

Report No. AAA52 - MN

Mongolia

Improving Public Investment Planning and Budgeting

September 2010

Poverty Reduction and Economic Management Sector Unit
East Asia and Pacific Region



Document of the World Bank

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CURRENCY EQUIVALENTS

(Exchange Rate Effective September 29, 2010)

Currency Unit = Mongolia Tugriks
1,322.50 MNT = US\$1

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

FFS	Fiscal Framework Statement
FSL	Fiscal Stability Law
GDP	Gross Domestic Product
MDG	Millennium Development Goals
MNAO	Mongolia National Audit Office
MNT	Mongolian Tugreg
MoF	Ministry of Finance
MoSF	Ministry of Strategy and Finance
MTBF	Medium Term Budget Framework
MTFF	Medium Term Fiscal Framework
NDIC	National Development and Innovation Committee
OECD	Organization for Economic Cooperation and Development
PIP	Public Investment Program
PPP	Public Private Partnerships
PSMFL	Public Sector Management and Finance Law
ROCKS	Road Costs Knowledge System
SEG	Social and Economic Guidelines
SPC	State Property Committee

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ACKNOWLEDGEMENTS

This report was written by a team consisting of Zahid Hasnain, Senior Public Sector Specialist, EASPR (TTL); Shilpa Pradhan, Senior Public Sector Specialist, EASPR; Munkhnasaan Narmandakh, Economist, EASPR; Tehmina Khan, Economist EASPR; Altantsetseg Shiilegmaa, Economist EASPR, and Martin Darcy, Consultant. Zahid Hasnain was the lead author for the report, drawing on background papers by Munkhnasaan Narmandakh “Roads Sector Case Study”, Tehmina Khan “Measuring efficiency in public investments”, Martin Darcy “Institutional Arrangements for Public Investment Planning.” Lynn Yeargin, Maya Razat, and Otgonbayar Yadmaa provided administrative support. The note was prepared under the overall guidance of Linda Van Gelder, Sector Manager (EASPR), Rogier Van Den Brink, Lead Economist (EASPR), and Arshad Sayed, Country Manager, Mongolia.

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- Dr. Derrin Davis, Consultant, NDIC

The key findings and recommendations of the report were presented to counterparts in workshops organized by the National Development and Innovation Committee in Ulaanbaatar in February and May, 2010, and to a delegation of parliamentarians that visited the World Bank headquarters in March 2010 and August 2010.

EXECUTIVE SUMMARY

Investments are a key to economic growth and in developing countries public investments in infrastructure, education, and health are necessary to provide public goods, address market failures, to crowd in private investments, and to achieve redistributive goals. In natural resource rich countries in particular, effective public investments are necessary for avoiding the Dutch disease and for translating natural resources underground into productive assets above ground.

Mongolia's public investment management system has several weaknesses that need to be urgently addressed if the country's natural resource potential is to be realized. First, the budget in general, and the capital budget in particular, have been highly pro-cyclical which, apart from its broader macro-stability implications, (overheating of the economy, impact on external balances and on inflation etc.) put numerous strains on public investment planning and execution. The problem was both the volatility in spending, mirroring the volatility in resource revenues, and the surge in expenditures during the boom. During the boom years there was a rapid growth in new investments which then could not be completed in time, or adequately maintained, during the lean period of capital expenditure contraction. The rapid increase in expenditures put strains on the systems for planning and execution, and resulted in the misallocation of resources as the systems for appraising and selecting projects could not grow in capacity and sophistication at a similarly rapid pace. Equally importantly, the local construction sector could not handle this surge in demand for public projects, resulting in myriad implementation problems.

The Government has recently taken a bold step to address this volatility and expenditure growth by passing the Fiscal Stability Law. There were three fiscal rules legislated: a structural balance similar to that of Chile, which sets a floor (and becomes binding) on the structural deficit of 2 percent of GDP in 2013; a ceiling to public debt of 40 percent of GDP; and limits on the annual increases in public expenditures. These rules, if followed, will be a key to Mongolia's efforts in constraining fiscal spending to prudent and sustainable levels.

A second major weakness is that Mongolia's budget has not allocated resources well, as demonstrated by the high priority given to new construction and the low priority given to maintaining existing capital assets, and the poor procedures for appraising and budgeting capital projects. Due to repeated underfunding of routine maintenance, 60% of the national paved road network is now in poor condition and in need of capital repair and rehabilitation, at an estimated cost of MNT 730 billion (or roughly 10 percent of GDP). The electricity sector is in a similar state of dilapidation. As against these needs, capital repair spending increased very little in nominal terms during the boom years and declined as a share of new investments and capital stock over the past five years.

There is no formal process of economic appraisal in Mongolia. The existing planning and budgeting regulations are highly skeletal, and there are no project appraisal guidelines that specify what economic and financial analysis needs to accompany project proposals, and what will be the basis of appraising these projects. Without such methods, it is very difficult to determine inter-sectoral and intra-sectoral priorities, and to determine which projects are good and which are bad. The corollary to this regulatory weakness is the lack of capacity in the line ministries to conduct economic analysis, and the lack of capacity in the Ministry of Finance, for an independent review of project proposals based on analytical criteria.

Weaknesses in the regulatory framework are the underlying factor behind these problems. The parliament in Mongolia exercises considerable legislative powers in budgeting and has used this discretion to significantly increase and alter the capital budgets submitted by the executive during the annual budget preparation. In democratic systems, clearly the legislature should hold the "power of the purse" and have the final authority to mandate all expenditures, borrowings, and revenues that will be

collected by the state. However, in many systems the legislatures have delegated much of these budget-making responsibilities to the executive in general, and the ministry of finance in particular, and focus more on holding the executive accountable ex post. From a cross-national perspective, Mongolia's parliament exercises unusually high authority in terms of powers to amend the budget and increase appropriations without restriction. Such unrestricted powers are particularly unsuited for natural resource rich countries where maintaining aggregate fiscal discipline and smoothing public expenditures and saving to account for mineral revenue fluctuations are of such paramount importance.

Third, these problems in allocative efficiency are compounded by problems in the project cycle. Delays in project completion are common and significant. 65 percent of roads projects completed between 2005 and now had time overruns, more than doubling the original completion time in some cases, while 73 percent of on-going projects have been extended. These delays reflect two factors: poor planning and inaccurate cost estimation, which in particular create bottlenecks in procurement and result in delays given Mongolia's short construction season; and weaknesses in the construction sector that lead to implementation problems.

Reforms at redressing these weaknesses in fiscal policy are underway with parliament currently debating the passage of fiscal responsibility legislation. This policy note focuses its analysis on improving Mongolia's public investment planning and budgeting processes, and makes the following recommendations:

- Strategic planning at the center of government needs to be strengthened through putting in place mechanisms for inter-ministerial coordination, particularly with regards to Southern Gobi development, and by preparing a multi-year Public Investment Program (PIP). The PIP would be a comprehensive list of certified publicly executed projects irrespective of financing sources, and from which projects should be selected for the capital budget for the given year, thereby helping ensure a single, unified public investment planning system.
- There needs to be centralized project evaluation to and integrated planning and budgeting. This requires that the division of responsibilities between the key agencies, namely the National Development and Innovation Committee (NDIC) and the Ministry of Finance (MoF) be well specified. We recommend that this division be as follows: the NDIC is responsible for preparing the multi-year PIP by conducting appraisals of project pre-feasibilities, thereby being the central unit for evaluating project proposals; the MoF is responsible for preparing the capital budget by deciding which of the projects from the PIP will be selected for inclusion in the capital budget.
- Ensuring that PPP funded projects are integrated into the system: This requires that the roles of the State Property Committee (SPC) in relation to the NDIC and MoF, be well specified and integrated, and in particular the fiscal risks associated with PPPs be adequately considered by the MoF
- Rigorous project appraisal aligned with local capacity: Given capacity constraints in the line ministries, a simplified project appraisal methodology should be adopted that can be used to enter projects into the PIP. This simplified methodology should consist of two steps: step 1, a "yes/no" decision based on whether there is sufficient demand for the project, whether it meets a national priority, and whether the financial analysis is sound. And if the project proposal passes step 1, then a second step that ranks the project on a set of simple criteria.
- Better distribution of executive and parliamentary responsibilities specified in the legal framework: While parliament can propose new projects it is crucial that these projects identified

by members of parliament also go through the same rigorous process for inclusion in the multi-year PIP and the capital budget

INTRODUCTION

1. The development of the new Southern Gobi mines and the resultant huge increases in natural resource revenues provide Mongolia with the rare opportunity of achieving sustained economic growth and poverty reduction. Transitioning to this path of sustainable growth however, requires addressing some key immediate and longer term challenges. The immediate need over the next five years is to effectively mobilize the considerable infrastructure investment needed to develop the Southern Gobi mines, namely Oyu Tolgoi and Tavan Tolgoi, needs that have been estimated at \$5 billion.¹ The longer term challenge is to ensure that the new mineral revenues are used for the benefit of Mongolia's citizens.

2. Effective budgeting and public investment planning and management systems will be the key requirement for meeting these challenges and for transforming mineral assets into the physical and human capital assets that will be needed for sustainable development. Mongolia's current systems are not adequate. As the experience of the mineral resource boom of 2005-08 showed, the Government was unable to maintain aggregate fiscal discipline and manage revenue volatility, and many resources were not spent in the right areas or spent in the most efficient, cost-effective manner. These problems are now well recognized, and the Government reforms are focusing on the necessary institutional — legal and regulatory — and organizational changes needed to ensure that its systems are a) better able to manage revenue volatility and maintain fiscal discipline at the aggregate level and b) are more effective in allocating resources and in achieving the most output for a given set of inputs.

3. This note focuses on the second of these reform agendas, and in particular on how the institutional and organizational system for public investment planning and budgeting can be improved. Considerable analytical work has already been done on the macroeconomic and fiscal framework, and the Fiscal Stability Law (FSL), prepared with on-going technical assistance from the International Monetary Fund and the World Bank, was recently approved by the parliament.² The framework for public investment planning however is in a state of flux, and there is a risk that the rapid changes currently underway will result in fragmentation of planning from budgeting, and within planning across financing sources. The on-going changes therefore provide both an opportunity and a risk, and this note is an attempt to crystallize the Bank's on-going technical assistance in this area in one document. The note complements, and draws on, other analytical activities by the Bank, including a governance and political economy assessment of the public investment system in Mongolia³, and the development of a new framework for public investment management in resource dependent countries.⁴

4. The note is organized as follows. Chapter 1 provides an assessment of Mongolia's planning and management system along three, well-established evaluation criteria: how well does the system maintain aggregate fiscal discipline, how well does it allocate resources between different sectors and activities, and how well does it deliver outputs for a given set of inputs. It identifies weaknesses in all elements of the project cycle — investment guidance and preliminary screening, project appraisal, independent review of appraisal, project selection and budgeting, and project implementation and maintenance.⁵

5. Chapter 2 then provides recommendations on improving the planning and budgeting system. The focus is on the upstream process and not on project execution, even though fixing the system requires improvement in all areas of the project cycle. The reasons for this focus on planning and budgeting,

¹ World Bank (2009)

² IMF (2008); IMF (2009); World Bank (2009)

³ Fritz & Finch (2010)

⁴ Petrie (2009)

⁵ These elements are drawn from the framework specified in Rajaram et al. (2009)

specifically investment guidance, project appraisal and evaluation, and project selection and budgeting, are two-fold. First, in our assessment weak planning and budgeting is the key constraint in the system and is a major cause of downstream delays in execution. Second, and more importantly, this is an area where fundamental organizational and institutional changes are underway and there is an urgent need for technical assistance to avoid some of the many pitfalls that many countries have fallen into, and to help ensure that an appropriate system develops. In other words, there is reform momentum but the direction of change is at this stage open.

6. A brief final point on the terminology used in the note as the terms used in Mongolia are somewhat different from standard international usage: The term “public investment program (PIP)” will be used in the standard way in the note to refer to a multi-year list of good projects or projects that have passed the appraisal of their pre-feasibility and, for larger projects, feasibility studies. “Capital budget” will be used to refer to projects that are funded in the budget. Mongolia does not have a multi-year public investment program, and the annual capital budget is called the Public Investment Plan (PIP). To avoid confusion, this report will use the acronym PIP to imply a multi-year Public Investment Program, and the term capital budget as defined above.

KEY ISSUES IN PUBLIC INVESTMENT PLANNING AND MANAGEMENT

1. Introduction

7. Mongolia, like other East Asian countries, devotes considerable resources to investments. The investment-to-GDP ratio has averaged over 30 percent for the past ten years, much higher than most developing countries, and as a result, Mongolia has an extensive infrastructure stock given its level of economic development. Access rates to roads, electricity, and the mobile phone footprint have expanded rapidly and are higher than might be expected given the country's income and geography. Nonetheless, considerable infrastructure gaps remain in access and quality. Transport bottlenecks are a major business impediment in Mongolia⁶, the considerable growth in Ulaanbaatar's population has strained the city's infrastructure to a breaking point, and a high proportion of the existing capital assets are in disrepair and in urgent need of rehabilitation.

8. Despite these high investment rates, resource availability was, until recently, a major constraint given the very high costs of infrastructure provision in Mongolia due to its geography and climate. Most public investments were funded by foreign funds, mostly aid, which averaged 60 percent of gross domestic investment in the decade up to 2005. With the mineral resource boom of 2005-2008 financing has become less of a constraint, and the many-fold increases in mineral resources that will occur with the development of the new Southern Gobi mines provide Mongolia with the opportunity of significantly expanding and improving infrastructure for the benefit of its people.

9. Its key challenge in achieving this goal will be in public expenditure management. The national budget is a government's main instrument for collecting resources from the economy and for allocating them in an effective, accountable, and efficient manner. As is generally accepted, all budget systems need to meet three fundamental objectives of public expenditure management⁷:

- To maintain aggregate fiscal discipline through the setting of expenditure ceilings that are based on a robust medium term fiscal framework (MTFF) and that are, generally, binding at the aggregate level and on respective spending entities;
- To achieve allocative efficiency, that is to distribute resources as per national priorities, and to shift resources from less productive sectors and less effective activities to more productive and effective ones. In other words, 'spending in the right areas';
- To achieve operational efficiency, or to implement programs and deliver services at the lowest cost per unit of output, or conversely, to get the most output for a given set of inputs

10. As this chapter details, Mongolia's budget system in general, and public investment planning and budgeting process in particular, is falling short on each of these objectives. Section 2 provides a brief background on the budget and public investment planning process in Mongolia. Section 3 then evaluates the public investment planning and management system along the above three dimensions, and the final section discusses the key underlying institutional and organizational factors behind these problems.

2. A Brief Background on the Budgeting and Planning System

11. The legal framework for budgeting in Mongolia is laid out in the Constitution of Mongolia (1992), the General Budget Law (1993) and the Public Sector Management and Finance Law (2003). This framework specifies a centralized arrangement in which prime responsibilities are vested in the line

⁶ World Bank (2007)

⁷ World Bank (1998)

ministries and the Ministry of Finance, with limited expenditure and taxing powers of provincial (aimag) and local (soum) governments. The annual budget process begins with the submission of a Fiscal Framework Statement (FFS) — a medium term fiscal framework — to parliament on May 1, which is meant to guide the annual budget making process. Budget call circulars are issued in June, and negotiations between the Ministry of Finance and the line ministries, provincial governments, and other budget entities proceed until the finalization and submission of the executive's budget proposal to parliament on October 1. Parliament (State Great Hural) is required to approve the budget by December 1, with the fiscal year commencing on January 1.

12. This legal framework for budgeting is largely silent on the modalities of public investment planning. Instead these are governed by secondary legislation issued by the Ministry of Finance.⁸ These outline the requirements for the planning, financing, implementation, and monitoring of public investment projects. New investment projects are meant to abide by national priorities, and have to be accompanied with technical and economic appraisals, although this guidance is stated in generic terms. For example, construction project proposals have to abide by the requirements of the Law on Construction and have to be accompanied by technical drawings and “feasibilities”, but there is no specification of the types of methodologies to be used in the economic analysis.

13. Until recently, Mongolia had no specialized agency for public investment planning. As in many other transition countries, the Soviet era institutions of central planning were dismantled, and planning responsibility was given to the Ministry of Finance. The Economic Policy Department (now the Financial Policy and Coordination Department) in the Ministry of Finance was given the overall policy formulation and strategic planning responsibility, and annually produced the Social and Economic Guidelines (SEG), a policy document which specified the priorities of the government for the given year. The SEG are approved by parliament together with the budget. The preparation of the capital budget is the responsibility of the Investment Division of the Fiscal Policy and Coordination Department (the Ministry's budget office). Donor funded projects are handled by a different department in the Ministry, the Foreign Aid Policy and Coordination Department.

14. Mongolia, unlike many other countries, does not have a multi-year public investment program. The capital budget lists the multi-year costs of projects, but only authorizes the year one allocation. The Investment Division reviews line ministry and agency capital budget submissions and prepares the capital budget through a process of negotiation. The capital budget is appropriated project-by-project by parliament, with no freedom for the executive to reallocate funds across projects, although a common practice is for a single appropriation to include a large number of individual projects thereby allowing for more flexibility and reducing controls.⁹ Virements across the three classifications within the capital budget — construction, purchase of equipment, and capital repair — are also not allowed. There are also no provisions for carry over funding and any un-utilized funds lapse at the end of the fiscal year.

15. In January 2009, the National Development and Innovation Committee (NDIC) was created under the prime minister's office. The decree creating the agency provided it with a broad mandate that includes regional and sector development policy, strategic planning and appraisal of public investment plans, economic reform, monitoring and evaluation of MDG's and the government's action plan, encouraging innovation and economic diversification, and formulation of national and social development policy formulation and guidance. The precise legal authority of the NDIC however, remains unclear at

⁸ Ministry of Finance Decree #58, 2008.

⁹ This is particularly so for the Local Development Fund, which is the allocation for each member of parliament with which to identify projects. This allocation is currently 1 billion MNT per member, and a significant portion of the Local Development Fund is lumped under two appropriations under the two deputy prime ministers.

present, as there were no amendments made to the General Budget Law or the PSMFL to define its role, and organizationally it does not have the status of a ministry.

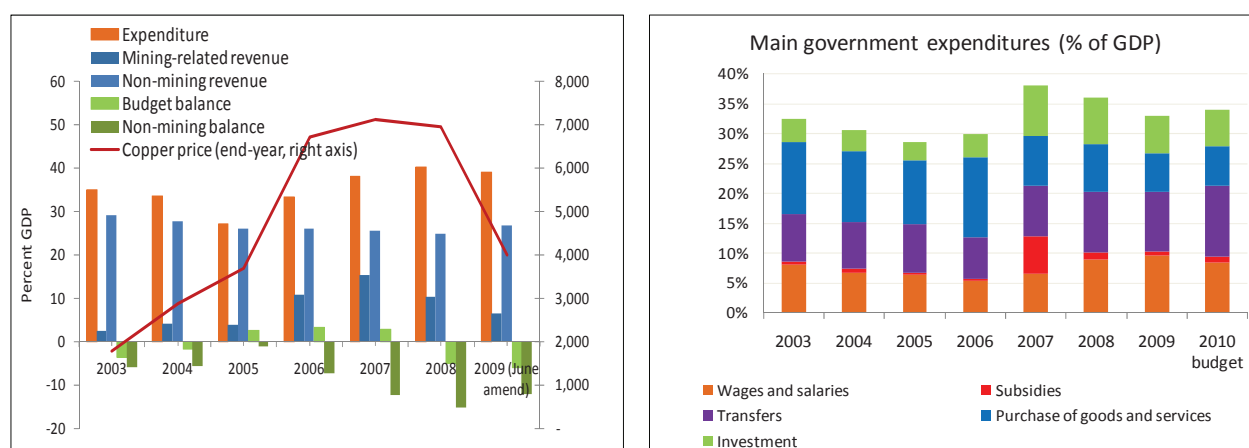
16. The private financing of infrastructure development through Public Private Partnerships (PPPs) is likely to be a major avenue for meeting the large investment requirements over the medium term to develop the Southern Gobi mines. These mechanisms are defined in the Concessions Law approved by parliament in 2010. The ownership of all state assets is vested with the State Property Committee (SPC), and therefore under the Concessions Law the granting of concessions on existing assets is the responsibility of the SPC. The SPC also has the responsibility for evaluating proposals for PPPs from the line ministries and agencies for new projects, and for making recommendations to the government on which projects will be implemented as PPPs.

3. Evaluating the System on the Three Dimensions

3.1. Lack of Fiscal Discipline

17. Mongolia, like many revenue rich and former socialist countries, has a big government as measured by revenue collection and public expenditures. As **Error! Reference source not found.** shows, public expenditures have averaged 30 percent to 40 percent of GDP over the past 5 years. Also like many resource-rich countries, expenditures have been highly pro-cyclical, in large part reflecting the trend in copper prices. Mongolia has gone through a classic boom-and-bust cycle from 2005 to 2009, with the non-mining deficit (i.e., expenditures relative to non-mining revenues) increasing from a deficit of 1 percent of GDP in 2005 to a deficit of over 15 percent of GDP in 2008 (Figure 1, left panel), which required large expenditure cuts in capital and operations (goods and services), and donor assistance.

Figure 1: Mongolia's public expenditure patterns, 2003-2010



Source: Bank staff calculations based on annual budget data

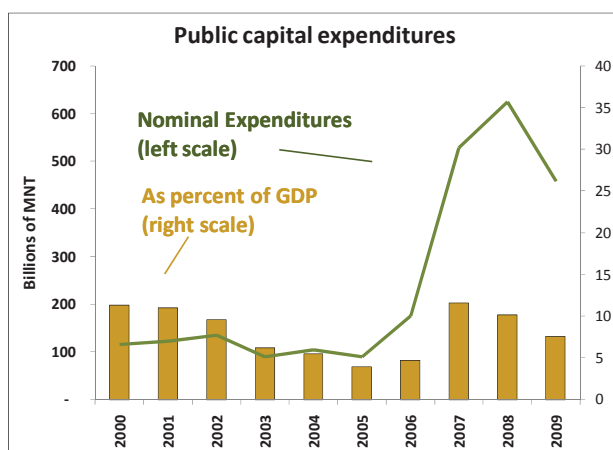
18. The 2005 to 2008 boom was used to finance massive increases capital expenditures (from 3% of GDP in 2005 to 8% of GDP in 2008, which translated into a seven-fold nominal increase), across-the-board wage increases for civil servants (from 6% of GDP to 9% of GDP), and social transfers (from 8% of GDP to 10% of GDP). Within public investments, the roads and transport, and fuel and energy sectors received a bulk of the resources (roughly half of the capital expenditures were on these two sectors), followed by education and health. The social transfers were in general untargeted and involved

significant cash handouts to all Mongolian citizens with children.¹⁰ The expenditure categories that were neglected, relatively, were operations (purchase of goods and services, which declined from 11% of GDP to 8% between 2005 and 2008) and in particular capital repair and maintenance, as described in more detail below.

19. Apart from its broader macro-stability implications, (overheating of the economy, impact on external balances and on inflation etc.), this fiscal cycle puts numerous strains on public investment planning and execution. The fluctuations in revenues usually impact capital expenditures the most as these are the government's discretionary expenditures which implies that during the boom years there is a surge in new investments which then cannot be completed in time, or adequately maintained, during the lean periods of capital expenditure contraction. The rapid increase in expenditures — in nominal terms, public capital expenditures increased seven-fold in three years (Figure 2) — puts a strain on the systems for planning and execution, and results in the misallocation of resources. In other words, if capital expenditures grow this rapidly then it is highly likely that they are financing many bad projects as the systems for appraising and selecting projects cannot grow in capacity and sophistication at a similarly rapid pace. Equally importantly, the local construction sector usually cannot handle this surge in demand for public projects, resulting in myriad implementation problems. Both smoothing expenditure fluctuations to avoid the problem of many new projects that then cannot be funded during the downturn, and controlling expenditure growth to preserve the quality of the capital asset portfolio is therefore imperative for a resource-dependent economy.

20. A significant new and positive development has been the passage of fiscal responsibility legislation, namely the Fiscal Stability Law (FSL), by the parliament in June 2010. The FSL is meant to smooth expenditures and control expenditure growth through three rules: a structural balance rule that uses trend mineral revenues to smooth out expenditures; an expenditure growth limit rule given the hump-shaped mineral production with the development of the new mines, and a debt limit rule. The annual budget has to follow the aggregate limits set by the MTFF, except for exceptional circumstances such as national emergencies or a severe recession. Critically the mineral revenue forecasts are to be made by an independent committee of experts, ala the Chilean model, which reports to the Ministry of Finance, thus giving the much needed credibility to the process.

Figure 2: Growth of public investments during the copper boom



3.2. Low allocative efficiency

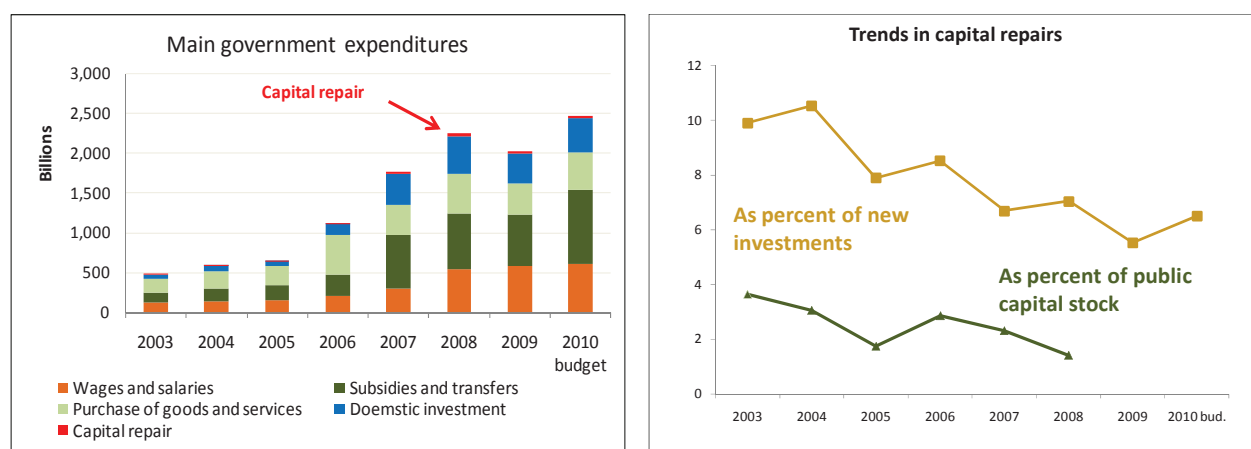
21. The starkest objective indicator of the misallocation of resources in Mongolia is the gross under-spending on capital maintenance and repair in relation to the country's needs. Due to years of neglect, the state of disrepair in the energy and roads sectors is approaching crisis proportions. The electricity sector has immediate capital repair needs estimated by the Ministry of Fuel and Energy at MNT 170-180 billion, and 60% of the national paved road network is in poor condition and in need of capital repair and rehabilitation, at an estimated cost of MNT 730 billion (or roughly 10 percent of GDP). As against these

¹⁰ The Child Money Program

large needs, and as shown in Figure 3, left panel, capital repair spending increased very little in nominal terms during the boom years, as compared to expenditures on subsidies and transfers, wages and salaries, and domestic investment, and declined as a percentage of new investments (from 10 percent to 6.5 percent) and of estimated public capital stock (from 4 percent to below 2 percent) between 2003 and 2010.¹¹

22. There are both technical and political reasons for this under-prioritization. As elaborated on below, there is no economic analysis of projects during budgeting and no requirement that the future recurrent costs of projects be specified and be part of the appraisal process. But the deeper political reason, common to many countries, is the lack of visibility of maintenance and repair as compared to new investments. These political economy factors are explored in more detail in Finch and Fritz (2010).

Figure 3: Spending in capital repairs and maintenance did not benefit from the expenditure boom and has declined as a share of new investments and capital stock



Source: Ministry of Finance, World Bank staff calculations. Public capital stock calculated using perpetual inventory methodology specified in Harberger (2007).

23. It is worthwhile examining this issue with respect to the roads sector in a bit more detail. Mongolia's road network has about 49,000 km of roads of which about 11 thousand km of roads are national roads that are regulated by the Department of Roads in the Ministry of Roads, Transport, and Urban Construction, and the rest are overseen by the regional authorities. National roads connect the centers of aimags to each other and capital city with the center of aimags. Of the national roads, there are only 5,000 km of paved roads of which 60 percent are classified to be in poor condition and 40 percent are classified in good or fair condition (Table 1). This classification follows standard norms in the Department on the number of years since the road was constructed (differentiated by the type of road). For example, an asphalt road is considered to be in good condition if it was constructed less than 5 years ago, in fair condition if it was constructed between 6 and 13 years ago and in poor condition if it was constructed more than 13 years ago.

24. The condition of the road also roughly determines the extent of maintenance and repair required, as detailed in Table 2. Good condition roads only require routine maintenance (resealing, leveling, pipe cleaning, sign repair); fair condition ones require medium repair (partial restoration of roads including gravel foundation replacement and surface treatment); while poor condition roads require capital repair, or complete rehabilitation. These capital repair costs amount to 729 billion MNT.

¹¹ The Government does not have an asset register and therefore capital stock is not measured. For the purposes of this report the public capital stock was estimated using the methodology in Harberger (2007).

Table 1: Condition of the national paved road network

Condition	Kms	Share of total classified (%)
Good	864.4	17
Fair	1,209.6	24
Poor	2,925.9	59
Total	4,999.9	100

Source: Department of Roads

25. As discussed, these problems reflect repeated under-spending on routine maintenance. For example, only 8.8 billion MNT was allocated in the 2010 budget for maintenance and repair as against a request of 14 billion by the Ministry. While there is recognition by Ministry officials that every 1 MNT spent for maintenance saves 3 MNT in capital repairs, and that a 1m² hole not resealed within a year will increase to 2-3m² a year later, the emphasis has been on expanding the road network rather than maintaining the existing capital stock.

Table 2: Maintenance and repair requirements for the paved national road network

Types of roads	Good condition		Fair condition		Poor condition	
	Years since construction	Routine maintenance funding needed*	Years since construction	Medium repair funding needed	Years since construction	Capital repair funding needed
Asphalt	0-5	3,240	6-13	79,390	13 and up	78,364
Surface treatment	n.a.	0	n.a.	0	9 and up	38,579
Cement concrete	9-25	0	n.a.	918	25 and up	9,799
Gravel	0-4	0	5-8	231	9 and up	193,175
Improved	n.a.	0	3-6	0	7 and up	409,437
Total		3,240		80,521.1		729,354

Source: Department of Roads, 2009

*Million MNT

26. Clearly the priority is for focusing first on the rehabilitation of the existing capital stock and not on new constructions, and on ensuring that sufficient funds are budgeted for routine maintenance going forward to prevent this “build-neglect-rebuild” pattern. However, funding for new projects has increased five-fold in nominal terms in the past five years, from 17.5 billion MNT in 2004 to 83.6 billion MNT in 2008, while maintenance and repair expenditures on roads have remained roughly stagnant, mirroring the general pattern across all sectors shown in Figure 3.

27. Determining optimal routine maintenance expenditures going forward for Mongolia based on international benchmarks is difficult as needs vary according to climate, terrain, the level of economic development (and needs), the initial quality of construction, and usage. While sophisticated models can be used to estimate maintenance spending required (e.g. by using the computerized road management and maintenance systems HDM3¹² and HDM4¹³ developed by the World Bank, the ADB and others), these can prove extremely complex and can require regular and accurate updating and strong technical capacity which may not be present in developing countries. Therefore for simple “rules of thumbs” and to obtain a range of estimates as a benchmark it becomes necessary to turn to for examples of what is typically spent in both developed and developing countries.

¹² Highway Design and Maintenance Standard Model

¹³ Highway Development and Management System

28. The UK Highways Agency spends on average about US\$19,000/km/year on road maintenance.¹⁴ The World Bank's ROCKS¹⁵ database on road work costs, which is derived from information contained in World Bank roads and highways projects in developing countries and in the emerging market economies of East Asia, indicates that these countries spent on average US\$2300/km on routine maintenance annually 2000 and 2008, with a range of US\$329/km in Cambodia to US\$8685 in Armenia. Unfortunately ROCKS does not contain any details on maintenance for neighboring Central Asian states which are the closest comparator countries for Mongolia sharing its extreme continental climate and geographic characteristics. Applying the average benchmark of \$2300/km to the 5000 km of the paved national road network suggests that Mongolia should be spending approximately MNT 16.5 billion annually on routine maintenance, approximately twice as much as it does now.

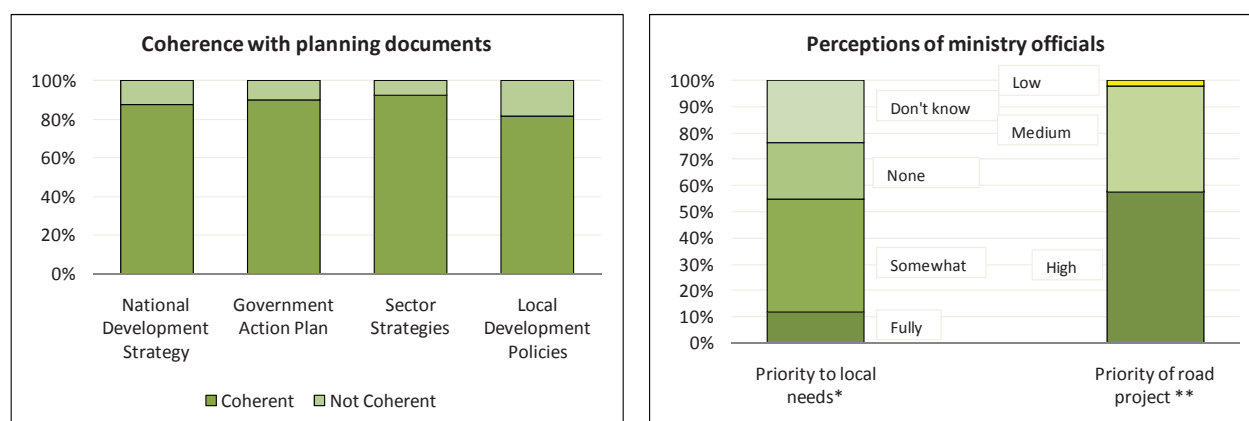
29. The allocation of funds across projects within the capital budget has also been poor. Ideally, budgets generally, and public investments specifically, need to be guided by policies that are grounded in a strategic framework based on sound analysis. The requirement therefore is both that national and sectoral planning documents be of good quality, and that the public investment program be, as much as possible, linked to the priorities as established in these documents. There are numerous national and sectoral planning documents in Mongolia, but these are usually quite weak in quality, and there is very little linkage between the documents and the annual capital budget. At the national level, there is the National Development Strategy that sets priorities over the period 2007-2015, but these are set at quite a high level of abstraction. The Government Action Plan, prepared under the guidance of the Prime Minister's Office, formulated at the start of a government's term in office is somewhat more concrete and has more of an impact on new spending proposals suggested during budget preparation. However, its priorities are not established on the basis of socio-economic appraisal nor are the cost implications specified. Finally, there are the annual Socio-economic Guidelines that are developed in parallel with the fiscal framework, but again appear to be weakly linked to the budget. At the sectoral level, most line ministries prepare strategic plans, often with the assistance of donors, but these usually do not identify projects based on robust cost-benefit analysis nor adequately specify their financing. For example, the Ministry of Roads, Transport, and Urban Development has seven different sectoral planning documents, some of which are contradictory, and while the Road Master Plan 2007 appears to be the main directional document there is at best a partial match between projects proposed by the ministry and the priorities specified in the Master Plan.

30. Given the level of abstraction in these documents, it is difficult to assess whether projects in the public investment portfolio are aligned to national and sectoral priorities. Attempts nevertheless, have been made. A recently completed audit of the 2010 capital budget by the Mongolia National Audit Office (MNAO) documented how many projects were "coherent" with the various planning documents. The findings of the audit, which are summarized in Figure 4 left panel, suggest a generally high level of coherence — for example, over 80 percent of the projects were in line with these documents. The auditors also interviewed line ministry officials about whether the projects met local priorities, and these findings were more sobering with only 10 percent of the projects identified as fully meeting these needs and 20 percent not meeting these needs (right panel, left bar). For the preparation of this report we asked the roads ministry officials to also rank the national roads portfolio of on-going projects in terms of priority, and found that only 54 percent of the projects were ranked by these officials as high priority (right panel, right bar).

¹⁴ (UK NAO Report 2009).

¹⁵ Road Costs Knowledge System

Figure 4: Alignment of investments to national, sectoral, and local needs



Sources: MNAO (2010); *MNAO (2010) **Roads Department officials

31. The procedures of actually preparing the capital budget shed more light on this question of allocative efficiency than these crude measures. A major problem has been that the sector ceilings determined under the FFS have almost no impact on line ministry budget proposals and there is very little attempt by the ministries to prioritize their investment proposals given fiscal constraints. For example, in 2008 the investment proposals submitted by all line ministries amounted to 22.6 percent of GDP, as against a ceiling of 8 percent of GDP set out in the MTFF. A positive development in the last two years has been that the budget call circular now, for the first time, requires that line ministries do a priority ranking of their investment proposals, which has helped the Investment Division in the preparation of the final budget.

32. The main problem is that there is no formally institutionalized process of economic appraisal in Mongolia. The primary budget legislation is largely silent on the modalities for public investment planning and budgeting, and the Ministry of Finance regulations on preparation and prioritization of public investment projects are highly skeletal. There are no project appraisal guidelines that specify what economic and financial analysis needs to accompany project proposals, and what will be the basis of appraising these projects. Without such systematic approaches, it is very difficult to determine inter-sectoral and intra-sectoral priorities, and to determine which projects are feasible and which are not. In general, only donor-financed projects are accompanied by economic analysis; the requirements for budget-financed projects that involve works are largely limited to compliance with the Law on Construction, which requires new constructions to have technical drawings and plans to meet the standards set in the Law.

33. There is little capacity in line ministries to conduct demand analysis. To understand these process issues better, we undertook case studies of 10 budget-funded roads projects, drawn from the total portfolio of 50 projects implemented since 2005. These sample projects, and the total portfolio, are listed in Annex 1. None of these projects included cost benefit analysis during any stage of the planning process. In part this absence reflects the constraints imposed by Mongolia's geography — officials stated that due to the low population density in the rural regions there is not enough traffic volume on national roads to justify a usage survey. Instead, the analysis of the social and environmental impact of a project is considered more relevant for Mongolia than economic analysis. In other words, a new road may not pay off its initial construction cost within a certain period due to low traffic, but it may reduce green pasture destruction and increase the development of infrastructure and livelihood in a region.

34. Inaccurate cost estimation is also a major problem and a large percentage of approved projects face cost over-runs, which, due to the project-by-project appropriation of the capital budget either require

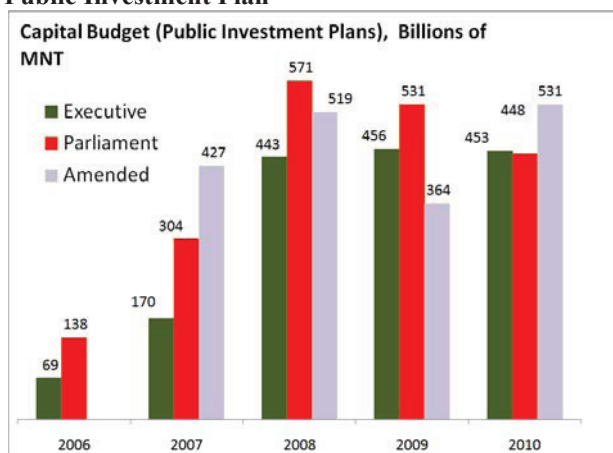
budget amendments and/or result in time over-runs. There are three reasons for the poor cost estimation: use of overly simple methods to estimate costs that served as the basis for project appropriations, projects inserted into the budget by parliament that were not subjected to cost estimation to the same degree as executive-proposed capital projects, and increases in building material prices, particularly during the inflationary period of 2008-09.

35. The Investment Division of the Ministry of Finance is responsible for reviewing line ministry project proposals, ensuring compliance with the above-mentioned regulations, and for preparing the capital budget. It has a staff of strength of less than 10, which, given the thousands of project proposals presented annually, for all practical purposes implies that the project review process is limited to ensuring that the proposals for new constructions have the necessary technical drawings to comply with the requirements of the Construction Law, that the cost estimates follow the required norms, and process of negotiations to cut large numbers of projects to fit the resource envelope.

36. Ministry officials provide plenty of anecdotal evidence of low priority roads in the public investment portfolio, in particular those projects that were introduced by parliament during the budget discussions. These problems of allocative inefficiency are also reflected in the relatively low prioritization of infrastructure in Ulaanbaatar. In the roads sector, the emphasis is on building an extensive road network connecting remote parts of the country — the Millennium Road linking the east with the west being a prime example — that would attract insufficient traffic to justify the costs rather than on Ulaanbaatar's roads that are in major need of rehabilitation. Similarly, the need for a new power plant in Ulaanbaatar has been long recognized, but attempts to mobilize private sector funding for Power Plant #5 have been repeatedly unsuccessful, with the result that the country could soon be facing a severe power shortage. By contrast, the parliament has emphasized the electrification of remote soum (county) centers, allocating 83 billion MNT to this in 2007. This under-investment in Ulaanbaatar may reflect the rural bias in the electoral system, with only 20 of the parliament's 76 seats allocated to the capital, as detailed in Fritz & Finch (2009).

37. Weaknesses in the regulatory framework are the underlying factor behind these problems. As detailed in Section 3, the parliament in Mongolia exercises considerable legislative powers in budgeting and has used this discretion to significantly increase and alter the capital budgets submitted by the executive during the annual budget preparation. In 2008 for example, the parliament increased the capital budget approved by the cabinet from 442 billion MNT to 571 billion MNT, replacing and adding numerous projects to the portfolio (Figure 5). The 2010 capital budget, while not increased in size was significantly altered with numerous projects added and, in a departure from the past, a large portfolio of projects shifted from budget funding to financing by construction companies on a reimbursement basis, with the contingent liabilities not reflected in the capital budget. These new projects generally lack even basic technical specifications — parliament added 439 projects, of which 310 (70%) amounting to MNT 121 billion are without appropriate technical drawings or accurate cost estimates. Parliament's preference in general has been for smaller projects — an average allocation per project of 540 million MNT for 'building and construction' compared to 625 million MNT in the cabinet submitted PIP for 2008.

Figure 5: Parliament has significantly expanded the Public Investment Plan



Source: Ministry of Finance

38. There are also organizational problems, in particular a lack of coordination between the different concerned departments within the Ministry of Finance. Mongolia does not have a comprehensive multi-year public investment program that lists public capital projects irrespective of funding source. Clearly proper planning and allocation requires a multi-year public investment plan that lists all publically executed projects irrespective of financing sources to allow for a comprehensive assessment of tradeoffs and priorities. Mongolia's capital budget does not include projects funded by foreign loans and grants, and only indicates a lump sum allocation for projects financed by local government own source revenues. Indeed the Aid Coordination Department and the Debt Division of the Ministry of Finance only maintain data on disbursements from foreign loans and grants, and as these disbursements are not broken down by the standard economic classifications there is no consolidated information on what proportion is spent on recurrent and on capital items.

3.3. Low operational efficiency

39. These problems in allocative efficiency are compounded by problems in the project cycle. Delays in project completion are common and significant. 65 percent of roads projects completed between 2005 and now had time overruns, more than doubling the original completion time in some cases, while 73 percent of on-going projects have been extended (Figure 6). These delays reflect two factors: poor planning and inaccurate cost estimation, and weaknesses in the construction sector. Roughly 32% of these projects were delayed due to upfront problems of planning, 49% were due to the downstream problems in implementation due to the weak capacity of the construction companies, and 19% of the projects were delayed due to both reasons.

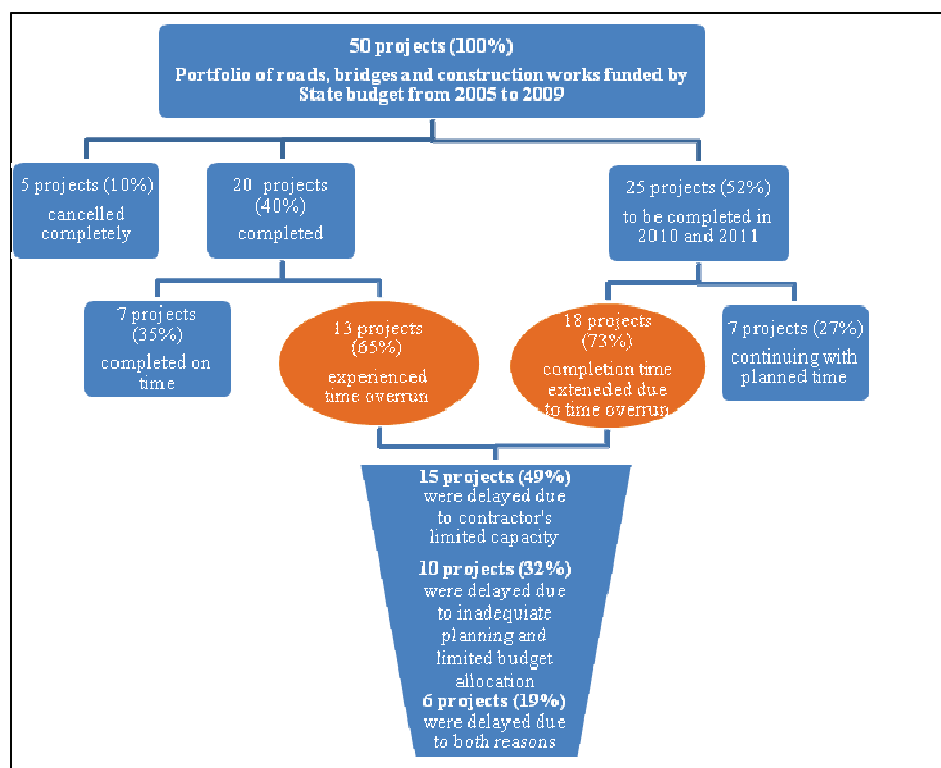
40. Given Mongolia's short construction season (from May to October), the initial months after the capital budget is approved by parliament in December are critical for timely implementation of the project. Procurement however is a major bottleneck in the process, due to both unrealistic cost estimates during project preparation and lack of procurement capacity in the executing agencies. As the capital budget has the force of law, and includes both the overall cost of the project and allocation for the particular fiscal year, no bid can be awarded that is above the approved cost of a project. Inaccurate cost estimates during project preparation imply that on many occasions the bids received do not fall within these cost ceilings, and on average procurement can take 6 months. In the last two years this problem has been compounded by high inflation that has resulted in significant cost escalation during implementation. In many cases line ministries have had to seek parliamentary amendments to the capital budget to increase the cost allocation of projects to make them more in line with market rates. This problem also encourages construction companies' compromise on quality in order to avoid incurring losses.¹⁶ These procurement delays are particularly severe for the projects that are added by the parliament as they usually have no accompanying engineering designs.

41. Weaknesses in the legal framework for procurement also raise questions on the quality of capital budget execution. Procurement is decentralized in Mongolia to the line ministries and agencies, with the Procurement Policy and Coordination Department of the Ministry of Finance setting policy and providing the regulatory and monitoring function, and conducting prior reviews for large contracts (above 1 billion MNT for goods and 3 billion MNT for works). As the Government's audit report details, the major problem in this framework is the provision for direct contracting that was introduced in 2007 in the roads and energy sector. In 2007, 125 billion MNT, or 34 percent of all of contracts, were awarded through direct contracting, often with no accompanying technical documentation with allegedly numerous technically unqualified, and politically well connected, companies winning construction contracts

¹⁶ In 2008 there was an exception due to significant inflationary pressures on raw material costs. Contractors were awarded MNT 4 billion for cost overruns.

(Government of Mongolia, 2008). Many road construction projects were also broken down into smaller schemes to enable smaller and less qualified companies to be directly awarded the contract. This practice of direct contracting was discontinued in 2008 and 2009, but remains allowable in the Procurement Law.

Figure 6: Status of the roads project portfolio



Source: Department of Roads

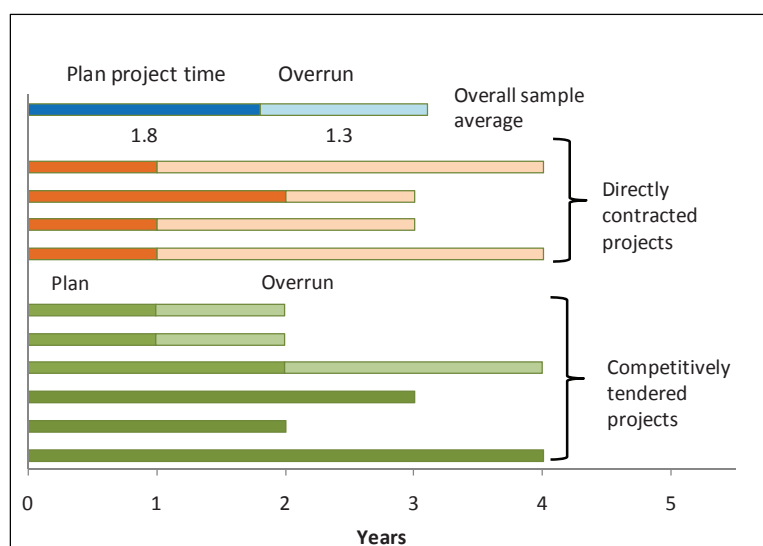
42. The findings from the roads case studies corroborate the findings of the audit report. Of the total sample of ten, four projects were executed through direct contracting while the remainder went through the normal tendering process. As portrayed in Figure 7, seven of the ten projects had time overruns, with an average completion time of 3.1 years compared to the original plan time of 1.8 years, or an overrun of 70 percent. The directly contracted projects were the worst performers, with an average time overrun of 2.25 years (or 180 percent).

43. Other reasons for the time overruns are bottlenecks in financing and the lack of implementation capacity of construction companies. The Ministry of Finance exercises strict input controls in the execution of the budget; the capital budget is approved project-by-project as law by parliament annually, even for multi-year projects, there is no multiyear appropriation, nor any provisions for carry-over funding. Line ministries have no authority to reallocate funds across projects based on revised cost estimates or pace of implementation, and any unspent allocation gets re-appropriated to the Ministry of Finance at the end of the fiscal year. For multi-year projects there is no prioritization process that would ensure that projects that are being implemented well would receive their necessary annual allocation.

44. Weaknesses in the construction sector are another bottleneck. In the roads sector, while there are approximately 300 licensed companies, only 3 are capable of constructing roads larger than 50km, and another 15 have the capacity to build roads of 30-50km. During 2007, many of the smaller, less stable

companies received large contracts through direct contracting with the resultant poor implementation. This problem has been compounded by the decision in the 2010 budget to fund a significant portfolio of new projects by the construction companies on a reimbursement basis. As these companies need to borrow at commercial rates the costs of these privately financed projects are approximately 25 percent to 30 percent higher than equivalent budget funded projects.

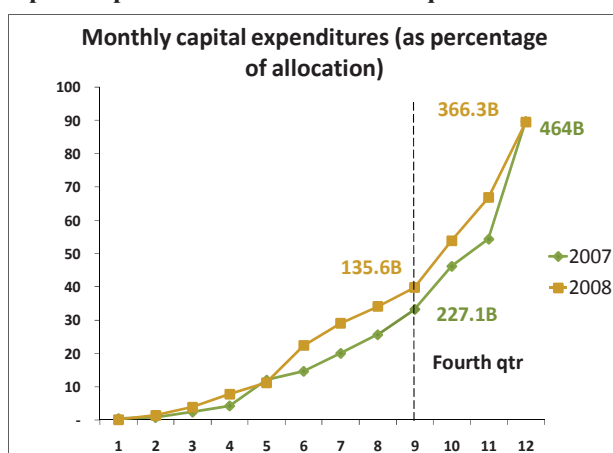
Figure 7: Time overruns in the ten sampled projects



Source: Department of Roads

45. Given these problems, actual budget utilization is surprisingly high. As Figure 8 shows, budget utilization has been close to 90 percent in 2007 and 2008, at 366 billion MNT and 464 billion MNT respectively. Over 60 percent of the expenditures occurred in the fourth quarter, with 45 percent and 35 percent occurring in December alone in 2007 and 2008 respectively. Given that construction stops in October, these December expenditures are likely to be payments for the works completed by October. While on paper there are strict guidelines for payments, involving certification by both the sector Ministry and the General Specialized Inspection Agency, it has been suggested that this expenditure in the fourth quarter may not represent actual project implementation but more a pressure to disburse funds given that any unused allocation lapses at the end of the fiscal year. This point is made strongly in the Government's audit reports, which notes that in 2007 disbursements of 115 billion MNT were made to vendors for projects managed by the Ministry of Fuel and Energy despite a majority of the contracts not being completed as per schedule.¹⁷ In other words, payments are made before the end of the fiscal year

Figure 8: Budget utilization is high with the bulk of capital expenditures done in the last quarter



Source: Ministry of Finance

¹⁷ Government of Mongolia (2008)

for work to be performed in the following year, which is a bad practice. Weak monitoring, as discussed, implies that the Investment Division does not have a good picture of the status of implementation of projects, and is an area that needs further analysis.

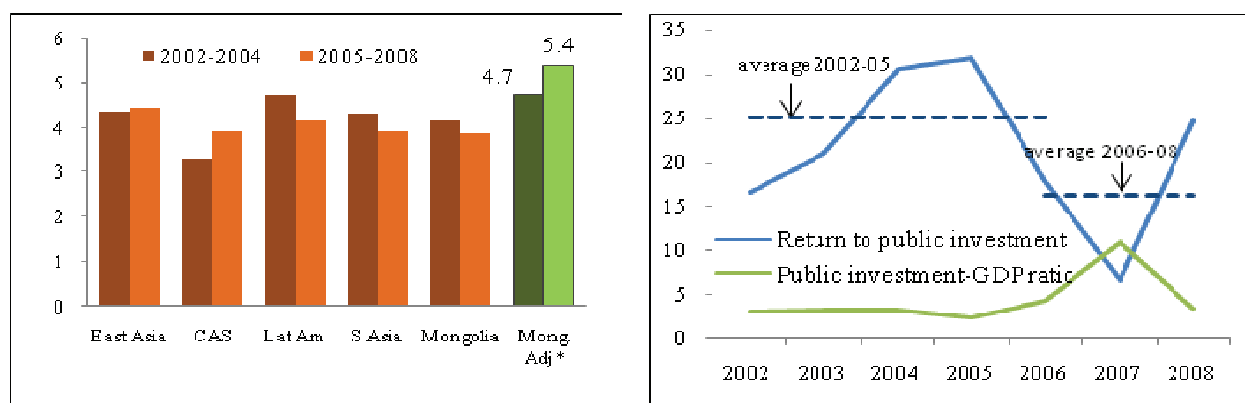
46. Finally, as is common in many developing countries, monitoring is weak and there is no systematic ex post evaluation. One factor is the lack of data. There is no comprehensive central asset register that would enable systematic monitoring of the portfolio of publically executed capital projects. Information on key monitoring indicators — the cost and time overruns per project, completion rates etc. — is not available with the Ministry of Finance that would allow the Investment Division to inform the preparation of the Public Investment Plan.

47. Line agencies are responsible for day-to-day monitoring, but are not well organized to perform this function. In the roads sector, the Department of Roads is the responsible unit and dedicates a team of 2-3 engineers per project for large projects to be located at the project site. The Department however, stated quite frankly that many of these engineers are easily influenced by the construction companies and that therefore, there was a need for an independent monitoring agency.

48. To summarize, low allocative and operational efficiency implies that the productivity of Mongolia's significant investments, as a share of resources (between 30 to 35 percent of GDP), is considerably below what it should be. These problems can also be demonstrated by some simple aggregate measures for the boom years (2005-2008) such as the incremental capital to output ratio (ICOR), which is obtained by dividing the ratio of investment to GDP by real GDP growth. A smaller ratio implies more efficient investment. As Figure 9 (left panel) shows, between 2002-08 Mongolia's ICOR ratio at 4 was well within the range of 3.5-4.5 observed on average for developing countries. However when this is adjusted for the impact on GDP of the increase in the last few years in copper prices, the ratio rises to 5.4 for the period 2005-2008, implying that in order to boost growth by 1 percentage point, the equivalent of 5.4 percent of GDP must be newly invested. This is much higher than in other countries, including in the comparator Central Asian region. Another way of looking at this issue is through returns to public investment, which have declined significantly over the past five years (Figure 9, right panel).¹⁸

¹⁸ Estimated using the methodology specified in Harberger (2007).

Figure 9: Low efficiency of investment in Mongolia is also revealed in aggregate indicators like ICOR and returns to public investment



Sources: World Development Indicators, National Statistical Office, World Bank staff estimates. East Asia comprises China, Korea, Thailand, Malaysia, Vietnam, Indonesia. South Asia consists of India, Pakistan, Sri Lanka and Bangladesh. CAS comprises the Central Asian states of Kazakhstan, Kyrgyzstan, Uzbekistan, Azerbaijan, Turkmenistan, Tajikistan and the Russian Federation. Lat. Am comprises Argentina, Brazil, Ecuador, Peru, Chile and Colombia.

* ICOR ratio for Mongolia calculated using non-mineral GDP. Excludes years of extremely high or low GDP growth

49. The benefits from improving public investment spending, e.g. through project rigorous evaluation and redressing implementation issues are huge. For example, on average in 2007-08, public investment amounted to 7 percent of GDP and yielded a return of 15 percent. If through improved project evaluation, public investment yields rose to 25 percent, this would have the impact of raising GDP growth by 0.7 percentage points $((0.25-0.15)*0.07)$. To gauge the long-term impact of this, assume Mongolia's average long term growth rate is 5 percent. Starting off with 2008 GDP of MNT 3.6trn (in real terms), the present value of the future stream of GDP with a 5 percent growth rate is MNT 72trn. If the growth rate increases to 5.7 percent as a result of the improved investment planning, the PV of future GDP rises to MNT 84trn. The difference is roughly 3 times 2008 GDP.

3. Underlying Institutional and Organizational Factors

50. Weaknesses in Mongolia's institutional framework for budgeting in general, and public investment planning in particular, are the major underlying factors for the upfront planning and budgeting problems identified above. The existing budget legal framework, specified in the Public Sector Management and Finance Law (2003) and the General Budget Law (1993), is not well suited to Mongolia's needs and deviates significantly from international best practice. Three key problems are a) the inadequate delineation of responsibilities and authorities between the executive and the legislature; b) the lack of attention to modalities and requirements for public investment planning; and c) the fragmentation of public investment planning and budgeting across several agencies.

51. In democratic systems, clearly the legislature should hold the "power of the purse" and have the final authority to mandate all expenditures, borrowings, and revenues that will be collected by the state. However, in many systems the legislatures have delegated much of these budget-making responsibilities to the executive in general, and the ministry of finance in particular, and focus more on holding the executive accountable ex post. The degree of authority that parliaments exercise varies, with United States type presidential systems on one end of the spectrum where parliament is the budget-making body and exercise unrestricted authority to the Westminster style systems at the other end in which parliament's role is essentially one to approve the executive budget as failure to do so essentially amounts to a vote of no confidence in the government. Many countries give parliament more balanced budget

power so that it has the ability to raise or lower expenditure or revenue as long as there is a counter-balancing measure to maintain the budget balance. A common practice in order to enforce ex ante fiscal discipline in several OECD countries is for the budget to be enacted by parliament in two phases. The MTFF and the overall expenditure ceiling is approved first, and appropriations and the allocation of resources among ministries are approved only in the second phase. This procedure is aimed at protecting the aggregate expenditure limit and the overall fiscal targets.

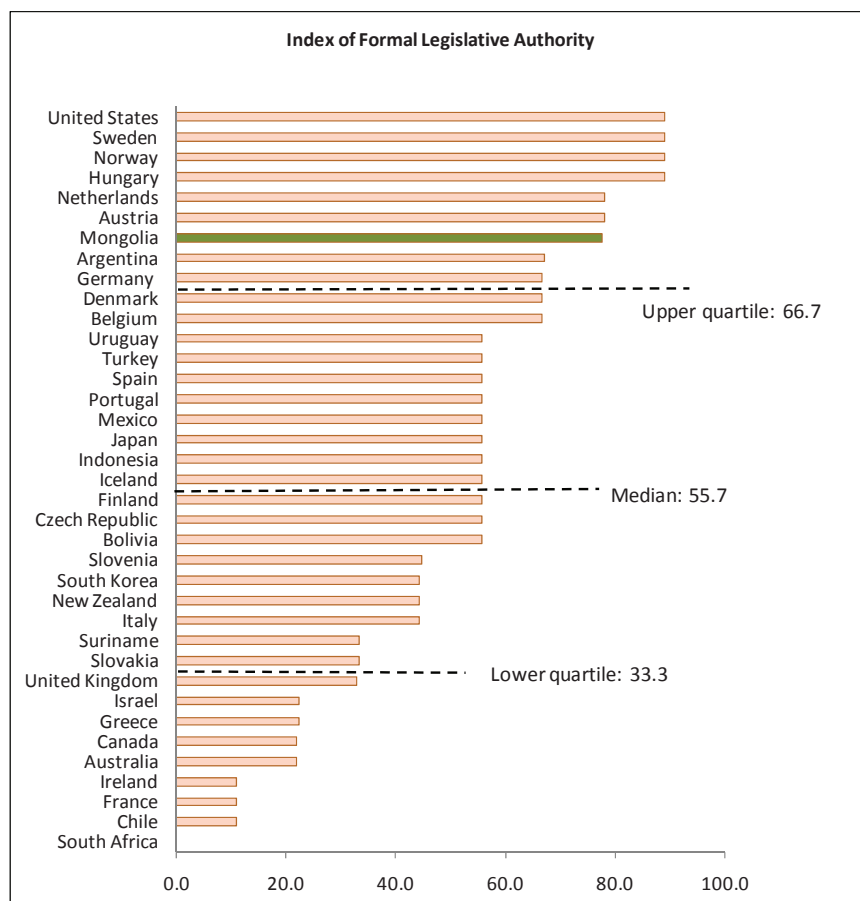
52. Wehner (2006) provides a quantitative measure of legislative authority based on an OECD/World Bank survey of budget practices. This survey covered 27 OECD members and 14 other countries, and did not cover Mongolia. It included questions on parliamentary formal authority, as measured by powers of amendment, consequences of non-approval of the budget, and executive flexibility in budgetary appropriations.¹⁹ If Mongolia were to be included in the survey then our estimate — and this assessment does not take into account the changes brought about by the FSL— is that it would in the upper quartile of countries on this measure of legislative authority (Figure 10). Mongolia's parliament, like the US congress, has un-restricted formal powers to amend the budget, including the ability to change the fiscal aggregates proposed by the MTFF (as noted earlier, the first-year targets of the MTFF are not legally binding), and to vary both expenditures and revenues in either direction, without the consent of the executive. While Mongolia follows a two stage process budget process as specified in the PSMFL, fiscal discipline has been repeatedly compromised because a) the mineral price projections made by the Ministry of Finance have lacked credibility, b) parliament has been free to revise the mineral price projections and therefore the fiscal aggregates, and c) the final budget is not legally required to follow the limits set by the MTFF. Unlike the US congress, the Mongolian parliament is also not restricted by the presidential veto, thereby giving parliament unchecked authority that is quite unique from a cross-national perspective.

53. Mongolia also stands out on other indicators. For example, there is no legal provision in the Constitution, the General Budget Law, or the PSMFL on what happens if the parliament is unable to approve the budget. Such an event has not taken place in Mongolia in the past twenty years, but the silence in the legal framework on this issue implies that no spending can be authorized, which gives parliament maximal authority (as in the US). In some countries non-approval results in the executive budget proposal being automatically approved, or the previous year's budget being passed, both options that limit parliamentary discretion.

54. As is now recognized in Mongolia, such unrestricted powers are particularly unsuited for natural resource rich countries where maintaining aggregate fiscal discipline and smoothing public expenditures and saving to account for mineral revenue fluctuations are of such paramount importance. Limits on the power of legislature to amend the budget are particularly needed where debates in parliament lead systematically to increased expenditures, as has been the case in Mongolia. Indeed this tendency of legislatures to increase appropriations is a common feature across the world, and is reflective of the incentives of individual parliamentarians to provide benefits to their constituents.

¹⁹ These three indicators are each measured on a scale of 1 to 10, with the sum normalized to range from 0 to 100. These measures are a) the power of budget amendment ranging from none, i.e. either accept or reject the budget (0), may cut items only (3.3), may shift funds as long as the aggregate limits are met (6.7), or un-limited powers (10); b) consequence if budget is not approved, ranging from the executive budget automatically passing (0), vote on account (3.3), previous year's budget passing (6.7), or no spending (10); c) executive flexibility, based on the scope for virements without parliamentary approval, whether the executive may withhold funds that are appropriated without legislative consent, and whether the annual budget includes any reserve funds to meet unforeseen expenditures. Mongolia scores 10 on each of the first two measures, and 3.3 on the third.

Figure 10: The formal budgetary authority of Mongolia's parliament stands out in comparative perspective*



* This assessment excludes the future impact of the FSL

Source: World Bank staff calculations based on Wehner (2006). The index is a sum of three indicators normalized to range between 0 and 100: legislative powers of amendment; consequences of non-approval of the budget; and executive flexibility on budget appropriations

55. As noted, the FSL will provide restraints on the parliament on the aggregate by requiring the MTFF to have the force of law and budget amendments by the parliament to adhere to the fiscal deficit targets specified in the MTFF. This restriction has to be complemented with reforms in budgetary procedures that ensure that projects proposed by parliament are subjected to the same standards and review processes as projects proposed by line ministries. The existing legal framework is largely silent on the process for capital budgeting. There are no provisions in General Budget Law or the PSMFL on the requirements for project proposals, the process for the approval of public investment projects, the requirements for the inclusion of investment projects in the capital budget, or the monitoring and implementation arrangements for these projects, all features that need to be specified in a budget law. Instead the preparation of the capital budget is regulated by Ministry of Finance regulations. As these are secondary legislations, parliament is not bound by them — parliament can, and has, regularly included projects in the capital budget that violate these regulations.

56. These regulatory weaknesses have been compounded by the lack of organizational capacity within the Ministry of Finance to effectively play the ‘gate keeper’ role to appraise project proposals and

ensure that only those projects that were certified to meet a national priority and had the appropriate financial or economic analysis were included in the capital budget. The establishment of the NDIC as the organization responsible for strategic planning and for the independent appraisal of public investment projects has the potential for bringing in the much-needed rigor in project selection. However, without an effective process for coordination with the MoF, and clear specifications of roles and responsibilities in the legal framework, there is the danger of further fragmentation between the capital and recurrent budget, and of projects being approved without adequate consideration of available resources to cover subsequent operational and maintenance costs, leading to asset degradation and a reduced ability to deliver effective infrastructure and services.

57. Another dimension to this risk of institutional fragmentation is the potential for considerable off-budget financing through Public-Private Partnerships, a common feature in natural resource rich contexts, which will carry considerable fiscal risks. As noted above, the Concessions Law recently approved by parliament gives the SPC the responsibility for preparing proposals for PPPs for existing state assets, and for appraising proposals for PPPs from portfolio ministries for new projects, with minimal involvement of the MoF. The SPC is authorized to recommend lists of potential PPP projects directly to parliament with limited involvement of the MoF to ensure that the proposals are in line with the MTFF. Given the increasingly important role of PPPs in infrastructure development in Mongolia, it is essential that the process for appraising and selecting PPP's be linked to this proposed process as significant fiscal contingent liabilities may be incurred for future budgets.

4. Conclusion

58. To summarize, the main problems with Mongolia's public investment planning and management system are as follows:

- Poor fiscal policy has meant that capital expenditures have mirrored the movement in mineral revenues. The problem is both the fluctuations in these expenditures (many new projects during the "boom" that then cannot be completed in time or adequately maintained during the "bust"); and the expenditure growth which strains the budget and the economy's absorptive capacity.
- Low prioritization of capital repairs and maintenance has resulted in serious degradation of infrastructure assets that now require a concerted budgetary commitment to rehabilitate. While there are technical reasons for this under-prioritization (failure to include future maintenance costs in project proposals), it fundamentally reflects political choices.
- Poor project planning and budgeting due to weak strategic guidance to public investments and lack of adherence to sector ceilings; lack of a formal project appraisal; weak capacity within the Ministry of Finance for an effective independent review of appraisal; poor cost estimation; and considerable parliamentary discretion in project selection and budgeting. These problems fundamentally reflect institutional and organizational weaknesses.
- Poor project implementation that results in significant time over-runs. These delays reflect both the upstream problems, particularly with regards to accurate cost estimation, as well as weaknesses in the construction sector, lack of flexibility in adjusting to changes in project circumstances, and weak monitoring.

59. As the above discussion underlines, the problems in public investment planning, budgeting, and execution are considerable and will take time and sustained effort to resolve. Therefore, sequencing of reforms is required. The next chapter argues that the Government should tackle the upstream planning and budgeting weaknesses first as a) the considerable surge in public investments with the development

of, and subsequent production from, the large new mines puts an imperative on coordination and project selection; and b) there are significant risks of institutional fragmentation in the upstream areas of appraisal, independent review, and selection.

2. RECOMMENDATIONS ON IMPROVING THE SYSTEM

1. Introduction

60. This chapter proposes reforms in the institutional and organizational arrangements for public investment planning that can result in an effective system of *appraising* and *selecting* public investment projects for Mongolia. While the focus is on investment planning, planning has to be viewed as an integral part of the budget process, and therefore these improved arrangements need to be specified in the regulatory framework for budgeting, as for example in the draft Integrated Budget Law under consideration. These reforms are urgently needed both to address the well-recognized weaknesses in the current public investment planning process, and to ensure that the rapid changes currently underway in the legal framework for planning result in an effective, well-coordinated system.²⁰ Specifically, the chapter outlines the principles that should guide public investment planning and budgeting, and the respective roles and responsibilities of the Ministry of Finance (MoF), the National Development and Innovation Committee (NDIC), and the State Property Committee (SPC).²¹

61. If there is a stylized fact on appropriate institutional arrangements for public investment planning then it can be summarized by the following observation in the World Bank's *Public Expenditure Handbook*: "failure to link policy, planning and budgeting may be the single most important factor contributing to poor budgeting outcomes at the macro, strategic and operational levels in developing countries." To avoid this ubiquitous problem, the institutional arrangements for planning and budgeting in Mongolia should be guided by the following principles:

- A unified policy framework: Public investments should be made within a coordinated framework of published national and sectoral policies that are aimed at the economic and social advancement of the country
- Fiscal viability: public investments, including any contingent liabilities from PPPs and future expenditures required to adequately maintaining the assets, should be made within the available medium-term resource envelope as specified in the MTFE
- Integration between capital and recurrent expenditures: for planning and budgeting, capital and recurrent expenditures should be considered together and aimed at implementing the same overall national and sectoral policies
- A single public investment planning system: Public investment projects, regardless of sources of finance — budget, donor or PPP — should be governed and regulated by the same rules and procedures and followed by all public entities.
- Rigorous project appraisal: The selection of public investment projects should be based on transparent and rigorous criteria

62. These good practice principles do not necessarily translate into one particular set of institutions or organizational arrangements — to paraphrase Dani Rodrik, there is no unique mapping from principles to policy packages and policy-makers have significant discretion in institutional and organizational arrangements that are sensitive to local opportunities and constraints.²² With this caveat in mind, we present here recommendations on what we believe are appropriate arrangements based on conditions in Mongolia and drawing on extensive consultation with the concerned stakeholders.

63. To summarize, our main recommendations are as follows:

²⁰ These changes include the draft Budget Law under discussion, the draft PIP Regulations prepared by the NDIC, and a proposed new Law on Planning.

²¹ This note does not cover planning arrangements for projects funded from local budgets

²² Rodrik (2007)

- A unified policy framework: The NDIC can facilitate coordination at the center of government by taking the lead in strategic planning, putting in place mechanisms for inter-ministerial coordination, particularly with regards to Southern Gobi development, and by preparing a multi-year Public Investment Program (PIP). The PIP would be a comprehensive list of certified publicly executed projects irrespective of financing sources, and from which projects should be selected for the capital budget for the given year, thereby helping ensure a single, unified public investment planning system.
- Centralized project appraisal for large and strategically important projects, and centralized independent review of appraisal for smaller projects: Given the scarcity in project appraisal skills, and the need to have an independent check on line ministry proposals, it is important that the NDIC conducts project appraisals for large projects, such as those that require coordinated investments to develop the Southern Gobi mines, and screens the appraisals of line ministries for smaller projects.
- Integrated planning and budgeting: This requires that the division of responsibilities between the NDIC and the MoF be well specified. We recommend that this division be as follows: the NDIC is responsible for preparing the multi-year PIP by conducting appraisals and reviews of project pre-feasibilities, thereby being the central unit for appraising and reviewing project proposals; the MoF is responsible for preparing the capital budget by deciding which of the projects from the PIP will be selected for inclusion in the capital budget.
- Ensuring that PPP funded projects are integrated into the system: This requires that the roles of the SPC in relation to the NDIC and MoF, be well specified and integrated, and in particular the review of fiscal risks associated with PPPs be the responsibility of the MoF
- Rigorous project appraisal aligned with local capacity: Given capacity constraints in the line ministries, a simplified project appraisal methodology should be adopted that can be used to enter projects into the PIP. This simplified methodology should consist of two steps: step 1, a “yes/no” decision based on whether there is sufficient demand for the project, whether it meets a national priority, and whether the financial analysis is sound. And if the project proposal passes step 1, then a second step that ranks the project on a set of simple criteria.
- Better distribution of executive and parliamentary responsibilities specified in the legal framework: While parliament can propose new projects it is crucial that these projects identified by members of parliament also go through the same rigorous process for inclusion in the multi-year PIP and the capital budget

64. The recommendations draw on the experiences of some relevant success stories. In particular, the note pays particular attention to the planning process of, Botswana (Box 1), Chile and South Korea (Box 2) in drawing lessons for Mongolia. Chile and Botswana are considered because they are examples of resource-rich countries that were able to transform mineral wealth into sustainable economic growth and poverty reduction. Botswana is a particularly interesting comparator given its similarities with Mongolia in geography (small population, very low population density, landlocked with a harsh terrain), political culture (ethnically homogenous and a democracy), and economic structure (dominated by minerals and livestock). Korea is considered because of its physical proximity to Mongolia, its history of cooperation with Mongolia, and the opportunities that it therefore provides for the transfer of knowledge and practices through staff exchanges and other forms of cooperation.

2. Unified Policy Framework

65. As discussed, a major weakness in Mongolia's planning system has been the lack of effective strategic planning and coordination at the center of government following the dismantlement of the central planning institutions during the transition from socialism. This central mechanism needs to be strengthened without recourse to a return to the socialist era organizations of central planning. Given the less than exemplary history of central planning, such a move would be a mistake. Examples of voluminous comprehensive 5-year macro-plans that pick sectors and industries, and establish ambitious growth targets that can never be met are too numerous to name. No one central organization can realistically have a monopoly over what the development strategy should be for a country. In reality, these choices are political, and the institutional and organizational arrangements should be such as to provide a forum for informed debate at the center of government. In other words, a unified policy framework for budgeting and planning requires within the executive an effective cabinet, with formalized and robust procedures for the sharing of information and consultation, which in turn implies a strong cabinet secretariat.

66. Botswana provides a good example of such a framework. The country's multi-year rolling National Development Plan is prepared through a broadly consultative process involving the line ministries, local governments, as well as members of parliament, which coordinated by the cabinet. Sector policy papers prepared by the ministries form the foundation of the Plan, with the Ministry of Finance and Development Planning (the planning and finance functions are unified under one ministry) determines the resource availability and the recurrent and development expenditure ceilings. Based on the sector papers, the line ministries draw up a list of projects to realize the sector goals, with each project presented in summary form. This summary contains a description of the project, its purpose and the cost — both capital and recurrent — during the plan period. These summaries along with the government's statement of proposed economic objectives, strategies, and the means for achieving them are presented to the parliament as the draft National Development Plan for approval.

67. The NDIC as an agency under the Prime Minister's Office can facilitate informed debate and coordination at the center of government in Mongolia. The NDIC can provide the much-needed leadership on strategic planning at the centre of government, coordinating national strategic planning and economic development initiatives, supporting and coordinating sectoral planning, and providing leadership in rural economic development strategies. To be effective the NDIC needs to base its advice on an effective consultation with the line ministries and not fall prey to the tendency of all too many central planning institutions of unilaterally identifying "winners and losers" in terms of sectors, industries, and services. There is a danger, given the NDIC's broad terms of reference that include promoting competition policy, innovation and economic diversification, in addition to strategic planning and project evaluation, that the agency will begin to view itself as a Soviet-era central planning institution.

68. One organizational mechanism for this consultation for the development of the Southern Gobi is, following the recommendation of World Bank's *Southern Mongolia Infrastructure Strategy* Report, for the NDIC to have a Southern Mongolia Infrastructure Coordination Unit within it to bring together the concerned ministries.²³ Presently this inter-ministerial coordination is weak, and in particular different ministries have very different conceptions of what is needed to develop the Southern Gobi mines. The report notes that this unit could take several forms: it could simply gather information and monitor the activities of line ministries, which would remain responsible for the delivery of infrastructure projects; it could be given "step-in" powers to take over control of activities for which other line ministries are responsible, when adequate progress is not being made; or it could be given powers to manage all stages of policy development and project management for Southern Mongolia's infrastructure. We would

²³ World Bank (2009)

Box 1: Botswana, a success story of managing natural resource wealth

Botswana is an interesting example of a country that has many geographical, economic, and political similarities to Mongolia, and which is second only to China in achieving the highest sustained growth rates in the past thirty years.

With a population of 1.9 million and an area of 580,000 square kilometers, Botswana is one of the least densely populated countries in the world (Mongolia being the least densely populated), is landlocked with a harsh, desert terrain. Its economy, like Mongolia's, is centered on natural non-renewable resources (diamonds) and livestock. Another similarity is that the country has been a vibrant democracy, but, and this is the crucial difference, has managed to avoid succumbing to populist pressures to spend the mineral resources on wealth distribution schemes, and instead has been able to convert these natural resources into long term assets for the benefit of the population.

The key to its success has been sound fiscal policy and effective public expenditure management, in particular public investment management. Botswana avoided the boom and bust cycle by running budget surpluses in the boom periods and accumulating foreign exchange reserves which were earmarked for stability spending during the lean periods. This expenditure smoothing was achieved by basing expenditures on longer term expectations of mineral revenues, akin to a structural balance rule. The nominal exchange rate was also managed to avoid the real appreciation of the local currency.

A major portion of the resource revenues were invested domestically for which good public investment planning and management was a key. Botswana's planning process was fairly sophisticated with public investment projects specified in multiyear rolling (5 or 6) public investment programs, namely the National Development Plan. A key element of this process was to keep the growth of capital expenditures in check in line with domestic absorptive capacity, in particular the availability of skilled personnel, to ensure that resources were not wasted on bad projects or on many new projects that could not be implemented well. A development expenditure ceiling, derived from the MTFF, was used to set the limit on annual capital expenditures. The National Development Plan also emphasized that that investment projects had to be in line with national priorities and that every investment project had to accurately account for the recurrent expenditures that the project would need to effectively maintain and operate it. Priorities were set through an extensive consultation process that culminated in the approval of the plan by parliament. Projects went through a proper appraisal process and only projects with sufficiently high rates of return were included in the budget. Once these plans were voted by the parliament it was illegal to implement any public investment projects that were not in the plan.

The results of effective public expenditure management have been the building of an impressive infrastructure despite the geographical challenges, and human capital development, with the notable and tragic exception of the HIV infection. Good public expenditure management is also linked to the overall capacity of public administration in Botswana, and the autonomy and expertise in key ministries like the Ministry of Finance and Development Planning, which in turn was reflective of the caliber of the civil service.

Sources: Sarraf & Jiwanji (2001); World Bank (1999); Hope & Somolekae (1998)

recommend the first of these options, with the line ministries retaining the primary responsibility for project implementation, and the Unit providing a coordinating and facilitating role. This responsibility would be in line with the proposed role, as elaborated below, of the NDIC as the organization responsible for project evaluation. In other words, one of the criteria for evaluating Southern Gobi infrastructure project proposals would be on this criterion of coordination and whether the project proposals have been drawn with an integrated investment strategy in mind.

69. A multi-year public investment program (PIP) can be an important means of ensuring that individual projects fit meet national priorities and are well-coordinated. PIP's generally cover a period of three or four years in which the year-by-year costs (capital and current) of projects are shown, together with the balance of funds required to complete the projects, in years beyond the PIP period. PIPs are prepared annually, on a rolling basis, to adapt to changes in the economic and financial environment. To be effective, PIPs provide a *prioritized* listing of projects, and include investment projects financed from

domestic sources, foreign loans, and public private partnerships. We recommend that Mongolia prepare a PIP through a process specified in the next section.

70. Organizational arrangements that facilitate informed debate at the center of government need to be complemented by arrangements that facilitate informed debate in parliament. While draft Fiscal Stability Law and Budget Law are aiming to balance executive and legislative responsibilities, the State Great

Hural will remain the final authority on the budget, and therefore needs to be able to call on expertise to inform its deliberations.

3. Centralized Project Appraisal and Review of Appraisal, and Integrated Planning and Budgeting

71. Mongolia should prepare a multi-year PIP with a central agency, namely the NDIC, responsible for setting standards for project appraisal; for providing the necessary technical assistance to line ministries in conducting the economic analysis as part of their pre-feasibility studies; for conducting project appraisals (above a threshold value) for large projects requiring cross-sectoral coordination, and for determining the projects that enter the PIP. Project appraisal and review skills need to be centralized because, unlike in OECD countries, project selection in developing countries is often highly politicized, and some screening of project proposals to at least ensure minimum consistency with national priorities, and application of basic economic analysis, is required, and that this function cannot be left entirely to proposing ministries to minimize conflicts of interest, reduce political interference, ensure standardization in appraisal, and to make best use of scarce project evaluation skills.²⁴ Several countries, most notably Chile and, until recently, South Korea use centralized mechanisms to screen project proposals to insure soundness in the public investment programs (Box 2). The Ministry of Finance would continue retain all responsibilities for capital budgeting.

72. The creation of a separate agency with responsibilities over national planning does carry the risk of “dual budgeting”, and this risk needs to be recognized and minimized in Mongolia. Dual budgeting does not refer to the presentation of the budget; indeed capital spending within the budget needs to be clearly identified separately, as it is done for example, in OECD countries, and many of these countries give very limited freedom, if any, to transfer (vire) funds between capital and current components in the budget. What dual budgeting implies is that for planning and budgeting, capital and current spending is not considered together, and investment proposals are not evaluated in terms of both their capital and recurrent costs. Indeed the history of separate planning institutions, either in the former command economies or in other developing countries where national plans were emphasized, points to a high probability that separate planning and budgeting organizations results in dual budgeting.

In developed countries the Medium Term Budget Framework (MTBF) is the mechanism for integrating budgeting, policy-making, and planning. The MTBF clearly specifies the resource envelope for the current year and the following two years based on a robust MTFF, the policy priorities and any direction of change in terms of total spending and distribution between sectors and programs, and forces a holistic view of the budget, both capital and recurrent, in achieving outputs. The rollout of MTBFs in developing countries however, has been far from smooth, and the capacity development and the considerable change in organizational arrangements, processes, and attitudes that this move requires is now well recognized. Mongolia is currently undertaking a gradual, phased move towards multi-year program based budgeting, and these reforms are promising in the medium and long term. But for the immediate future, fiscal viability and integrated budgeting has to be achieved in the annual budget process.

²⁴ One viewpoint (Spackman, 2002) is critical of centralized evaluations as reducing line ministry ownership over sectoral programs, and discouraging forward planning in spending units.²⁴

Box 2: Two ‘good practice’ examples of institutional arrangements for project appraisal

Concentrating scarce project appraisal skills in a central unit or agency which reviews project proposals can be a way of ensuring that only “good” projects enter the public investment program. In some countries these units are within the Ministry of Finance, in others in a separate Ministry of Planning, and in still others as an agency that is under the Prime Minister or President’s office. The key requirement is of a) matching the project appraisal methodology with local capacity and b) ensuring that public investment appraisal is synchronized with the budget process. Two success stories are outlined below: Chile, in which a separate Ministry of Planning performs this function, and Korea where this role is integrated within the Ministry of Finance.

Chile

In Chile’s National Investment System (SNI) the Ministry of Planning (MIDEPLAN) sets the standards for project submission, does the ex-ante appraisal for a project to enter the SNI, and conducts ex-post evaluations of a sample of implemented projects. The Ministry of Finance is then responsible for funding the projects that have been appraised by MIDEPLAN. MIDEPLAN guidelines specify the necessary steps, required documents, technical specifications, and assumptions for economic analysis (e.g. social discount rates) for a project that a proposing agency needs to follow, and provides technical assistance to proposing agencies (regional governments and line ministries) for preparing projects that meet these requirements. Once the project formulation is completed, the agency sends the project proposal to MIDEPLAN (either its central office or regional office) for the ex-ante appraisal. The appraisal considers the economic and financial aspects of the project, compliance with environmental norms, citizen participation, and gender analysis, and the financial sustainability of the project. Projects are then “scored” and only if the project has received the necessary rating is it considered for funding by the Ministry of Finance. An integrated project database (BIP) is a key management tool in this process with formulating submitting their proposals directly through an on-line portal, with each step in the project cycle recorded in the database.

South Korea

In Korea the Ministry of Strategy and Finance (MoSF) has the overall responsibility for both project selection and budgeting. These responsibilities used to be split between the Ministry of Finance and the Ministry of Planning and Budget, until the merger of these two ministries to form the MoSF. All projects above 50 billion Won (approximately \$50 million) are subjected to a pre-feasibility study by MoSF. This pre-feasibility appraises projects on what’s called an Analytic Hierarchy Process, a multi-criteria decision-making tool combining quantitative and qualitative measures. Specifically, the projects are evaluated on economic analysis, consistency with national and sectoral objectives, and promotion of regional development. Projects passing a threshold score are considered feasible. The effectiveness of the pre-feasibility can be judged by the high rejection rates — between 1999 and 2007, a total of 335 projects were evaluated and 147 (44%) were rejected.

Instead of building project appraisal skills in-house, as in the case of MIDEPLAN in Chile, MoSF has delegated this function to the Korean Development Institute (KDI). Specifically, MoSF established the Public and Private Infrastructure Investment Management Center (PIMAC) within the KDI, with the necessary multi-disciplinary research team, to undertake the pre-feasibility study and provide its recommendation to the MoSF. The final decision on whether a project is rejected or goes to the next step of a full feasibility study is made by a Pre-Feasibility Study Council that is chaired by the MoSF and includes representatives from PIMAC and the line ministries. Locating this evaluation role in the KDI has brought in the necessary technical expertise, and also provided a degree of independence and objectivity to the decision-making.

Sources: Lee (2008); Arancibia (2008)

73. In the Mongolian context, a unified ministry of finance and planning, such as in Korea, appears not to be politically feasible. It is highly unlikely that the Ministry of Finance’s staff strength will be significantly increased, to allow for such an enhanced role. Therefore, to achieve the necessary functionality in project appraisal and independent review would require the MoF’s role to be complemented with that of the NDIC, and possibly the SPC. The key would be to ensure effective coordination among the concerned agencies, and clarity of roles and responsibilities. Our recommendations on these roles are detailed below:

Preparation of the MTFF

74. The FSL strengthens the legal force of the MTFF that is prepared by the Ministry of Finance. The only missing ingredient in the evolving legal framework is the organizational responsibility for the basic macroeconomic assumptions — other than the revenue projections, which are, and should clearly be, with the Ministry of Finance — that are used to prepare the macroeconomic framework and the MTFF. A degree of separation in the formulation of these assumptions from budget-making is desirable. In some countries, the government's macroeconomic projections are submitted to a panel of independent experts in order to evaluate their accuracy and reliability. In other countries, such as the United Kingdom, the projections are validated by the Auditor General. In all cases however, good practice dictates that the MTFF remain the sole responsibility of the Ministry of Finance. These principles suggest that the Government's current plan for the NDIC to be responsible for estimating the basic assumptions of GDP and inflation, in consultation with the National Statistical Office and the Central Bank, and the Ministry of Finance retaining the responsibility for the MTFF is sound and should be maintained.

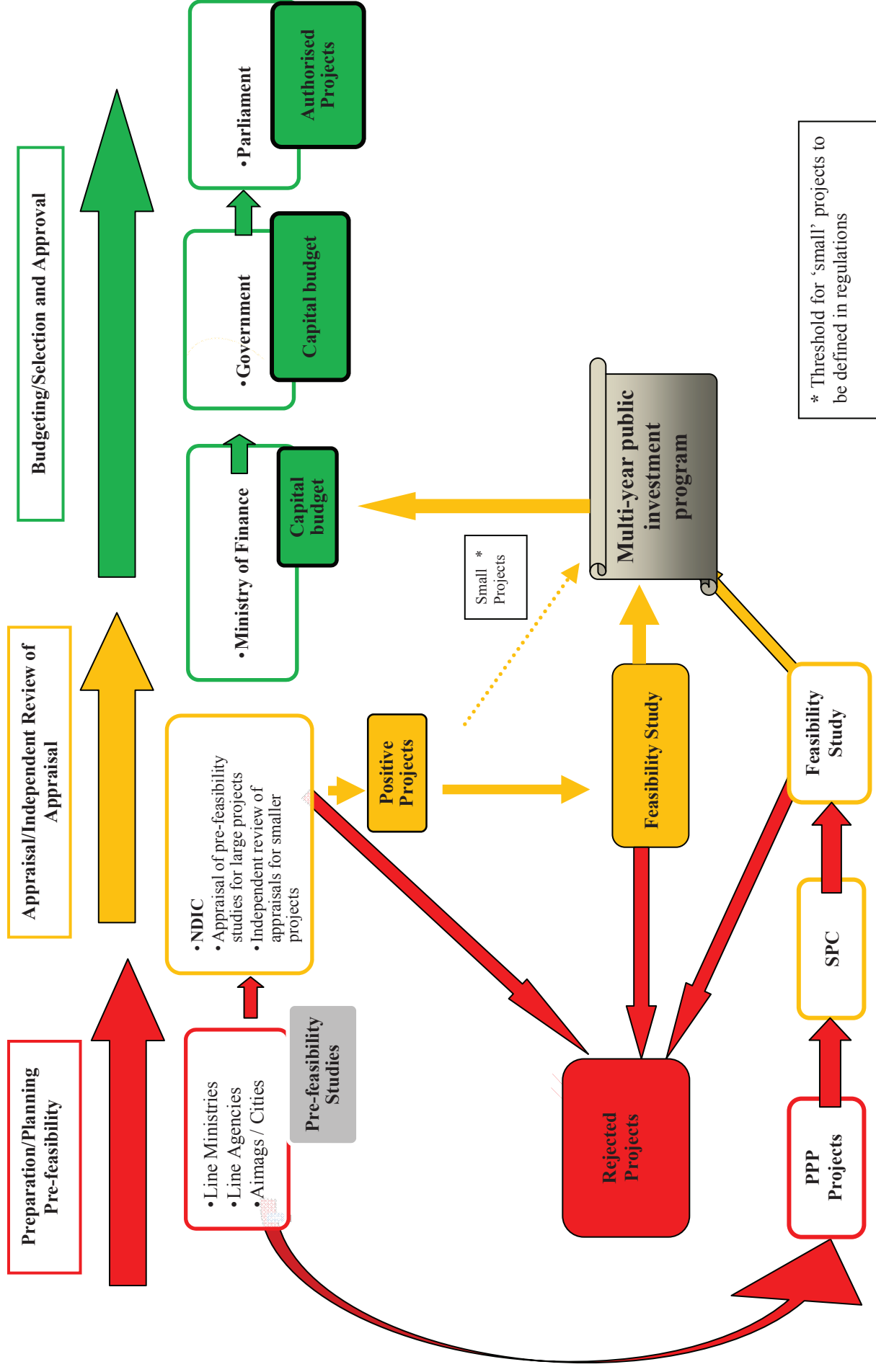
Project Preparation, Appraisal and Budgeting

75. It is recommended that the division of responsibilities between line ministries, the NDIC, and MoF for the preparation, appraisal, and budgeting of public investment projects be as follows:

- Portfolio ministries and agencies are responsible for preparing project proposals, project appraisals for smaller projects, and for project execution and monitoring
- The NDIC is responsible for
 - Preparing the National Development Strategy and the annual Socio-economic Guidelines, which specify the priorities for public investment
 - Cross-sectoral coordination of investment projects
 - The review of project appraisals submitted by the ministries and agencies, and for conducting appraisals of large projects requiring cross-sectoral coordination
 - The preparation of the multi-year PIP
 - Providing technical assistance to the ministries and agencies as needed in preparing project appraisals that meet the necessary informational requirements that will be used in the appraisal process
 - Monitoring and evaluation framework of national and sector development policy, planning and programming
- The MoF is responsible for:
 - Preparation of the MTFF and the setting of sector ceilings under which both the recurrent and investment budget must fit
 - Preparation of the annual investment budget based on the multi-year PIP; in other words selecting projects from among the budget year projects in the multi-year PIP if the total amount for these projects exceeds available resources
 - Determining the choice of financing — state budget, donor funds, or public private partnerships — for the projects

76. The suggested process for appraising and approving public investment projects is depicted in the schematic below (Figure 11). Portfolio ministries and agencies would submit their project appraisals, or pre-feasibility studies, to the NDIC for review. These pre-feasibility studies would need to provide the necessary information specified in the *Guidelines for the Socio-economic Appraisal of Projects* currently being prepared by the NDIC, and elaborated on in section 5. The NDIC would then conduct a review of these pre-feasibility studies based on the following criteria specified in the *Guidelines*: whether there is proven demand for the project, whether the project conforms to national priorities, and whether the

Figure 11: A suggested process for project appraisal and budgeting



financial analysis is sound and specifies, critically, the future recurrent costs that will arise from the project. Projects that do not meet these criteria would be rejected; projects that pass the appraisal would then enter the multi-year PIP. Ideally, all of these projects would then undergo a full feasibility study; in reality though, given the budget constraints, this next step would probably be undertaken only for the “large” projects. Either way, the end of the appraisal process would result in a list of certified projects that would be in the multi-year PIP.

77. The list of these certified projects would then be reviewed by the MoF which would check the realism of the financial analysis and the proposed financing sources, and would then select from the multi-year PIP the projects that will be included in the capital budget for the year. This final list would then be sent to the Cabinet and then to the parliament for approval. Importantly, the investment budget should be presented together with the recurrent budget as there is one budget ceiling for each sector.

78. Three points need to be emphasized in this process. First, it is very important that the appraisal and selection process establish inter and intra sectoral priorities within the multi-year PIP, and therefore the list of certified projects that the MoF receives includes a priority ranking. If this is not done, then not enough guidance is given to MOF when selecting projects for funding in the annual budget. The lack of priorities within the PIP, or similar plan documents, is very common as planning agencies find this exercise difficult, both because it is intrinsically difficult to do and it creates conflicts with the organizations that requested the projects. However, if the NDIC does not prioritize then the MoF will have to select the projects with less information than the NDIC has, which would be sub-optimal.

79. Second, planning and budgeting are separate but closely coordinated activities. Planning for the multi-year horizon would be NDIC’s responsibility, while budgeting, or determining, what is possible in a given year based on available resources, and ensuring that future recurrent costs of the project are reflected in the medium-term budget would remain the overall responsibility of the MoF. This separation of responsibilities would greatly reduce the current burden from the Investment Division of the MoF, which currently undertakes both appraisal and selection, and would allow each agency to specialize.

80. Third, and most importantly, investment projects proposed by parliament should also go through this appraisal and selection process to control the present problem of new projects without any pre-feasibility studies being added in the capital budget during parliamentary deliberation.

81. The above is a general framework for a PIP system for Mongolia. Some details that would need to be flushed out include:

- While all project proposals should include pre-feasibility studies, what are the thresholds, if any, for projects that undergo appraisal by the NDIC? On the one hand, given capacity constraints it may be unrealistic for the NDIC to undertake the appraisal of all project proposals and therefore the pre-feasibilities for “small” projects could be submitted directly from the portfolio ministries to the MoF for selection. On the other hand, establishing thresholds may create an incentive for ministries to propose smaller projects to fall below the threshold and therefore avoid a rigorous appraisal.
- Given full feasibility studies would require budget allocations, what are the thresholds for projects that would need to be subjected to these for inclusion in the multi-year PIP; in other words, where is the line drawn between whether pre-feasibility studies or feasibility studies as the basis for certification and inclusion in the PIP

82. As noted above, the Concessions Law recently approved by parliament gives the SPC the responsibility for preparing proposals for PPPs for existing state assets, and for appraising proposals for PPPs from portfolio ministries for new projects. Given the increasingly important role of PPPs in

infrastructure development in Mongolia, it is essential that the process for appraising and selecting PPP's be linked to this proposed process as significant fiscal contingent liabilities may be incurred for future budgets. In particular, Mongolia needs to avoid the risk that PPPs develop into a system that is parallel to the budget financed public investment program, and with the true costs of these projects not adequately reflected in the budget. A common occurrence in many countries is that a line ministry (or even more common, a local government entity) will seek capital funding from the Ministry of Finance for a particular project that it sees as important for its own strategic reasons. The Ministry of Finance may reject this application for a number of reasons: the nation can't afford it, it doesn't meet a priority, or it doesn't believe that the project has been prepared adequately. Given this disappointment, the sponsoring entity may then attempt to pass off its project as a PPP project in order to bypass the system.

83. Integration of PPPs into the public investment system would imply a) that the project appraisal process for state-funded and PPP-funded projects be based on the application of the same criteria so that a project that is rejected by the NDIC is then not submitted as a PPP to the SPC and then approved; b) that there be a sharing of information between the SPC and the NDIC so that the database of certified projects in the multi-year PIP include projects from the various financing sources; and c) that the SPC submit the selected PPPs to MoF for final approval. This last point is crucial given the fiscal risks associated with PPPs, which to date have not adequately been considered in Mongolia.

4. Fiscal Risks of Public Private Partnerships

84. The key characteristics of PPPs are that they tend to bundle investment and service provision into a single long term contract. The duration of projects is usually 20-30 years, with the private firm managing and controlling the asset (this typically also includes responsibility for maintenance), usually in exchange for user fees, which are its compensation for the investment and other costs. When the contract ends, the project reverts to government ownership.

85. It is important to underline that PPP's are not "free money" — the investors will expect a return on their investment and financiers will require certain collateral assurances that they will get their money back. The majority of these transactions convert capital expenditure today into recurrent spending in future years. They need to be viewed by the Government as just another financing option for a "good project", with its associated costs, and not as a means to promote other objectives, such as privatization or spurring private sector activity.

86. The fiscal risks in the form of explicit guarantees and contingent liabilities can in particular be considerable. These include:

- State guarantees on the debt raised against the project
- Guaranteed payments against minimum levels of demand (volume of traffic, MW of power through 'take or pay' agreements etc)
- Minimum Revenue Guarantee System
- Termination provisions that require the state to buy back the assets at either 'market value' or write down value
- Other 'buy back' clauses

87. It is essential to use a single system of project appraisal to ensure consistency in selection and fairness in prioritization. The obvious, but often forgotten point is that a bad project will always remain a bad project and a PPP methodology cannot magically transform it into a good one. The Ministry of Finance should therefore be able to veto a proposed PPP project at both the concept stage and prior to the contract being signed. And all the fiscal risks of the project have to be adequately accounted for, which

includes reflecting the expected value of guarantees and other contingent liabilities in the annual budget, and subjecting the stream of expected service payments for PPPs and calls on guarantees to medium-to-long term debt sustainability analysis, with appropriate sensitivity tests.

5. More Rigorous Project Appraisal

88. As noted, one major weakness in public investment planning in Mongolia is the lack of a formal project appraisal process based on economic analysis. OECD countries, and other high performing middle-income countries, such as Chile and South Korea, have fairly advanced systems of appraisal in place that use some form of social cost benefit analysis. Korea for example, uses a multi-criteria assessment technique that evaluates project pre-feasibility studies on economic cost benefit analysis, policy relevance, and promotion of inter-regional equity.²⁵ These systems have a level of sophistication that has gradually evolved over time, and which cannot be realistically transplanted to Mongolia at its current level of organizational capacity. Instead, what is proposed here is a simple system that can immediately provide the much-needed rigor to the appraisal process, and therefore significantly improve on existing processes, and which can evolve over time in sophistication in line with capacity.

89. This section summarizes the “Guidelines for the Socio-economic Appraisal of Projects in the Public Investment Program of Mongolia” which were produced for the NDIC with the help of World Bank technical assistance. It assumes that the organizational responsibilities are clarified, as recommended in the previous section, with the NDIC tasked with preparing a certified list of multi-year projects and the MoF responsible capital budgeting.

90. The proposed simplified appraisal process entails two stages as depicted in Figure 12. The first stage is a “yes/no” decision that can be used to reject bad projects early in the decision process so that scarce time is not wasted on any detailed evaluation of these projects. The second stage consists of scoring projects that pass through this first-level screening on the basis of simplified prioritization criteria.

91. The “yes/no” stage assesses project proposals on whether:

- Credible evidence is presented that there is demand for the project and the services it will provide. The demand analysis should for example, show traffic volume projections for roads projects, trends in economic growth, which will have an impact on the demand for infrastructure services such as power, water and communications, and Population growth and demographic trends (age distributions, etc) that affect demand for schools and hospitals;
- There is a good explanation of which strategic national priority—as specified in a national or sectoral strategy or planning document—the investment relates to and how the project meets the requirements of that priority
- There is a basic financial analysis, with special focus on the estimation of capital (investment) and recurrent (operating) costs, and that the assumptions used in preparing the project proposal are outlined and are sound.

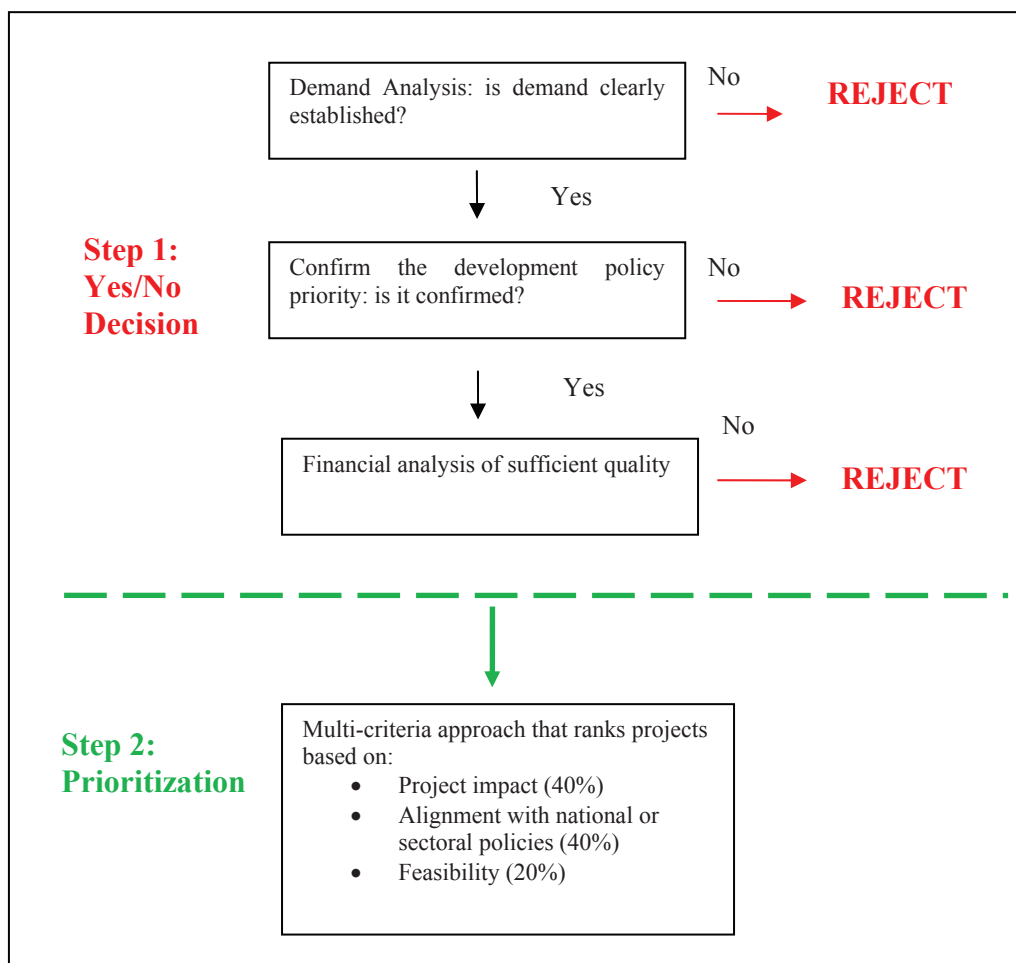
92. On the last point, the methodology acknowledges that capturing benefits in the social cost benefit analysis (economic analysis) will be difficult and therefore the focus at this stage, and given the current weaknesses in this area, should be on the cost side of the equation, or financial analysis. The financial analysis should be prepared on a cash flow basis for the period over which the project will provide

²⁵ Lee (2009)

services (the "economic lifetime" of the project). A template for preparing the financial analysis is provided in Annex 2.

93. Projects that pass through this first stage are then ranked on a multi-criteria basis. A common approach to prioritizing projects is to base them on a financial value such as return on investment, internal rate of return, net present value, or on some other valuation approach that considers the costs and benefits of

Figure 12: Process for the Appraisal of Large Projects



undertaking a project. Such values provide valuable information that can be used to inform the process of prioritizing public investment projects. However, the values derived depend critically on the assumptions about costs and prices, productivity, and so on (although these are matters that NDIC would be expected to review during project appraisal). Furthermore, in many projects in the social sectors, along with those in the environment and in infrastructure development, it is often difficult to estimate project benefits, which limits the usefulness of the costs and benefits approach.

94. The alternative recommended here involves scoring a range of objective criteria for each project and combining the scores using either weighted sums or weighted averages. It requires that a prioritization matrix is constructed, with the weights for the criteria and the scoring system built into the matrix. This prioritization is undertaken on a sectoral basis to allow for the differing levels of financial and economic appraisal possible for different kinds of projects (e.g. social versus productive sector), and

to simplify the review of consistency with policy documents. Sectors can be grouped as social services sector, productive sector, and general public services sector. An example of such a matrix is provided in Annex 3, which ranks the projects based on project impact (40 percent weight), alignment with national and regional development policies (40 percent), and feasibility (20 percent).

95. This appraisal methodology is simple and can be operationalized immediately within the NDIC and can provide a significant improvement in the quality of the projects in the capital budget. Once this process is in place and operational for two to three years, and capacity gradually built, more sophisticated systems that also evaluate the benefits side of the equation, and take further account of equity considerations, such as Korea's Analytic Hierarch Process, can be introduced.

6. Parliamentary and Executive Responsibilities

96. The FSL introduces rules to help ensure aggregate fiscal discipline. These need to be complemented by regulatory reforms of the budget process to ensure that the capital budget adheres to the principles outlined earlier. Mongolia's parliament presently has no limits on changing the budget presented by the executive, and has used its authority to include numerous bad projects. Therefore, there needs to be limits on parliament's ability to add projects that do not meet the rigorous appraisal criteria for inclusion in the multi-year PIP or the capital budget.

97. Concretely what these limits should mean is that while parliament is free to propose projects, these projects should go through the centralized evaluation and selection depicted in Figure 11. In other words, parliament would be a proposer, just like any line ministry, and would need to support project proposals with the necessary pre-feasibilities. Parliament proposed projects would then be subjected to the same project appraisal process described above. In terms of the budget cycle, this may imply that projects proposed during the parliamentary budget session, if they pass NDIC's appraisal, would enter the PIP starting in year 2, and could be considered for funding and inclusion in the capital budget for the following fiscal year. Alternatively, for projects to be included in the same fiscal year there needs to be a formal mechanism by which parliament can propose projects during the budget preparation process.

7. Other Technical Recommendations

98. Finally, some of the technical aspects of capital budgeting can be improved.²⁶ Given the problems in cost estimation of these projects, there is a need for some flexibility in funding. While rigorous project appraisal will improve the accuracy of costs, there will always be uncertainty in prices, particularly for a small, open economy such as Mongolia. As noted, the capital budget currently appropriates funds on a project by project basis which maximizes financial control but at the expense of flexibility. Some level of delegation of authority to the executive to adjust project funding, without requiring an amendment to the budget (as is presently needed) will improve project implementation.

99. There are various options on the degree of flexibility that can be given. Some countries use "reserve funds" to supplement project appropriations, which we would recommend against in the Mongolian context given the incentives to spend and the likely tendency to view these as "free money". Another option is to identify individual projects in the annual budget law but to use an appropriation structure to allow for shifts in funding between groups of projects without approval in law. Clearly there must be some limits on the cost overruns beyond which the scope of the project changes at which point the originally approved project is then a new project, and should therefore require parliamentary re-

²⁶ This section draws on a note prepared by David Gentry, IMF Advisor based in Ulaanbaatar

approval. For Mongolia we would recommend that these thresholds be kept at initially fairly modest levels, such as 10 percent of original project cost.

100. A related issue is the multi-year character of capital projects and the need to have some flexibility in payments over time. As noted in the roads sector case study, delays in project execution are ubiquitous. While poor planning is a major reason for these delays, another is project financing modalities. Mongolia currently appropriates funds only for expected expenditures for one fiscal year, a practice which while improving control can lead to significant uncertainty in project funding and burdens the budget process by requiring multiple decisions to fund a single project that is implemented in more than one fiscal year. These problems are amplified given Mongolia's short construction season — four months separate the beginning of the fiscal year (1 January) and the beginning of the construction season (May through October) — implies that upfront delays in procurement of a few weeks can effectively stall projects for six months. Managers therefore usually need to make requests for additional appropriations in the next budget in order to complete the project on time, and these requests are usually not fully met given that ongoing projects need to compete with new ones for funding.

101. One proposed solution being discussed within the Government is for a change in the start of the fiscal from January 1 to October 1 or November 1 in order to allow for more upfront time for project preparation and procurement before the construction season. While this may provide some respite, it does not solve the problem of funding multi-year projects. One solution could be to allow for some flexibility in transferring a portion, for example 20 percent of the approved fiscal year appropriation, of the undisbursed balances of public investment projects from the fiscal year to the next.

Annexure

ANNEX 1: ROADS CASE STUDY SAMPLE

The following sample of 10 budget-financed projects from a total population of 50 projects were used for the case study:

Description of sample projects

	Projects name/location	Type of work	Dimension	Original construction time	Budgeted	Financing in 2009
1.	Khushuu Tsaidam-Ugiin Lake	asphalt road	10 km	2007	1,298.9	280.1
2.	Damdinsuren street, UB*	concrete road	1.3 km	2006-2009	1,800.0	104.3
3.	Bulgan-Uench-Khovd province	asphalt road	40 km	2007-2008	6,800.0	1,471.1
4.	Arvaikheer – Bayankhongor	asphalt road	23 km	2007	2,992.2	787.1
5.	Eg river in Tunel soum, Huvsgul province	concrete bridge	160 m	2007-2008	1,812.5	1,532.5
6.	Undurkhaan-Sumber	asphalt road	50 km	2007-2008	8,988.4	0
7.	Arkhangai-Tsetserleg	asphalt road	10.6 km	2007	1,632.7	223.8
8.	Hatgal-Jankhai-Toilogt	gravel road	10.4 km	2006-2008	1,044.3	0
9.	Altan river in Khalkh gol soum, Dornod province	concrete bridge	17.36 km	2007	175.8	0
10.	Turgan River in Sagsai soum, Bayan-Ulgii province	concrete bridge	96.95 m	2008	999.0	787.9

* Overseen by the City Road Authority; therefore, not included in the list provided by the Department of roads.
Source: Department of Roads and MRTC.

The sample projects include the following documentation:

- A contract between the client (MRTC or Department of Roads) and the contractor (private construction companies). The contract includes budget breakdowns, technical requirements, engineering/schematic drawings, geological review report and scope of work and implementation schedule. A bank guarantee is also included in the contract.
- A tender document: Background information on the Contractor Company, technical capacity and requirements, material requirements, engineering/schematic drawings, geological review report, scope of work and implementation schedule. The directly awarded contracts (see Table 6) did not have tender selection documentation.
- A Project implementation report. The report includes the scope of work covered and pictures of the construction development phases for each monitoring period.

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Implemented roads, bridges and construction works since 2005

№	Project Name	Contract Time Granted		Contract Awards (MNT million)	
		Planned	Actual	Planned	Actual
2005					
1	75 meter long concrete bridge in Teel river, Uvs province	2005-2007		368.9	368.9
2	Bayanuur-Dashinchilen 6 km asphalt road	2005-2006	2005-2007	823.5	823.5
2006					
1	Kharkhorin- Khujirt 21,4 km asphalt road	2006-2008	2006-2009	3419.3	3419.3
2	Kharkhorin- Khujirt 15,4 km asphalt road	2006-2008		2421.9	2421.9
3	Khatgal-Jankhai-Toilogt 10,4 km asphalt road	2006-2008	2006-2008	1044.3	1044.3
4	Khatgal-Jankhai-Toilogt 20,0 km asphalt road	2006-2008	2006-2009	1995.7	1995.7
5	325 meter long concrete bridge in Nariin river, Uvs province	2006-2008			
6	Bayanuur-Dashinchilen 3km asphalt road	2006-2007	2006-2008	665.9	665.9
2007					
1	Bulgan-Uench-Khovd 40 km asphalt road in Khovd province	2007-2008	2007-2010	6800.0	6800.0
2	258 meter long concrete bridge in Tuul river, Ikh Tenger of Ulaanbaatar	2007-2008	2007-2010	3986.5	3986.5
3	211 meter long concrete bridge in Tuul river, Gorkhi	2007-2008	2007-2010	2422.4	2422.4
4	Dashinchilen- Orkhon river bridge 10 km asphalt road	2007-2008	2007-2010	1704.6	1704.6
5	Dashinchilen- Orkhon river bridge 30 km asphalt road	2007-2008	2007-2010	5350.4	5350.4
6	Dashinchilen- Orkhon river bridge 40 km asphalt road	2007-2008	2007-2010	6861.9	6861.9
7	Dashinchilen- Orkhon river bridge 7 km asphalt road	2007-2008	2007-2009	1191.5	1191.5
8	Dashinchilen- Orkhon river bridge 22,5 km asphalt road	2007-2008	2007-2009	3965.5	3965.5
9	18 meter long concrete bridge in Altan river, Dornod province	2007	2007-2008	175.8	175.8
10	Kharkhorin-Tsetserleg 21,08 km asphalt road	2007	2007-2008	2061.5	2061.5
11	Kharkhorin-Tsetserleg 22,86 km asphalt road	2007		2281.4	2281.4
12	Kharkhorin-Tsetserleg 10,6 km asphalt road	2007	2007-2010	1632.7	1632.7
13	Kharkhorin-Tsetserleg 7,1 km asphalt road	2007		1206.9	1206.9
14	Kharkhorin-Tsetserleg 7,2 km asphalt road	2007	2007	1223.9	1223.9
15	Tsetserleg-Ikh Tamir-Bridge of Khanui 15,4 km asphalt road	2007	2007	2346.2	2346.2
16	Tsetserleg-Ikh Tamir-Bridge of Khanui 37,6 km asphalt road	2007	2007-2010	5299.5	5299.5
17	Arvaikheer – Bayankhongor 23 km paved road to construct 23 km asphalt road	2007	2007-2009	2992.1	2992.1
18	Undurkhaan-Sumber 50 km first time asphalt road	2007-2008	2007-2008	8988.4	8988.4
19	Khushuu Tsaidam-Ugiin Lake 10 km asphalt road	2007	2007-2010	1298.9	1298.9
20	Ulaanbaatar-Lun 106,2 km asphalt road	2007-2008	2007-2010	21238.9	21238.9
21	Lun-Erdenesant 62,1km asphalt road	2007	2007	12638.7	12638.7
2008					
1	Erdenet-Bulgan-Unit 14,5km asphalt road	2008	2008-2009	3045.0	3045.0
2	Arvaikheer-Bayankhongor 27 km asphalt road	2008-2009	2008-2010	5500.0	5500.0

3	Bayankhongor-Nariin Teel 50 km asphalt road	2008-2009	2008-2010	9516.5	9516.5
4	Concrete bridge in Ider river in Ikh Uul soum, Zavkhan province	2008-2009	2008-2010	1593.4	1593.4
5	96,9 meter long concrete bridge in Turgan river in Sagsai soum, Bayan-Ulgii province	2008-2009	2008-2009	999.0	999.0
6	127 meter long concrete bridge in Khovd river in Tsengel soum, Bayan-Ulgii province	2008	2008-2010	120.0	120.0
7	2 km asphalt road in Orkhon soum, Darkhan-Uul province	2008	2008	500.0	500.0
8	Kharkhorin-Tsetserleg 46,9 km asphalt road	2008-2009	2008-2010	6566.0	6566.0
9	Khanzanburgedei-Solongot height 100 km asphalt road	2008-2010	2008-2010	19496.7	19496.7
10	Ulaangom-Teel river bridge 15 km asphalt road	2008-2009	2008-2010	3000.0	3000.0
11	Bulgan-Uench-Khovd 20 km asphalt road	2008	2008-2010	3849.0	3849.0
12	Murun-Khatgal 50 km asphalt road	2008-2009	2008-2010	9613.2	9613.2
13	Murun-Khatgal 48,8 km asphalt road	2008-2010	2008-2010	9757.8	9757.8
14	Undurkhaan-Sumber 50 km second time asphalt road	2008-2010	2008-2010	10000.0	10000.0
15	181,8 meter long concrete bridge in Khovd river in Ulaanhus soum, Bayan-Ulgii province	2008-2010	2008-2010	1500.0	1500.0
16	169 meter long concrete bridge in Eg river in Tunel soum, Khuvsgul province	2007-2008	2007-2009	1812.5	1812.5
17	127 meter long concrete bridge in Erdenemandal soum, Arkhangai province	2008-2009	2008-2011	1294.6	1294.6
18	3,1km asphalt road in Tsenkhermandal, Khentii province	2008	2008-2010	299.0	299.0
19	2,3 km asphalt road in horse racing place	2008	2008	400.0	400.0
2009					
1	Ulgii-Tsagaannuur 40 km asphalt road	2009-2010	2009-2010	13320.0	13320.0
2	2,3 km asphalt road in horse racing place	2009	2009	440.0	440.0

- Note: Highlighted projects are selected in the sample

ANNEX 2: FINANCIAL ANALYSIS TEMPLATE

Financial Analysis Template													Cont -->
Item	YEARS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Investment (capital) costs													
1. Total investment costs	0	0	0	0	0	0	0	0	0	0	0	0	0
Start-up costs													
2. Total start-up costs	0	0	0	0	0	0	0	0	0	0	0	0	0
3. TOTAL INVESTMENT AND START-UP COSTS (1 + 2)													
Operating Costs													
4. TOTAL OPERATING COSTS	0	0	0	0	0	0	0	0	0	0	0	0	0
5. TOTAL COSTS: (3 + 4)	0	0	0	0	0	0	0	0	0	0	0	0	0
PRESENT VALUE OF COSTS:													
Income/revenue (if any)													
6. TOTAL INCOME	0	0	0	0	0	0	0	0	0	0	0	0	0
7. NET BENEFITS (6 - 5)	0	0	0	0	0	0	0	0	0	0	0	0	0
IRR (when revenue available)													

ANNEX 3: PRIORITIZATION CRITERIA FOR PROJECTS

It is recommended that prioritization is undertaken on a sectoral basis to allow for the differing levels of financial and economic appraisal possible for different kinds of projects (e.g. social versus productive sector), and to simplify the review of consistency with policy documents. Sectors can be grouped as social services sector, productive sector, and general public services sector. The potential sectors and sub-sectors in each group include those listed below.

Sector Group	Sectors/Sub-Sectors
Social Sector Group	Education, Culture and Science Social Welfare and Labor Health
Productive Sector Group	Food and Agriculture Industry Mineral Resources and Energy Roads, Transportation, Construction and Urban Development Construction, Urban Development and Public Utilities Civil Aviation Railway Authority
General Public Services Group	General Taxation Administration General Customs Office Justice and Internal Affairs Defense Information technology Meteorology, Hydrology and Environment Monitoring Land Affairs, Geodesy and Cartography Post Authority regulatory authorities; e.g. standards and measurement; State Professional Inspection Agency Management Academy

A prioritization matrix for the productive sectors is given below:

Prioritization Matrix for PIP Projects: Productive Sectors

PROJECT IMPACT (40%)		0-10%	10-20%	20-30%	30-40%	> 40%	Score
FIRR		1	2	3	4	5	
Demand proven		No	Partly	Mostly	Completely		
		0	5	10	15		
Goals and objectives clear and achievable		No	Partly	Mostly	Completely		
		0	5	10	15		
Links to other programs, projects, activities		No	Partly	Yes			
		0	3	5			
DEVELOPMENT POLICY (40%)						Sub-total	
National Development Strategy		No	Indirectly	Yes			
		0	4	8			
Consistent with socio-economic guidelines		No	Indirectly	Yes			
		0	4	8			
Government Action Plan		No	Indirectly	Yes			
		0	4	8			
Sector and/or regional policy or strategy		No	Indirectly	Yes			
		0	4	8			
Project is a critical project identified in a sector/sub-sector		No	Indirectly	Yes			
		0	4	8			
FEASIBILITY (20%)						Sub-total	
Options for undertaking project considered		No	Partly	Mostly	Completely		
		0	3	7	10		
Realistic technical solution available for implementation		No	Yes				
		0	5				
Implementing agency has capability to implement		No	Yes				
		0	5				
						Sub-total	
						SCORE	

REFERENCES

- Allen, Richard and Daniel Tommasi. 2001. *Managing Public Expenditure: A Reference Book for Transition Countries*. Paris: OECD
- Fritz, Verena and Christopher Finch. 2010. "Challenges of good public investment management in a resource rich country: a political economy perspective on Mongolia's recent experience." Mimeo: The World Bank
- Government of Mongolia. 2010. *Audit Report on 2010 Public Investment Budget*.
- Government of Mongolia. 2008. *Implementation of State Investment Budget 2007*.
- Harberger, Arnold. 2007. "On Growth, Investment, Capital, and the Rate of Return". Mimeo, Los Angeles: University of California, Los Angeles
- International Monetary Fund. 2008. "Mongolia Budget Preparation: A roadmap for Reform and Institutional Strengthening." Mimeo. Washington DC, IMF
- International Monetary Fund, 2009. "Mongolia: Technical Memorandum on the Fiscal Stability Law." Mimeo. Washington DC, IMF
- Petrie, Murray. 2009. "Public Investment Management in Resource Dependent Countries".
- Rajaram, Anand, Tuan Minh Le, Nataliya Biletska, and Jim Brumby. 2009. "A Diagnostic Framework for Assessing Public Investment Management". Mimeo: The World Bank
- Sarraf, Maria and Moortaza Jiwanji. 2001. *Beating the Resource Curse: The Case of Botswana*. Mimeo: The World Bank
- Spackman, Michael. 2002. "Multi-year Perspective in Budgeting and Public Investment Planning." Mimeo. Paris: OECD
- Wehner, Joachim. 2006. "Assessing the Power of the Purse: An Index of Legislative Budget Institutions," *Political Studies*, 54, December
- World Bank. 2009a. *Southern Mongolia Infrastructure Strategy*. Washington DC: The World Bank
- World Bank 2009b. *Program Document: Mongolia Development Policy Credit*
- World Bank. 2008. *Mongolia: Public Expenditure and Financial Management Review*. Washington DC: The World Bank
- World Bank. 2007. *Foundation for Sustainable Development: Rethinking the Delivery of Infrastructure Services in Mongolia*. Washington DC: The World Bank
- World Bank. 1999. *Botswana: A Case Study of Economic Policy Prudence and Growth* Washington DC: The World Bank
- World Bank. 1998. *Public Expenditure Management Handbook*. Washington DC: The World Bank

