for an export sale was above (or below) the Bulgarian domestic price, the government collected the difference as a non−tax revenue (or paid it out as a non−tax subsidy). Analogous price equalization revenues, or outgoings, resulted from import sales.16

The revenue from trade taxes as a proportion of imports increased throughout the 1980s: 1992 customs duties were approximately 2 percent of GDP and 3.6 percent of the value of total imports (see table 10.2). Although this is much higher than in the 1980s, it is still very low in comparison with most market economies. Tanzi (1987) presents data on tax revenues relative to GDP for eighty−six developing countries in 1981. His data set did not include any eastern European countries, but it is interesting to compare Bulgaria with countries in this data set with comparable levels of per capita income; that is, with those which had per capita incomes in the range $850−$1699 (in 1981 prices). For these countries, all trade taxes averaged 5.3 percent of GDP, while import duties averaged 4.4 percent of GDP, 14 percent of imports and 24 percent of total tax revenue (Tanzi 1987:216, 232). These proportions are between two and a half and four times as large as the corresponding proportions in Bulgaria in 1992 and about ten times as large as the corresponding proportions in Bulgaria in the 1980s. These differences
between the Bulgarian tax system and those typical of market economies with similar per capita income levels is another legacy of communism: the reasons for the relative unimportance of trade taxes under communism have already been briefly noted in this chapter.

The increase between 1991 and 1992 in the ratio of revenue from customs duties to total imports is too large to be explained by the increase in average rates in 1992; besides, tariff rates had remained roughly constant for many years before 1992, whereas the data in table 10.2 show that the ratio of revenue to total imports increased substantially during the 1980s. Rather, the increase in customs duties came about partly because a higher proportion of the duties nominally due are actually collected, and partly because of the change in the regional composition of Bulgaria's trade: the decline in the share in the total of imports from socialist countries on which no duty was levied has increased the ratio of customs duties to total imports. Particularly since 1990, imports have grown much more rapidly than total tax revenue; the proportion of customs duties in total tax revenue has therefore increased even more rapidly than the increase in the ratio of customs duties to imports. Table 10.2 confirms that the higher rate of collection of import duties increased the relative contribution of these duties from a negligible one percent of all tax revenue before the late 1980s to 6 percent of all tax revenue by 1992 (World Bank 1994:18).

Table 10.2: Revenue From Customs Duties and Additional Import Tax

<table>
<thead>
<tr>
<th>Years</th>
<th>Total imports millions of leva</th>
<th>All taxes</th>
<th>Import duties</th>
<th>Revenue duties as % of:</th>
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<tbody>
<tr>
<td></td>
<td>Total Revenue (mil. leva)</td>
<td>All tax</td>
<td>Import duties</td>
<td>Total Imports %</td>
</tr>
<tr>
<td>1981</td>
<td>8,194</td>
<td>11,604</td>
<td>97</td>
<td>1.2</td>
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<td>1982</td>
<td>8,725</td>
<td>12,506</td>
<td>128</td>
<td>1.5</td>
</tr>
<tr>
<td>1983</td>
<td>9,251</td>
<td>13,217</td>
<td>88</td>
<td>1.0</td>
</tr>
<tr>
<td>1984</td>
<td>10,015</td>
<td>14,218</td>
<td>69</td>
<td>0.7</td>
</tr>
<tr>
<td>1985</td>
<td>10,716</td>
<td>15,021</td>
<td>140</td>
<td>1.3</td>
</tr>
<tr>
<td>1986</td>
<td>12,335</td>
<td>17,024</td>
<td>159</td>
<td>1.3</td>
</tr>
<tr>
<td>1987</td>
<td>12,081</td>
<td>16,910</td>
<td>156</td>
<td>1.3</td>
</tr>
<tr>
<td>1988</td>
<td>13,119</td>
<td>18,162</td>
<td>310</td>
<td>2.4</td>
</tr>
<tr>
<td>1989</td>
<td>13,060</td>
<td>19,527</td>
<td>330</td>
<td>2.5</td>
</tr>
<tr>
<td>1990</td>
<td>16,121</td>
<td>19,239</td>
<td>441</td>
<td>2.7</td>
</tr>
<tr>
<td>1991</td>
<td>84,637</td>
<td>50,840</td>
<td>1,516</td>
<td>1.8</td>
</tr>
<tr>
<td>1992a</td>
<td>108,925</td>
<td>63,420</td>
<td>3,966</td>
<td>3.6</td>
</tr>
</tbody>
</table>

a. Estimate

Conclusions

The reform of tariffs, the auctioning of externally imposed quotas on meat exports, and the relaxation of exchange controls and NTBs in 1991 and 1992 made Bulgaria's trade policies relatively free from overt government restrictions and allowed most trade to be conducted simply on the basis of customs declarations. Bulgaria's tariffs, with a maximum rate of only 40 percent (or 55 percent for items such as grapes, apples and processed fruits on which there is a 15 percent additional import tax, as well as a 40 percent tariff), were relatively low and relatively uniform by international standards. Trade policy tended to tax agriculture and to subsidize industry, but the extent of this bias was substantially reduced by the trade liberalization packages of 1991 and 1992, which removed most of the exchange controls and many of the NTBs which had created the bias.

An important policy question for Bulgaria is whether rates of trade taxes should be increased in order to raise revenue. Without more information it is impossible to place much confidence in estimates of the relative marginal efficiencies of trade taxes, excises, VAT, and direct taxes as revenue raising devices. Nevertheless, the view taken here is that the rates of existing trade taxes should not be raised. This view is based partly on administrative considerations and partly on the conventional argument against using tariffs to raise revenue; a system of tariffs is equivalent to a system of taxes on consumption together with subsidies on production at the same rates. There are reasons for believing that efficiency can be increased, at constant revenue, by removing the subsidies to production. Conceptually, this policy change could be achieved in two steps, each of which would increase efficiency, subject to caveats noted below, and which would together, by construction, leave revenue unchanged. First, the production subsidies provided by the tariffs could be neutralized by imposing excises on domestic production at the same rates as the tariffs; second, since the imposition of excises would raise revenue, the rates of both tariffs and domestic excises could be reduced to restore revenue to its original level. The first step would convert the tariffs into consumption taxes, thereby increasing production efficiency by eliminating protection to import–competing industries and also ending the implicit taxation of export–competing industries. The second step would increase efficiency because it would involve an across–the–board reduction in the rates of distorting taxes on consumption.

This case for converting trade taxes to consumption taxes at lower rates could break down if it were possible to administer trade taxes with much greater efficiency than consumption taxes or income taxes. However, the fact that the amount of import duties collected has been much less than could be expected on the basis of average rates of duty and the share of imports in GDP, together with Bulgaria's lack of experience in administering a customs tariff designed to collect substantial amounts of duty, make it unlikely that this possibility is of much actual relevance. The apparently relatively weak administration of trade taxes is both in part a cause and also in part a consequence of their relative unimportance in revenue generation. An additional important practical reason for not increasing trade taxes is that Bulgaria eventually plans to join the EU: rather than raise tariffs which will eventually have to be lowered, the government should rely on VAT and on increased efficiency of the direct tax system to raise revenue, and should bring its tax system into line with that of the EU.

Since a VAT is a form of consumption tax, Bulgaria's introduction of a VAT in 1993 is consistent with the recommendations made above (see chapter 11). While consumption taxes and income taxes should play the main role in raising revenue, small increases in the revenue from trade–related policies could usefully be achieved by the following two reforms: first, all remaining NTBs should be converted into their tax equivalents, or in the case of trade quotas they should either be auctioned, or converted into equivalent taxes; and second, the effort put into collecting the existing legislated trade taxes should be increased. Given the present very wide gap between average legislated tariff rates and tariff revenue as a share of total imports, the case for trying to raise compliance, and reduce exemptions, is obvious. The justification for converting NTBs into explicit taxes and the case for auctioning quotas were both set out earlier in this chapter.
Because of the difficulty of collecting the already legislated import duties, the decision to reduce the import surcharge to only 3 percent and to widen the base of this surcharge appears to be very sensible: broadening the base while reducing the rates makes administration easier and results in fewer distortions than from high dispersed rates and narrow bases. These same criteria can be used to support the tariff reform of 1992. The decision in September 1992 to replace most export NTBs with export taxes was consistent with the recommendations made here, and so too was the decision to sell the meat export quotas allocated to Bulgaria by the EU.

The reforms implemented since 1991 have made the trade regime more efficient and more transparent, and help to raise revenue. The government confronts the tasks of improving the administration of existing trade policies, and continuing the process of reforming these policies along the lines taken since 1991.

Notes

1. The fact that in Bulgaria, as in other former communist countries, the Customs Department was not part of the Ministry of Finance is a reflection of the unimportance of customs duties as a source of government revenue.

2. Current general government revenues, which had been 59 percent of GDP in 1989, were down to 53 percent of GDP in 1990, and to 42 percent of GDP in 1991. These revenues were estimated to be only 35 percent of GDP in 1992. Budgetary problems have been serious because the fall in revenue relative to GDP since 1989 has not been matched by a corresponding fall in expenditures: as proportions of GDP, the actual and estimated budget deficits for these four years were 3 1/2 percent, 8 1/2 percent, 4 percent, and 6 percent, respectively. The data for 1989 are from World Bank (1990:154); the data for 1990−1992 are from World Bank (1993a, table 1.6).

3. Registration and licensing of imports and exports are not included in the above list, since they are regarded here as being ways of administering the measures in the list, rather than being separate restrictions.

4. Exports of fifty−seven items—mainly raw materials and intermediates, but also some items of basic food and clothing—were subject to export quotas under Ordinance 32 of Decree 56 of 1989. Import and export licenses were imposed by Ordinance 52 of May 1990 on a range of items including imports under bilateral clearing agreements; exports to countries with bilateral clearing agreements for shipments not specified in the agreements; imports of "complete projects" from any country; all trade in precious metals; all barter trade agreements; all imports paid for in leva; imports of retail goods; and the exports subject to quotas under Ordinance 32 (World Bank 1990:72).

5. The proportion of foreign exchange sold at the auctions was very small: at each of the first two monthly auctions in 1990 the FTB supplied only $30 million, which was only about 5 percent of Bulgaria's total average monthly imports in 1990 (World Bank 1990:44; 1993a:14).

6. Apparently most exporters preferred to keep their retained foreign exchange for their own use, rather than sell at the company auctions. Thus, for example, only $1.5 million (about one quarter of one percent of average total monthly exports in 1990) was sold at the company auction in May 1990 (World Bank 1990:43). Some of this retained foreign exchange was presumably used in the black market to finance capital flight and smuggled imports.
7. A "ceiling" is defined as a quantitative limit on imports or exports which can be relaxed, but not tightened, at the discretion of the Minister of Trade, acting without the explicit authorization of the Council of Ministers (COM); in contrast, a "quota" is defined as a quantitative limit on trade which can only be changed by an explicit amendment of the decree by the COM. In addition to ceilings, quotas and licenses, Decree 114 of 1992 also imposed registration requirements on some imports and exports. These requirements were administered in a non-restrictive way for monitoring purposes.

8. The imports and exports subject to licensing are listed in Annex 3 of Decree 114 of 1992. The items which are licensed for reasons described in this chapter as being "non-economic" are: protected plant and animal species; art and antiques; narcotic drugs; radioactive materials; weapons, explosives, and ammunition; and dangerous and environmentally damaging materials.

9. If domestic firms are price-takers in the home market, there is an exact equivalence between trade taxes and trade quotas allocated by auctioning. If individual domestic firms are large relative to the home market, protection by quotas on imports allows them to retain some monopoly power whereas foreign competition would reduce or eliminate this monopoly power if protection were by means of tariffs.

10. The ceiling on exports of live female breeding animals was replaced with a ban on exports of pregnant animals and animals for breeding purposes, which was intended to prevent the unofficial privatization of herds on state-owned farms.

11. The criteria for allocating externally imposed quotas under decree 119 of 1991 were set out in Regulations 1, 2, and 3 of February 1992. These regulations are summarized in Cuthbertson, Fane and Pearce (1992:35–39).

12. Auctioning of export quotas was recommended in the Report to the Ministry of Trade by Cuthbertson, Fane and Pearce (1992). The import quota auctions used by Australia, Colombia, and New Zealand are described and analyzed in Takacs (1991). Since November 1987, Singapore has successfully used auctions to allocate between 25 and 30 percent of its textile and garment quotas under the multi-fiber agreement (Reuter News Service, September 19, 1987; June 29, 1992).

13. Annex 5 of Decree 114 lists the rates and items to which the additional import tax still applied: 25 percent on frozen beef, veal and poultry; 15 percent on frozen pork, butter, grapes, apples and processed fruits; 10 percent on yoghurt, passenger cars with engines over 2.5 liters, and meat and fish extracts and juices; and 5 percent on perfumes and cosmetics and fruit juices.

14. The items subject to export taxes after September 1992 were vegetable oils, timber, scrap metal, hides and skins, grain, seeds, and wheat flour.

15. Decree 2244 of 1987 provided for the establishment of FTZs. At least six FTZs had been established by 1991 (Cuthbertson and Pearce 1991:40–41).

References


11—

The Introduction of the Value–Added Tax in Bulgaria

Zeljko Bogetic and Julia Varga

References
The value-added tax (VAT), which is a major revenue instrument in many market economies, was enacted into law in October 1993 after a number of deferments and implemented in April 1994. The VAT replaced the turnover tax and marked a significant departure from the socialist tax regime described in chapter 3. This chapter reviews the procedures for implementation of the Bulgarian VAT, assesses the design and characteristics of the tax, and evaluates early revenue performance (which exceeded expectations).

The Tax Administration

We begin with an observation on the introduction of a tax such as the VAT from the perspective of the tax administration. For a tax official, transition from planning to a market economy entails a complete change in the manner of thinking and functioning. Rather than confronting what is effectively an all-encompassing economy-wide vertically integrated firm under planning, the official has to contend with a market economy with thousands of new agents and myriads of individual transactions. At the same time, incomes and status of tax administration employees do not provide sufficient incentives for work, retraining, and professional advance. Even with good intentions and motivation, there is a gap between scarce resources (man-power, expertise, technology) and the magnitude of the task.

Before the VAT

Before the VAT, indirect taxation consisted of a turnover tax levied on sale for final consumption, and to a lesser extent, excise taxes. Under planning, goods were predesignated for intermediate use and final consumption. Tax liability was predefined, as was the tax via the level and structure of producer and consumer prices. Even in these circumstances, it was impossible to insulate domestic prices entirely from international prices. This, combined with the fact that the state could not have continuous information on real production costs, meant that there was ongoing bargaining between producers and the state on taxes, with the former pressing for lower tax rates. As a result, the turnover tax before the reforms featured a bewildering array of rates.

With the abolition of planning, prices other than for energy (electricity, heating, coal, and other fuels) were liberalized. Ambiguities were introduced into the system that were previously absent: it was necessary to monitor or verify whether a transaction entailed sale for intermediate or final use. The different rates of turnover tax after 1991 (zero for exports, electricity, heating, bread, and milk; 2 percent for construction materials and housing; 10 percent for basic foods and services; and 22 percent to all the other goods and services) also led to disputes as to the rate to be applied to particular goods. Numerous concessions distorted competition and created loopholes for avoidance or evasion. It became virtually impossible to apply clear criteria and procedures for levying the tax. At the same time, as we have noted, the tax administration was inadequately staffed and equipped for dealing with large numbers of participants in market transactions.

Because the VAT entailed a new start, it was decided to introduce it with new systems and procedures. This implied that priority be given to the design of systems for registering taxpayers, development of documentation, collection and accounting, detection of delinquency, and selection of VAT taxpayers for audit. The intention was that at a later stage, when the VAT would begin to function extensively, the administrative framework would be extended to the other major taxes (corporate tax, individual income taxes and, eventually, social security).

Reasons for Adopting the Value-Added Tax

Bulgaria replaced the turnover tax by a VAT for four reasons. These reasons are of broad interest, as they apply to other transitional economies (Cnossen 1192): (a) neutrality of VAT with respect to economic activity, types of firms, and transactions, (b) the country's aspiration to join the European Union, (c) revenue capacity of the VAT
and, (d) the advice of international advisors and agencies, such as the International Monetary Fund and the World Bank, advocating the introduction of the VAT.

First, neutrality is a major advantage. The neutrality of the VAT is multifaceted: neutral with respect to foreign trade, productive activity, stage of production, and type of transaction. In this regard, the VAT is particularly well suited for a well–functioning market economy—the ultimate objective of Bulgaria's reforms.1

Second, as a country in transition that has aspirations of joining the European Union, the introduction of a VAT has been seen as one of the institutional prerequisites of making its tax system compatible with that of the European Union countries. This factor is of importance in all eastern European countries that wish to join the European Union. It also implies that the countries in transition should take the Sixth Directive as a standard bench mark in designing the new VAT, with possible deviations only in the case of compelling, country–specific arguments.

Third, the VAT is a very productive revenue instrument because the tax base is consumption which tends to be stable over time. In fact, the VAT's reputation as a "money machine" has been a key factor behind governments' interest in it (Tait, 1988). In a recent empirical analysis of the VAT revenue potential, Bogetic and Hassan (1995) find that for single VAT rate countries, each percentage point of VAT rate raises, on average, 0.5 percent of GDP in VAT revenues, while the revenues are somewhat lower for multiple–rate countries.

Fourth, the VAT is an internationally popular tax, particularly among tax advisors and international agencies. In Bulgaria the advice of international tax experts and the IMF was instrumental in Bulgaria's decision to adopt a VAT. In fact, the advice to transitional countries to adopt a VAT is now so widespread that there are voices which warn against overselling its economic advantages (Bird 1992; Kramer 1994).

**Salient Characteristics of the Bulgarian VAT**

VAT legislation in Bulgaria is consistent with the provisions of the Sixth VAT Directive of the European Community. The VAT is based on the destination principle. Consistent application of the credit mechanism guarantees the elimination of cascading. The objective was to create a simple, neutral, and pragmatic VAT system.

**The Tax Base**

The VAT applies only to transactions related to business activities. According to the destination principle, VAT is charged on transactions performed within the territory of the country, including the continental shelf and the exclusive economic zone, with the exception of the territory of the bonded warehouses and duty–free shops.

*Taxable transactions* are all transactions, except transactions for export and exempt transactions. For the purpose of the VAT, a transaction is defined as any "transfer of rights or provision of services notwithstanding whether it is for consideration or not, with the exception of transfer of ownership by way of inheritance." *Exempt transactions* are the following without the right for tax credit:

Transfer of ownership of land

Leasing of land and buildings

Financial services
Insurance services

Educational services

Health services

Supplies by non-profit organizations where the supplied item has been donated to the organization

Gambling services

Transfer of ownership of an enterprise, when it is done in accordance with the Privatization Law

Transactions for accomplishing law activities in accordance with the Bar Association Law

Tickets for museums, libraries, zoological and botanical gardens, art galleries, and theaters.

During the first three years, transactions in eleven basic goods (milk, bread, medicines, electricity, and heating for the population, etc.) are also exempt. Transactions for export are exempt, but with the right of tax credit. In other words, exports are zero rated. Exports also include the transportation of goods to free trade zones, bonded warehouses and duty free shops. International transport including that of passengers is also in the category of exports.

Registered person for VAT purposes is every person (legal or natural) who has taxable turnover of more than 1.5 million leva in the previous 12 months; such persons are obliged to register. Persons who are not obliged to register, include the following: (a) persons whose taxable turnover does not exceed 1.5 million leva, (b) persons leasing land or buildings to registered persons for the purpose of premises to carry on the registered person's business activities and, (c) persons who intend to commence business activities. Once registered, everyone has the same status within the VAT system. For calculating taxable turnover, the value of transactions is used.

VAT is charged and collected by the customs authorities on goods imported into the country. Goods are not released from customs until the VAT is paid. Customs collect the VAT from all importers, but only registered importers are entitled to claim it back. The taxable value of an imported good includes the sum of its customs value, all customs duties and fees payable in relation to that good, and the excise, if the imported good is subject to it. Imports of services are not defined by the draft law and, therefore, are not taxable.

The VAT is charged on "the value of the transaction," that is, the amount of money charged by the seller to the customer, excluding VAT itself. When the payment is made in the form of goods or services, the value is calculated on the basis of open market value. If payment is in foreign currency, the value is calculated on the basis of the exchange rate quoted by the Bulgarian National Bank for that currency on the date of sale. If the transaction is between related persons, the value of the transaction cannot be less than the open market value of the goods and services.

The Tax Rate

The VAT is levied at a single tax-exclusive rate of 18 percent. Tax credit is given only to registered persons, on the following conditions: (a) the goods and services in relation to which tax credit is claimed are used in the registered person's business activity for performance of taxable transactions or transactions for export,
(b) the goods and services are not used for ceremonial purposes, (c) the goods or services are not related to acquisition, maintenance, or use of cars, trucks, mini buses or motorcycles, except in cases when transactions with these is the basic activity of the registered person, and (d) the registered person obtains a tax invoice or customs declaration in relation to the goods or services for which credit is claimed.

Special Issues

The tax period is (a) quarterly for registered persons whose twelve−month taxable turnover is up to 10 million leva and (b) monthly for registered persons whose twelve−month taxable turnover is over 10 million leva.

Registered persons, whose twelve−month taxable turnover is over 50 million leva must make advance payments of VAT. Those registered persons whose taxable turnover is up to 10 million leva may choose the monthly tax period instead of the quarterly.

Transactions are related to certain tax periods. The date of performance of the transaction is deemed to be the date when the tax invoice is issued, or the latest date for issuance. The tax invoice is to be issued within three days after the earlier date of (a) either the date of transfer of ownership or provision of services or (b) the date of payment. When the transaction includes periodical performance and there are several payments during the period of performance, then for each a separate invoice is to be issued as if it is related to a separate transaction. This is to deal with cases such as supply of electricity, gas, water, etc.

Payment of VAT by the registered person to the state budget is calculated and due for each tax period. This sum is derived from the tax charged by that person less the amount of the tax credit for the same period. It is to be paid within fourteen days after the end of the tax period. The tax return and the bank document in approval of the payment for each tax period are submitted together to the tax administration. If for a certain tax period the tax credit exceeds the tax payable, the difference is to be refunded by the tax administration to the registered person within thirty days after the tax return has been submitted.

Supplies of buildings are treated as taxable transactions. There are state fees payable for transferring the ownership of buildings. The average level of these fees is 9 percent of the taxable value of the building. The amount of the state fees is not a part of the tax base and also it is deductible from the VAT charged for the building. Therefore, the average effective tax rate for buildings is 11 percent.

Registered persons are to comply with accounting requirements as follows:

Issuing an invoice (including the tax identification number, taxable value, etc.) for each of their taxable transactions

Issuing a tax debit or credit note when there is a change in the price

Keeping customs declarations for tax credit purposes

Keeping special books for purchases and sales

Regularly submitting tax returns to the regional tax office

Submitting a special tax return when ordered by the tax administration.

Administrative penalties for non−compliance are: (a) for withholding information or giving wrong information in a tax return, a jail sentence up to five years, (b) for not registering, up to double the amount of tax payable, and (c)
for not charging the tax, not issuing a tax invoice, tax debit or credit note, and not submitting a tax return, up to 25 percent of taxable turnover for twelve months.

Relationships of the VAT with the Former Turnover Tax and Excise Duties

The VAT and new excise duties replaced the past turnover taxes and excise duties. The Tax Administration would not refund turnover tax on goods in stock at the beginning of implementation of the VAT. In the retail sector, a general valuation of inventories was organized. As the turnover tax and excise duties are levied only on goods and services for final consumption, this generally guarantees the avoidance of double taxation. All transactions contracted before the implementation date of the VAT, but supplied after that, were subject to VAT.

Excise rates are tax−exclusive and harmonized with the VAT−rate. The new excise rates were to generate the same revenue as the ones they replaced. The most important excise rates are (by percentage):

<table>
<thead>
<tr>
<th>Item</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirits: whisky, vodka, brandy, flavored and special drinks</td>
<td>110</td>
</tr>
<tr>
<td>Wines – all kinds, including vermouths and aperitifs</td>
<td>40</td>
</tr>
<tr>
<td>Beer – all kinds</td>
<td>40</td>
</tr>
<tr>
<td>Coffee</td>
<td>40</td>
</tr>
<tr>
<td>Tobacco products</td>
<td>110</td>
</tr>
<tr>
<td>Cars</td>
<td>20</td>
</tr>
<tr>
<td>Perfumery</td>
<td>40</td>
</tr>
<tr>
<td>Gasoline</td>
<td>70</td>
</tr>
<tr>
<td>Diesel fuel</td>
<td>30</td>
</tr>
<tr>
<td>Gambling, lotteries, betting and other games of fortune</td>
<td>110</td>
</tr>
</tbody>
</table>

All listed goods and services, except gambling, are also subject to VAT when supplied by registered persons. When goods subject to excise duties are imported, the excise duty is calculated on the customs value, including duties and fees. The customs authorities collect the excise duties before releasing the goods to the importer. Most suppliers of goods and services subject to excise duties have a high enough turnover to be registered for VAT, so these persons are controlled mainly through the VAT system.3

Implementation

Implementation of the VAT coincided with a surge in inflation due to unanticipated exchange rate depreciation and energy price adjustments. This makes it difficult to assess the relative impact on prices of introducing the VAT. Nevertheless, it appears that the price impact of the VAT consisted of a one−time price effect of the order of less than 10 percentage points. Cumulative inflation for the first six months of 1994 was about 60 percent, and about half of this—30 percent—
Table 11.1: Changes in Effective Indirect Tax Rates

<table>
<thead>
<tr>
<th>Goods and Services</th>
<th>Changes in tax rates (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>4.90</td>
</tr>
<tr>
<td>Alcoholic beverages</td>
<td>−6.85</td>
</tr>
<tr>
<td>Tobacco</td>
<td>−8.80</td>
</tr>
<tr>
<td>Housing</td>
<td>−5.03</td>
</tr>
<tr>
<td>Energy for household use</td>
<td>16.54</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>−6.40</td>
</tr>
<tr>
<td>Clothes, shoes, goods for personal use</td>
<td>−4.92</td>
</tr>
<tr>
<td>Hygiene and health</td>
<td>−0.64</td>
</tr>
<tr>
<td>Education and recreation</td>
<td>−8.89</td>
</tr>
<tr>
<td>Transport and telecommunications</td>
<td>2.23</td>
</tr>
<tr>
<td>Home-made goods and services</td>
<td>−6.40</td>
</tr>
<tr>
<td>Other</td>
<td>−4.88</td>
</tr>
<tr>
<td>Total</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance

occurred in the April–May period. On a rather conservative assumption that no more than two-thirds of the price increase in this period was a result of the effects of exchange rate depreciation (combined with energy price adjustments) which occurred during March (at which time the exchange rate fell from 37 leva per dollar to 65 leva per dollar), the upper-bound of the impact of the VAT introduction on the price level is no more than 10 percentage points.

As of the end of 1994, VAT revenue performance had exceeded expectations. The annualized revenues were in excess of 9 percent of GDP for 1994. This better than anticipated performance is explained, among other things, by good design, one-time effects of high inflation, and slow initial refunds to taxpayers by the government. The slow refunds have been of special concern, with businessmen expressing dissatisfaction that the slow pace combined with high inflation was eroding the real value of refunds. Such concerns undermine the voluntary compliance on which the VAT's revenue performance depends.

Assessment and Some Lessons

Our assessment of the Bulgarian VAT is based on comparison with international practice and the evaluation of the early revenue performance. The Bulgarian VAT is a textbook case of a "standard VAT." As noted, the design of the Bulgarian VAT follows the conventions of VAT experts and, in particular, the EC directives which specify in detail choices regarding the VAT for countries that wish to join. Characteristics of the VAT are mutually compatible and create what, in terms of design, is a characteristics-compatible VAT (see Shoup 1990; Tait 1990).

The rate was the subject of extensive debate that continued while the VAT bill was passing through the final stages in the Parliament. Typical arguments in favor of lower rates looked to compliance: a lower rate reduces the benefits of evasion.
For VAT to be successfully evaded, two evaders must collude to jointly remain outside the system. On the other hand, where the number of VAT taxpayers is comparatively low (for example, less than one percent of the population), and much of the VAT is collected at import or pre−retail levels (that is, production and distribution), there may be little to gain in terms of compliance from lower rates. The key to enforcing any rate level is, of course, the tax administration.

The base for the Bulgarian VAT comprises goods and services, but exempts a number of services as elaborated above. Some exemptions, such as financial services, insurance, and leasing of buildings, are standard exemptions made in most OECD countries. Important food items are also exempt (but with a view to eliminating these exemptions after three years). In these respects, the design of the base of the Bulgarian VAT follows the dominant practice in OECD countries. The threshold level is relatively low, but due to the huge number of new start−ups it is estimated that in the initial period the total number of registered VAT taxpayers will not exceed 20,000, or 0.24 percent of the population. This is not large by international standards. An adequately equipped and trained administration will be able to deal with the task of this magnitude.

The administration of the VAT is initially independent of the rest of the tax system, until the system is fully operational. This is a reflection of a gradual approach to the implementation of the VAT tax administration, but with the consequent objective of integration of the entire tax administration over time. It is also the one used in most countries that introduced a VAT. Alternatively, Sanchez, Vazquez−Caro and Mayville (1993) argue for an earlier integration of the VAT administration into the entire system of tax administration as a more appropriate and, in the long run, less costly approach.

Finally, an issue of potential future importance in the implementation of the Bulgarian VAT (which has not received wide attention), is the need to eliminate the "collection bias" (see Sanchez, Vazquez−Caro and Mayville 1993) in the present tax administration, by delegating collection and processing functions to the banks. This was successfully done in Argentina, Chile and Mexico, while in eastern Europe it is practiced, although less successfully, in Hungary. Such "privatization" is a source of savings, via lower resource use in dealing with tasks directly unrelated to compliance, and greater focus and quality of efforts to foster compliance. There is of course an agency problem between the fiscal authorities and the banks. However, since the number of agents (for example, banks) is relatively small, and the banks are potentially easier to monitor than individual taxpayers, monitoring costs would be lowered. Also, banks have computer software and hardware capable of carrying out the tedious task of collecting and processing returns. With a suitably designed generic contract, many banks may be interested in participating in the scheme in return for an appropriate fee. At first view, turning collection and processing to the banks may be a seemingly complex and costly endeavor with some loss of control over some functions of tax administration. It would however be useful to study and evaluate the costs and benefits of such a move in the Bulgarian context. It may well be that the net benefits are already positve, while the increase in the number of taxpayers over time will inevitably favor such functional specialization in tax administration.

The lessons that can be drawn from the Bulgarian experience with introducing VAT in the transition can be summarized in the following propositions.

Before the VAT, if there is a turnover tax in place which will be replaced by VAT, it is wise to adjust the turnover tax rate—typically to reduce it—to close to the level of the future VAT rate(s) so as to minimize adjustment and ease the transition to the new VAT system. For the same reason, it is useful to eliminate any tax holidays and similar incentives so as to broaden the base before VAT is introduced.

Introducing VAT takes time, at least eighteen months (Tait 1988) and during the tumult of transition, it can easily take two to three years; therefore, it is important to start preparations early in the transition. This is more than an...
issue of proper timing. The longer the VAT is delayed in the parliamentary process, the more interest groups are likely to lobby successfully to obtain concessions which undermine good tax design. Also, the sooner the VAT law is passed and implemented, the sooner the entire statutory system of indirect taxation including excises can be completed.

To move the preparation of VAT off the ground, and prepare the main parameters of the new VAT, a creation of a task force directly responsible to or headed by the Minister of Finance (also involving relevant Deputy Ministers and Department Heads) is usually essential. In Bulgaria, although declarations of intent to introduce VAT were already made in 1989, it was not before a high level task force was created in May 1991 that the process began to move.

There is a general consensus of experts on what constitutes basic characteristics of a good VAT. Unless there are compelling reasons otherwise, countries contemplating introduction of VAT should follow the expert consensus. This consensus typically favors an invoice−based VAT, a single rate or very few rates between 10 and 20 percent, very limited exemptions and zero rating for exports.

Contrary to some perceptions, there is little real danger of the VAT igniting significant inflation.

Tax administration is always important but is critical for a well functioning VAT. A functional master file with unique identification numbers for taxpayers, and proper computerization is essential.

In the early stage of implementing VAT, it is important that tax authorities do not unduly delay returning VAT credits to firms that have initially complied with their VAT obligations.

Appendix:
Bulgaria's VAT Calendar

November 1989 Broad political decision for the implementation of the VAT during the communist regime.

June 1990 First free elections, and programs of main parliamentary groups include implementation of the VAT.

March 1991 Reduction in the number of the rates of turnover tax and preparation of the VAT

MarchOctober 1991 Invalidation of government decrees granting turnover tax holidays.

May 1991 Government decision to set up a working group for the implementation of VAT. The head is the Minister of Finance and members consist of different ministers, deputy ministers, and heads and deputy heads of government organizations.

June 1991 The government working group decides the basic parameters of the Bulgarian VAT−system:

Invoice−based credit system
Single rate
Broad tax base
Destination principle
Importation taxed

Exportation zero rated

Few exemptions (land, leasing of land and buildings, financial, insurance, health, educational services, and gambling)

No special regimes

High threshold for obligatory registration

Harmonization of excises and VAT.

Implementation date set at July 1992

July-September 1991
Technical assistance from the IMF in VAT legislation.

October 1991
Approval of the draft laws of the VAT and excise duties by the government working group.

November 1991
Technical assistance from the IMF in the field of tax administration, focusing on the VAT as a pilot tax.

November 1991-March 1992
The Ministry of Finance makes decisions on:

Computerization (efforts of the IMF, PHARE and MoF are coordinated by the IMF).

Registration system for VAT with intent to be extended to all taxes later

Design and implementation of tax return forms

Taxpayer identification numbers

Processing of data

Design of a master file

Control of stopfilers and nonpayers

VAT audits

Payment system

Training

Publicity campaign

Work plan

Operational level of the VAT (Regional tax offices).

The details of these tasks were worked out in the first half of 1992.

The implementation date is postponed to January 1993 and the supply of the basic minicomputers, the operational software (UNIX) to the end of 1992 and the functional VAT—software to February 1993.

January 1992
The new head of the General Department of Taxation requires additional discussions by academics.

February 1992
Presentation of the draft VAT and excise laws to the government.
June 1992 The government sends the draft laws to Parliament.

July 1992 The Budgetary and Economic Committees of the Parliament discuss and approve the draft laws and recommend that the General Assembly vote for them on the first reading.

August 1992 PHARE-funded tender for 30 personal computers for VAT registration.

October 1992 Disputes on the necessity of minicomputers and on the operational level of the VAT within the tax administration and as a result delaying the tender funded by PHARE.

February 1993 The tender for the minicomputers is published.

February 1993 The Legislative Committee of Parliament approves the draft laws.

March 1993 Parliament votes both of the draft laws on the first reading. Parliament also approves the legislative program including a priority list of the tax laws:

- Tax Administration Law
- Tax Procedures Law
- VAT Law
- Corporate Tax Law
- Personal Income Tax Law

The Minister of Finance declares July 1993 as the VAT implementation date.

October 1993 The VAT law is voted by the Parliament on the second reading.

April 1994 Implementation

Notes

1. The economic argument for the VAT as opposed to the retail sales tax is not compelling, since both taxes theoretically have the same base. However, the VAT appears to have certain advantages, including the VAT's ability to better tax services; its capacity to better distinguish between producer and consumer goods and its (potentially) better monitoring and therefore compliance (Cnossen 1992).

2. At the average exchange rate of 28 leva per U.S. dollar for 1993, the minimum threshold level is approximately $53,000.

3. This was reported by a number of private firms in a recent analysis of the private sector firms in Bulgaria (World Bank 1995).

4. In general, the new Excise Duty Law must be implemented together with the VAT.

5. Casanegra de Jantscher (1990) reports how Peru, motivated by the desire to improve compliance, dropped the standard rate in 1984 from 18 to 11 percent in 1986, and then further to 6 percent.
6. For an excellent comparative survey of tax systems in OECD countries, see Messere 1993.

7. The magnitude of the administrative task in Bulgaria is similar to Ecuador's 22,000 taxpayers (0.27 percent taxpayers) and Panama's 7000 taxpayers (0.36 percent taxpayers). See Casanegra de Jantscher 1990, p.176, table 15–2.

References


VI—
FINANCING SOCIAL EXPENDITURE

12—
Social Insurance and Social Assistance

Louise Fox

This chapter describes the social−insurance and social−assistance system in Bulgaria, provides an assessment of the system, and presents a reform agenda. Bulgaria began the transition in 1989 with a universal public pension and short−term benefits system, a very small social assistance system, and no provision for unemployment insurance or assisting the unemployed. Under socialism, the social security system combined with guaranteed employment was expected to insure an adequate income over an adult life. In response to the income uncertainties of the transition (see chapter 6), unemployment, retraining benefits and employment services were created, and social assistance was reformed and upgraded. The benefits under the system of social insurance were not substantially reformed. Failure to reshape the cash benefit system created problems. As a result of declining incomes and employment, and the government's response (primarily the encouragement of early retirement), government expenditure on social insurance and social assistance increased as a share of GDP from 11.4 percent in 1990 to 13.3 percent in 1992. The structure of benefits discouraged formal employment and encouraged fraud, and abuse. In the face of financing difficulties, the earmarked payroll tax which financed benefits was increased several times, yet revenue shortfalls remained. Most countries in transition inherited a system similar to that of Bulgaria and faced similar choices. Political pressures for entitlement benefits were intense, especially after the reductions in income in the initial transition period.

Overview

Bulgaria provides cash support and social services (a) to those individuals whose income has fallen as a result of an insurable risk (for example, illness, disability, old age, unemployment), (b) to households in which the income is below a minimum threshold, and (c) to those with children. These benefits and services are provided institutionally through three main groups of programs: (a) the Social Security Fund (SSF), which receives earmarked payroll taxes and budget transfers, administering benefits primarily to those employed in the state sector (about 90 percent of the work force in 1992); (b) the Unemployment and Retraining Fund (URF), which also receives earmarked payroll taxes and budget transfers, with which it pays unemployment benefits and finances the provision of employment services, and (c) social assistance programs (SA) which are budget financed and are responsible for benefits and services to low income households, and the operation of a number of long−term care institutions (homes for the elderly, disabled, orphans, chronically ill, etc.) There is some overlap between programs. For example, while the SSF paid 95 percent of the total birth and child payments in 1992, the other 5 percent was paid in part by the URF (if a parent received unemployment benefits) and in part by the SA budget (if no parent or guardian was working or receiving unemployment benefits).

A consolidation of all programs and their financing is shown in table 12.1. As expected, in both 1990 and 1992, over 60 percent of expenditures were for pensions, although the growth of unemployment benefits and social assistance expenditures over this period caused the share of pensions in total expenditure to fall below two−thirds by 1992.
Although expenditures as a share of GDP rose over the period, this was entirely caused by the over 30 percent fall in GDP over the period. Despite the expansion of SA and URF programs, total expenditures fell almost 20 percent in real terms, as the government was forced to restrain benefits in the face of rapidly declining revenues. Normally, expenditures on these programs are counter-cyclical, even rising in real terms during periods of falling economic growth. The extent of the squeeze on these programs can be seen in the last column of table 12.1. Had GDP simply held its 1990 level (which was already 20 percent below the 1985 peak in dollar terms), expenditures as a share of GDP would have been a more manageable 10 percent.

Earmarked tax revenues fell sharply as well, despite major tax increases over the period. In 1990 the total tax rate, combining all taxes earmarked to finance these expenditures, was 30.5 percent on payroll (30 percent for SSF, 0.5 percent in the non-budgetary sectors for URF). By March 1991 the average rate approached 50 percent of payroll in the non-budgetary sectors, as the URF rate rose to 7 percent, while the SSF rose to an average of over 40 percent (35 percent on the payroll of those who worked in occupations entitled to regular retirement—70 percent of contributors—and 45 to 50 percent for those entitled to early retirement). Even with these sharp tax increases, tax receipts as a share of GDP only held constant. This rapid shrinkage of the tax base can be attributed to two factors: (a) a decline in total employment and labor income and (b) poor tax administration, such that taxes owed in the growing private sector were simply not collected. The growing gap between earmarked revenues and expenditures necessitated a major increase in financing from general revenues, from 3.4 percent in 1990 to 15.8 percent in 1992.

### Table 12.1: Consolidated Social Insurance and Social Assistance: Expenditures and Financing 1990–1992

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(leva million)</td>
<td>(%) of Total</td>
<td>Index</td>
<td>% OF GDP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditures</td>
<td>5188.5</td>
<td>29752.4</td>
<td>100.0</td>
<td>100.0</td>
<td>81.9</td>
<td>11.4</td>
<td>13.3</td>
</tr>
<tr>
<td>Benefits</td>
<td>5064.1</td>
<td>28103.0</td>
<td>97.6</td>
<td>94.5</td>
<td>79.3</td>
<td>11.2</td>
<td>12.6</td>
</tr>
<tr>
<td>Pensions</td>
<td>3562.2</td>
<td>18791.1</td>
<td>68.7</td>
<td>63.2</td>
<td>75.4</td>
<td>7.8</td>
<td>8.4</td>
</tr>
<tr>
<td>Short term sick benefits</td>
<td>268.9</td>
<td>1533.0</td>
<td>5.2</td>
<td>5.2</td>
<td>81.5</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Maternity benefits</td>
<td>423.6</td>
<td>1784.5</td>
<td>8.2</td>
<td>6.0</td>
<td>60.2</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Unemployment benefits</td>
<td>0.0</td>
<td>1284.0</td>
<td>0.0</td>
<td>4.3</td>
<td>0.0</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>Birth &amp; child allowances</td>
<td>741.4</td>
<td>3809.4</td>
<td>14.3</td>
<td>12.8</td>
<td>73.4</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Social assistance benefits</td>
<td>68.0</td>
<td>901.0</td>
<td>1.3</td>
<td>3.0</td>
<td>189.3</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Other expenditures</td>
<td>124.4</td>
<td>1649.4</td>
<td>2.4</td>
<td>5.5</td>
<td>189.5</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Retraining expenditures</td>
<td>0.0</td>
<td>42.5</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Social care institutions</td>
<td>123.6</td>
<td>882.0</td>
<td>2.4</td>
<td>3.0</td>
<td>102.0</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Other SSF</td>
<td>0.8</td>
<td>49.9</td>
<td>0.0</td>
<td>0.2</td>
<td>891.3</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other UF</td>
<td>0.0</td>
<td>675.0</td>
<td>0.0</td>
<td>2.3</td>
<td>0.0</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td><strong>5012.3</strong></td>
<td><strong>24820.8</strong></td>
<td><strong>96.6</strong></td>
<td><strong>83.4</strong></td>
<td><strong>70.8</strong></td>
<td><strong>11.0</strong></td>
<td><strong>11.1</strong></td>
</tr>
</tbody>
</table>
Compared with other transition economies, Bulgaria followed a fairly prudent transfer policy during the first years (table 12.2). Her expenditures as a share of GDP were much lower than her northern neighbors in 1992, as was the growth of expenditure. The fastest reformer, Poland, experienced an astronomical 92 percent increase in expenditures as a percent of GDP (caused in part by much higher unemployment benefits due to faster restructuring), while even in fiscally prudent (former) Czechoslovakia, transfers to households rose by 20 percent. Burgeoning transfer payments are a characteristic of transition economies, and are part of the structural fiscal problem. For an explanation, we now turn to a description of the programs in Bulgaria and the main policies followed since the beginning of the transition.

The Social Security System

Social security benefits have three main components: (a) pensions for the elderly and the disabled, (b) other benefits to compensate for temporary absence from employment due to ill health, and (c) maternity and child care benefits and child allowances. They are funded by an earmarked payroll tax on a pay−as−you−go (PAYG) basis. In times of surplus the revenues are transferred to the consolidated budget, while in periods of deficit a transfer is made from general revenues to the social security budget. During the 1980s there were more earmarked taxes than paid−out benefits; the surplus ranged from 2 percent of GDP in 1981 to 0.15 percent in 1990. Since 1991, the fund has been in deficit. The main reason for the declining surplus is that expenditures grew faster than GDP, especially in the last few years. Total spending on social security benefits was 9 percent of GDP in 1980 and 11.7 percent in 1991. Cash transfers from the social security system accounted for slightly over 20 percent of household income recorded in the national accounts in 1991.

Old−age and disability pensions are the largest component of social security expenditures, accounting for 73 percent in 1992. Maternity and family allowances make up 20 percent; the remaining expenditure is for other benefits (mainly sick leave and compensation for work place accidents). If an individual is employed, the firm administers the benefits, with full reimbursement from the central government. Pensions for nonworking individuals are paid centrally through the postal service. Benefit policy is regulated by the Ministry of Labor and Social
Table 12.2: Government Cash Transfers to Households, 1990–1992
(as percent of GDP)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>11.4</td>
<td>13.8</td>
<td>13.3</td>
<td>16.7</td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>13.6</td>
<td>16.1</td>
<td>16.4</td>
<td>20.6</td>
</tr>
<tr>
<td>Hungary</td>
<td>20.9</td>
<td>22.6</td>
<td>26.1</td>
<td>24.9</td>
</tr>
<tr>
<td>Poland</td>
<td>11.2</td>
<td>17.8</td>
<td>21.6</td>
<td>92.8</td>
</tr>
</tbody>
</table>

Source: Bulgaria – World Bank staff estimates; others – Barbone and Marchetti, (1994).

Welfare (MOLSW). A series of decrees, including the Pension Law, the Labor Code, and the Decree for Stimulating Birth, determine eligibility and benefits. Social security benefits are not taxable under current legislation.

Pensions

Bulgarian pensions are provided by the central government; there are virtually no enterprise–based funds. Bulgaria began the transition with much the same eligibility requirements as other economies in transition, with very early retirement ages compared to Western European countries or with other countries at its income level. The standard retirement age was fifty–five for women and sixty for men, but retirement up to ten years earlier with full pension was allowed for those working in particular occupations. This provision was originally created for those working under dangerous or stressful conditions, but the entitlement expanded. By 1993 about 30 percent of employees in the state sector worked in occupations where early retirement was possible. Retirees who continue to be employed pay a tax of 35 percent on additional earnings to the social security fund. The system also provides survivor and disability pensions, including disabilities caused by occupational hazard.

Pension benefits were generous during the centrally planned period, with high net replacement rates. At the beginning of 1991 the average pension was equal to the average wage. During the inflation of 1991–92, benefits fell dramatically in real terms, making uprating of pensions a contentious issue. During the period of very high inflation, policy was to increase pensions by a fixed amount (labeled "compensation"). This led to a real decline in pensions, and to a compression of the distribution (which was not very wide in any case). By the third quarter of 1992, the average pension had declined in real terms by 40 percent, to 35 percent of the average wage (table 12.3).

Although pension benefits fell relative to wages by 70 percent between the first quarter of 1991 and the end of 1992, pension expenditures only fell by 20 percent in real terms, due to the growth in the number of pensions paid. Between 1985 and 1989 the number of pensions paid grew on average by 24,000 per year, bringing the total paid to 2.3 million by the years end. Between 1989 and 1992, the number grew by 76,000 per year, to a total of 2.5 million pensions paid by the years' end. The increased growth in pensions was caused by a normal increase in retirement during times of falling labor demand, combined with the government's previous policy of offering early retirement (that is, even sooner than the early retirement ages built into the law) to those laid off by restructuring firms.

In July 1992 concern over rising system deficits prompted the government to adopt the Pension Reform Act which restricted eligibility and amended the old–age pension benefit formula. Beginning in January 1993 early retirement ages were raised by two years (for all occupations), and the minimum length of service for a full pension was increased. Early retirement was no longer offered to laid–off employees. Under the old law, years of service and previous salary determined the size of old–age pension benefits, with little incentive for employees
who reached

Table 12.3: Real Wage, Benefits by Sector, 1991–1992
(leva or index)

<table>
<thead>
<tr>
<th>INDICES</th>
<th>1991</th>
<th>1992</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1 Q2 Q3 Q4 AVE</td>
<td>Q1 Q2 Q3 Q4 AVE</td>
</tr>
<tr>
<td>(march 1991 = 100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Wage</td>
<td>100.0 145.4 169.5 210.2 162.9</td>
<td>182.1 176.5 207.2 196.3</td>
</tr>
<tr>
<td>Real Pension</td>
<td>100.0 123.7 92.5 80.2 97.2</td>
<td>70.6 67.0 61.5 56.6</td>
</tr>
<tr>
<td>Real U–Benefit</td>
<td>100.0 153.1 181.2 169.9 155.4</td>
<td>111.5 90.8 103.9 104.7</td>
</tr>
<tr>
<td>Price Index</td>
<td>100.0 113.9 136.8 156.3 126.8</td>
<td>188.2 226.5 243.3 206.7</td>
</tr>
<tr>
<td>Pension/wage</td>
<td>103.9 88.4 56.7 39.6 62.0</td>
<td>39.6 39.2 39.2 33.9</td>
</tr>
<tr>
<td>Benefit/wage</td>
<td>56.5 59.5 67.1 45.4 69.7</td>
<td>34.0 28.6 27.9 33.9</td>
</tr>
<tr>
<td>Average Wage</td>
<td>513.0 850.0 1006.0 1147.0 959.0</td>
<td>1721.0 2002.0 2180.7 2264.9</td>
</tr>
<tr>
<td>Average Pension</td>
<td>533.0 751.0 675.0 668.0 656.8</td>
<td>682.0 784.0 774.0 766.0</td>
</tr>
<tr>
<td>Average Benefit</td>
<td>290.0 506.0 719.0 770.0 571.3</td>
<td>586.0 578.0 712.0 804.0</td>
</tr>
</tbody>
</table>

Source: Ministry of Labor and Social Welfare; National Statistical Institute.

the minimum retirement age for a full pension to continue working. From January 1993 new old–age pensions were based on a much simpler formula. For those who retire after twenty–five years of service or less, pensions are equal to a fixed amount set by government decision (the social pension), plus 1 percent for each year of service. After twenty–five years the total pension increases by 5–7 percent per year (depending on the retirement category). Total benefits to any one recipient, regardless of whether these were granted under the old laws or the new, cannot exceed a ceiling of three times the social pension (or about 80 percent of the average wage at current benefits and wage levels).

This new formula provides substantial leeway for adjustment in pension levels based on available resources. The government intends to continue the policy of increases in pensions, compensating pensioners for the change in price of a subsistence basket of goods consisting mostly of food. A provision which would increase all pensions once a year by a percentage of the increase in the average wage over the last twelve months was also under consideration.

The reforms contained in the Pension Reform Act, including the lower pensions and the incentives to work, were directed at stemming the growth of new pensions in 1993. However, the damage done by the previous policy to the medium term system deficit was severe. The pension dependency ratio (number of pensions paid per of employed contributing) which was already high at 0.56 in 1989, had grown to 0.87. This high dependency ratio will be a major financial burden to the system in the medium term.
Maternity and Family Benefits

Maternity benefits provide for leave in three phases and apply only to the first three children. Women are entitled to three years of leave, and have a firm level reentry guarantee. During the first phase, paid leave amounts to 100 percent of earnings. The period is 45 days prior to delivery and up to 180 days after, depending on the number of children. During the second phase, maternity leave allowance is paid at the minimum-wage level. This allowance continues for the first two years after birth (after the first year, the working father or the mother's parents can take it). If the allowance is not taken in this period, the mother is entitled to have her salary supplemented by an additional cash benefit of 50 percent of the minimum wage. During the third phase (until the end of the third year after birth), the mother is entitled only to leave without pay.

Birth grants and family allowances are given for each child. If the mother is employed, these payments are disbursed by her firm. If she is not employed but the father is (even if they are divorced), the payment is disbursed by his firm.\(^7\) The birth grant ranges from 100, 250, and 500 leva for the first, second, and third child respectively (1992 prices).\(^8\) Family allowances are given according to a complicated schedule (see table 12.4). This is a holdover from the previous period, when parents were given higher payments per child as a pro-natalist policy. In families where both parents are unemployed, the allowance is paid from the social assistance budget. Payments are made until the child turns eighteen as long as he or she is in school. These payments have also been increased by less than inflation, so that expenditures have declined 25 percent since 1990.

Table 12.4: Child Allowance Benefits
(Leva Per Month, October 1992)

<table>
<thead>
<tr>
<th>Total Per Child</th>
<th>One Parent Working</th>
<th>All Parents Unemployed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Per Child</td>
</tr>
<tr>
<td>One child</td>
<td>185</td>
<td>185</td>
</tr>
<tr>
<td>Two children</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>Three children</td>
<td>655</td>
<td>218</td>
</tr>
<tr>
<td>Four Children</td>
<td>840</td>
<td>210</td>
</tr>
</tbody>
</table>

SOURCE OF PAYMENT

SSF

SSF

BUDGET

1. If receiving unemployment benefits, transferred through unemployment fund.

Source: Ministry of Labor and Social Welfare.

Accident, Illness, and Death–Related Benefits

These are benefits regulated by the Labor Code to compensate individuals or their families in the case of death, illness, or accidents. They also provide paid leave in the case of illness of a worker's child. The system covers both the employed and the self-employed. Eligibility for full and unrestricted benefits is established after three months of registered work. Employees (including the self-employed) receive up to six months of sick leave per year, subject to physician's verification, and up to sixty days leave per year to take care of a sick child. There is no separate worker's compensation program; industrial accidents and work–related health problems are covered under normal sick leave for short–term problems and disability for long–term problems. Benefit levels for sick
leave depend on the length of service and range from 70 to 90 percent earnings replacement; for an occupational injury, the replacement rate is fixed at 80 percent. The benefit for parents who take leave to care for a sick child is 100 percent earnings replacement. There is no ceiling on these benefits.

**Financing**

To offset rising expenditures, tax rates on payroll earmarked for the SSF have been increased. Tax rates are 35 percent on the payroll for employees entitled to normal retirement, 45 percent for those entitled to retire three years early, and 50 percent for those entitled to retire seven years earlier. The self-employed pay SSF contributions according to a simplified structure: 20 percent on declared earnings up to five minimum wages for pension coverage only (normal retirement), and 35 percent for all benefits. In principle, all firms are required to pay, with payment optional for the self-employed and those in the "liberal professions" (lawyers, accountants, etc.). In practice, many firms do not pay, and collections from the self-employed are also low. Poor tax administration allows many private firms to evade payment. Many state enterprises do not pay the full amount required and a significant number of them are in arrears. As benefit payments are linked to employment record and not whether the firm actually paid the taxes on the employee's behalf, employees have no incentive to monitor compliance. As a result, the average tax rate should be over 40 percent but it was only 37 percent in 1992; despite the tax increase, revenues as a share of GDP fell in 1992 from the 1991 level.

**Unemployment Compensation and Job–Search Related Programs**

In December 1989 the Council of Ministers approved a specialized fund (Unemployment and Retraining Fund, URF) to provide unemployment compensation, labor market information, and training to the unemployed. All workers made redundant by the transition who register with the Labor Office are eligible to receive compensation; voluntary departures and dismissals for poor performance are not covered. School dropouts are covered under a special program. The MOLSW has proposed that voluntary departures and dismissals be covered after five months. There are no minimum service requirements. The MOLSW administers the Labor Offices.

**Unemployment Benefits**

The original benefit formula established in 1989 was complex, and has been amended. Benefits are equal to 60 percent of the unemployed's average earnings over the last six months, with a maximum of 140 percent of the minimum wage, and a minimum of 90 percent of the minimum wage. The length of payment period is determined by length of service and age, and ranges from six months for those with less than six months of service to twelve months for those with twenty years of service or more who are over fifty–six years of age (fifty–one for women). An unemployed person has the right to receive all benefits in a lump sum if a proposal for starting a business is presented to the Labor office. In principle, benefits cease if the unemployed person receives a job or declines a reasonable job offer. In practice, this is very difficult to monitor. Benefit recipients are allowed to work part time and receive 50 percent of the unemployment benefit, provided their monthly earnings are not more than the minimum wage.

The fund also pays a number of benefits which are not, strictly speaking, insurance benefits. In 1992, these expenditures accounted for about 17 percent of total expenditures. School graduates receive a "social benefit" equal to the minimum wage for three to six months. The fund covers the child allowance for households where there is no working parent but unemployment assistance is being received. Once unemployment assistance ceases, the benefit is paid by the social assistance program.
In addition to benefits, the fund finances programs to help the unemployed, such as labor exchange services and counseling and training programs. Other programs include 10 percent interest subsidies for capital investments for firms planning to increase employment, temporary work programs, regional development programs, assistance in worker training to firms undertaking restructuring, and "job insertion" wage subsidies for school dropouts and disabled workers. The fund also covers the overhead costs of the labor offices; the buildings are provided by local government. These expenditures accounted for about 20 percent of total expenditures in 1992 and are expected to rise as more staff is hired to respond to growing unemployment, and pro-active programs necessary to assist the unemployed to reenter the labor market, such as retraining programs and employment services, are implemented on a national scale.

The number of unemployed registered at employment offices who actually collect benefits is relatively low (table 12.5). This is because most of those who are registered were not laid-off, and indeed, may not even be labor force participants. They have registered because they are required to do so, to reduce the chances that their spouse will be laid off, or in order to collect social assistance benefits (for example, voluntary unemployed, new entrants). Many may actually be earning income in the private sector. The need to service these clients, whose interest in actually using labor-exchange services may be doubtful, is an extra administrative burden. In addition, these data overstate the extent of unemployment.

**Financing**

The URF receives funds from two main sources; an earmarked tax and transfers from the state budget. The unemployment contribution is set at 7 percent of the wage bill of all enterprises and organizations engaged in economic activity, including private enterprises. Budgetary transfers are mandated to reimburse the fund for unemployment benefit payments for those in the budgetary sector (where no contributions are made), and the non-insurance benefits listed above.

As a result of the increase in the payroll tax rate to 7 percent (effective retroactively from June 1992, accounting for the large jump in revenues in the second half of 1992), and the slower than expected increase in the number of layoffs, the fund's reserves rose to 0.4 percent of GDP by the end of 1992, or about 75 percent of total benefits paid and 45 percent total expenditures (table 12.6).

**Social Welfare Programs**

Since 1989 Bulgaria's social welfare programs have undergone a major change. In the centrally planned economy, social welfare was the responsibility of the Committee for Health and Welfare (the predecessor of the current Ministry of Health), which administered the long-term care institutions (such as nursing homes and orphanages) and disbursed cash benefits on an occasional basis. This system was administered by the local Peoples' Committees according to cen-

<table>
<thead>
<tr>
<th>Table 12.5: Bulgaria—Unemployment Data</th>
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<tbody>
<tr>
<td><strong>(thousands, %)</strong></td>
</tr>
<tr>
<td><strong>1991</strong></td>
</tr>
<tr>
<td>Q1        Q2        Q3        Q4      AVE</td>
</tr>
<tr>
<td>Labor Force</td>
</tr>
<tr>
<td>Unemployment</td>
</tr>
<tr>
<td>Registered 1/</td>
</tr>
</tbody>
</table>

**Financing**

171
Receiving Benefits 35 75 102 163 94 178 176 216 226 100
Benefits Expired 2 5 4 13 6 30 44 44 51 42

\[
\text{Total Unemploy. Rate} \left(\frac{2}{3.7}\right) 6.7 10.0 12.5 8.1 13.6 14.3 16.2 17.3 15.3
\]

\[
\text{Layoff Unemploy. Rate* \left(\frac{2}{3.7}\right)} 1.0 2.3 3.1 5.3 2.9 6.0 5.6 6.2 7.3 4.3
\]

\[
\text{Percent Layoffs} 27.1 33.9 31.1 42.0 35.2 44.3 39.2 38.0 40.1 40.3
\]

Source: NES/MOLSW, mission estimates. Note that labor force does not equal employment plus registered unemployed, as some unemployed are estimated to have found alternative employment.

1. Registered includes people who have dropped out of labor force or who are employed in informal sector.
2. Unemployment rate = Registered unemployed/labor force.
3. Layoffs = receiving benefits + benefits expired.

Table 12.6: Unemployment and Retraining Fund Operations

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>1992</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td>Revenues</td>
<td>44.9</td>
<td>137.6</td>
</tr>
<tr>
<td>From Employers</td>
<td>36.4</td>
<td>119.2</td>
</tr>
<tr>
<td>From State Budget</td>
<td>5.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Other</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Expenditures</td>
<td>33.9</td>
<td>123.0</td>
</tr>
<tr>
<td>Benefit Payments</td>
<td>30.2</td>
<td>113.6</td>
</tr>
<tr>
<td>Allowances &amp; Other</td>
<td>0.0</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Child allowance

SA to new entrants

Retraining Expenditures | 0.6     | 0.9     | 0.7     | 4.9      | 7.1      | 3.3      | 4.6      | 17.3     | 18.1     |

Overhead | 3.1      | 6.2      | 7.3      | 74.5     | 91.1     | 20.3     | 22.4     | 177.3    | 183.1    |

SURPLUS/DEFICIT | 11.0     | 14.6     | 15.1     | 215.8    | 226.3    | 135.4    | 80.9     | 9.7      | 46.9     |

END OF PERIOD RESERVES | 19.2     | 33.8     | 18.7     | 234.5    | 234.5    | 369.9    | 450.8    | 460.5    | 921.3    |

SHARE OF TOTAL EXPENDITURES (%)

Revenues | 132.4    | 111.9    | 93.6     | 146.4    | 126.4    | 140.5    | 128.2    | 101.8    | 108.1    |

From Employers | 107.4    | 96.9     | 80.8     | 140.8    | 116.7    | 140.5    | 128.2    | 101.8    | 108.1    |

From State Budget | 14.7     | 12.2     | 10.7     | 0.0      | 5.3      | 0.0      | 0.0      | 0.0      | 0.0      |

Other | 10.3     | 2.8      | 2.1      | 5.7      | 4.4      | 0.0      | 0.0      | 0.0      | 0.0      |
trally determined criteria. One social worker was assigned to each municipality. With the reorganization of the government in October 1990, social welfare responsibilities were transferred to the newly created MOLSW which has built up a network of local offices to respond to the increased caseload that has come about as a consequence of expansion of benefits and the dislocations of the transition.

While the system of occasional benefits may have been sufficient under the centrally planned system, where guaranteed employment was the main social safety net, it was inadequate to meet the needs of the transition and the market economy. A comprehensive social welfare act was introduced which provided a universal monthly cash benefit to all poor households. At the same time, the scope of the existing occasional benefits program was reduced and more local discretion permitted.

All households with a monthly income below a minimum are entitled to cash benefits to bring household income to the minimum level. The minimum income is adjusted for household size and composition according to a set of formulae, so that the minimum for a household of two adults and four children is approximately three and one-half times the minimum for a single individual. To qualify, all adults in the household must be working or registered with the local labor office. Qualification limitations are also placed on property ownership and on financial assets. In order not to discourage labor supply, the working poor whose total household income is below the minimum are entitled to exclude 25 percent of their labor income for purposes of benefit calculation.

Social assistance programs are financed from general revenues. Despite budgetary pressures, expenditures on social assistance were allowed to almost double in real terms. By the end of 1993, between 8–10 percent of households nationwide qualified for assistance under this program.

As social assistance programs have grown, the legal framework governing their administration has not kept pace. For example, the minimum income program is a national entitlement, but paid out of the municipal budget and administered by a combination of central and municipal staff. This has led to significant unevenness in benefit administration.

**Assessment of the Social Insurance and Social Assistance Systems**

Social insurance and social assistance systems can be judged according to how well they meet the following objectives: (a) affordability—entitlements should not exceed society’s willingness to allocate revenue to this purpose given competing needs (other government programs, private spending); (b) poverty alleviation through income smoothing—programs should raise the living standard of the most destitute and those least able care for

<table>
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<tr>
<th>Expenditures</th>
<th>100.0</th>
<th>100.0</th>
<th>100.0</th>
<th>100.0</th>
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<tr>
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<td>92.4</td>
<td>94.2</td>
<td>80.9</td>
<td>86.5</td>
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<td>86.5</td>
<td>59.0</td>
<td>45.0</td>
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<td>Allowances &amp; Other</td>
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<td>1.9</td>
<td>2.4</td>
<td>2.0</td>
<td>2.0</td>
<td>3.1</td>
<td>4.1</td>
<td>5.0</td>
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<td>Child allowance</td>
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<td>SA to new entrants</td>
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<td>0.0</td>
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<tr>
<td>Retraining Expenditures</td>
<td>1.8</td>
<td>0.7</td>
<td>0.3</td>
<td>1.1</td>
<td>0.8</td>
<td>1.0</td>
<td>1.6</td>
<td>3.2</td>
<td>1.8</td>
<td>5.5</td>
</tr>
<tr>
<td>Overhead</td>
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<td>5.0</td>
<td>3.1</td>
<td>16.0</td>
<td>10.6</td>
<td>6.1</td>
<td>7.8</td>
<td>32.8</td>
<td>18.9</td>
<td>18.9</td>
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<tr>
<td>SURPLUS/DEFICIT</td>
<td>32.4</td>
<td>11.9</td>
<td>-6.4</td>
<td>46.4</td>
<td>26.4</td>
<td>40.5</td>
<td>28.2</td>
<td>1.8</td>
<td>5.5</td>
<td>9.5</td>
</tr>
<tr>
<td>END OF PERIOD</td>
<td>56.6</td>
<td>27.5</td>
<td>8.0</td>
<td>50.4</td>
<td>57.4</td>
<td>110.7</td>
<td>157.2</td>
<td>85.3</td>
<td>10.0</td>
<td>45.4</td>
</tr>
</tbody>
</table>

**RESERVES**

<table>
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<th>RESERVES</th>
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<th>100.0</th>
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| Source: Ministry of Labor and Social Welfare; World Bank staff estimates.
themselves to the maximum the society can afford to guarantee, while preventing the emergence of chronic poverty by providing minimal insurance for the income–earning population from the risk of loss of income due to temporary or permanent ill health, childbirth, old age, or unexpected unemployment; (c) encourage efficient resource allocation (micro–

affordability)—programs should not encourage rent–seeking activity or discourage employment of factors of production; and (d) administrative efficiency and transparency—beneficiaries should know their entitlements and be able to plan accordingly, benefits and services should be delivered fairly, promptly, and cheaply, and the costs of entitlements should be known and redistributions explicit.

Few cash benefit systems in OECD countries and middle income LDCs satisfy all these objectives perfectly, and even those which meet most objectives are inadequate. The macroeconomic consequences of budget deficits compel governments eventually to confront affordability. Affordability problems are usually symptomatic of problems arising out of the other three objectives, and are usually only resolved satisfactorily if the microeconomic issues are addressed. Most systems also come close to satisfying the poverty alleviation objective, although too much is spent on income–smoothing (to the point of being income–enhancing), and too little is spent on the very poorest (a failure to target). While any tax–funded system of social insurance interferes with micro–efficiency, successful programs aim at encouraging contributors to work as much as possible in the highest productivity employment, and supplement social insurance with funded, actuarially sound private insurance in order to minimize distortions. Micro–efficiency is enhanced by both transparency and administrative efficiency, if clear rules apply to aid beneficiaries in maximizing their welfare over time. As shown below, Bulgaria's current cash benefit system requires major reform if it is to meet the above four objectives.

Affordability

When real GDP declines by 30 percent, virtually all government programs fail the affordability test, and Bulgaria's social insurance system is no exception. A large share of GDP devoted to these programs is cause for concern. Without fundamental reform, this share will continue rising, because of two trends. First, use of the new programs—expanded social assistance and unemployment benefits—will grow as privatization and the development of the market economy increase income uncertainty. Second, Bulgaria's population, like that of the neighbors, is aging. By the year 2000, 23 percent of the population will be over sixty, compared with some 20 percent in 1993. This percentage is expected to rise throughout the next fifty years. Bulgaria cannot afford to support this whole group with large pensions, and still have resources to invest in the future—in children, in infrastructure, in health care, etc.

The pension problem is not one that Bulgaria can easily resolve. If there are no major improvements in tax compliance from the private sector, the tax base will continue to shrink, with increased financing required from general revenues. Unless fundamental reforms are undertaken in the social insurance system (especially the pension system), the problem of affordability is not likely to be resolved in the medium term when the economy recovers and unemployment is reduced. On the contrary, birth rates have declined in Bulgaria over the past twenty years while life expectancy has increased. Although it is likely that birth rates will stabilized at current levels (about replacement), life expectancy at age fifty should continue to increase with improvements in the standard of living. In 1993, the pension dependency ratio exceeded one pensioner per contributor. Without an increase in the retirement age and a major effort to collect taxes from private–sector employees, the pension dependency ratio will rise well above this level, making the entire system of earmarked tax and PAYG financing unsustainable.
Poverty Alleviation

Reliable evaluations are not available of the effectiveness of the cash benefits and social insurance system in alleviating poverty. The data collection systems are not in place. Nonetheless, it is virtually certain that the real decline in benefits which took place between 1990 and 1992, combined with the unemployment and falling standards of income, impoverished households. Certainly household incomes, especially multigenerational ones, shifted substantially as the retired population began to depend heavily on the working members of households. How effective informal income−sharing systems have been in helping households meet basic needs is also unknown, as these transactions are not recorded in official data. The expansion of the social assistance system should improve aid to vulnerable households.

Benefits tied to current wages (such as sick leave) continued to serve an income−smoothing function and help to prevent the emergence of even more poverty—but, as we see below, at a high cost. While pension benefits have fallen dramatically, an income floor for the elderly is nonetheless being sustained. Analyses from other countries show pensioners are less likely to be in poverty than other social groups (Fox 1994).

Many pensioners are dissatisfied with the level of benefits and would prefer a higher level of income replacement. Unfortunately, they do not understand that the effect of providing so many pensions so early was to devalue the benefits. Under existing financial constraints, this trend cannot be reversed in the short run, and will require major reform in the medium term. If this reform is not undertaken, major chronic poverty problems are likely to emerge, especially among the elderly.

Micro−efficiency

Bulgaria's cash benefit system contains a number of provisions which discourage efficient resource allocation and, at the same time, contribute to reducing overall affordability. First, the system of payroll tax financing drives up labor costs, discourages employment, and encourages tax evasion and avoidance. Second, the fact that many temporary benefits provide a high replacement rate encourages employees to take these benefits frequently. The policy of excluding benefits from income or wage taxes amplifies this tendency. This feature, combined with no risk−rating on employers or other penalties for heavy use of benefits, also encourages employees and employers to collude in abusing temporary benefits,

further driving up system costs. Third, the generous early retirement provisions discourage labor supply.

Transparency and Administration

The cash benefit system as a whole, and especially the social security fund, lacks transparency with respect to both costs and benefits. On the cost side, since employers are responsible for all earmarked taxes, employees have no idea of the costs of the system (or even the cost of individual programs). Nor do they understand that increased system costs, which have been financed by increased payroll taxes, have lowered their wages, all other factors being equal. As benefits do not depend on whether the employer actually paid the tax but whether the beneficiary worked, a further reduction in transparency occurs. In the case of child allowances (and increasingly in the case of pensions), benefits are not related to contributions, but are actually a transfer from one household to another. These benefits are not insurance payments in the classic sense. The benefits of an earmarked tax funding system, that increased transparency increases compliance, are for the most part lost.

There is reasonable transparency with respect to the means−tested benefits (social assistance) as these benefits are low and well targeted. However, the insurance benefits involve significant redistributions which are poorly understood. This is especially the case with respect to pensions, where calculating the redistribution is technically complex. Prior to the real decline in benefits, the average pensioner received more income than was justified by
contributions, because of the overall low retirement age and early retirement provisions. With the decline in benefits, the system provides a more actuarially fair pension on average, but the pension is too low (the income smoothing objective is not met). The lack of a clear policy in adjusting pensions for inflation has also reduced the transparency of the system and the population's support for it.

For the most part, under existing policies, benefit administration is efficient. The main exception is family-related benefits, which are paid from a different source depending on the employment status of the parents. As smaller firms spring up, this complex administration is likely to become increasingly subject to abuse.

In sum, the cash benefit system is caught in a squeeze. Under existing entitlement policies, costs will keep rising—because of previous policies of retiring too many people too early, because of long term demographic factors, and system incentives to claim benefits which are not needed. At the same time, a system which was designed to be relatively self-financing is likely to suffer constantly declining revenues as a result of the erosion of the tax base. Fundamental reform is required to stop the squeeze, restore the viability of the system, and allow Bulgaria to move to a higher growth path. However, lack of transparency in the existing system will make fundamental reform difficult—unless the reform proposals increase the system transparency and make clear true costs and tradeoffs among competing claims. Reform will only be effective if measures address all four above-designated objectives simultaneously.

A Reform Agenda

The Reform Process

Some reform procedures can be readily designed, and implemented. Others, such as pension reform, require detailed technical analysis of options, because entitlement changes imply change in the long-term structure of contingent liabilities of the government. Major changes in entitlements to pensions need to be implemented in a phased manner, in order to allow the beneficiaries time to adjust to the changed income stream. Most importantly, the population has to be convinced of the need for the reforms, not an easy task where interests conflict. Entitlement reform is one of the most difficult issues transition economies face over the next decade.

Reforms in Short-Term Benefits

These reforms are easiest to introduce, as they do not require the long lead time of pension reforms. A number of measures are involved. (a) Taxation of benefits: all benefits should be taxed, so that the active population is less inclined to collect benefits than work, especially in a higher income bracket. (b) Sick leave reform: firms and employees should be penalized for over-use of temporary benefits, by transferring responsibility for the first six weeks of sick leave benefits to the firm in a phased manner. Another option, to risk-rate employers, would not be as successful, especially during restructuring, as firms most likely to encourage their employees to abuse the system are also those near financial failure, and which consequently are not likely be around when the tax bill is increased. Requiring employees to self-insure (that is, forego benefits) for the first day of sick leave would also help to curb abuse. (c) Child allowances: Pro-natalist incentives should be reconsidered, since these incentives seem not to have been successful in Bulgaria and have a poor record in other countries. The child allowance should be made equal per child, while the birth grant should be reconsidered and possibly eliminated or at least made equal per child. (d) Unemployment benefits: Such benefits should only be for those who held a job, involuntarily became unemployed, and do not have any other job. If any other group is included, the potential for waste and fraud increases, and the program loses its insurance character. As there was no general social assistance system in the past, benefits from the URF fund were extended to groups who should not be eligible, including school leavers and people working part time. The expansion of the general social assistance system should allow the elimination of the specialized social assistance benefits funded by the URF, including child allowances and benefits for school leavers.
Pensions: Issues for Medium−Term Reform

In the medium term, pension reform has to address two issues: (a) the benefits provided to those already receiving pensions; and (b) a system to meet the income−smoothing needs of those who will spend a significant amount of time working in the market economy. These questions are fundamentally different, as younger labor force participants have greater opportunities for private savings as an alternative to a state scheme. Because of differences in needs and available resources, consideration should be given to developing an entirely new scheme for the latter group.

Regardless of changes to the benefit formula, the pension system will never be able to provide adequate affordable income replacement unless the retirement age is raised. The 1992 reform was a very positive step but more action is needed. Retirement age should be raised and equalized for all as soon as possible. The special regimes should be eliminated. If necessary, credit for previously acquired rights can be given in the form of a pension supplement. In a PAYG pension system, aggregate benefits depend on the income of the working generation and the numbers in the non−working generation, and not strictly on individual contributions. As a result, the question of acquired rights is less legal than political − whose promises are fulfilled and whose not?

Support for the Already Retired and Disabled

For age cohorts retired or about to retire, the sole source of income other than from existing assets such as housing is public and private transfers from the current generation. The Bulgarian system of public transfers is inequitable, and also unaffordable in the medium term. The questions are: (a) what share of GDP should be transferred over the next twenty or so years given other competing needs; (b) how will this transfer be distributed; and (c) how will it be financed? The generation whose resources were invested in a failed economic system, and have little or nothing to fall back on, should be treated equitably. Obligations to them should be financed from general revenues. Likewise, as any actuarially fair formula will give most of this group impossibly low benefits, there is a strong case for adopting a flat benefit for this group.

Even if the current formula were to be changed to a flat benefit for those already retired or about to retire, this is not likely to result in much savings. While it is probably unfair, and in any case unrealistic to take benefits away from current pensioners, it is also the case that many pensioners under the age of sixty still work. If benefits are to be cut, this group should be singled out. This could be achieved by, for example, indexing their benefits less than the pensions paid to those over sixty (or over sixty−five). Additional savings could also be found by tightening disability standards and requiring recertification.

Support for the Currently Active

The age cohorts with at least ten more working years (according to OECD retirement age norms of sixty−three to sixty−five, or most of the currently active population) have many more options with respect to old−age security. In addition to a public system, which is needed to provide at least a floor for old−age income, private savings opportunities are available. Bulgaria should begin to develop a multi−tier pension system, building on the existing public system, and adding private savings and insurance options. The questions to be addressed for this group are: (a) what should be the roles of public and private programs in ensuring old age security; (b) how much participation (for example, earnings replacement) should be mandatory, how much voluntary; (c) how should the systems be financed; and (d) what measures should be used to encourage voluntary savings?
With respect to financing, almost all public systems began as funded systems, but almost all are at least partially PAYG, in part because politicians have proved themselves incapable of resisting access to the funds accumulated. Private systems, on the other hand, are mostly funded. Since there is no way to insure a stream of tax revenue, PAYG is not possible in the private sector. An extensive public system does tend to discourage the growth of a private system, but simply scaling back the public system and letting the private system grow spontaneously is not recommended either. The development of long–term savings instruments (pension plans, life insurance, etc.) requires careful regulation to ensure that savers are protected.

A funded pension system, regardless the type, cannot possibly replace a PAYG system in a country as mature as Bulgaria. This is because the existing pension debt is too large. The burden on the working generation of financing the current debt (paying pensions over the next 30 years) as well as accumulating a large enough fund for their own retirement is too great, even if the debt is reduced somewhat by raising the retirement age. Depending on the rate of economic growth and the growth in real wages, development of a funded tier to complement a reduced PAYG system would however be possible.12

Financing Reforms

Benefit reforms need to be complemented by reforms in the payroll tax financing. Efforts must also be made to collect taxes from the growing private sector. These efforts are more likely to be successful if the payroll tax is lowered so that compliance is not such an onerous burden.

Lowering payroll taxes implies finding other revenue sources for some benefits. The logical revenue source is general revenues, as the tax structure is being reformed to improve efficiency and equity. Prime candidates for transfer to the state budget are non–insurance benefits, since any medium term reform is likely to include this measure anyway, in order to improve transparency. This includes birth and child allowances, social pensions, and non–unemployment related benefits (such as subsidies to firms to hire unemployed), retraining expenditures, and the like.

Payroll taxes earmarked for the URF should also be lowered. These taxes have been increased, despite continuing surpluses. With each tax increase come new expenditure proposals, some of which are of dubious value (interest subsidies for firms expanding employment), some of which would be more efficiently covered by other programs (social assistance expenditures), and some of which are unrelated to unemployment (e.g. funding for improved survey analysis). World Bank projections suggest that even at the height of unemployment, at current tax rates, the URF fund will run a significant surplus before requiring any transfers from general revenues. The cycle of increased taxes followed by increased eligibility and expenditures should be curtailed.

Tax compliance may also increase if benefits are tied to contributions, not to employment. When benefits are tied to contributions, the employee has an incentive to monitor compliance. This change will require a major improvement in record–keeping and administration, including a large investment in computerization.

Notes

1. For data on pension expenditures in over 20 countries, see Fox 1994.

2. Pay–as–you–go (PAYG) is the most common method of financing public pensions and short term benefit financing: current expenditures are financed out of current savings. An alternative, generally used in private insurance funds, is full funding, where reserve funds equal the present value of future benefit obligations.
3. Municipalities pay maternity benefits and allowances to families where both parents are unemployed (primarily students), and those to single nonworking mothers where the father is unknown or deceased. These payments are funded by general revenues, although the benefits are equivalent to the social security benefits of working families and individuals. These payments are included in table 12.1 but not in table 12.3.

4. The payroll tax which finances the benefit is a tax deductible expense for firms and individuals.

5. A few small private pension funds have been organized, covering workers in the private sector. As these funds are completely unregulated, the size or coverage is not known.

6. As our data begin in March 1991, this is where the index was based. This leads to the appearance of dramatic real wage gains throughout the stabilization, which is not a true picture. Between January and March 1991, both pensions and wages declined dramatically as the first burst of pent-up inflation was released with the removal of price controls. The system of fixed–amount compensation benefitted pensioners relatively more, so that in March 1991 the average wage had fallen roughly to equal to the average pension. After March 1991 wages recovered more than pensions, to approximately twice in real terms, their March low. Nevertheless pensions continued to decline.

7. The firm is simply the disbursing agent, as firms are reimbursed from the central government for these payments.

8. For the first child this amounts to about $5, for the second about $12, and for the third, about $25.

9. Due to the exclusion of employees of budgetary institutions from the tax base, the base is much narrower than the SSF tax base.

10. In principle, a PAYG–financed social insurance system could be as efficient as a funded, private system. However, this does not occur in practice. Demographic change implies the need for large reserve funds, which are usually poorly managed in the public sector (or, as in the case of Bulgaria, not created at all). Also, politicians cannot resist using any social insurance systems for redistributions, between generations and within generations. Socialist countries are no exception. One example is the difference in retirement age. For the same contribution, some groups have the right to retire much earlier than others, yielding discriminatory benefits. Actuarially unfair redistributions introduce distortions, thus reducing market efficiency. As a result of this experience, many now believe that the public sector social insurance program should be small, and should explicitly focus on redistribution, leaving more of the savings and insurance functions to the private sector (see World Bank 1994).

11. Risk rating raises an employer's tax rate as benefit claims increase.

12. See World Bank, 1994, for simulations on the transition to a funded system for typical economies.
Choosing and Funding a Health Care Program in the Transition

Charles Normand

There is little dispute about the reasons for preference for market provision of most goods and services. Yet, as a result of particular characteristics of demand and provision, in most countries government is involved one way or other in the health sector. Recourse to the market to provide health services needs to accommodate the presence of scale economies in provision, ignorance and information asymmetries, and the nature of demand for care. Associated with these considerations are potential monopoly power of doctors and other providers of care, potentially adverse incentives, and health-service needs which arise with small probabilities but have high costs.

Against the general background of problems of provisions of health services, this chapter is concerned with the financing and choice of health care in the transition, with a focus on the circumstances of Bulgaria. The first section sets out in detail indicators of health and health services, and assesses the priorities for reform. Health policy is considered in the second section, with an emphasis both on the need to have a coherent set of policy objectives, and to put in place organizations and incentives to meet these objectives. The third part looks at the actual and proposed reforms, analyzes the likely outcomes of the changes, and matches them to the policy goals. The final section is concerned with the lessons of health-sector reform in Bulgaria for other countries in the transition.

Health and Health Care in Bulgaria

Health and Disease

Indicators of the health of the population of Bulgaria show an overall pattern that compares unfavorably with western Europe. Bulgaria is typical of countries in central and eastern Europe (CCEE). Life expectancy at birth is 71.4 years, com-

pared to an average of around 71.3 in CCEE and 77 in western Europe. Bulgaria is slightly better in terms of life expectancy than Hungary and Romania, and slightly worse than eastern Germany. Within the European Region of

References


The World Health Organization, Bulgaria ranks twenty-sixth in terms of life expectancy with a deteriorating relative position. The main source of differences in life expectancy is in diseases of the circulation, stroke being at a particularly high level. Given the risk factors for diseases of the circulation (smoking, diet, lack of exercise) and the long time lags between exposure to risk factors and the development of the diseases, it is probable that Bulgaria's relative position will continue to deteriorate in the short term.

Challenges facing the health sector are also affected by the aging of the population. The proportion of the population over the age of sixty increased from 20.2 percent in 1970 to 28.5 in 1990. There were more deaths than births in 1990, resulting in a declining and ageing population. Use of health services is strongly correlated with age, and demand is therefore expected to rise.

Health Services

Health services in Bulgaria are provided by a network of public facilities and services consisting of local, regional and national hospitals, polyclinics, health facilities in small towns, and some workplace clinics (which may also serve the local population). The system has little official private medicine, and few official copayments by patients, although some additional payments are made to doctors.

Public health services are provided by a network of hygiene and epidemiological inspectorates which have public health, environmental, and occupational health functions. They are mainly administered by the Municipal People's Councils (MPCs) and most of the funding is channelled through or raised by MPCs. Decision making in the health sector has been very centralized, with administrative rather than managerial or policy rules for local tiers. For a simplified diagram of responsibilities and organization, see figure 13.1.

Some regional and district hospitals provide polyclinic services from within the same facility, but as a separate operation. Clinics in enterprises sometimes provide ambulatory services for the local population as well as for their employees. Funding for drugs and facilities in enterprise clinics is provided by the enterprise, but the staff is employed by the local polyclinic.

There is a particular problem in the financing of regional hospitals, since their services may cover several municipalities. As the budgets of municipalities have come under pressure, a resistance has developed to using locally raised funds to supply services to residents of neighboring municipalities. In effect the municipality is too small a unit for funding hospitals that provide services for the population of several municipalities.

Management of services has been very centralized, with little autonomy for providers of care. Since decisions about facilities and staffing are taken at higher levels, there is little incentive to use resources efficiently. Switching expenditure between parts of the budget has been severely restricted.
Figure 13.1
The Bulgarian Health Sector

Table 13.1 Hospital Beds

<table>
<thead>
<tr>
<th>Country</th>
<th>Hospital beds per 10000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>125</td>
</tr>
<tr>
<td>Portugal</td>
<td>45</td>
</tr>
<tr>
<td>Greece</td>
<td>52</td>
</tr>
<tr>
<td>Spain*</td>
<td>40</td>
</tr>
</tbody>
</table>

* The regions of Spain included are those with an income per head at or below 70% of the average for the European Community.

Sources: Ministry of Health, OECD, European Community
There are some very positive features of health services in Bulgaria, including one of the best records in Europe on childhood immunization. The quantity of health care facilities and personnel is above the European average, and is, in particular, high for a middle income European country. There is a strong correlation worldwide between
GDP and the share of countries' resources devoted to health. It is therefore interesting to compare Bulgaria with the relatively poor countries in western Europe. Table 13.1 makes the comparison based on the number of beds in hospitals in Portugal, Greece and the poorer regions of Spain.

A consequence of the high levels of hospital beds is the tendency to treat people in hospital when cheaper and better ambulatory care is an alternative. Bed availability is generally a good indicator of bed use. Changes in care strategies, and a recognition of the advantages of shorter hospital stays, mean that fewer beds are needed for any given workload. Modern health care does not require the current numbers of hospital beds in Bulgaria.

The number of people treated in hospitals is compared in table 13.2. There is no evidence that more people receive services in Bulgaria, but only that more is being provided in hospitals. Many people are being treated in hospital in Bulgaria who could be treated on an ambulatory basis. Those who need hospital care are often kept there unnecessarily.

High rates of hospital admission are normally associated with short lengths of stay and low admission rates with longer stays. The most urgent need for admission to hospitals is for very dependent patients who need care for an extended period. As admission rates increase, the additional admissions are normally of relatively fit and independent people, many of whom do not require hospital care. Bulgaria has high admission rates and long stays in hospital (13.7 days as compared to Portugal with 11 days). In Europe trends in length of stay are falling by around 2.4 percent per annum, as less traumatic surgical treatments become wide−spread, and more effective medical treatments become available. If facilities in Bulgaria were used more intensively, a reduction of between 30 percent and 40 percent in bed numbers would be achievable.

Health services in Bulgaria use more staff than in Western countries. Table 13.3 compares the number of doctors and nurses. Differences in the tasks carried out by different professions make comparisons between professions unreliable. However, large differences remain when all health care professions are summed and compared. No
country in the European Union has more than 100. Staff productivity could be increased significantly in Bulgaria, allowing a rise in the incomes of health care professionals within existing expenditures.

The overall picture is therefore of a health care system in Bulgaria using more staff and treating more patients in hospital than in comparable countries. Some improvements in efficiency in the health sector are readily achievable, while others require training or investment. Rapid change in patterns of care is impeded by poor facilities and outdated and unreliable equipment, excessive specialization of medical staff, weak primary care, low pay and poor morale of health sector staff, management inefficiency, poor financial data that cannot be used to inform management, and no incentive for doctors to take account of resources in their behavior.

The Challenges

Health Policy

In common with other countries in central and eastern Europe, Bulgaria has no clearly stated health policy. The focus of change has been on ownership, funding mechanisms, and structures, without the reference point of clear policy goals. Government, which inevitably has a role, should direct policy to achieving longer life and better health for the population. It is also important that government resist the tendency for inflation in health sector costs.

Many of the serious health problems of the population of Bulgaria will be solved only through public health measures, including changes in smoking, diet, lifestyles, and the physical environment. Such public−health interventions can be only partly achieved through the structures of the health sector, since also involved are health aspects of other government programs and taxation policy. In most countries public−health services are provided publicly, often with little connection to the rest of the health−services sector.1

Health services have the largest impact on the health of the population if the incentives are to provide appropriate services to people with the greatest need for care in the most efficient ways. Reforms should be judged on the extent to which this is likely to be the case.

In addition to achieving health policy goals, there is a need to move towards a more pluralistic health sector, with more choice for patients and providers. Some reforms may be neutral in terms of the basic goals, but offer greater freedom and choice. It is worth noting that much of the reform of health sector financing in developed countries leads to less choice, as mechanisms are put in place designed to control costs.

In summary, the goals of health policy are long life and good health for the population at large. Operationally, this implies access to basic health services, however defined, for all of the population on the basis of medical need rather than ability to pay.

Markets and Health Care

Market failure in health care is due to economies of scale, monopoly power by providers (largely through the need for professional qualifications and the need to restrict market entry by unqualified practitioners), and great uncertainty about the likely need for services for a particular individual. The sources of economies of scale are the high cost of medical facilities and technology, and the need to use equipment intensively. Except in major centers of population, the number of separate providers able to provide many types of care will be small (or only one).
Professional competence in medical practice is controlled by licensing practitioners with a required minimum level of skill. This means that entry is restricted. To a large degree, control by the medical profession over entry criteria ensures that licensing is used both to police standards of practice and to restrict entry. Although it is possible and often desirable to use competition between providers of health care to improve efficiency and reduce costs, it is important to remember that such competition is likely to be limited. Health sector reforms must take into account the inevitable elements of monopoly.

Need for health care is highly uncertain, with individuals facing a small probability that high costs will be incurred in treatment. It is the type of service which lends itself to insurance financing. However, it has long been recognized that there are constraints to the operation of insurance markets in health care (Akerloff 1973). The main reasons for this market failure are asymmetries in information between the insurer and the insured, the difficulties in recognizing differences in risk, and the concentration of high risks in relatively old and poor people. The first leads to the problem that the bad drives the good out of the market. Premia reflect the fact that people seeking insurance are likely to have above average morbidity. Other people see insurance as actuarially unfair, and therefore do not buy it. This further increases the risk mix for those insured. The second means that those with the greatest need for insurance coverage typically are those least able to pay. If reforms aim to use insurance mechanisms for financing, it is important to consider how universal access to at least basic health care will be achieved. Experience of actuarial insurance in the U.S. indicates that sections of the population fail to obtain coverage (Judge 1991).

Cost Containment

Health care systems are prone to cost escalation. The main reason for this is the dominance of payment by third parties. Normally health services are funded by government or insurance (private or social). The effect of this is that it is in the immediate interest of neither the patient nor the provider to contain costs. Even though it is in the long run interest of patients to avoid cost inflation, at the time that decisions are taken about specific treatments, both parties are willing to see higher costs and better processes or outcomes.

Given the tendency for cost inflation in health services, it is important to design rules and structures in the reformed health sector that discourage this. Certain funding mechanisms can help to contain costs, and it is particularly useful to avoid methods of reimbursement of providers that encourage costs to rise.

As a general principle, systems of insurance with no direct payment and copayment by patients encourage cost escalation. However, of greater importance are systems of incentives to providers of health care. Providers can be paid by the case, by capitation (a fixed sum for each person registered for services with a particular provider), by each service provided, or the providers can be directly employed by the funders (as in the case of health maintenance organizations and national health care systems). The evidence is that systems that reimburse by fee—for—services have the greatest tendency for service volumes and costs to rise. Capitation systems best contain costs, but can be associated with a low quality and volume of care. Most reimbursement systems are a combination of the different approaches, using financial incentives as an instrument for achieving health policy goals.

The Transformed Health Care System

The reform of the health sector in Bulgaria is loosely based on the German model. Funding for most medical services will be by social insurance, based on mutual support, and funded from a payroll levy, with compulsory membership of a health insurance plan for almost all people resident in the country. The proposal is to set up a single health fund with responsibility for providing health insurance for anyone wanting coverage. In the German
terminology this is a territorial fund. The proposal allows for other health funds to be developed, which might, for example, cover occupational groups and would offer an alternative to the territorial fund. The latter will not have to have open enrollment for all citizens, but will not be allowed to discriminate on basis of risk or income.

Since the health funds will face different patterns of risk in those covered, cross subsidization between funds is planned. In essence, a levy would be raised on contributions of funds covering low risk people, which would be used to subsidize funds with high−cost members. In addition to changes in the mechanisms for raising resources for health care, changes are planned in the methods of remuneration for health sector institutions and professionals. A mixture of capitation and fee for service is planned, although the balance and mixture is not fully specified.

Health care providers will contract with health funds to provide services for the insured population. Providers may be private (for profit or nonprofit) or public. The aim is to allow choice between competing providers. These changes are analyzed in more detail in the remaining part of this section.

**Health Insurance**

Social insurance funding for health services has a long history in Europe, and versions of this system are used in several countries. The system was widely used in central Europe before the 1939−45 war. It is based on mutual support (that is, contributions on the basis of ability to pay) and sets up a fund or funds explicitly to be used for providing health services. The most common source of funds is a percentage levy on the payroll or income, although this is not necessarily the case. Many of its features can be achieved with another tax base, such as property, or a share of general tax revenue. The important features of social insurance, which differ from tax funding, are transparency in the flow of resources into the health sector and consumer choice. In particular, it is normal for insurance systems to allow some choice of doctor and other service suppliers.

Health insurance may or may not bring significant increases in funding for the health sector, better services, and better salaries for staff. Governments see the advantage of transferring the cost of health services off−budget, and may reduce other funding for the sector. It may therefore be that net resources for health care remain unchanged, or even decrease.

Health care providers are keen to find additional sources of funds for better salaries for staff. The strong support from the medical profession for health insurance in Bulgaria is partly due to a belief that significant additional resources will be forthcoming.

Since social insurance is based on the principle of mutual support, it is not actuarially fair. This means that contributions are calculated on ability to pay, and access to care is on the basis of need. This helps to achieve universal coverage for basic health services, or near universal coverage of the population in a single system of funds, and thereby producing efficient risk sharing. The principle of mutual support gives rise to incentives for the relatively rich and relatively healthy to avoid membership and payment, although there is some evidence in western Europe that such people obtain quite high levels of care (van Doorslaer and others 1993). On average, these people are losers in the system and may be prepared to live with some risk. If emergency care is provided to all (most countries take the view that care must be given to those who are seriously ill or injured regardless of insurance status), then the incentive to be a free rider increases. There is, therefore, a risk of losing universal coverage, of encouraging some to avoid paying, or of a more complete collapse of the system. Low levels of compliance lead to higher premia for those who do pay. There is also a trade−off between spending money on policing the system, with higher levels of compliance, but higher administrative costs. This further reinforces the
argument for sharing those costs with other compulsory tax and contribution systems.

The Bulgarian scheme is compulsory for all with low or medium incomes, but, as in Germany and the Netherlands, allows opting out for those on high incomes. This greatly reduces the degrees of cross-subsidization from richer to poorer people within the system. The most able to contribute to the scheme, and thereby the net losers, opt out.

The problem of compliance is particularly severe in the informal sector (see chapter 4) where people who are self-employed or employed by small firms which do not comply with employment law. No country has achieved 100 percent coverage, but experience in middle income countries with large informal sectors suggests that it may be difficult even to achieve 75–80 percent compliance. This is due to non-compliance by self-employed people and small firms. The higher the percentage payroll deduction for health insurance, the greater the incentive to evade, which can be done fully or partially. High levels of evasion lead to higher rates of deduction on those who do pay, producing further incentives to avoid payment. Costs of administration and compliance may be lowered if health funds cooperate with one another (for pensions, unemployment and health benefits). Alternative ways to secure contribution from the informal sector are flat-rate payments, levies on agricultural products for farmers, or fees based on property.

Calculations of contribution rates must take into account an element of non-compliance (which is likely to be at least 20–30 percent). It may be preferable not to allow exemptions (as is suggested for those with very high incomes), since this makes it more expensive to ensure that people all contribute, reduces transparency, and reduces the mutual support. In addition, individuals in the informal sector are an important part of the contributions base, being those most able to pay.

Health insurance can be provided by one or, as in Germany, many health funds. Allowing more than one fund avoids monopoly and the consumer is given some choice. The disadvantage of competing health funds is less efficient risk sharing as the number of companies rises, and the need for rules to ensure universal coverage. Competing companies have a strong incentive to choose high income, low risk people, leaving the old, poor, high users of services to be funded by the basic state scheme. Complex and expensive monitoring and revenue sharing is needed to avoid this. Costs of administration can also be higher with more companies, each collecting contributions, and contracting with suppliers of services. This is potentially wasteful, and may lead to inefficient priority setting. The natural tendency for elements of monopoly to develop in provision of health care is a reason to allow monopsony power in funding services. With the exception of the Netherlands, no western European country attempts to use competition between health funds as a mechanism to encourage efficiency.

Some countries have a number of regulated health funds that are not really competitive. It is of interest to note that the development of health insurance in the former German Democratic Republic has involved fewer companies than in the rest of Germany. The system in western Germany involves duplication of effort, but despite this, for any individual there may be little or no choice of health fund.

The main disadvantages of health insurance are potentially high administrative costs and excessive dependence on payroll as a source of funds. The overdependence on income and payroll taxes is discussed later in this chapter. There is some evidence that health systems funded by social insurance are less successful in controlling costs than those using general state revenue, but also that insurance systems are more popular with the public.

The key feature of health insurance is the entitlement to services that goes with membership in an insurance plan. Although in an analytical sense many health funds resemble earmarked taxes for health, they bring with them the idea of insurance and a tradition of offering very specific entitlement to services, as compared to a more general entitlement in a national health system. Health funds operate within a framework that specifies entitlement to services, and sets the contribution rate to allow this. Great care is therefore needed to define the entitlement at an
affordable level. The experience in France is of generous entitlements, which are very difficult to remove. It is important to learn from mistakes elsewhere.

**Paying Providers and Health Care Provision**

There is no necessary connection between the system of funding for health services and the ownership of providers of care. For example, reforms in the United Kingdom allow private providers of services to compete with government hospitals for patients. Germany uses a mixture of public and private facilities funded by health funds. Equally, different systems of reimbursement for providers can be combined with financing by health funds.

**Setting Entitlements**

There is some argument in Bulgaria about what should be included in the benefit package funded through the insurance. It is clear that primary and secondary health care should be covered, and there is a case for individual health promotion activities and immunization programs to be included. Occupational health should be excluded, since it should be funded by employers, as should costs of health−leave certification and general health education.

It is generally the view that public health services have strong externality and public−good features, and government should subsidize them. There is no reason why the health budget should fund nursery schools and other nonmedical child care as is currently the case in Bulgaria.

The Bulgarian system would have some very expensive services separately funded from the state budget. Two reasons are suggested for this. First, there is the concern to avoid an excessive burden on health insurance. Second, there is a fear that financing will not be made available for important but very expensive procedures. The answer to the first is to examine the contribution base for health insurance. In general, there should not be too much dependence on any single source of financing. It may be necessary to supplement the already heavily taxed payroll with other financing (for example, taxing expenditure, profits, or property), or to accept the current level of spending.

The second point is more serious. Insulating some services from comparison with other health services is undesirable. If they are of lower priority than some other services, they should not be chosen, and if of a high priority, the health funds should be willing to pay. There is a danger that low priority, expensive services are protected from comparison with more important routine care. There is also a risk that expensive services will be even more vulnerable if financed by the state budget. Given very tight government spending, important expensive services may be reduced. If the objective is to achieve maximum benefits from health care, responsibility for all health care should fall on the same agency or agencies.

A similar case can be made for a close link between the funding of health services and social care, such as residential or domiciliary care for elderly people, or services for people with handicaps. There is some evidence that people remain in health facilities (high cost) when there need is for social care (lower cost), but it is not possible to vire between the two budgets. Much of the reason for the long stays in and high admission rates to hospitals is the lack of cheaper and more appropriate social care, including support for those in their own homes. The new health insurance structure may exacerbate this problem by further separating responsibility for funding health care and social care.

Priority setting in health services is a problem in most countries. Often access to care has been partially dependent on where people live, or how long they wait for treatment. There is an increasing awareness that clearer and more explicit priority setting is required; reforms in the United Kingdom and in the state of Oregon in the United States, require that services be given priority on the basis of cost−effectiveness in achieving health gain. Thus, treatments
which contribute little are excluded. The Czech and Slovak republics are among those countries which have attempted to specify basic packages of care to be covered by insurance.

In a system of social insurance, the mechanism for priority setting is the setting of entitlements. Services included in the entitlements have priority over those that are not. In Bulgaria the plan is for entitlements to be set by an expert group, quite separate from those responsible for setting the contribution rate. This will lead to a mismatch between entitlements and finances, and will also lead to the dominance of provider priorities over those of patients. The interests of providers of services are not necessarily the same as those of patients, and include a preference for interesting work, technology, and innovation.

**Contributions and Funding**

Health services in Bulgaria are funded by a levy on income collected through the payroll. Because of the difficulty in assessing nonsalary income, in practice this becomes mainly a payroll charge. Payroll taxes can be progressive, proportional, or regressive. The desirability of any individual tax or charge being progressive depends on other parts of the tax system, and the distribution of the burden of taxes and charges. Policy on rates of health insurance contributions should therefore be made in conjunction with the decisions on other social security and tax rates.

The plans involve contributions by both employers and employees. Analytically there is little difference between pretax employee contributions and employer contributions. The actual amounts paid by the employee depend on the effect of the employer's contribution on wages, which, in turn, depends on the degree of competition in the labor market. In either case, the take-home pay of the employee and the employment costs to employers should be the same. However, the levying of the payment can be important in determining the attitudes of both employers and employees. If, formally, the payment is by employers, then they are involved in the management of the funds and in the efforts to control costs. If employees pay, they are made conscious of the costs of services and will resist increases. The proposed formula for Bulgaria envisages different proportions being paid by each party as salaries rise. Employers will pay the full cost for those with very low salaries, half for most people and less than half for those with very high incomes. This complication is unnecessary and makes it more difficult for people to see a relationship between contributions and entitlements. Given the legacy of distrust of government, it is important to maximize the transparency of the system. If an objective is to make people aware of the cost of health care, the best option is to describe the payments as by employees.

Under health insurance schemes, arrangements have to be made for coverage for the unemployed, including nonworking spouses, and pensioners. The Bulgarian proposal provides coverage for parents, children, and spouses through the insured worker. Funding dependents on this basis requires a high average contribution rate. Unemployed people will be funded from unemployment insurance, and pensioners by the pension fund. The suggested system of payments on behalf of unemployed or retired people is a problem, since neither the unemployment nor the pension funds can afford to support significant additional spending. It may be appropriate in this case to seek an alternative source of funds, such as taxes on harmful products, or taxes related to wealth rather than income.

**Containing Health Sector Costs**

It is important that the health insurance system have incentives for efficiency and cost containment. The setting of entitlements to services must take into account the cost of providing access to these services. It is important to understand that no health care system has unrestricted access to care. Two methods are used to control the use of services: entitlements that allow access only to high priority services, and a system of referral, which allows primary care doctors to identify those who have high priority for treatment. Services that are free or subsidized at
the point of use always display excess demand since the consumer faces zero price, and will demand services that yield benefits to him or her, but which are not cost-effective. A policy is necessary regarding which services are to be included in the package, and for which categories of patients. In other words, priorities must be determined and services targeted on those who will benefit most. Rights will have to be explicit and entitlements determined on basis of meeting the most important needs within affordable limits. This is particularly difficult given the raised expectations of the population and the efforts of health sector professionals to move towards the relative incomes that are common in western Europe.

An additional mechanism for cost control is to require payment of some part of the cost by patients. The Bulgarian scheme would have some co-payments, covering part of the cost of medications. Full payment is required for treatments falling outside the basic package. In many poorer countries, payments by patients have increased significantly in recent years.

A common, and usually successful mechanism for the control of inappropriate health care services, and thereby cost, is the use of general practitioners as "gate keepers" to hospital care. This can ensure that only those who are likely to benefit from available specialist services will be selected. Direct access to specialist care is convenient for and popular with patients. It saves travel and other costs of home primary care, which is often followed by visiting a hospital or specialist. However, it is almost always associated with high health services costs. Effective gate keeping requires very skilled general practitioners, who can treat some conditions themselves, and recognize those conditions which will benefit from investigation and treatment in hospital. For a system of gate keeping to work, the status of primary care physicians in terms of pay and length of training must be similar to that of hospital doctors.

Health Sector Reforms

The reform of health financing introduces a contractual relationship between the health fund (or funds) and the providers of health services. This allows the creation of a more diverse and competitive system of health care providers. The need to set priorities and control expenditure does not imply that services should be managed or closely controlled by the government or health fund. It is possible to have a competitive system of provision whether providers are private, public, or both. Under a system of social-insurance funding of health care providers, it is possible and desirable to have competition in the supply of services, thereby making good quality and appropriate services available at minimum cost. Funding bodies should aim to agree to contracts that achieve policy goals and minimize costs.

Funding and Reimbursement Mechanisms

The planned reforms in Bulgaria do not specify the funding mechanism in detail, but indicate that it will be a mixture of capitation funding, fee-for-item-of-service, global budgets and salaries. All payment systems have both desirable and undesirable incentives, but a high priority in the choice of system must be the control of costs. Experience in Europe and North America shows clearly that successful control of expenditure is always associated with payment systems where the overall budget is known at the start of the period, and the payment mechanism allows expenditure to be constrained to this level. Both capitation and systems with expenditure limits achieve this overall control, but have important differences in the incentives they produce. Fee-for-service systems are always associated with cost escalation unless accompanied by constraints. They encourage professionals to work hard, but also to carry out more work than the system can afford. They are popular with physicians, since they tend to lead to high costs.
for the patients and high incomes for providers.

It is possible to give consumer choice and incentives for good quality services without fee−for−service. Germany has a system of fee−for−service, but the associated cost control mechanism is causing significant problems, and is the source of disputes with doctors.

Capitation is typical in primary care, and gives a continuing responsibility to primary care physicians. It can be set at a level that allows a reasonable income for doctors who are successful at attracting patients. Given the surplus of doctors in Bulgaria, it can also offer a competitive mechanism for selecting those who work hard and provide an attractive service. The International Labor Organization, which has extensive experience in social−insurance funding, is a strong advocate of capitation payments for primary care and basic hospital care. Capitation works best when it is easy to transfer between providers, so as to move resources to those who provide good services.

Paying salaries to providers as employees helps to control costs, but may not encourage hard work. However, many countries have hospitals paid by capitation or global budgets, but pay salaries to doctors. It is important to have a clear association between the success of the hospital and the career prospects of the doctor.

The importance of cost control can be seen in the approximate relationship of health care costs and the required contribution rate in Bulgaria, where each 10 percent rise in health care costs would add around one percentage point to the contribution rate for the insured population. There are other influences which will tend to increase the cost of health services in Bulgaria. For example, expenditure on pharmaceuticals is likely to rise as prices move towards world prices.

The proposed system of contracts between the health fund and health care providers requires the formation of legal bodies to enter into contracts, and the combination of skills and management systems within health care providers. At present there is no tradition of management in hospitals and primary care services, little relevant and timely data management, and no skills at managing within budgets. Educational, cultural, and legal changes are required, as well as introduction of financial and activity information systems. Within the hospital sector, the aim should be to make hospitals autonomous and locally managed (whether they remain in the public sector, or become private). Appropriate financial and management data are necessary. However, it is important to ensure that the data needs are derived from management, and not driven by the available information technology.

There will be a need for a large training program in health−services management, and it is important to develop an indigenous capacity to train health service managers. This will require education abroad of those who will become trainers.

Payment mechanisms should encourage the delivery of good quality care, encourage competition, and be simple and inexpensive to administer. Bulgaria has begun planning payment systems and monitoring of care. Payment to hospitals would be on the basis of the volume and mix of cases treated, with each category being given a price. The proposals are a development of payment by Diagnosis Related Groups. The ideas contained in the proposals are too complex and require too much data to be useful in the short run. It would be sensible to try to adopt simpler mechanisms that require fewer data, and specify volumes and quality of care, and have clear rules for selection of patients to avoid high−cost cases and other discrimination. It is easier to enforce rules of choice of

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patients than to calculate detailed costs by detailed category of case. For example, a contract for a given volume of surgery with a clear rule against adverse selection and choice only of easy cases may be preferable to a contract which details case by Diagnosis Related Group (DRG) type categories.

The payment system should take account of the volume, type and quality of service, but should not discriminate among suppliers. The aim should be a level playing field, which gives no special treatment to private providers or tertiary care facilities. Providers are normally interested in carrying out new and innovative treatments, and like to use up–to–date equipment. The funding arrangements should not encourage this. For example, unless a particular skill is necessary for providing a treatment no additional payments should be made. The system should not encourage and reward excessive specialization, and only pay for what is done, and not what could be done. There is always pressure to pay for what a hospital could do and not what it does. It is, however, important to make available some funding for development and innovation.

A move to a more pluralistic and competitive set of health care providers will require some changes in the status, management, and funding of government owned facilities and services. If local government continues to own some hospitals and clinics, subsidies which give these facilities a competitive advantage should be removed. Rent should be paid by providers to cover buildings and equipment, so that they compete on equal terms with private (for profit or non–profit) providers. The cost of purchase, maintenance, and replacement of equipment should be built into the contract prices from the health fund(s). Attempts to protect certain providers from competitive pressures should be resisted. Teaching hospitals should not be allowed special treatment for their service provision, except insofar as the services provided are indeed special. Similarly, funding for research should be provided separately and within a competitive environment.

A major problem with centrally planned health care systems is the dominance of provider interests over patient interests. It is important that this will not be continued. However, the major scope for diversity, competition, and choice is in provision rather than financing of care.

Contribution Rates and Funding of Health Services

The tax base for the health fund in Bulgaria is mainly the payroll, and contributions made by the state on behalf of certain categories of people (“deemed contributions”). The contribution rate required depends on incomes, the number of people contributing, compliance rates, and the cost of services covered by insurance. Declared (as opposed to actual) incomes form the basis for personal contributions.

Measured unemployment may rise in Bulgaria (even if GDP remains stable or increases). It is therefore important to consider any effects of introducing health insurance on unemployment. Since no money for health care contributions is currently available from pension and unemployment benefit funds, it is assumed that the government will make deemed contributions for them.

Table 13.4 presents estimates of the contribution rates on a range of assumptions. It should be noted that the normal way of describing contribution rates for social insurance is on a tax–exclusive basis. The rate is the insurance payment divided by the salary. The base assumption is 1992 GDP (225 billion leva) and unemployment rates (15 percent), 100 percent compliance with the new insurance, and 1992 levels of health care expenditure. The "worst case" assumes a 50 percent rise in costs of health care, unemployment at 20 percent, a 5 percent fall in GDP, and only 75 percent of the working population paying contributions. The other cases considered introduce variations in the assumptions made in the base case.

Judgement about which scenario is most likely depends in part on the size of the informal sector. On the basis of current employment by sector, it is probable that the number of self–employed or employed in small firms is likely to be between 35 percent and 40 percent if agriculture is assumed to be mainly self–employment, with
some parts of industry, transport and services in the informal sector. The formal sector will contain many relatively small firms, where tax compliance can be expected to be lower than in the existing state enterprises. Judging from the experience of other middle income countries, compliance in informal sectors is low,

Table 13.4 Contribution Rates Under Different Scenarios

<table>
<thead>
<tr>
<th>Case</th>
<th>Contribution Rate</th>
<th>(% of salaries)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Base Assumptions</td>
<td>8.0</td>
</tr>
<tr>
<td>2</td>
<td>As 1 with 20% unemployment and 5% fall in GDP</td>
<td>8.1</td>
</tr>
<tr>
<td>3</td>
<td>As 1 with 75% of workers paying</td>
<td>9.7</td>
</tr>
<tr>
<td>4</td>
<td>As 1 with 20% increase in health care salaries and drugs</td>
<td>8.8</td>
</tr>
<tr>
<td>5</td>
<td>As 1 with 50% increase in health care budget</td>
<td>11.9</td>
</tr>
<tr>
<td>6</td>
<td>Worst case (15)</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Sources: IMF, Central Statistical Office, Ministry of Health, World Bank Estimates

and so 75 percent overall compliance is likely to be more realistic than 100 percent, and may be optimistic. Registered unemployment is also likely to rise at least in the short run, as is the average price of pharmaceuticals. Therefore, on realistic assumptions about pharmaceutical costs, compliance rates, and unemployment, the likely contribution rate for the current pattern of services would be around 10.5 percent, with 1.5 percent of GDP paid by the state budget (combining the effects of 2, 3 and 4 in table 13.4). This assumes very tight cost control within the sector. An increase in the cost of services of 50 percent, which would take incomes of health care staff above the national average, would lead to a contribution rate of nearly 15 percent and state budget contribution of 2 percent of GDP.

The contribution rates for health insurance need to be considered in the context of the overall burden of payroll and income taxes. Analytically it does not matter whether these are paid by employer or employee. The current plans for deductions in Bulgaria are:

- Social insurance—pensions and disability (average) 42%
- Social insurance—Unemployment 7%
- Income tax 12%
- Total 61%

If health insurance contributions are added, the total deductions would be in the range of 69–74 percent. For an employer, the total cost of an employee with a take home pay of 2000 leva per month is therefore in the range of 3380–3480 leva per month. This represents a serious disincentive to employment in general, formal sector employment in particular, as well as incentives for avoidance and evasion. Even at the lower rate of 10 percent, health insurance contributions from incomes are probably only feasible in the context of other reductions in the burden of taxes from this source. There is no option of effecting a significant increase in the health care budget through this source unless significant reductions are made in other payroll deductions.
Conclusions

The transition changes the framework for provision of health services, and in particular, decisions have to be made regarding the model of health care provision and the associated means of funding. The system chosen in Bulgaria encounters potential contribution base difficulties, akin to the tax-base issues discussed in chapter 3. This is the consequence of permitting people with higher incomes to opt out of the broad system, and the consequent concentration of funding on a narrow and potentially shrinking payroll base. A small contribution base and low levels of compliance are likely to lead to serious shortages of finances for health, while other tax and social security deductions may eliminate or severely restrict the capacity of the payroll to provide adequate funding without serious effects on employment. Calculations of overall payroll deductions are important, as are sources of deemed contributions. Setting of entitlements must take resource constraints into account; given explicit and clear entitlements, it is vital to ensure that the provision of the services is financially feasible. It is also important to use a cost-effectiveness framework to set priorities. The relationship with providers of care is important, and requires careful thought and preparation. Payment mechanisms are very important, both as a mechanism to achieve policy goals, and for effects on cost containment.

Preparation of the health sector for insurance financing requires developing independent providers, with trained managers, information systems, and a clear legal status. This preparation will take several years, but is vital to the success of reform of the funding system. Overall, it is more difficult to operate a health system with health funds and contracts for service provision than to run a health service directly. More, rather than less, government policy is needed, and all parts of the system need better data and better management.

Insurance funding can provide resources to help achieve health policy goals, but can not guarantee extra resources, which may lead to equity problems unless care is taken to compensate for differences in risk.

Notes

1. Issues in the development of public health services are beyond the scope of this chapter. See, however, Bojan and others 1993.

2. Mutual support (or solidarity) is the term used to describe insurance funds which are based on ability to pay rather than the contribution of actuarially fair premia. This insurance involves risk sharing and an element of cross subsidization of the relatively poor by the relatively rich. The systems of health insurance that provide coverage for the majority of the population in European countries are based on this principle.

3. The purpose of all insurance is risk sharing. Larger numbers of members in an insurance plan (other things being equal) improve the efficiency of risk sharing, as the variations in proportions of the insured who claim are more predictable. A proliferation of small insurance funds can lead to problems of funding rare but very high-cost claims.

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VII—
CONCLUSIONS

14—
General Lessons from the Bulgarian Experience

Zeljko* Bogetic* and Arye L. Hillman

The studies in this volume have been concerned with the financing of government in the transition. While there are idiosyncratic features of the Bulgarian experience, there are as well quite general lessons. The foremost relates to choice of the tax system. It is a principle of public finance that tax systems, once in place, can only be changed by incurring horizontal inequity, because changes in taxation in general do not treat equals equally. That is, "the only fair tax is an old tax," primarily because of capitalization of taxes into market values of assets and into wages and salaries. Changes in an existing tax system are therefore more difficult to make than setting up a completely new tax system. How then should the opportunity provided by the transition be used to start anew without the encumbrances of a preexisting tax system? Should the chosen tax system be based on the model of one of the mature market economies, or is there a tax system more appropriate for the conditions of the transition? Bulgaria adopted a tax system that is more or less a copy of western European systems, with quite high tax rates, although certainly not the extremely high marginal income tax rates that have been observed at different times in different western from–cradle–to–grave "welfare" states. Chapter 3 suggests that the tax system could be—or could have been—better adapted to the conditions of the transition.

It is characteristic of the transition that state–enterprises which provided the taxbase under socialism decline, and a private sector emerges. Individuals in the private sector have no tax history and no tax files, making it difficult for the tax administration to "find" and tax them. A tax system should encourage participation of the private sector in formal taxable economic activity. In Bulgaria, in the first five years of transition, incentives for such participation were not present. The estimates of chapter 4 reveal the substantial role of the informal sector, appropriating between 80 percent and 100 percent of total profits (and prospectively more, given the losses of the state–enterprises). Since the private sector’s use of resources was inconsistent with such magnitudes of profits, the origin of the profits was elsewhere in the economy, ostensibly the loss–making state–enterprise sector.

Privatization of the state enterprises (or the absence thereof) and taxation are also linked. There is no incentive for the private sector to participate in privatization, if state enterprises are "profit centers" for private firms. Profit shifting appears to occur by separation of state enterprises from market prices; that is, private firms provide inputs and take delivery of output, at internal transfer prices. The differences between market and transfer prices provide the private sector with its profits. Because of differences in tax monitoring of state enterprises and private firms, profit shifting has also increased tax evasion, giving rise to the situation where profits in the economy are in the
informal private sector outside of the tax base.

From the perspective of incentives for private sector development, having the private sector outside of the tax base is not necessarily undesirable. A distinction is however necessary between income from productive activities and income derived from successful rent-seeking activities. Rents are payments to individuals above the value of productive contribution, and rent seeking is the quest to become the beneficiary of such rents. The real resources used in rent-seeking activities are wasted, in that they could have been used in productive activities; and if too many people in an economy are engaged in rent seeking (which is a redistributive activity), little is produced, and there is little to redistribute. Some profits from informal state–private sector relations do reflect productive activities. Profits in the informal private sector however also reflect rents associated with the manipulation of prices at which the private sector transacts with state enterprises. Taxation of these rents would not have undesirable efficiency effects (precisely since it is rents that would be taxed). When productive activity is taxed, efficiency losses are incurred via deadweight losses. The revenue that is lost to the government by tax evasion in the course of creation of rents has no such associated losses. If privatization of the state enterprises were to have taken place, the untaxed rents from the informal activities of state and private firms would not have been present, and a tax base could have been developed under a more transparent system of economic activity. The income from the activities of privatized enterprises and the new private sector firms would have not been illegally or quasi–illegally acquired by profit shifting, and the resultant legal income would have been more readily taxable than illegal income.

The general lesson is one of interdependence between the pace of privatization and tax revenue. The design of a tax system should take into account how property rights affect taxation. In Bulgaria, when not pressured to cooperate in privatization via a mass−privatization scheme imposed from above, management of state enterprises had little incentive to initiate privatization proposals, and nor did private firms (which may well have been owned in part or wholly by the state managers themselves). The consequence was profit shifting and tax evasion. For a given property rights structure, tax bases are also not independent of the level of taxes levied. If taxes are too high, economic activity is initiated in and remains in the untaxed informal sector.

The tax system also affects investment incentives (chapter 5). Policy makers should be aware of the best means of assuring that the tax system is consistent with these incentives, and they should be guided by successful experiences of other countries. Certainly, under the system of informal transactions between non−privatized state enterprises and the private sector described in chapter 4, there were few incentives for investment in the state enterprises. The returns to new private investment in unprivatized state enterprises would not have been legally privately appropriable and there was no way of knowing to whom the privatized enterprise would belong when privatization eventually occurred (if the enterprise survived long enough to be privatized).

Traditions and attitudes of the population affect taxation in the transition. In the socialist economies, large segments of the population did not regard it as particularly immoral to cheat the government. The government was the monopoly of "the Party," and the system of personal rather than market allocation was based on access to favors. It was who one knew that mattered, and not one's market worth. The special favors were often not far removed from what might be regarded as theft in a private−property rights market economy. When the market economy appears, the same perceptions lead tax revenue to be associated with special favors and not with the general benefit to the population. The attitude toward government under the socialist regime carries over to taxation in the transition. If tax compliance is to increase and the government is to have adequate tax bases, these past attitudes require changing. Personal behavior of officials should, of course, be exemplary in indicating that special relations in allocation of government funds have departed with the end of the socialist system. This is reinforced by modest taxation, and by clear accountability of government revenues. If people perceive the system as honest—and if the system is indeed honest—the foundation is provided for change in traditions and attitudes.
toward taxation. It is also important that the distributional impact of the tax system be perceived to be fair (chapter 7).

There is no point however in promising more than can be feasibly delivered in social insurance and social assistance programs (chapters 6 and 12). Credibility is impaired when promises are not kept. The failure to keep promises is consistent with prior beliefs of distrust of government, and reinforces these beliefs even if there were good intentions to meet social transfer payment obligations. Targeting is required of the government transfers to the population in need. The targeting should identify people who, because of personal circumstances, truly do not have opportunities for earning income, and who are not employed in the informal sector. Nor should social programs (early retirement) be viewed as the solution to economic problems (such as unemployment).

The system of central and local government tax relations should be precisely defined and maintained, so that responsibilities of different levels of government are clearly understood (chapter 8). Negotiation and change introduce uncertainty and competition into the fiscal hierarchial structure, and distract officials from their primary tasks of assuring efficient functioning of their different levels of government.

The choice of the means of taxation is important. While substantial technicalities are involved in introducing a value−added tax (chapter 11), the VAT is an efficient tax, because of its independence of vertical integration of firms and self−enforcing properties that encourage compliance. There are interests present who benefit from delay of the introduction of efficient tax such as the VAT (chapter 4). If these interests are not resisted, the government's revenue base can be seriously compromised (chapter 3).

Old conceptions maintained in a new market environment can create serious distortions in the domestic economy, give rise to rents, and restrict supply with loss of revenue from an important tax base. Excise taxation of fuel in Bulgaria (chapter 9) provides an illustration. Under the socialist system, there had been discriminatory allocation of fuel to state and private users. The attempt to maintain the discrimination had been unsuccessful under socialism where a form of rent−seeking activity was securing private access to fuel designated for state use. In a market system, fuel is more readily transferable between consumers and discriminatory taxes erode the tax base. In the example of chapter 9, tax revenues and economic efficiency appeared to be compromised by income redistribution to groups with tax−free privileges. The state's refining and distribution monopolies were also maintained when more emphasis could have been placed on competitive supply. When the move to a market takes place, discriminatory indirect taxes should end, if only because, from a revenue perspective, resale opportunities provided by the market predictable lead to tax evasion.

The lesson of chapter 10 is that taxation of international trade compromises gains from a liberal international trading system. The sources of the gains from trade are well−known. Efficient resource allocation is achieved by using international comparative advantage to guide domestic investment and to determine the economy's true opportunity costs. Import competition counters domestic monopolistic tendencies; and imports of intermediate goods embody foreign technological improvements that make for better, higher−quality, domestic production. These benefits are particularly important for a small open economy such as Bulgaria. Taxes on trade are, in effect, taxes on these gains from trade. If there is to be nonetheless departure from free trade, quantitative restrictions that are not auctioned competitively deny the government revenue. The presence of quotas without competitive auctions raises questions regarding why rents are allocated to the private sector at the expense of much−needed budgetary revenue.

People everywhere are particularly concerned about health care. A common phenomenon in economies in transition has been a decline in the quality of health care and reduced life expectancies. As with much of everything else, health care under socialism was provided paternalistically, not always efficiently, and without...
access to western technology. Within the paternalism, there were those with special privileges. When socialism ends, what replaces the paternalistic socialist system (chapter 13)? None of the models of health provision is perfect. A basic choice is with regard to financing: should there be a compulsory tax, should finance be voluntary via the private market, or should there be a combination of both? Should the private market provide insurance, or should insurance be compulsory, and should the government control and regulate the health−insurance system? Similar questions about state and private provision arise concerning health−care services, as distinct from insurance. The Bulgarian choice provides one case study of a health system adopted in the transition. Decisions regarding health care are difficult enough in mature market economies. The heritage of socialist paternalism makes adhering to constraints of limited resources all the more difficult when attempting to set up and finance a health−care program in the transition.

The broad contribution of the studies in this volume has been to identify the problems in financing government in transition. The conclusions are that there are well thought−out alternatives to proceeding in haphazard steps. On the other hand, steps which appear haphazard can have a certain logic, when consequences of rents and rent−seeking behavior are taken into account.

The challenge for governments in economies in transition is to provide a framework for tax policy that makes clear that the purpose of taxation is social betterment. Tax evasion then becomes less justifiable to individuals as they make compliance decisions and choose whether to cooperate with other individuals in evading taxes. Choice of tax bases and tax rates should take careful account of incentives to remain outside of the formal tax paying economy. Large informal sectors provide potential tax bases for financing of government in transition. The basic question concerning financing of government in the economies in transition is whether informal sectors will remain so, or whether incentives and compliance will be conducive to tax bases encompassing large parts of private−sector economic activity.

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