

Public Investment Management in the New EU Member States

*Strengthening Planning and Implementation of
Transport Infrastructure Investments*

*Thomas Laursen
Bernard Myers*



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The study was prepared jointly through the effort of the World Bank's Poverty Reduction and Economic Management (PREM) network and the U.K. Chartered Institute of Public Finance and Accountancy (CIPFA).

For the World Bank, the team was led by Thomas Laursen, Lead Economist for Central Europe and the Baltic States (task manager) and Bernard Myers, Senior Public Sector Management Specialist (principal author). Other members of the core project team included William Dillinger, Leszek Kasek, Anton Marcincin, and Karlis Smits. The report was prepared under the general guidance of Bernard Funck, Sector Manager, and Cheryl Gray, Sector Director, Poverty Reduction and Economic Management Department, Europe and Central Asia region. Peer reviewers for the report were Jim Brumby and Henry Kerali (World Bank), Martin Darcy (international consultant), and Eivind Tandberg (IMF). Administrative support for the study was provided by Anita Correa and Virginia Yates.

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Individual country reports were prepared by the following independent consultants: Tom Ferris (Ireland), Signe Keikate (Latvia), Maciej Bukowski (Poland), Miroslav Beblavy (Slovakia), Mitja Mavko (Slovenia), Jose Moreno (Spain), and Michael Spackman (UK-England only).

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Executive Summary

The effective planning and management of public infrastructure projects is a challenge for new and old member states alike. Each of the seven countries in this study confronts difficult trade-offs among transport infrastructure options and each is challenged to make resources stretch across competing needs. Moreover, in all countries the incentives to get new and bigger projects initiated can often overshadow the incentives to assure value for money. While EU funding and policy directives obviously play an important role in the New Member States (NMS), it will be increasingly important over time to build national procedures and practices that can sustain and strengthen effective and efficient management of public infrastructure resources.

Strategic planning is an important first step in public investment, but in many NMS the process is heavily influenced by external requirements rather than the internal needs of the government for high-quality planning and management. As a result, strategic planning documents in the NMS often define policy goals in very broad terms with little evidence that policy trade-offs have been adequately assessed or the financial implications fully considered. Even strategic plans that have focused on a specific sector such as transport provide only a list of possible investment options rather than a well-defined set of priorities that reflect the inter-dependencies between policy areas and projects. In contrast, in the UK and Ireland, sector strategies are more closely integrated with medium budget estimates. Moreover, because of the emphasis on value for money in both countries, the sector strategies are subjected to external review to confirm the analysis of the Ministry of Transport.

Medium term budget plans are used throughout most of the countries surveyed, but the quality varies significantly. For the NMS and Spain, three-year rolling budget frameworks are used to provide a useful bridge between the multi-year strategic plans and the annual budget process, by providing more information about the intended interventions. The problem is that much of the decision-making about public investment, including the prioritization of projects and the pace of implementation still occurs during the annual budget cycle. In the UK and Ireland, in contrast, the resource envelope for infrastructure investment and relative priorities are defined over a longer period of time, and medium term budgeting is used for facilitating efficient management of investment programs.

One of the most significant differences among countries studied was the role and investment in cost-benefit analysis for guiding project selection. Though cost-benefit analysis is a standard component of project appraisal in all countries, especially for EU-funded projects, the quality of the analysis in NMS is not independently reviewed and the resulting analysis is not necessarily a significant factor in the project selection. Selection criteria tend to give wide scope for political discretion and other non-economic factors. Project appraisal processes in the NMS are also more limited in scope, with less attention to business case justification, project management arrangements, risk mitigation, and procurement strategies than one would find in the UK or Ireland. The systems in the UK and Ireland are helped by the strong coordinating role played by the Treasury and Department of Finance respectively, including the comprehensive and regularly updated guidance given to line ministries as well as measures to assure their use.

The more advanced systems are also characterized by institutional arrangements that create checks and balances on quality at the front-end and during implementation. The UK and Irish governments have both used external firms to provide independent assessments of project proposals when it is appropriate. Quality assurance can also be provided through

institutional arrangements within government. In Ireland a special unit was created at the Department of Finance to drive compliance with control/monitoring requirements. In the UK a formal review mechanism was instituted at key stages of major government projects (the Gateway process), so that they could better manage risks. They also commission special reviews to identify systemic issues affecting the cost or quality of projects.

Project implementation and monitoring arrangements could be strengthened in the NMS. For example, procurement techniques could be used more effectively to share the risks between the contractor and purchaser. Monitoring of project implementation tends to be more focused on control for budget purposes, and does not necessarily communicate the right information for managerial purposes or to assure value for money across the investment cycle. Internal audit is still in the early stages of development in most NMS and therefore tends to focus on compliance rather than the effectiveness of risk management systems and procedures. *Ex-post* reviews of projects from a perspective of effectiveness and efficiency are generally not done within the NMS.

Building public sector capacity is an issue in all countries, and it is likely to continue to be a challenge. While contracting out to the private sector has become common, experiences in the UK and Ireland demonstrated to officials in those countries that the public sector must retain a core capacity for it to manage effectively the private sector contractors with whom it works. In small countries the capacity challenges are perhaps even more acute. Among the countries surveyed Ireland appeared to have the most extensive program of training for its civil servants to acquire specialized skills.

Public investment management processes and practices are shaped in part by the broader governance and public sector management culture. There are significant differences among case study countries, especially between the UK and Ireland and those of Eastern Europe. However, the experiences of the former can be useful for other countries in Europe despite differences in administrative and political tradition. Though not all practices may be readily transferable, decision-makers should apply the underlying principles of sound public finance management into their own country context.

In summary some of the key features to consider from more advanced public investment management systems include:

- Sector strategies that are closely linked to and consistent with projected budgetary commitments
- Significant investment in cost-benefit analysis methodologies, supplemented by business cases analysis and aggressive risk management strategies
- Procedures to evaluate projects against value-for-money criteria both *ex-ante* and *ex-post*
- Systematic procedures to involve external experts in the review of sector strategies and project business cases
- Multi-year budget commitments to facilitate efficient management of project planning
- Formal and informal checks and balances to assure that procedures are being complied with in terms of project appraisal and project management
- Public procurement strategies designed to manage risks between the government and the contractor
- Investment in staff training and the employment of specialist experts
- Effective audit and reporting processes that facilitate transparency and encourage feedback to improve the quality of the decision making and management process.

Introduction

The Rationale for the Study

For many New Member States (NMS), public investment in infrastructure is an essential part of their long-term growth and EU convergence strategy. Resources flowing from EU structural and cohesion funds have transformed once stagnant investment budgets into substantial areas of policy debate. More resources are expected. During the next EU budget period 2007–13, NMS are eligible to receive support from the EU in the order of 3–4 percent of GDP per year. A large part of the available funds, in many cases more than one-half, will be used to finance infrastructure investments. Even in countries still outside the EU, privatization proceeds are providing new sources of revenue for major capital projects.

Despite the high demand for public infrastructure investment, the capacity of NMS to use the funds effectively can be undermined by various factors. Public investment planning in the region tends to be short term and highly politicized. While all countries have prepared various medium-long term economic development strategies, they tend to be all-encompassing with strategic investment priorities only vaguely defined. Project appraisal is weak and there is no strong link to the budget process. In addition accountability arrangements tend to be weak both in terms of identifying the full costs of projects and in comparing anticipated outputs/outcomes with the actual.

Strong planning and management systems are essential to ensuring *productive* infrastructure investments. The experience from previous EU accession countries shows that it can make a big difference how well countries plan for and use the structural funds available, and there is ample evidence also from other parts of the world that good public investment planning is key to ensuring productive infrastructure investments. Among the former “cohesion” countries, Ireland stands out in terms of its effective planning and good results, while Greece has been less successful in taking advantage of the accession-related

window of opportunity. High quality processes and procedures for planning and managing capital investment have also been important to the achievements of high-growth countries outside the region, such as Chile, Korea, and Malaysia.

Defining Sound Public Investment Management

The goals of public investment management (PIM) are not dissimilar to the goals of a sound public finance system in general—aggregate fiscal discipline, allocative efficiency, and technical efficiency. The aggregate envelope for public investment should be consistent with long-term macro-economic stability. Second, the selection and funding of individual projects should be consistent with the government’s policy priorities for the sector and subsector. And third, projects should be implemented in such a way that they deliver the expected outputs/outcomes in a cost-efficient manner.

Despite commonalities with public financial management in general, there are some unique challenges that countries must address in the context of capital projects. Foremost, the multi-year nature of capital projects means that budget resources and cost need to be planned and managed over multiple years. Specialized skills are often needed to evaluate projects on the one hand, and then to manage their implementation on the other. Funding is often subject to greater volatility because of revenue swings. Finally, the institutional responsibilities can often be more fragmented than with recurrent spending—multiple ministries, independent agencies, and quasi-public sector corporations may all play a role.

Establishing a sound public investment system will require attention to each of the different aspects of the project cycle. First, without a credible strategic framework, policy priorities may be vague and the basis needed to make allocation decisions will be weak. Secondly, project planning, appraisal, and selection are fundamental to a sound system; their effectiveness will be determined not only by the quality of the analytical tools but also by the institutional framework and incentives. Third, implementation and monitoring arrangements play a large role in assuring technical efficiency and that immediate outputs are achieved. Finally, *ex-post* evaluation is an often neglected but essential element to enabling the system to improve over time and to create incentives for performance in the other project phases.

A Framework for Sharing Country Experience

The primary purposes of this study were two-fold:

- To identify some of the key issues and challenges being faced by NMS in the management of their public investment programs.
- To identify good practice examples—and persistent challenges—faced by EU member states that have had a longer history of development under democratic institutions of public management (referred to as “old member states” or OMS).

Examples from the old member states tend to highlight good principles of PIM, but they do not necessarily represent a clear pathway for reform. Research on Spain revealed practices

that have made public investment management inefficient in many ways. In contrast, the UK and Ireland provide numerous examples of good practice, but they have such different political and administrative cultures that replication could be very difficult. For example, in the UK and Ireland there is much greater separation of responsibility between ministers and civil servants for policymaking on the one hand, and policy implementation on the other; ministers are limited to the former. NMS in contrast have often inherited systems in which the relevant minister takes on day to day administrative decisions reaching to quite low levels. Moreover, the “confidence” of civil servants to challenge ministerial approaches is generally much more limited in the NMS. Furthermore, the prevalence of multi-party coalition governments can also be in some instances a significant binding factor on the Ministry of Finance authority over PIM.

By necessity this study is limited in the number of country cases and the depth at which various issues are addressed. Four NMS were selected—Poland, Slovenia, Latvia, and Slovakia—based on agreed willingness to participate. The three “old member states” were the UK, Ireland, and Spain (selected based on Bank interest and availability of expert consultants). In all of the countries, the focus was on central government policies and practices—even though some execute projects through regional governments as well. The scope of the study was limited strictly to transport infrastructure (roads, bridges, and railways), because this tends to be the largest beneficiary of EU funding for investment. Finally, while the study touches on all phases of the project cycle, the strongest emphasis is given to project planning, appraisal and selection.

Methodology

National consultants from the case study countries were recruited to research the processes and procedures used by their country. Each of these country researchers had experience as public sector employees in one capacity or another. Using a common questionnaire, they were asked to explore not only the formal processes of planning and project assessment, but also to examine three or four specific projects as case studies. The research was undertaken with the support of the Minister of Finance or a relevant senior official of the country. The individual country studies were reviewed for clarity and brought together into a single background report by staff of the UK-based Chartered Institute of Public Finance and Accountancy. The final report was written and prepared by staff of the World Bank’s Europe and Central Asia Poverty Reduction and Economic Management (PREM) department.

The report is organized with the following chapters:

1. The Role of Strategic Planning in Defining Priorities for Public Investment
2. The Role of the Budget Process in Supporting Strategic Allocation
3. The Impact of Project Appraisal Methodologies on Project Selection
4. Institutional Arrangements for Quality Assurance
5. Project Implementation and Monitoring Arrangements
6. Building Capacity to Manage
7. Conclusions and Recommendations

The Role of Strategic Planning in Defining Priorities for Public Investment

The role and nature of strategic planning differs substantially between the NMS and the other countries surveyed. Though strategic planning documents have proliferated in the NMS, few of these are linked to resource envelopes that provide a credible guide to what is achievable. Programming documents for EU Cohesion and Structural Funds provide the most realistic assessment of what is feasible budget-wise, but other documents tend to take the form of wish lists. Policy goals are set out in such broad terms, that there is little evidence that policy trade-offs have been adequately assessed or the financial implications considered. For example, Ireland has used broad national strategic planning as a starting point for investment prioritization. Again sector planning in the UK and Ireland tends to be much more closely aligned with medium term budgeting than is the case in any of the NMS. Strategic planning in the UK and Ireland is relied upon for managerial purposes (for example, to maximize value for money), and as part of a Ministry's overall accountability to Parliament. In contrast, in the NMS where the internal governance and accountability framework is less developed, strategic planning is more heavily influenced by external requirements rather than by any drive to improve the quality of the overall government planning and management processes.

Experiences of the New Member States

The strategic planning processes by which NMS define their allocation of resources to transport infrastructure satisfy the form, but not the content of EU guidance. The political objective is generally to maximize absorption of EU funds. From that basis, the national strategic planning documents cover a fixed seven to eight year period (aligned to EU budgetary cycles) and are geared toward the types of investments that fit within EU priorities

and that will utilize large proportions of the available funds (high cost projects). Furthermore, because projects funded by the EU have a requirement for counterpart funding, the domestic resources that go to transport are guided by that. In Slovakia, there was a sense that the strategic plans primarily provided analytical justification to the EU, for a set of national objectives that were already predefined. The document was therefore seen as intended for an external audience more than an internal one. In Latvia, the National Strategic Framework Document is devoted exclusively to projects benefiting from EU Structural and Cohesion Funds.

Although long term national development strategies exist, which are intended to put transport within a broader context, in practice they provide only very general rationale for the EU programming decisions that have been taken. In Latvia, the government recently produced a 25-year “Long-term Development Guidelines.” In Slovenia, there is a Resolution on National Development Projects (NDP) 2007–23. Characteristically, these plans provide only broad visions of government directions. In some cases (such as Latvia and Poland) multiple plans exist but they provide no clearer sense of government priorities because the goals and objectives are set at such general levels. In Latvia, for example, the NDP cites establishing the country as “a transport and logistics centre” for Europe and Asia as one of the objectives. Unfortunately, the plan is silent on the types of programs required to achieve that, the budgetary implications, or how one would gauge progress toward this objective. It gives no analysis or consequences if one or another task is not carried out or conversely what the broader economic and social impact may be by undertaking one or another activity. Broadly defined as such, many different types of projects can be conceived that might support the objectives. It provides a wide degree of discretion to ministries (and ministers) to select among potential programs and projects. In most cases, the relationship between the national strategies and the sectoral strategies is fairly ambiguous.

Like the broader national strategies, the sectoral strategic planning processes in NMS result in wish lists of possible options rather than a well-defined set of priorities that reflect the interdependencies between different policy areas and among individual projects within the same policy area. For example, in the case of Poland the draft Transport Policy of the State (TPS) 2007–20 does not provide indication of specific projects, their relative prioritization/sequencing, or estimated cost of such a program. Instead, it is a list of general project names allocated across a country map. While it provides a comprehensive picture of overall needs and how to meet them, some linkage to a resource envelope is needed to form a basis for sequencing. In Slovakia, the Public Works Plan is a three-year rolling document with a list of potential public works (not just transport) projects, but without a clear attempt to prioritize among them or to reconcile them with resource envelopes. In Slovenia there are some similar shortcomings in sectoral planning documents. The “Resolution on transport policy of Slovenia” (adopted by Parliament in May 2006) provides SWOT analysis for the transport sector and identifies several objectives covering railways, roads, maritime, and airport infrastructure. The document encourages the Ministry of Transport (MoT) to develop programs that support the objectives in the resolution, but provides no link to resources. More focused planning documents exist for railways and motorways, but neither is linked to a realistic resource envelope. (The later plan proposes the cost and sources of financing, but thus far, the state budget has not fulfilled the plan to the extent projected).

Effective prioritization is sometimes undermined by “path dependency,” with projects being based upon out-of-date plans and assumptions. In Poland, although there is now a considerable emphasis upon planning in practice, the network of planned expressways and motorways has changed only slightly in the last 15 years and remains similar to that defined in the late 1970s. For example, on some major routes traffic has been growing fast but these routes have kept the same status as (originally projected) expressways, since the 1980s,¹ whereas traffic density would suggest that they should be upgraded to motorway status. This also conflicts with the priorities of more recent transport strategy plans that stress the crucial importance of good transport connection between the largest Polish cities for economic development reasons. On other routes, traffic is relatively light and yet proposals to upgrade the roads have high priority. There may therefore be an element of inertia in the transport infrastructure development planning process, or possibly political considerations may override others.

Experiences of the UK, Ireland, and Spain

National planning processes in Spain are still in a transitional stage, but they are focused on the transport sector specifically rather than development of cross-sectoral priorities. The Transport Infrastructure Strategic Plan (TISP) was approved by the Council of Ministers in 2005 and covers the period 2005–20. The TISP provides the overall diagnostic of the sector, general goals, strategic priorities in each subsector, and very broad estimates of the expenditure requirements. The TISP is a high-level vision document however, and leaves open the expectation that specific sector plans will be elaborated. As such, there are no specific projects mentioned, nor any breakdowns of the annual resource implications.

In contrast to Spain, Ireland has used an overarching national strategy document to guide public investment decisions while the UK has relied on strong integration of long term budgetary and service planning processes. Ireland is well-known for its analytical work that generated an assessment of the key barriers to growth in the economy, and led to a consensus over long-term investment priorities. The *National Investment Priorities for 2000–06*, a document prepared by the Economic and Social Research Institute for the government, examined the key constraints to long-term economic growth and developed investment priorities intended to respond to them (including indicative funding levels for each domain). In the UK, the process of deciding allocations across major sectors is essentially a political process led by the party in power. However, the political judgments are typically informed by various policy reviews and White Papers that are produced over time. Though the Treasury does not set long term priorities across sectors, it nevertheless plays a significant role in coordinating policy across sectors and providing high-level technical advice to the political level.

In both the UK and Ireland, long-term transport priorities are framed within realistic budgetary parameters. Ireland’s *Transport 21* represents a major policy commitment by the Irish government to address what is perceived as a transport infrastructure deficit. The

1. Examples: The S-3 (Wroclaw—Poznan) and S-7, S-10 (Krakow/Warsaw/Torun/Gdansk) have grown rapidly in traffic volume, but their status has not changed since the 1980s.

ten-year program provides the capital investment framework through which the transport system in Ireland will be developed over the period up to 2016. With an estimated cost of €34 billion, the program covers national roads, public transport and regional airports. The document's credibility is linked to the ten-year capital envelope agreed with the Department of Finance—a period twice as long as that used for other areas of investment. In the UK as well, long-range planning for transport investment is currently guided by a seven year budget guideline provided to the Department of Transport by the Treasury.

The challenge of avoiding wish lists in sector planning is not one that is unique to NMS. Until the late 1990s, the UK Highways Agency maintained a list of schemes that in their judgment would be worthwhile if funds were available, and thus were candidates for more detailed appraisal. After 1998, this process was abandoned in favor of a “Targeted Program for Improvement” that reduced the number of schemes to a number more likely to be funded. Over time, the system has stabilized, with a program through 2015 that is in line with the expected Highways budget. As recently as 2000, the Government published a “Transport Ten Year Plan” signaling a very large increase in transport investment, though it became apparent soon that the plan's objectives were too ambitious.

The UK and Ireland increasingly emphasize the “value for money” of public investments, and therefore, the transport strategies are subject to review or critical input from external sources. The main recent policy review for transport in the UK, the Eddington Report, was conducted as a joint effort by the Treasury (the UK Ministry of Finance) and the Department for Transport, thus assuring substantial input from Treasury. In Ireland, *Transport 21* was the subject of review by the Irish Government in updating the National Development Plan. In addition, through a competitive tender process, the Economic and Social Research Institute (ESRI) was selected to do an *ex-ante* review of the proposed investment priorities. In that review they cautioned the government on the possible macroeconomic effects of undertaking such a large program within the period. ESRI also provided recommendations to shift priorities within the sector, and to increase public transport projects on the assumption that many will pass the cost-benefit analysis hurdle. Path dependency is less likely to be present, as the NDP confirmed in its review that *Transport 21* was based on the latest economic, social, and demographic data.

Though specific projects are described in the sector strategy, in both the UK and Ireland they are still subject to extensive cost-benefit analysis and where appropriate business case studies that will confirm the final prioritization. The Irish Ministry of Finance sets out extensive guidelines on project appraisal that must be followed. In addition, most projects will go through a public hearing before an inspector, where the business case for the project must be clearly set out. A *Transport 21* Monitoring Group has also been set up to monitor implementation of the projects and to review their prioritization. Likewise in the UK the Treasury sets out the guidelines on project appraisal with specific transport guidelines being developed and published with Treasury approval, by the Department of Transport.

The Role of the Budget Process in Implementing Government Priorities

Medium term budget planning is practiced in most of the countries surveyed although the quality of that process appears to vary significantly. In the NMS and in Spain, where the planning process is less directly linked to budget implications, medium-term budget frameworks are at best a modest bridge between the longer-term strategy documents and the constraints of annual funding (and often there is no effective link). Three-year rolling sectoral plans provide more details about the intended interventions however, the actual sequencing and prioritization of projects still does not occur until the annual budget process gets underway. In the UK and Ireland, in contrast, the resource envelope for infrastructure investment and relative priorities are defined over a longer period of time, and medium-term budgeting is used for facilitating efficient management of investment programs. In summary, in the NMS and Spain much more of the project selection and prioritization and volume of investment on particular projects occurs during the annual budget cycle, unlike in the UK and Ireland where the long term economic and physical transport planning processes remove the impact of an annual budget process.

Experiences of Spain and the New Members States

Medium term budget plans are being used in the NMS, but the consistency with annual budget ceilings is still weak. Slovenia has a two year rolling budget with indicative fiscal targets provided for three additional years. However, the government also presents a Development Programs Plan (DPP) as part of the annual budget. Individual investment outlays within the DPP are presented on a rolling basis for the $n + 4$ period on a considerable level of project detail. The problem is that the DPP and the budget are not well linked—there

are far more projects listed in the DPP than available financing from the budget. The actual budgetary allocation depends largely on the annual negotiating cycle between the Ministry of Finance (MoF) and the Ministry of Transport, including the proposal from MoF on an index of increase of the previous year's budgetary allocation. In Slovakia, there is a similar process—all projects above €3 million must be approved by the Government and entered into the Investment Register managed by the MoF. Entrance into the registry gives no guarantee of financing, and therefore represents a shopping list of potential projects.

Similarly in Spain three-year forward forecasts are prepared, but prioritization occurs only in the annual budget process. Investment projects are listed in an annex and the sum of the individual project amounts equals the total appropriation for capital investment in the budget. In practice not all projects in the annex are executed during the year and some projects not included in the annex may be executed. Projects can be delayed or slowed down in order to provide fiscal space to begin new projects. For example, in 2005 the Investment Annex for the program "Railway construction" managed by the Directorate General for Railways included 90 individual projects. Out of this 34 (or 38 percent) were not executed at all, and the amounts allocated to these projects were used to finance other projects, among them 20 which were not included in the annex. A similar situation was observed in the execution of the program "Roads Construction" managed by the Directorate General for Roads. Indeed some "super projects" are initiated with relatively little financing in the early years and their completion date can be prolonged to fit the fiscal envelope available (for example, Cantabrian Motorway).

Some NMS are experimenting with medium term expenditure frameworks (MTEFs) to provide greater predictability in budget funding across years. In Slovakia for example, the MoF has begun to integrate all public funding (whether EU or national) into the MTEF. The first year ceilings are firm, while the second and third year ceilings levels are indicative only but have become the accepted starting point for the following year's budget preparation. Latvia has also implemented elements of a three-year MTEF (starting with 2008) that includes projected base line budgets for two forward years. For investment spending, each program or project is included in the appendix to the state budget law and approved by Parliament separately for the next three budget years and in one sum until the completion of the project. Once a project is ready for service (whether funded by the EU or State budget), the operational expenses are supposed to be automatically included in the Ministry's base budget request and in future medium-term ceilings.

Experiences of the UK and Ireland

In the UK and Ireland the budget process is designed to provide predictability in funding multi-year activities, including infrastructure investment. For example, there is a collective government responsibility for the overall budgetary and fiscal policy. Within the overall fiscal framework, the Government provides multi-year spending envelopes for the ministries to plan. In Ireland, the Department of Finance provides rolling five-year capital envelopes. In the UK, the Treasury initiates "spending reviews" every two years, but these set expenditure budgets for three years negotiated around the ministries' public service agreements (PSAs). As part of this budget process, the Treasury also requires ministries

Box 1: Lessons in Budgeting for Transport Investment

Transport investment in Ireland has moved in recent years from annual budgets to rolling investment programs or financial envelopes. In introducing the 2004 Budget, the then Minister for Finance announced a major change in the financial treatment of capital spending, with the introduction of rolling five-year multi-annual envelopes for all investment areas. In implementing the new envelope system Departments are allowed to carry over to the following year any unspent Exchequer capital allocations, up to a maximum of 10 per cent of each annual capital subhead. This carry-over facility, which took effect from financial year 2004, was seen as a mechanism for significantly assisting in the better planning and execution of projects, which span a number of years. In the case of transport investment, the Irish Government went further and decided in November 2005 to go further and to provide for a ten-year multi-annual envelope—called *Transport 21*—to tackle the transport infrastructure deficit. The envelope puts an overall limit on the amount of investment that can take place each year. Line departments are also required to make a contingency provision within their overall envelope to meet any unforeseen demands or additional costs which might emerge for the program as a whole.

(departments) to produce Departmental Investment Strategies (DIS). These were introduced in the 2000 Spending Review. They allow the Treasury to have a strategic overview of investment proposals. The DIS regime also requires ministries to relate their proposals to existing assets and asks them how such new assets will be managed and maintained. (Although this process applies to all ministries, in practice, the DIS is not material in the budgeting of road and rail transport.) The Highways Agency receives the same three year budget authorization, but it also receives an indicative budget for the long-term. In rail infrastructure, the government now conducts a five-year periodic review and then issues a Statement of Funds Available (SoFA), defining the government funding available over the five-year control period. This review process is under-pinned by a “High Level Output Statement” which will specify output requirements in terms of reliability, safety, and capacity. In Ireland, the National Roads Authority (NRA) has a five-year envelope for road expenditure, and a ten-year indicative resource level. This has not always been the case. Prior to 2003, the NRA typically had to wait until “budget day” to learn what the Exchequer allocation to the roads program would be.

Funding authorization for projects is multi-annual, but flexible enough to support the actual pace of progress. In Ireland the budget resources for a project are authorized in their entirety once implementation has begun (that is, upon approval for award of the contract).² However, the annual allocation to a particular project is adjusted to take into account actual progress. The Irish Department for Transport (DfT) for example, reviews progress on *Transport 21* projects on a monthly basis with the sponsoring agencies (usually State-sponsored bodies) and the results are used to update financial allocations on a regular basis. Funds are transferred between sectors where this can facilitate an acceleration of projects or where progress is slower than anticipated due, for example, to a delay in a statutory approval process. There will be a transfer of funds back to the projects which have been

2. Prior to the implementation, funds are allocated for other stages including appraisal and planning.

delayed as they find themselves in a position to proceed with the work. By allowing transfer of funding from one year to the next, the intent is to maximize implementation and maintain value for money. Having said that, the Treasury has placed severe restrictions on End-of-Year Flexibility (EYF), causing difficulties for those planning and implementing investment proposals. This may in turn lead to decisions being made on the basis of expediency rather a more rational approach. In the UK much the same process applies but the EYF arrangements are more flexible.

The Impact of Project Appraisal on Project Selection

The quality of project appraisal practices is difficult to assess accurately. However, in most of the NMS the results of the appraisal process do not necessarily determine the decision about which projects will go forward and the system still allows a wide political discretion in selection of individual projects. Though cost-benefit analysis is a standard component of project appraisal in all countries, especially for EU-funded projects, the quality of the analysis in NMS is not independently reviewed and the resulting analysis is not necessarily a significant factor in the project selection. While various projects could generate positive economic benefits, it is rare to assess their relative value-for-money. Moreover, NMS project appraisal processes give much less attention to business case justification, project management arrangements, risk mitigation, and procurement strategies than is the case in the UK or Ireland.

Experiences of New Member States

In most of the NMS Ministry of Finance's role in evaluating infrastructure investment priorities is quite limited, as is its capacity to assess the quality of cost-benefit analysis. The Ministry of Transport in conjunction with the implementing agencies determines the specific projects to put forward in the next year's proposed budget, drawing from the broad collections of possible projects that are generally included in sector strategies. Even though it sets the overall macro spending limit for the ministry, the MoF generally does not challenge the projects that are put forward. Projects with EU funding, however, are approved at the Cabinet level before they go forward. Ministries of Finance in the NMS may have limited power within the Cabinet (at least compared to the UK and Ireland), and are therefore not well-positioned to play a strong stewardship role in sectoral policy and planning processes.

The link between sector strategies and annual budget decisions is not consistently maintained and political pressures often still weigh on the final selection. In Slovenia for example, the MoT has found that despite its own set of priority projects, MPs will try to “squeeze in” other projects to be included for financing. Usually these are projects that appeal to local constituencies and are generally not supported by feasibility studies or any other comprehensive assessment of expected costs. In recognizing that pressure, the MoT and MoF have implicitly indicated that a “limited envelope” is usually set aside for the final stages of the budget adoption to cater for such requests. This has had the effect of marginalizing such pressure. In contrast, in Latvia, the MoF found that some projects were included into the budget during the fall budget amendment period, what the Latvians term as “two-stage budgeting”. This generally occurred when actual revenues came in higher than forecast. At that time, projects could be inserted that had not been through the traditional project selection, screening, and approval process.

Though all EU-funded projects—and many of the larger domestically funded projects—will include a formal cost-benefit analysis, it was unclear what impact such analysis actually has on decision-making. Project selection criteria sometimes leave substantial scope for political discretion. In Latvia for example, six criteria have been elaborated by the Ministry of Transportation for selection of projects: (1) maturity (preparedness of the project’s application), (2) conformity with objectives of transport system development, (3) feasibility study, (4) urgency, (5) size of the project, and (6) co-financing possibilities. Steps are being taken to make the project selection criteria and their scores more transparent. Nevertheless, the criteria leave open substantial room for non-economic judgment about the project. For example, in similar guidelines on the State Investment Program (used for non-EU funded projects), more than half the weighting goes to project compliance with the sector strategy and the “urgency” of the project. Only 10 points out of 70 are allocated for the financial-economic appraisal. In Slovakia, priorities for first-class roads are developed through a scoring model managed by the Slovak Road Administration. With a relatively large number of small potential projects, the scoring model is a sensible way approach to manage the process. In practice, officials acknowledge that there is still substantial latitude for political interference in setting priorities among many “deserving” projects.

The EU guidelines on cost-benefit analysis provide a strong technical toolkit for NMS to use,³ but it is beyond the scope of the study to assess how well the analysis is applied in practice. Some areas of concern were evident though. Sensitivity analysis is generally part of the CBA, but it may not have an impact on whether a project goes forward. In Slovenia, for example, the Vrba-Peracica motorway section included analysis to assess the risk of lower benefits and higher costs. With only a 5 percent increase in project costs or a 10 percent decrease in benefits, the NPV for the bypass project would turn negative and the IRR

3. An important task of the European Commission is to provide guidance on evaluation (<http://www.evaled.info/>) and to facilitate exchange of experience across Member States. The European Commission also publishes guidance on cost benefit analysis. The main document is *Guide to cost-benefit analysis of investment projects* (Structural Fund-ERDF, Cohesion Fund and ISPA) prepared for: Evaluation Unit, DG Regional Policy, European Commission, 2002. This has since been updated in some respects, in particular in recommending new financial and social discount rates *Guidance on the Methodology for Carrying Out Cost-Benefit Analysis*, Working Document No. 4, European Commission, DG Regional Policy, August 2006.

would fall below the common discount rate. Nevertheless, construction of the project began in 2001. There was also a problem in some projects in the mid-1990s that lacked a common discount rate. Furthermore there was little evidence that project appraisal methodologies incorporate explicit analysis of alternative options. Experts in Slovakia indicated that incentives were to over-design projects, rather than settle for simpler, more cost-effective options.

“Readiness” of the project to move forward can become a more important consideration than its strategic or economic value. As one official noted, the flow of EU money has shifted the emphasis from appraising projects, to managing a project portfolio. Given the limited window of EU funding availability, governments face pressure to make sure that they have a group of projects ready. This can have the effect of creating a perverse incentive in that governments fear losing these funds if they are unable to spend them because politically. It is better to spend the money on suboptimal projects rather than risk losing the funds and having no project. Inevitably, some preparations take longer than expected once the funds are available. In Poland, there have been frequent delays in projects, for example, because of the difficulties with obtaining land acquisition rights. This may in turn increase the incentive to promote projects where land rights have already been acquired, rather than those that carry high economic returns. In Slovakia and Latvia as well officials noted that sometimes project readiness led to changes in project prioritization.

While risk assessment is formally complied with for all EU-funded projects in the NMS, some evidence suggests that it has little significance in terms of actual project planning. Risk assessment is usually seen as a formality and does not have a bearing on project selection or management arrangements. It may even be undertaken after the political decision to go forward is already made. In some cases, risks specific to an individual project are not identified but instead referenced back to a more general risk catalogue for all EU-financed projects. Even where there is an attempt at risk assessment, the impact is questionable because many serious risks emerge during the implementation—that could have been foreseen. Risk registers are generally not kept during the implementation of the project. In contrast, in Latvia the Ministry of Transportation appeared to have a more active approach to risk management. For the projects reviewed in this study, the identified project risks were classified and registered in the ministry’s risk register, and a responsible person assigned to take mitigating actions and to report back to the Risk Management Committee.

Experiences of the UK and Ireland

In the UK and Ireland, central coordinating ministries such as the Treasury (in the UK) and Department of Finance (Ireland) play much more assertive roles in managing the public investment process than is common in the NMS. Though its interventions are very selective, the UK Treasury is heavily involved in the overall transport strategy and high level planning and controls. Explicit Treasury approval is needed for road schemes of more than £500 million. The level of involvement in specific transport projects varies widely, depending upon scale and funding complexity. The Treasury issues its own guidelines for project appraisal and evaluation, although these have been much extended by DfT for transport

purposes and issued, with Treasury approval, as its own guidance. The DfT still plays a leading role in providing cost-benefit valuations. In Ireland, the Department of Finance also takes an active role in establishing the criteria by which projects are to be assessed, as well as guidance on the management arrangements of projects. The key value added is in assuring that the processes are in place that will lead to good project appraisal and management.

UK and Irish central finance institutions play an important role in setting out project management guidelines and assuring their use by line ministries and implementing agencies. For example, in Ireland a new evaluation unit has been set up within the Department of Finance to provide central oversight of the Value for Money and Policy Reviews that are required of implementing agencies. The unit is also empowered to conduct spot checks at the project level to verify compliance with the various VFM requirements. Going further, the DfT has engaged professional companies to carry out audits of compliance with the Department of Finance guidelines and audits of progress in implementation of projects. The projects to be audited will be selected by the Monitoring Group over the coming years. There is also an explicit expectation that managers will have incorporated lessons learned from projects—whether successes or failures.

While cost-benefit analysis has traditionally been a core component of project appraisal, countries like the UK have refined their approach to include risk adjustments and distributional issues. The UK Green Book has traditionally provided basic principles on appraisal and evaluation, as well as specific conventions such as the choice of discount rates. The latest edition (2003), however, introduced a set of risk adjustment factors for different types of investment. The DfT, which has generally been the leading provider of cost-benefit evaluations, has gone further in broadening the scope of the appraisal. The “New Approach to Appraisal” (NATA) introduced in 1998 set project proposals against five criteria (economy, safety, environment, accessibility, and integration) and more clearly distinguished the distribution of costs and benefits.⁴

In Ireland, guidance on cost-benefit analysis has evolved to include advice on project management and implementation. The latest guidance from the Department of Finance issued in February 2005 (and supplemented with procurement guidance in January 2006) and proposes different levels of appraisal depending on the size and scope of the project. Full cost benefit analysis is required on all projects over €30 million. The guidance addresses how to deal with future cost increases and variations in outputs. It also sets expectations for the monitoring and management arrangements, for example, appointment of a program coordinator and monitoring committee. The Department of Finance also requires the *Transport 21* projects to comply with new guidelines on Value for Money issued in March 2007. As in the UK, there is a growing interest in not only quantifying the benefits, but also setting up structures to manage the risks and create appropriate management incentives (see Box 2). In some cases, an appropriate level of contingency is also required to be built into the costings.

4. The Integrated Transport White Paper was Department for Environment, Transport and the Regions (1998) “A new deal for transport: better for everyone,” Cmnd 3150. See: http://www.dft.gov.uk/162259/187604/A_new_deal_for_transport_be1.pdf

Box 2: Planning of Project Management

In the UK the planning of the management of major public sector projects used to be seen as a vital but specialised role, which did not need the close attention of policy officials and ministers, whose focus was on the appraisal of projected costs and benefits (assuming competent project management) and on high level budgeting.

In the light of experience there has been in recent years a much closer concern, during the lead up to submission for project approval, with the planning of the project management, including the proposed contract structure, the clarity of allocation of responsibilities and the competence of those concerned. These factors, alongside longer established factors such cost-benefit analysis of impacts that can be monetised and assessment of environmental and other important impacts that cannot be monetised, are now key factors in the business case on which a decision to approve is based.

For national roads the PRINCE2 (PROjects IN Controlled Environments) process is used (<http://www.prince2.com/default.asp>) to develop the many elements needed for competent project management, such as defining the organisational structure for the project management team and dividing the project into manageable and controllable stages. Similar procedures are applied to rail and both modes apply a “gateway” procedure throughout the life of the project, whereby the case for continuation has to be made at successive stages, such as Output definition, Business justification, Detailed design, Construction test & commission, Scheme hand back, and Project close.

A relatively new, but important complement to traditional cost-benefit analysis has been formulation of the “business case”. In Ireland, business cases are prepared by the sponsoring agencies and approved by the DfT. The latter seeks to assure that the technical, financial, and economic approach proposed is the best for delivering value for money. This entails review of the basis for selection of the favored option, the quality of the analysis, and whether the solution best meets the project’s broader policy objective. In the UK, the DfT issues special guidance for projects funded from the Transport Innovation Fund (TIF) and which require not only sound economic analysis but also greater emphasis on procurement strategies and potential risk to costs or timing. However, such practices may only be appropriate in country contexts where there is already a pragmatic approach to financial management, otherwise they risk becoming merely a bureaucratic hurdle.

While risk assessment is a common element of project appraisal in the NMS, Ireland and the UK have more robust systems in place for risk mitigation. In Ireland for example, the sponsoring agency is required to put in place suitable strategies to minimize risk through project management organization, review procedures, or information flows. Project monitoring guidelines issued by the Department of Finance, coupled with a requirement for independent spot-checks, are intended to assure that risk management is incorporated. In the UK, specific guidelines have been issued by the Treasury to help agencies deal with what is termed “optimism bias.” This includes risk adjustment factors for different types of investment—intended to help improve the average accuracy of cost forecasts. In addition, during the Options stage of development the Gateway process, (see below), the project is subject to initial public consultation and possibly updating of the Appraisal Summary Table, including explicit adjustments for optimism bias.

Stage approval processes have helped to move projects from concept to implementation more quickly, but they require discipline to prevent shifting priorities. In particular,

where projects require substantial engagement of local authorities, the Irish have found that the formal checks introduced in the NRA's project management guidelines reduce the types of delays encountered in preparing projects. They establish milestones for Local Authority Action, Public consultation, and NRA approval so that the local authority can plan each phase in terms of time, staff, consultancies and cost. This enables better measurement and management of project progress. Yet, in bringing projects forward they recognize that they must manage the temptation to allow low priority schemes to displace higher priority ones, merely because of the planning progress that has been made and because of enhanced local expectations.

The Impact of Private Financing on Project Selection Decisions

Off-budget agencies and private financing possibilities in the NMS permit projects to circumvent the level of economic scrutiny required for budget-financed activities. Most governments have used or explored off-budget debt financing and PPPs as ways to expand resources for infrastructure, but these carry important risks. Whilst a primary motivation for the use of such measures is to avoid the budgetary processes for some off-budget debt financing and PPP schemes (exactly which depends upon the financial structure of the scheme) the expenditure may not need to appear in the government fiscal accounts as part of the deficit calculations for Maastricht purposes. The same is also true for some of the roads programs which are managed by government joint stock corporations (even though 100 percent owned by the government). Their debt can be treated by Eurostat as debt that does not necessarily need to appear in government fiscal accounts as part of the deficit for Maastricht purposes. Therefore, private financing may appear to bring more resources into the motorway program without showing a fiscal impact on the government's account.

Similar concerns about economic soundness can be raised about PPPs, where projects are targeted for PPPs, not because of the increased efficiency or effectiveness that might be gained, but rather on the basis of bringing in additional resources. Projects are sometimes targeted for PPPs without an adequate economic justification for the project relative to other options. It is important to understand that there is no such thing as a PPP in itself. Such projects should be scrutinized with the same rigor as all other projects. PPP is one of a number of procurement options and any PPP scheme should be the subject of specialist scrutiny because of the often very high risks associated with such schemes. Institutional responsibility for PPPs may have been assigned, but the analytical expertise is still being developed.

In the UK and Ireland, in contrast, policies and procedures are being put in place to reduce any economic bias toward PPPs that might otherwise lead to excess expenditure on infrastructure and extensive specialist training for those engaged on PPP procurement is undertaken. In Ireland, a number of structures have been implemented to facilitate use of PPPs, while building up the government's expertise to assess PPP options. The government requires such projects to demonstrate "optimal risk transfer," accelerated delivery, and value for money. In short, the prospect of additional resources is not a sufficient criterion. In the UK, the major step taken to prevent PPPs from distorting investment decisions is to treat private financing in the same way as public finance for budgeting purposes. In other words, the accounting rules have been refined to close the loophole that previously allowed

Box 3: Private Finance is an Option in the Right Circumstances

Private financing is now used in the UK for some major and very complex road schemes that could not easily be managed in a conventional way by the Highways Agency. It is also used for some simpler schemes, such as straightforward road widening or major maintenance, or by local authorities (with transport ministry approval) for large scale replacement of street lighting. In such cases contractors face only risks that they can control; thus they may be paid for road lane availability, but not for the level of traffic. In such cases, with very tight output specifications and clear terms for the distribution of unforeseen costs or savings, private financing can give better overall value for money, even though the private cost of capital is higher than that of public financing. However, such financing counts against the transport ministry capital budget in the same way as public financing.

For local authority light rail schemes private financing is considered too rigid for a full scheme. However it may be used for some infrastructure contracts, where the output and responses to unforeseeable events can be tightly defined.

Another major application of private finance is to the London Underground system, where the infrastructure is being upgraded by private sector, privately financed consortia, under contracts with complex definitions of required outputs and associated contract payments. This follows from a broadly accepted political decision that the previous public enterprise regime was unsatisfactory and, more controversially, that management of the infrastructure upgrading should not be left under the control of the London transport authority. (The latest development in this complex privately financed project is that one of the main consortia involved has become bankrupt with the likelihood that significant additional costs will fall on the public sector. It is an example of the risks with this type of financing arrangement.)

private financing favorable treatment. As long as private contractors will be repaid from public expenditures, there is no additional incentive. So for example, in the case of the UK Highways Agency, private capital financing is rarely in the form of tolls charged to users; instead the commercial consortium recover their costs through “shadow tolls” paid by the Ministry of Transport (called the Department for Transport, DfT) for the availability of road capacity—for example, contracts are Design, Build, Finance and Operate (DBFO) and costs are included in the agency’s budget. Therefore, the only incentive to adopt this method of procurement is that it may in some circumstances be the most cost-effective procurement option.

Institutional Arrangements for Quality Assurance

Project appraisal can include checks and balances to assure that sound principles are being applied. In Ireland, Department of Finance guidelines cover the initial approval in principle of the project up through the decision to award the contract. The *Transport 21* Monitoring Group in Ireland has as its responsibility to assure that the implementing agencies appraise and manage all projects in line with the various Department of Finance guidelines. The Monitoring Group's work is aided by professional companies who can conduct audits of the process in the implementing agencies. In some instances, the DfT also commissions independent review of the business case. This external review is significant, as some experts in Ireland believe that the quality of CBA has suffered in the past because they were either conducted or commissioned by the agencies promoting the projects concerned. There was also a sense that they were done only to comply with EU requirements. To address this, a central government unit was created at the Department of Finance to drive compliance with control/monitoring requirements, such as Capital Appraisal Guidelines. The unit is required to oversee an annual spot-check process that line ministries themselves are to carry-out on a sample of projects.

In the UK the staged external review of large projects provides an important measure of quality control, and this can be especially important in early stages. The UK has seen substantial benefits come from instituting formal review mechanisms at key stages of major government projects. The standard central government Gateway process (which applies to all types of major investment projects) has been used by the Highways Agency for the past three years, and sets out six stages of review:

- Gateway 0: Strategic assessment;
- Gateway 1: Business justification;

- Gateway 2: Delivery strategy;
- Gateway 3: Investment decision;
- Gateway 4: Readiness for service;
- Gateway 5: Operations review & benefits realization.

These gateways are designed as stages which have to be formally approved before moving to the next stage. Typically the process entails a panel of experts, otherwise unconnected with the project, working with the body responsible for the investment to verify each stage approval.⁵ The significance of the Gateway process is that it provides a means to balance the tension between project expediency and the need to manage risks on an ongoing basis.

External review before projects start is a tool also used by the Irish for quality assurance. In the case of Irish Rail's Kildare Route Project (a €357 million heavy rail project), for example, the DfT commissioned an economic consulting firm to review the business case and the cost-benefit analysis. The firm's review led to Irish Rail modifying its proposals and producing a revised final business case and an updated cost-benefit analysis. External reviewers have also been used by the Irish to address risk management specifically. In the case of the Luas Line B1 project for example, a consultancy was commissioned by the RPA to update and finalize the existing risk register and to carry out Quantitative Cost Risk Assessment (QCRA) in order to confirm the cumulative risk associated with the project.

Special reviews have helped identify the main causes contributing to systemic underestimation of project costs. For example, in the UK it became evident in 2005 that the Highways Agency target construction costs, made just before construction, had become systematically higher instead of fluctuating above and below earlier estimates. This led to schemes being dropped or delayed to keep within the aggregate budget. After DfT commissioned a report from a project management consultancy and the National Audit Office (NAO), it was revealed that no one had adjusted for a sustained construction industry inflation rate that had become more rapid than general inflation. Other reasons were insufficient adjustments for potential changes in scope, such as the addition of more junctions, and allowances for potential factors such as archaeological remains and worse than expected ground conditions, and some estimation weaknesses in the costs of structures such as bridges and tunnels as well as costs of land and re-routing of utilities.

5. Network Rail uses a similar but different process that is customized to its needs: "Guide to Railway Investment Projects (GRIP), which has eight stages: (1) Output definition; (2) Pre-feasibility; (3) Option selection; (4) Single option selection; (5) Detailed design; (6) Construction test & commission; (7) Scheme hand back; (8) Project close out.

Project Implementation and Monitoring Arrangements

Experience of New Member States

Although EU procurement guidelines are followed, there was little evidence of NMS employing modern procurement techniques for sharing greater risks between contractor and purchaser. Countries contract out for the design work, and then as tender documents are prepared and land acquired, a separate contract is tendered for the construction. In only one project examined (Poland's Railway modernization of the Minsk Mazowiecki-Siedlce section) was procurement done (in part) through a "design and build" model. Like other projects in Poland and other NMS, this contract included guarantees and penalties for delays to ensure quality and on time delivery. In some cases, exchange rate fluctuation and inflation of key inputs, have led to dispute arbitration between the agency and the contractor over who should bear the consequences of the price changes.

Accounting systems in NMS do not appear well-aligned to provide information about the entire investment process, but instead are focused on control for budget purposes. In general, accounting appears to be against individual contracts concerned with a particular element of the project (such as project design) and there is no overall accounting for the whole cost of the project including land acquisition, supervision, design and other fees, and construction. Administrative costs of supervision are also not included. Although the initial feasibility study and cost-benefit analysis may include all of these, there are generally no systems for capturing them through the accounting system. Consequently reporting on the degree of cost overruns may not fully capture the magnitude of variance, especially relative to the cost in the feasibility study.

In each of the NMS, project monitoring is generally limited to monthly reports on financial performance and physical progress against a specified contract. In many cases, a third party engineering supervisor provides reports to a project committee that is responsible

for notifying senior officials of any major changes proposed to the project design or cost. In addition, for EU-financed projects special monitoring and control structures are in place, and a joint Monitoring Committee provides coordination between the NMS and the EC. Project performance is generally controlled in terms of technical standards for construction. In some cases, the implementing agencies are apt to use internal supervisors (for example, Slovakia Road Administration). In Poland, the modernization of line E20 was one of the first railway projects to use external supervisors, and it was deemed to be a much more efficient management tool than relying on regional offices of the implementing agency PKP PLK. What is generally missing in the NMS is monitoring of the project implementation as a whole through all.

Internal and external auditors in NMS provided only basic financial oversight over implementing agencies and individual projects. Their role is primarily to give an opinion on the effectiveness of the implementing agency's internal controls and the compliance with Cohesion Fund procedures. The internal audit functions are still relatively new, and in some cases (such as Slovakia) their work is almost exclusively focused on EU-financed projects. In all of the NMS, the concept of "control" focuses almost exclusively on compliance of individual transactions with the law and the budget, with very little focus on effectiveness of expenditure or risk management systems and procedures.

Ex-post review of projects from a perspective of effectiveness and efficiency are generally not done within the NMS. In none of the NMS countries is there any attempt to review whether the project benefits were achieved (in terms of traffic flow, safety, or other broader policy objectives, for example). As noted above, project performance is typically denoted only in terms of technical standards of construction. None of the countries used external organizations (consulting firms, or academic institutions) in a systematic way to validate project analysis or assess overall management procedures in place.

Transparency of information about transport investment is improving in NMS, but is yet to include information on project outcomes. In some countries (Latvia and Slovakia) the Ministry of Transport publishes its sector strategies and information about EU-financed projects on its website. Information about annual budget expenditures is also readily available on individual projects. However, none of the countries provide *ex-post* reviews of the original cost estimates versus the actual total project costs.

Experiences of Spain, Ireland, and the UK

In the UK and Ireland an increasingly large part of the investment appraisal and planning processes focuses on design of effective procurement strategies that limit risk to the public sector. Assessment of public versus private financing is one consideration. Yet, even among publicly financed projects there is an increasing attention devoted to determining procurement and project management arrangements that will maximize value for money. In the UK, the Highways Agency used to undertake further design work in house, leading to a competitive tender, based largely on price, for the actual construction. Now the Agency uses a procedure called "Early Contractor Involvement" (ECI). Under this procedure (now also used by Network Rail), a competition is held soon after the planning approval process is completed, which is based entirely on quality, with subsequent "open book accounting." A target cost is agreed before construction, and detailed arrangements are agreed for the

Box 4: Early Contractor Involvement

The traditional way of procuring transport infrastructure has been to prepare within the public sector fairly detailed designs and then invite fixed price competitive tenders from the construction industry. The competition helps to promote innovation in contractors and to keep down costs. However the process entails considerable work by tendering contractors, most of which will not bring any reward, and it inevitably leads later to sometimes difficult negotiations about exceptional circumstances justifying higher (or possibly lower) payments to the successful contractor.

Over the past several years, on an experimental basis, some contracts have been let under a procedure of “early contractor involvement” (ECI). Under this procedure tenders are invited on the basis of an outline design, but with no requirement for costing. The bidding contractors are invited to demonstrate their suitability to enter into a contract on the basis of a joint development with the client of the design and its implementation, in exchange for payments made to cover costs on the basis of fully open book accounting. Selection is made on the basis of the contractor’s track record and availability, understanding of the project and quality of new ideas. As with conventional contracting, the contract sets out the allocation of responsibilities for responding to unforeseeable problems, such as exceptional weather or delays by utilities in moving their facilities to make way for construction work. This approach saves considerable bidding costs and leads to a more harmonious relationship with the contractor. However it also reduces the incentives of price competition between suppliers. The overall balance of advantage and the circumstances in which one form of contract may be more efficient than another, are presently being evaluated.

distribution of subsequent extra costs or savings. The project has to be re-submitted again to DfT and Ministers only if the cost is more than 10 percent above that originally approved by the Ministers. If the actual cost is less than the target cost, the contractor receives a bonus, though this is rare. More often, there is some net increase for which there is a contingency in the Highways Agency budgeting. The allocation of upward or downward variations from target is shared between the Agency and the contractor according to a very detailed prior analysis and agreement on the distribution of risks.

EU procurement procedures have been fully adopted in Ireland, but there are increasing efforts to improve incentives for contractors to deliver projects on time and within budget. The National Roads Authority (NRA) and the Railway Procurement Agency (RPA) are relying more on “Design and Build” contracts, rather than traditional project delivery contracts. Under the DB model, one contractor performs both design and construction under a single contract for an agreed contract price. The contracts involve some type of risk sharing, whereby most risks are borne by the contractor with a certain amount of risk retained by the sponsoring body. In the future, the government is preparing to introduce fixed price lump sum contracts in order to shield taxpayers from cost over-runs. The success of such contracts is still being debated as some are concerned that medium-sized firms would find it difficult to absorb unforeseen events that might occur.

Monitoring and reporting arrangements take different forms once a project has begun construction, but reporting can include performance against non-financial indicators. In each of the three projects reviewed in Ireland, for example, monitoring was executed through either a project steering committee or a dedicated project team that would review monthly reports. In the case of the Kildare Route Project, there was also an Advisory Group established that met monthly. In some instances, the RPA has included within the project team individuals with experience on similar projects in other countries. Termination of a

project is rare, but systems are in place to do so if necessary. In the UK, highways are also monitored by a review team that includes the Highways Agency Project manager and the Agency's Design Agent, who acts for the Agency on site and provides quarterly quality assurance reports. Progress is monitored by the Highways Agency against an agreed program; performance measures are also applied, relating to factors such as "right first time," forecasting accuracy, and safety.

Audit activities include review of financial management controls, risk management, and value for money. Among the sample projects in the study from Ireland, audits were carried out for all on behalf of the Department of Transport to verify adherence to relevant guidelines. Internal audit was also involved in the projects, though primarily focused on review of financial controls. In the UK, the internal audit role includes bringing projected cost increases to the attention of Ministers. The UK National Audit Office (NAO), on the other hand, has undertaken value for money audits on some transport projects, although not for those included in this study. NAO reports carry substantial weight as they focus on verifiable facts and can sometimes lead to heads of department appearing before the Parliamentary Public Accounts Committee to respond to questions. *Ex-post* reviews of projects have also been built into the Gateway process as a means of learning lessons. These are still relatively new and have thus far tended to focus on the economic justification and assumptions for the project.

Public transparency plays an important role in bringing to light poor management of individual projects and creates incentives for the government departments (ministries) and implementing agencies to assure good practices. In both the UK and Ireland, extensive information is made public about projects, their costs, and the procurement arrangements. The media and nongovernmental organizations are motivated to identify problem areas and provide wider access to NAO reports and other special findings. The Parliamentary Public Accounts Committee, which is supported by the NAO, also plays a role in promoting accountability by public officials when problems are uncovered. Together the open access to information and healthy political competition provides incentive to get things right. Institutional relationships are also designed to provide checks and balances. The Department of Transport provides oversight of the Highways Agency, but it also must assure the Treasury, the NAO, and the Parliament that it is performing its responsibilities properly.

Building Capacity to Manage

Among the countries studied only the UK and Ireland discussed explicit strategies to strengthen the capacity of the civil service to manage infrastructure investment programs. Though the capacity of the public administration is generally high compared to many of the NMS, there was still recognition of the need to improve upon the existing processes and procedures used by the public administration. In the case, of Ireland there was also concern that the availability of project planning and management skills were in limited supply and that capacity building needed to take into account their longer term development. In the NMS one of the reasons for this shortcoming is that civil service structures have traditionally been concerned with public administration and have been slow moving to a managerial culture. Therefore, it is common to find “generalists” in the majority of posts rather than skill specific specialists. Another factor is the often inability of the civil service in NMS to meet the relatively high remuneration costs that specialists can demand, within a traditional civil service structure.

Governments must manage the tension between delegation of authority to outside experts and the need to retain or develop professional expertise to be a competent client. In the UK, for example, concern has been evidenced in different ways. After problems with escalating cost in construction of roads, external experts suggested that delegation to contractors had gone too far and that the Highways Agency needed strengthening of its commercial skills for fully effective negotiated ownership of the projects. In turn, external consultants also stressed the need for the highways program to be managed as a whole and for the DfT to be clear about the required outcomes (in terms of traffic flow, safety, and environmental impacts). Major problems with past high speed rail projects (such as the Channel Tunnel Rail Link) led to much tighter controls by the DfT starting in 2004.

Box 5: Building Capacity to Appraise and Manage Projects

The think-tank—the Economic and Social Research Institute—has emphasized the importance of completing cost-benefit analysis on all of the proposed projects under *Transport 21*, in order to permit an appropriate prioritization of projects. It also advised on the importance of having effective project management. In particular, it emphasizes the importance of learning lessons from projects already completed, both successes and failures, before embarking on even larger future projects.

The Government has been addressing these issues. The *Guidelines for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector* (February 2005) are certainly helping to enhance the capacity and capability of the system, in delivering infrastructure efficiently, on time and within budget. These Guidelines assist Departments and agencies in fully carrying out their responsibilities and functions in regard to the evaluation, approval and management of capital expenditure, particularly within the context of the new multi-annual investment framework. The recently established Central Expenditure Evaluation Unit, based in the Department of Finance, will also be playing an important role in general oversight of project management. It will have specific responsibility for central oversight of the Value for Money and Policy Reviews and for organizing ongoing NDP evaluation at program level including the Mid-Term Review of the National Development Plan. The overall objective of the work of the Central Unit will be to inculcate best practice in the appraisal and management of projects and programs by public bodies delivering investment under the NDP. The Unit will also carry out spot checks at project level to verify compliance with the various Value for Money requirements. In addition, all expenditure under the National Development Plan will be subject to the monitoring and reporting arrangements agreed for the Plan.

Capacity to manage public investment cannot be taken for granted especially in relatively small economies. Guidelines are ineffective if civil servants lack the skills to implement them consistently. Ireland has identified public sector project management skills as an important challenge for them and one that they needed to address. Up to the 1990s, the country had limited experience in major transport infrastructure investments. Since then, the Department of Finance has played a lead role in establishing an overall project management system, and the 2005 Appraisal Guidelines are intended to help Departments and Agencies carry out their responsibilities. Specialized training is being provided for officials across a broad range of areas, such as procurement, project management, project appraisal, and policy analysis. Furthermore, to encourage compliance with the project appraisal and project management procedures, the Department of Finance just introduced a robust system of spot-checks. In addition, to help address the need for highly-specialized skills in project finance and risk analysis, the government created the National Development Finance Agency. Though initially focused on a small set of PPPs, the Agency now includes a Center of Expertise that provides financial and risk advice to State Authorities on all large public investment projects.

Conclusions and Recommendations

Substantial progress has been made in many of the NMS to establish a good framework for public investment. Yet, the urgency to catch up on neglected infrastructure investments and to use EU resources while available can be a distraction from applying adequate value-for-money analysis to projects. There is an argument that the availability of such funds should be more strongly linked to good investment practice, beyond merely requiring that cost benefit analyses be undertaken. Although many projects may demonstrate positive cost-benefit ratios, the relative cost-effectiveness of project designs and policy options needs to be given more attention. Since the sector strategies themselves are often broad wish lists, many potential projects can be loosely linked in support of the strategy. Though politics is an inevitable feature of the democratic process, better systems will strive to ensure that political decisions are at least informed by sound analytical work and that the outcomes are transparent.

The systems in the NMS could be strengthened by building in formal and informal checks and balances that go beyond formal compliance with financial regulations. This may include early-stage reviews by external experts, greater public transparency about project selection and outcomes (Ireland under *Transport 21* lists the different transport projects, including information on their stage of development—see www.transport21.com), formal systems for post-project review, and stronger capacity within the Ministry of Finance to identify potential risks to value-for-money. Public investment management practices in the UK and Ireland are constantly evolving to integrate lessons from the management of past project (good and bad). In contrast, systems in the NMS generally do not include processes to reveal and address systematic risk such as over-estimation of benefits or under-estimation of costs and time. In the long-run, the NMS would benefit from integrating processes for evaluation early in the project design.

Recommendations

Strategies Linked to Budgets

Strategic plans have to be linked to published government policy and to a reliable resource envelope if they are to generate genuine prioritization among competing policy options. The experience in the NMS has shown that strategic planning processes can be helpful in deepening knowledge about the challenges and opportunities facing various sectors, but without a link to the budget they provide little more than a list of possible options. To the extent possible the strategic plans should be updated on a rolling basis and indicate how specific programs or projects contribute to the higher level policy objectives established for the sector.

Multi-year Funding Commitments

Spending authorizations for capital projects need to be made for a multi-year period covering the duration of the project or the project phase.⁶ When project funding is subject to re-authorization each year, there is a likelihood that individual projects will be slowed down as fiscal space is made for new or changing priorities. Inevitably this leads to very inefficient project management and cost overruns. At the same time, implementing agencies should also have flexibility to program the actual resources according to the specific needs of individual projects, for example, by grouping projects within a “program” and authorizing moderate reallocations to occur between faster and slower moving projects.

Cost-Benefit Assessment

The selection of individual projects within the overall strategic plan should be driven by high-quality analytical assessments of competing projects which in turn could more effectively inform political judgments. Public expenditure decisions will by their very nature involve political judgments around relative priorities; however, the institutional framework in which those decisions are made should require consideration of sound economic analysis and bring to light the relevant economic trade-offs and/or risks. Even where strong guidelines exist for conducting CBA, governments need to strengthen their capacity to meet these standards and should incorporate checks and balances to assess potential biases and risks. Projects need to be assessed against alternative options to assure appropriate value for money.

Ex-post Evaluation

The public investment management (PIM) system should require evaluation of past project experiences and incorporate the lessons into future guidance and regulations. These reviews could be undertaken by any number of institutions, including the MoF, the internal audit for the transport ministry, the external auditor, or an independent organization

6. Projects might be authorized and funded in modules or phases (e.g., design phase, land acquisition, construction of a stand-alone segment of road).

contracted by the MoF. In many transition countries, internal and external auditors focus on compliance with regulations. While compliance is important, there is a need to also assess whether the guidelines and rules are as effective as they could be and whether the practices encourage value-for-money.

Investment in Skills

Project planning and project management skills need to be enhanced and retained within the civil service. This is needed not only for effective management within the public sector, but also for effective management of the private sector which may be undertaking investment on behalf of the government. Given that a number of governmental bodies do not regularly engage in investment projects, and therefore cannot justify permanent, full time resource, the case could readily be made for a central body of expertise as has been foreseen by the Irish government.

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This paper describes the characteristics of public investment management (PIM) in seven EU countries as it applies to a single sector—transport infrastructure. The report highlights some of the common challenges that four relatively new EU member states—Poland, Slovakia, Slovenia, and Latvia—face as they plan and execute their transport infrastructure projects. It recognizes the importance that EU-mandated processes and procedures have in shaping national systems in the new member states (NMS), but the report finds that actual practices often fall short of EU goals due to capacity constraints, weak institutional structures, and other factors. The experiences of the NMS are compared with those of more developed economies (namely Spain, the UK, and Ireland) to assess whether the later countries have faced similar challenges in managing public investment, and if so, what measures they have adopted to overcome them.

This comparative analysis serves to draw out several good practice examples that are relevant for all countries. How those practices are applied in each country is a matter for further study, as each country considers its own political culture and administrative tradition. This paper is a first step toward building dialogue among public finance practitioners in Central and Eastern Europe on how to make public investment projects more effective and efficient over the long term.

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