MYANMAR TRANSPORT SECTOR POLICY NOTE

HOW TO REFORM TRANSPORT INSTITUTIONS

ASIAN DEVELOPMENT BANK

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6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
www.adb.org

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Contents

Appendixes

Tables, Figures, Box, and Appendixes

Tables

Figures

Box

Appendixes

Tables

Figures

Foreword

Myanmar is at a historic milestone in its transition into a market economy and democracy. After decades of isolation and stagnation, the country has since 2011 been undergoing a fundamental political, economic, and social transformation at unprecedented speed and scope. Achieving the country's high growth potential will require continued reforms and structural transformation, especially in advancing major investments in infrastructure, developing relevant capacities and skills, and enhancing the business environment. This will enable Myanmar to reach the ranks of upper middle income economies by 2030.

Due to massive underinvestment and neglect in recent history, Myanmar's infrastructure lags behind its Association of South East Asian Nations neighbors, and hinders access to markets and social services. High transport costs and associated limited access to markets and services are among the main causes of poverty and regional inequality. Twenty million people still live in villages without access to all-season roads. The questions then are: how can basic transport services be provided to all? What does it take to improve the quality of the transport infrastructure and services for the private sector? How can Myanmar reduce the economic and social costs of transport?

The Government of the Republic of the Union of Myanmar is committed to addressing these questions, and the underlying issues. Toward this end, the Government has commissioned from the Asian Development Bank (ADB) the preparation of a Transport Sector Policy Note. The Transport Sector Policy Note takes stock of the transport sector challenges, provides a strategic framework for reforms that could assist Myanmar's policymaking, and identifies the areas where international financial and technical assistance could make the highest contribution to the development of Myanmar's transport sector.

The *Transport Sector Policy Note* is composed of nine reports, including this one, and a summary for decision-makers. The first two—*How to Reform Transport Institutions, and How to Reduce Transport Costs*—provide an overview and framework for policy reform, institutional restructuring, and investments. These are accompanied by separate reviews of key subsectors of transport: *Railways, River Transport, Rural Roads and Access, Trunk Roads, and Urban Transport*. These reports summarize and interpret trends on each transport sector to propose new initiatives to develop them. The thematic report *Road Safety* builds a first assessment of road safety in Myanmar. The thematic report *How to Improve Road User Charges* is a stand-alone study of cost-recovery in the road sector.

The research was organized by ADB and the then Ministry of Transport, with the active participation of the Ministry of Construction and the then Ministry of Railway Transportation. A working group comprising senior staff from these government ministries guided preparation. The work stretched over the period of 24 months, and was timed such that the final results could be presented to the new government that assumed office in April 2016, as a contribution to its policy making in the transport sector.

As the *Transport Sector Policy Note* demonstrates, Myanmar can, and should, develop a modern transport system that provides low-cost and safe services, is accessible to all including in rural areas and lagging regions, and connects Myanmar with its neighbors by 2030. The Government has the determination to doing so, and can tap the support from development partners, the private sector and other stakeholders. It can take inspiration from good practices in the region and globally.

The *Transport Sector Policy Note* provides a rich set of sector data, is meant to be thought-provoking, presents strategic directions, and makes concrete reform recommendations. It stresses the need to strengthen the role of planning and policy-making to make the best use of scarce resources in the transport sector. It highlights the need to reexamine the roles of the state—and particularly state enterprises—and the private sector in terms of regulation, management, and delivery of services in the sector. It identifies private sector investment, based on principles of cost-recovery and competitive bidding, as a driver for accelerated change. Finally, it aims at a safe, accessible, and environmentally friendly transport system, in which all modes of transport play the role for which they are the most suited.

We are confident that the *Transport Sector Policy Note* will provide value and a meaningful contribution to Myanmar's policymakers and other key stakeholders in the transport sector.

James Nugent
Director General
Southeast Asia Department
Asian Development Bank

H.E. Thant Sin Maung
Union Minister
Ministry of Transport
and Communications

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The Transport Sector Policy Note was prepared at the initiative of Hideaki Iwasaki, director of the Transport and Communications Division of the Southeast Asia Department of the Asian Development Bank (ADB). It was prepared by ADB staff and consultants. Adrien Véron-Okamoto (ADB) coordinated the study, prepared the notes *How to Reduce Transport Costs, How to Improve Road User Charges* and the overall *Summary for Decision-Makers,* drafted the executive summaries, and contributed substantially to the notes *How to Reform Transport Institutions, River Transport, Trunk Roads, and Urban Transport.* Gregory Wood prepared the note *How to Reform Transport Institutions.* The *Railways* note was prepared by Paul Power. It also benefited from analytical research and suggestions by Richard Bullock. Eric Howard prepared the Road Safety note. Kek Chung Choo prepared the *River Transport* note. Paul Starkey and Serge Cartier van Dissel prepared the *Rural Roads and Access note.* Serge Cartier van Dissel also prepared the *Trunk Roads* note. Colin Brader (of Integrated Transport Planning) prepared the *Urban Transport* note.

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Abbreviations

ADB	–	Asian Development Bank
CEO	–	chief executive officer
DCA	–	Department of Civil Aviation
DOH	–	Department of Highways
DOT	–	Department of Transport
DMA	–	Department of Marine Administration
DRD	–	Department of Rural Development
DRT	–	Department of Road Transport
DWIR	–	Directorate of Water Resources and Improvement of Water Systems
GDP	–	gross domestic product
IWT	–	Inland Water Transport (company name)
MA	–	Myanmar National Airlines
MOC	–	Ministry of Construction
MOPF	–	Ministry of Planning and Finance
MOT	–	Ministry of Transport
MOTC	–	Ministry of Transport and Communications
MPA	–	Myanma Port Authority
MR	–	Myanma Railways
MRT	–	Ministry of Rail Transportation
MS	–	Myanma Shipyards
NTDP	–	National Transport Development Plan
PPP	–	public–private partnership
PSO	–	public service obligation
PW	–	Public Works (within Ministry of Construction)
RT	–	Road Transport (company name)
RTAD	–	Road Transport Administration Department
SEE	–	state-owned economic enterprise
TPD	–	Transport Planning Department

Currencies

(as of December 2014)

$1.00 = MK 1,000
MK 1.0000 = $0.001

Executive Summary

Overview

Myanmar's national transport system can be characterized by:

- Extensive but low-quality infrastructure that translates into slow, unsafe, and costly transport especially for import and export;
- A private sector that is dynamic, combining small-scale and informal transport service operators with a few large contractors involved in road, port, and airport public–private partnerships;
- A large public sector that delivers most infrastructure works and a sizeable share of transport services, but in which the main state-owned companies—particularly Inland Water Transport, Myanma Railways, and Road Transport—are making deficits and losing market share.
- A fragmented institutional setting involving until April 2016 three ministries—Ministry of Construction, Ministry of Rail Transportation, and Ministry of Transport—that had over the years confined to routine management tasks such as execution of civil works by force account. In April 2016, one the new government's first actions was to create a Ministry of Transport and Communications (MOTC) to lead the sector.

To meet the needs of a quickly growing market economy, the transport system will need investments, better management, and a larger, more able private sector. This report reviews how policies and institutions can enable or delay the achievement of these objectives.

Scaling Up Transport Resources and Improving Cost Recovery

This report estimates that Myanmar needs to spend at least 3%-4% of its gross domestic product (GDP) just for priority transport investments. This is three times what Myanmar has been spending in the past decade on average. In the last decade, Myanmar has spent only 1%-1.5% of its GDP on transport. These estimates are built from various sources, mainly from investment plans already approved by the government: the National Transport Development Plan and the Yangon Urban Transport Master Plan. This level of spending is commensurate with investment levels in other fast-growing countries. The United States (US) spent over 5% of its GDP during the growth of its interstate highway system in the 1960s. The People's Republic of China, Thailand, and Viet Nam's transport spending have all exceeded 4% of their respective GDP.

The government can raise transport investments to 3%-4% GDP annually, under the following assumptions:

- Road user fees should be raised and earmarked for operational expenses and investments in the transport sector. A new fuel levy at perhaps $0.1 per liter, a heavy vehicle license fee, and higher tolls could generate about $850 million each year. These resources should be prioritized for maintenance, but could also finance improvements.
- Government should require state-owned economic enterprises (SEEs) to propose a medium-term plan toward financial sustainability. This plan should include full pricing of commercial activities, and new public service obligations (PSOs) to finance nonviable public services. Myanma Railways and Inland Water Transport should, however, refrain from raising their fees until the quality of their services has increased, as this would deter customers and fail to raise new revenues.
- Private sector investments should be actively pursued, e.g., by improving road concession mechanisms and developing other public–private partnerships.

Once the sector is financially sustainable, debt should become a choice instrument. Several options can be considered. Future revenues and earmarked taxes can be pledged by an SEE or transport agency to service debt. The Department of Highways could use such mechanisms, for instance, to aid toll-financed expressway development and fuel-tax-financed road network improvements. The South African National Roads Agency or the Indian National Highway Agency are good medium-term models to consider. The government could also create an infrastructure fund, which would provide cheap long-term debt to SEEs and private investors in the transport sector. Finally, the government could also request international financing institutions to scale up support in the transport sector, using nonconcessionary lending for projects that will generate revenues or increase the tax base.

Improving Investment Planning and Delivery

In the past, the Government of Myanmar has mainly invested on transport infrastructure in remote areas. While this can make sense from a national redistribution perspective, it has also limited the resources flowing to the core part of the networks, which are critical from an economic standpoint. Investments in transport have had limited benefits. In the future, more resources should be allocated in support of economic priorities.

The government has prepared, with assistance from the Japan International Cooperation Agency, the country's first **national transport master plan**, as well as a master for urban transport in Yangon. These plans give a solid base to plan major investments. Parliament approval could give them increased strength.

Nationwide Programs. Most investments will be small. The country needs to rehabilitate its highway and railway network, and extend rural road networks. For these smaller investments, good identification, preparation, and delivery processes are paramount. These programs would run for several years, possibly decades in the case of rural roads. They could be financed by the government and international financiers. The government could launch long-term nationwide programs, such as:

- **Trunk road maintenance and rehabilitation program**, to improve the conditions of highways with the most traffic;
- **Rural road program**, to provide basic access to all;
- **Safer roads program**, to eliminate the worst highway hazards;
- **Railway productivity improvement program**, to bring to running condition the trunk and secondary rail networks and improve the viability of Myanma Railways;
- **Public transport improvement program** for Yangon and Mandalay; and

- **River navigation improvement program**, to enable modern all-year-round navigation between Yangon and Mandalay.

Investment Cycle. The processes to prepare and implement large infrastructure projects need to be modernized. Typically, each agency starts designing a project after a budget is approved, without previous preliminary studies. Work, carried out by relevant units, is stopped at the end of the year or when projects runs out of budget. This may be appropriate for small investments. To deliver large-scale programs, a formal project cycle needs to be defined by law or regulation, and strictly followed by each agency. For large investments, it should include at least a feasibility study, consultation with the public, an administrative appraisal, and a detailed design.

Medium-Term Investment Program. The government would benefit from maintaining a 3- to 5-year rolling program of public investments, at least in the transport sector. This would facilitate budgeting and delivery of long-term plans, as the preparation and implementation of large investment projects takes several years. It would also provide a single reference to public agencies, private investors, and international financing institutions.

Statistics. The quality of the information available for policymaking and for reporting performance of the transport sector to the public is weak. For instance, there are no consolidated accounts of what the Department of Highways spends on the roads. Government statistics for transport volumes only report on state-owned operators (Inland Water Transport, Road Transport), even though they only account for a small share of demand. Transport prices are not monitored. A new statistical system, implemented by a dedicated unit, and with most data in the public domain, is needed.

Opening the Market for Infrastructure Provision

Transport infrastructure has mainly been provided by government units and contractors, particularly through the SEE, Public Works (until April 2015) and Myanma Railways. Their working methods have been traditional, and their delivery capacity is limited. As the government is tasked with a much larger program of works, it should rely on the private sector. This may require the following changes:

- **Publicly financed civil works should be systematically outsourced**. This would principally concern road and bridge construction and improvement works, railway works, ports, and airports. A second phase may also include infrastructure maintenance, as well as design and supervision of civil works.
- **Public procurement should be made open, fair, transparent, and competitive**. The risk of corruption in public works procurement is very high. Good principles, sound processes, transparent awards, and independent auditors can help mitigate that risk. The government could set to run a "good governance" agenda in the sector, and give it high visibility.
- **Common rules and procedures should be adopted**. Currently, each agency uses its own rules and procedures, without a sound legal base. The passage of public procurement law and possibly a public–private partnership (PPP) law should be considered. Myanmar would also benefit from adapting existing contract frameworks (e.g., those used by the International Federation of Consulting Engineers [FIDIC]) to local practice..
- **Government capacity to prepare and manage contracts should be developed**. To facilitate the transition to contracting out of civil works, the government could consider: (i) setting up or strengthening procurement units, (ii) setting up a public–private partnership (PPP) unit (at least for transport), (iii) running long-term training programs for government staff and contractors, and (iv) recruiting international consultants to assist in procurement, management, and supervision.

Liberalizing the Transport Service Market

The transport service market is generally a free market but new steps for increasing efficiency are possible and should be considered. Particularly, the Road and Inland Water Transport law is not adapted to market-driven operations. This law was drafted for a time when the government owned most transporters, and centrally allocated capacities. It includes many layers of approvals and processes that are meant to limit competition. In practice, regulation is now light. The transport service market has grown, but most operating companies remain small and quality is low. The law should be revised, and regulation should gradually raise service quality and increase competition.

Also, specific markets could be opened up:

- Government transport requirements could be openly tendered rather than allocated to Myanma Railways or Road Transport.
- Vehicle inspection could be privatized, similar to what many other countries have done. This is a change that the MOTC is already considering.
- Rail freight services could be opened up to the private sector. Myanma Railways has too limited rolling stock to develop this market, but private investors could do it. For the foreseeable future, Myanma Railways should keep operating the trains, but the traction, wagons, and marketing could each be partly privatized.
- Noncore rail services should be outsourced, so that Myanma Railways can concentrate on its core business.

Restructuring State-Owned Transport Enterprises

Government priority should be to build corporate governance and develop sound businesses rather than push for early privatization and cut financial lifelines. Transport state-owned enterprises need a new governance structure, new management, and new financial systems, while learning to serve customers. However, no transport state-owned enterprise except Myanmar National Airways is yet profitable, and some do not have sound businesses, viable assets, and/or a managerial culture. A 5-year transition period toward a new model should be considered, with gradually declining government involvement and support (e.g., transition period can be up to 10 years for railways).

Clean balance sheets. The ministries in charge of transport could jointly negotiate common terms with the ministry of finance regarding SEE financial performance targets, treatment of excess staff and pension obligations, inherited debts, surplus assets, treatment of land, public service obligations, and timetables for restructuring. The rule of thumb should be that old liabilities are borne by the government rather than saddled on the new company, and that excess assets should be sold.

Choosing the new chief executive officers will be critical. These people need to be appointed for their merit, business experience, and charisma. Often, it may be advantageous to recruit an outside chief executive officer who can in his or her experience of how a private company functions and can instill that mentality in the staff of the corporatized enterprise. The government could also consider hiring international executives to mentor their Myanmarese counterparts.

The corporatization process itself could be completed within **1–3 years**, with support from external advisers, under the supervision of a common corporatization team and the state-owned enterprise establishment boards.

Restructuring options for key SEEs considered are as follows:

- **MOC Construction Units:** Form three or more medium-sized companies; invite a strategic investor; privatize once contractual models and financial systems are in place.
- **Myanma Railways:** Corporatize in two entities; separate freight; identify public service obligations for urban and nonviable rail lines; prepare business and rationalization plan, as well as performance contract.
- **Inland Water Transport:** Five-year transition to a new business model centered around cargo and ferry operations; discuss public service obligations for ferries and services to remote communities; sell assets to invest in modern equipment and possibly loading facilities.
- **Road Transport:** Search joint venture opportunities for viable parts of the business; close and/or sell nonviable operations.
- **Myanma Port Authority:** Privatize terminal operations to concentrate on port management possibly merge with the Directorate of Water Resources and Improvement of River Systems to become a port and river authority.

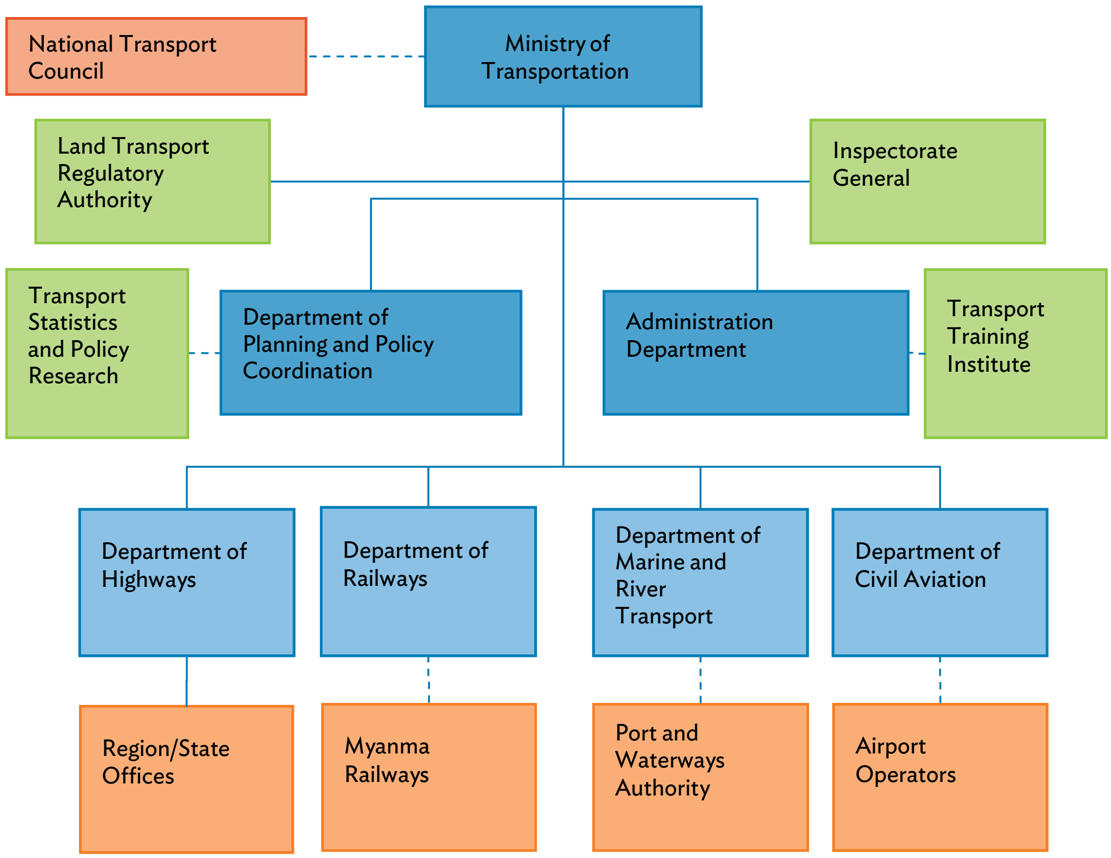
Reorganizing Ministries

To address the shortcomings of the current organization of its ministries in charge of transport, the government could consider the following realignments:

- **Planning:** Establish a permanent secretariat to the Joint Coordination Committee between the Ministry of Construction and the Ministry of Transport and Communications, as a precursor to a full-fledged Department of Policy and Planning. Attach to it a new transport statistics and research body.
- **Regulation:** Transform the Road Transport Administration Department into a Land Transport Regulator, which may be constituted as an independent authority.
- **Highways:** Establish a Highway Department or Authority from the Department of Highways and the Department of Bridges (formerly Public Works).
- **Railways:** Establish a new Railway Department.
- **Water:** Make the Department of Marine Administration the entity in charge of all water sector policies, and either transform the Department of Waterways and Improvement of Water Resources into a River Management Authority, or merge it with the Myanma Port Authority into a Port and River Transport Authority.
- **Aviation:** Complete the separation of Department of Civil Aviation regulation and airport operation functions.

In April 2016, just before this publication went to press, the new government created a Ministry of Transport and Communications, which assumed the responsibilities of MOT, MRT and the Ministry of Communications. In the long-term, the government could consider further placing all transport responsibilities under a single Ministry of Transportation. Figure ES1 shows its possible structure.

Figure ES1: Potential Long-term Structure of a Unitized Ministry of Transportation



Source: Authors.

The case for considering a unitized ministry in the long-term rests on:

- the structure's suitability to coherently plan investments and deliver policies following the National Transport Development Plan and proposed transport policy statement;
- the policy and regulatory synergies benefiting users in the areas of safety, logistics, multimodal transport, and innovation;
- a stronger capacity to articulate ambitious policies and request larger budgets; and
- the scale economies that would come from having a single structure rather than smaller entities after the planned decentralization and corporatization of state-owned enterprises, in traditional areas (e.g., information technology, human resources, communications), and in new areas (e.g., state-owned enterprise management, private sector participation, procurement, statistics, economics and planning, regulation, and environmental protection).

There are also benefits to having a single contact point for all transport matters when interacting with other transport stakeholders, the Parliament, regional and/or state governments, foreign investors, and international financial institutions.

Decentralizing

Transport could be a leading sector for administrative decentralization. The government could already consider decentralizing the administration of transport services, vehicle fleet and traffic management, as well as ports, river ports, and airports of local interest. These areas are actually considered in the Myanmar's constitution as being of region and/or state interest, but their administration still lies with union agencies.

Further, the government could consider decentralizing state and/or regional and rural roads as well as railways of local interest. In these areas, the management responsibility over local road and rail networks could be decentralized, but the execution of works could remain with union agencies (Department of Highways, Department of Rural Development, and Myanma Railways) until the local government has sufficient capacity.

This will require new forms of relationships such as contracts between the local government and the union agencies, which will then manage the networks on their behalf. Alternatively, for the road sector, part of the staff of the Department of Highways dealing with local roads could be placed under the hierarchical responsibility of the region and/or state Minister of Transport. A new funds transfer mechanism will also be needed. These are complex tasks that need to be studied in detail before arrangements are proposed.

A special case should be made for Yangon City. There, the local government should be able to develop sufficient capacity to manage all networks and services. Its authority should not, however, stop at the city boundaries of Yangon City. Either a Greater Yangon Transport Authority, or the Regional Minister of Transport, should be given oversight on the entire metropolitan transport system.

Suggested Next Steps

The government could clearly express its commitment to market-oriented reforms in the transport sector, and give its interpretation of what this implies.

A Transport Sector Policy Statement would define how the sector should be structured to deliver the broad objectives of the National Transport Development Plan. This document, to be issued at the highest level after broad consultations, would guide future reforms. It would define the objectives of enacted legislation and regulations. It would define the roles and responsibilities of public agencies, SEEs, and private actors in the transport system. It would spell a strategy for decentralization in the transport sector, covering allocation of authorities, accountability, and funding. It could also sketch a new organizational and financing structure for the sector and announce future reforms for transport SEEs. Finally, it would describe the main policy and institutional reforms to be proposed before the legislature.

The government has already set up a working group under the Joint Coordination Committee to review a draft of this report, assess its policy propositions, and conduct a dialogue with ADB and other donors. This process, which is supported by ADB under the technical assistance for Transport Sector Reform and Modernization, could take about a year. After this stage government could then issue the Transport Sector Policy Statement, announce the restructuring of sector institutions and task the ministries to prepare a new umbrella law concerning the reorganization of the transport sector.

Possible Areas for Donor Support

The reform agenda outlined here (see a possible summary policy matrix in Table ES1) will require political and financial resources to implement. It would make much sense for international financing institutions to support it through policy lending, should the government request it.

The government could benefit from further technical assistance in the following areas:

- establishment of the secretariat to the Joint Coordination Committee;
- review and overhaul of transport legislation;
- public–private partnership (PPP) development; and
- restructuring of state-owned enterprises and ministry departments.

Table ES1: Possible Policy Reform Agenda

Agenda 1: Improve planning and delivery
• Approval by the Parliament of a Transport Master Plan, mandate the preparation of subsector and/or state plans compliant with the master plan • Mandate by law a formal project cycle including: (i) feasibility studies, (ii) public consultations, (iii) administrative appraisal, and (iv) detailed design • Prepare and maintain a medium-term investment plan • Allocate sufficient funds for infrastructure maintenance; consider earmarking resources • Create a new transport statistics and price monitoring system
Agenda 2: Liberalize the market for the provision of infrastructure
• Restructure the long-term road concessions (“build–operate–transfer” [BOT]) to ensure they can deliver needed investments • Adopt a public procurement, concession, and/or public–private partnerships law • Conduct open bids to contract out road, bridge, rail construction, and rehabilitation works • Reduce the share of in-house road and rail maintenance • Contract out a growing share of road, bridge and rail design and supervision works • Implement a good governance agenda in procurement across the sector
Agenda 3: Liberalize the transport service market
• Revise the Road and Inland Water Transport law to eliminate outdated requirements • Tender out government transport requirements • Privatize vehicle inspection in the medium term • Open rail freight services to the private sector • Outsource noncore rail services to the private sector
Agenda 4: Raise resources, improve cost-recovery, and reduce subsidies
• Set road fees to cover infrastructure maintenance and renewal (e.g., fuel tax, heavy vehicle tax, restructuring road tolls) • Price commercial rail services at cost-recovery levels • Introduce and gradually tender public service obligations for nonviable rail, air, river transport services • Eliminate operational subsidies for state-owned enterprises in the medium term
Agenda 5: Restructure state-owned enterprises
• Corporatize Road Transport, Inland Water Transport, and the Ministry of Construction’s construction units; take steps to privatize them in the medium term • Approve and initiate restructuring plan for the rail sector, including the separation of Myanma Railways and the Ministry of Transport and Communications and improve corporate governance • Implement retrenchment plans in SEEs and government departments moving to a corporatized structure; the Ministry of Finance to assume inherited pensions and debt requirements from SEEs
Agenda 6: Reorganize and decentralize ministries
• Create a coordination mechanism, or consolidate ministries in charge of transport • Create a common national transport planning and policy department • Decentralize new areas of responsibility to lower level governments

Source: Authors.

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Introduction

This note presents an initial review of Myanmar's transport sector's institutional and policy framework. After 50 years of military regime (1962–2011)—the first 30 years of which was under a socialist type of government, and the following 20 years under a more market-friendly, but centralizing and authoritarian, government—there is a need to take a critical look at the transport institutions that Myanmar inherits today. The broad movement in the last 20 years has been that of a gradual loss of coherence of the institutional framework, accelerated by the macroeconomic reforms of 2011–2012. All stakeholders interviewed shared their perception that the transport sector's policy framework and organizational structure had, by 2014, become largely irrelevant and that, at minimum, it needed rationalization, or at a more strategic level, complete rethinking. They requested ADB to review the national transport institutional framework in light of international best practices, advise on the policy principles that could guide government action, and make concrete recommendations on what measures the government could take to modernize its management of the transport sector.

The study was carried out by a small team of ADB staff and consultants through missions to Myanmar over 2014. While the study benefited from frequent discussions with government officials and other stakeholders, it remains an external viewpoint. Many areas would benefit from further analysis. Two risks had to be avoided. The first one was that the output of the study would result in an ambitious but abstract and unattainable description of what "ideal" institutions should be. The study therefore starts from an assessment of existing institutions, and from that analysis, formulates practical measures that would lead to measurable improvements. The opposite risk was that the study would propose a long list of specific recommendations, not linked to a coherent understanding of the long-term role and tasks of Myanmar's public transport institutions. The reforms proposed herein are driven by an overarching objective to modernize the sector and, to the extent possible, make it self-supporting, following an accepted principle of separating governance from delivery of transport service. Conscious of the limitations of what could be achieved with only short inputs, and on the many external considerations that would drive policymaking in the transport sector, the study team sought not to be prescriptive, but rather to lay out options and pathways that could be explored once there is a consensus on where reforms should go.

At the outset of this study, stakeholders share three considerations:

- The democratic and market reforms initiated in 2011 and 2012, followed by the opening of the country's markets, should lead to a quick economic take off, built on **the modernization of the economic infrastructure** including transport. The need for reform is accepted by all; with economic reforms (e.g., market liberalization) prioritized over institutional ones, particularly those involving several ministries. International, technology, and capital are generally welcomed to foster this transformation.
- **The role of the public sector and the organization of the transport sector are somewhat anachronistic**. The government transport sector delivers and manages areas (transport services, construction) that now could be better left to the private sector. That change can make government resources available and enable the government to concentrate on more high order "governance"

missions such as defining and implementing regulations, creating plans and policies to guide growth and development, or ensuring the delivery of a safe, environmentally and socially sound transport system, which is not yet in place. Many understand what should be best left to the private sector. But there is a lack of understanding on what roles and responsibilities should be in the public sphere, beyond a mantra that the public sector should become a "regulator." Stakeholders also generally realize that the fragmentation of transport sector institutions brings about negative consequences, and share a desire for closer coordination.

- **Several transport state-owned economic enterprises (SEEs) are in unsustainable financial situations**, particularly Inland Water Transport, Myanma Railways, and Road Transport. Stakeholders are aware of and are gradually coming to accept the difficulties these companies face due to changing transport needs and increased competition following the 2011–2012 reforms and the imperative for SEEs to now begin balancing their books. The previous mandate was rooted in a now obsolete understanding of the economic mission and role of these companies—that of the management of a large share of the economy by the state. Transformation of those SEEs into effective companies requires a significant change in mindset and mandate.

To deliver their task to modernize the sector and overcome the problems inherited from the past, the public sector institutions must reform. The organization of this report therefore addresses four questions:

- **What should be the objectives for reform?** Section 1 presents current sector institutions. Section 2 proposes an assessment of the current sector institutions to suggest objectives for their reform.
- **What should be the guiding principles for government policy in transport?** Section 3 proposes general policy principles for government action in the transport sector, discusses needed functions for the public transport institutions (i.e., regulation, planning, organization of public services, management of infrastructure, safety), explores the implication of decentralization, and discusses the role of the SEEs in this new context.
- **What should be the institutions to lead the transport sector?** Section 4 reviews the institutions and instruments needed to apply such policy principles. It discusses institutional restructuring needs, financing mechanisms, and human resources. It sketches out reorganization options for transport sector agencies, and proposes a path toward preparing this restructuring.
- **How should transport sector SEEs be restructured and managed?** Section 5 sets a framework for managing transport SEEs, depending on whether they act in a competitive environment or not and identifies common restructuring parameters. The Appendixes illustrate specific options for key transport SEEs (Inland Water Transport, Road Transport, and Myanma Port Authority.

By design, the study considers transport sector institutions as a whole. This leads it to examine ways to improve coherence and coordination, and eliminate gaps or overlaps. It then posits a consideration of common approaches and institutions. This approach is justified by the linkages and similarities between transport's subsectors, and is supported by this assessment. It is also accepted by Myanmar's stakeholders. The study is limited in the sense that it does not consider the political economy and social implications of the framework it sets—on the basis that these issues can be disjointed—even though they should be considered during further preparation of structural and institutional reform.

1 Institutional Setup in the Transport Sector

Key Findings

The organization of the transport sector in Myanmar is a complex structure involving until April 2016 three major ministries [Ministry of Transport (MOT), Ministry of Rail Transportation (MRT), and Ministry of Construction (MOC)]; three levels of government (national, state and/or regional, and city/township), eight state-owned economic enterprises (SEEs), and various coordination committees that are active in different degrees.

This structure is heir to a rich history. It was formed through the addition of successive layers, brought about by the colonial period (passage of rail and port laws and the organization of a unit on Public Works), independence period (nationalization of SEEs), the Burmese Way to Socialism (central planning of transport services through the Road and Inland Water Transport Law), and the authoritative regime of the 1990s and 2000s (treatment of SEEs as departments, split of MOT and MRT).

The new democratic and liberal era that opened in 2011–2012 has not yet presided over a major reorganization of the sector. Judging from history alone, the government is in a position to, again, take a cold look at what is needed, what should be preserved, and what could be usefully changed.

In April 2016, the new Government of Myanmar recreated a Ministry of Transport and Communications, merging MOT, MRT, and the Ministry of Communications.

1.1 Union Government Organization

Myanmar is divided into seven states, seven regions, and the Union Territory of the capital, Naypyitaw.[1] Each of the states and regions has a state and/or regional government with a chief minister and parliament (*hluttaw*), and has the same status as a ministry. Naypyitaw Union Territory is under the direct administration of the President through the Naypyitaw Council. The states and regions are divided into 63 districts, which are subdivided into 330 townships. Each township includes a large number of villages (64,134 villages in total) that are grouped into village tracts (13,618 village tracts in total). In addition, there are five self-administered zones (SAZs) and one self-administered division (SAD), covering a total of 18 townships.

The union government of Myanmar is organized by sectorial ministries which oversee service departments, and are each headed by a director general; and state-owned economic enterprises (SEEs), headed by a managing director.

[1] The seven states are Chin State, Kachin State, Kayah State, Kayin State, Mon State, Rakhine State, and Shan State. The seven regions are Ayeyarwaddy Region, Bago Region, Magway Region, Mandalay Region, Sagaing Region, Tanintharyi Region, and Yangon Region.

Three ministries had, until April 2016, responsibility over the national transport infrastructure:

- The **Ministry of Transport (MOT)** was responsible for air, maritime, and river transport. MOT's Department of Transport (DOT) coordinated until 2015 the actions of the ministry, and in 2013, led in the preparation of a multimodal National Transport Development Plan. MOT also housed the departments of Civil Aviation (DCA), Marine Administration (DMA), Meteorology and Hydrology (DMH), and the Directorate of Water Resources and Improvement of Waterways (DWIR). It supervises Inland Water Transport (IWT), Myanma Airways (MA), Myanma Five Star Line, Myanma Port Authority (MPA), and Myanma Shipyards (MS), all of which are SEEs. In the maritime area, the ministry also had a university and an institute of technology.
- The **Ministry of Rail Transportation (MRT)** was responsible for the railways, road vehicles, and road and river transport services. Its Transport Planning Department (TPD) was at the same time a licensing body for transport services, a coordinator of the ministry's actions, and a national focal point for international transport affairs. The Road Transport Administration Department (RTAD) is responsible for vehicle licensing, roadworthiness checking, and vehicle weights and dimensions. MRT supervises Myanma Railways (MR) and Road Transport (RT), which are SEEs. MRT also had a training center. In 2015, the government merged TPD into RTAD.
- The **Ministry of Construction (MOC)** is involved in the development and management of trunk roads, through its sole SEE, Public Works (PW). Public Works was restructured in April 2015 as several entities, including the Department of Highways (DOH) and the Department of Bridges (DOB). The internal structure of these entities was not yet final when this report was fiirst drafted. This report discusses Public Works, but most of discussions are either still valid for the new departments created since, or can be useful in the transition to a new model.

In 2015, Rural roads fall under the responsibility of three other ministries: the Department of Rural Development (DRD), under the Ministry of Agriculture, Livestock and Irrigation; the Ministry of Border Affairs; and the Ministry of General Administration, which supervises township development committees. Township development committees are responsible for roads in small- and medium-sized urban areas. Urban roads in Mandalay, Naypyidaw, and Yangon fall under the responsibility of three city development committees, which have ministry status.

Special committees ensure coordination functions. The most recent is the **Joint Coordination Committee**, created in 2014 to monitor and coordinate the implementation of the National Transport Development Plan. It comprises MOC and MOTC, and its secretariat is with MOTC. Three committees still exist formally, but do not seem active at the central level. The **Central Supervisory Committee for Ensuring Secure and Smooth Transport** used to be a very high-level policymaking body, but it seems to have fallen into disuse after 2011. The **Road and Inland Water Transport Control Committee** is tasked with issuing business licenses (through TPD until 2015, then RTAD), organizing freight transport, and regulating passenger transport, and has the power to set fares under the 1963 Road and Inland Water Transport Law. The **Central Movement Coordination Committee** is tasked with supervising passenger transport services, organizing the transport of state-owned freight, and arranging transport for public events and works. It was headed by MRT, and its secretariat was also with TPD until 2015. Before 2007, it also allocated allowances for subsidized fuel.

Table 1: National Transport Entities under the Ministry of Construction, Ministry of Rail Transportation, and Ministry of Transport (until April 2016)

Entity		Practical Functions	Status	Actual staffing
Ministry of Construction (MOC)				
Public Works (until April 2015) Department of Highways (since April 2015) Department of Bridges (since April 2015)	PW DOH DOB	Manages and develops trunk roads	SEE and/or Budget unit	15,000
Ministry of Rail Transportation (MRT)				
Transport Planning Department (until 2015, then under RTAD)	TPD	Licenses freight and passenger road and/or river transport services, coordinates MRT action, international affairs focal point	Department	690
Road Transport Administration Department	RTAD	Regulates, registers, and inspects road vehicles; collects road taxes; licenses drivers; coordinates road safety	Department	2,710
Road Transport	RT	Provides freight and passenger road transport services and for government	SEE and/or Budget unit	2,940
Myanma Railways	MR	Manages and develops rail infrastructure, delivers rail transport services	SEE and/or Budget unit	20,000
Central Institute of Transport and Communications		Trains MRT staff	Other	
Ministry of Transport (MOT)				
Department of Transport (until 2015)	DOT	Coordinated the National Transport Development Plan (since 2013), coordinates action of MOT entities	Department	
Department of Civil Aviation	DCA	Regulates and operates airports, provides air traffic services, regulates aviation sector, investigates accidents	Department	
Department of Marine Administration	DMA	Licenses and regulates inland and seagoing vessel, inspects vessels, oversight of seamen	Department	
Department of Water Resources and Improvement of Water Systems	DWIR	Surveys, monitors, maintains, and manages river systems for navigation, agriculture, erosion control, and water pollution control	Department	900
Myanma National Airlines (Myanma Airways until 2014)	MA	Provides commercial air transport services. National flag carrier	SEE and/or Autonomous Unit	
Myanma Port Authority	MPA	Regulates and manages ports, also provides some commercial port services	SEE and/or Autonomous Unit	3,200
Inland Water Transport	IWT	Provides passenger and cargo river transport services	SEE and/or Autonomous Unit	3,420
Myanma Shipyards	MS	Builds or repairs seagoing, coastal, and river vessels	SEE and/or Autonomous Unit	
Myanma Five Star Line		Provides commercial sea transport services. National flag carrier	SEE and/or Budget unit	
Myanma Maritime University	MMU	Trains sector human resources	Other	
Institute of Marine Technology	IMT			

SEE = state-owned economic enterprise.

Note: Actual staffing reflects actual available staff, not "sanctioned" staff.

Source: Asian Development Bank estimates, based on Ministry of Construction, Ministry of Rail Transportation, and Ministry of Transport data.

1.2 Decentralized Institutions

Two forms of decentralization coexist in Myanmar. The most common form is deconcentration, under which decision-making and financial or managerial responsibility are vertically decentralized within a ministry or department to a local office. This is generally recognized as a weak type of decentralization, as accountability is to the center. Myanmar also devolves some responsibilities and resources to more or less independent local governments with their own legal status, budgets, and rights. This is a stronger form of decentralization, as accountibility is local.[2]

Deconcentrated offices. Many of the service departments and SEEs are deconcentrated. DOH has offices in all regions and states, districts, and townships, and in some cases, subtownships; it appears to be the most deconcentrated agency. DRD is a new creation (2012). As of 2014, it has 2,000 staff and was present in all state and districts, and had plans to increase staff to 10,000 and open offices in all townships. RTAD (and TPD until 2015) is present in all states and regions; RTAD also has offices in half (35) of the districts. Other large transport entities (MR, DWIR, IWT, MA, MPA) only have offices in areas where they operate. Local offices of national departments or SEEs do not form stand-alone units, but are part of their parent administration, and their staff remain hierarchically under the national government. In the case of DOH and possibly some other central government units, local staff is paid from the regional and/or state budget.

State and/or regional governments. The state or regional minister of transport forms part of the regional executive, which is nominated by the central government among elected members of the regional or state *huttlaw* (parliament). According to the Constitution of Myanmar of 2008, the areas of responsibility of the state and regional *huttlaws* are local roads, water transport infrastructure, and “systematic running of private vehicles” within the state. Regional or state ministers of transport have very few of their own staff. They do not control hierarchically the deconcentrated offices of national departments. They are however able to coordinate or supervise the actions of RTAD through a set of committees which they chair. While the regional or state minister of transport does not coordinate DOH’s actions (or only informally), the regional executive holds responsibility for approving road investments financed under the state or regional budgets.[3]

Coordination Committees. Various local committees parallel national ones. In Yangon region, there is a Yangon Region Secure and Smooth Transport Supervisory Committee (charged with examining transport policies). Under it are the Yangon Region Traffic Rules Enforcement Supervisory Committee (coordinate safety actions) and the Yangon Region Road and Inland Water Transport Board (tasked with issuing licenses). Under the latter is the Yangon Region Movement Coordination Committee. These committees meet only periodically, the Yangon Region Traffic Rules Enforcement Committee seeming the most active one. Another committee, the Yangon Region Central Supervisory Committee for Motor Vehicles and Vessels (Ma-hta-tha Central) has a permanent support structure, with about 70 staff. It is tasked with monitoring, enforcing, and regulating bus lines in the Yangon region.[4] It includes representatives of RTAD, the police, and bus line committees.

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2 See a full discussion in Myanmar Development Resource Institute and The Asia Foundation. 2014. Fiscal Decentralization in Myanmar. Yangon.

3 As the review of the road sector shows, regional or state road budgets in 2014 were larger than national ones, and were used to finance roads both under the responsibility of the national and regional or state governments.

4 The setting differs between regions. In Mandalay, there is a Bus Line Supervisory Committee, which controls and manages bus owners’ associations.

City Development Committees are the local executive and administrative bodies of Yangon, Mandalay, and Naypyidaw. They are set up under the supervision of the national Ministry of Home Affairs. The city development committees have each road and bridge engineering departments, which manage the urban road infrastructure—but not transport services.

Local freight and bus transporters are grouped under **bus supervisory committees, bus line committees**, **and "gates" for freight**. These nongovernmental associations organize, control, and regulate transport services. Membership to a committee seems mandatory for bus operators, while this does not seem to be the case for truckers' "gates."

1.3 Historical Background

The current organization and policy framework in the transport sector has been shaped by the colonial period, the independence period, the Burmese Way to Socialism period (1962–1989), the military regime (1992–2011), and the recent reform waves since 2012.

Colonial Period. The majority of the laws still governing the transport sector come from the colonial legislation. As the Comprehensive Transport Study in 1991 described them, these laws are "outmoded," "outdated," "extremely detailed," "inflexible," and organized by separate modes of transport, so that their complete rewriting has been periodically considered. For instance, the railways are still governed by the Indian Railways Act of 1890. They were for 30 years managed as a private company (Burma Railway); after the lease expired in 1928, the railways were returned to Indian Railways. They were finally separated from Indian Railways in 1937, and a Burma Railways Administration Board was established. The Yangon Port Authority was created in 1908. The Irrawaddy Flotilla and Burmese Steam Navigation was a private company founded in 1865, but it ceased operations during the Second World War. Public Works is a colonial creation of 1888, at that time covering roads and irrigation.

Independence Period (1947–1962). Upon independence, the government nationalized the airways (Union of Burma Airways Company) and the Irrawaddy Flotilla Co. (its name was changed to Inland Water Transport Board), and put the railways under the new Burma Railway Board. The companies were put under closer government control, but retained autonomy. In 1959, the government's defense arm created the City Transport Company and the Burma Five Star Line.

Burmese Way to Socialism Period (1962–1989). In March 1962, the revolutionary council nationalized all aspects of the economy and introduced central planning. In the transport sector, the newly nationalized Road Transport Board, and the Union of Burma Five Star Corporation, the Inland Water Transport Board, the Union of Burma Airways, the port authority, and the Burma Railway Administration Board were put under the direct control of the Ministry of Transport and Communications (MOTC). The main change was the formation of a Communications Planning and Operation Department, under MOTC, through the Road and Inland Water Transport Law and the Movement Coordinating Committee notification of 1963. This department and the committees associated with it centralized all the transport market allocation. The pillars of government control were:

- a fuel rationing and subsidizing system coupled with foreign exchange control, which provided heavily subsidized supplies to SEEs. Private operators had to resort to the black market for allowances beyond their quota,
- a system for allocating freight (especially government freight) to prefer SEEs.

- control of SEE tariff and fares, coupled with nonbusiness accounting rules on capital inputs that did not include all costs, thus keeping prices artificially low. The government also fixed the passenger transport rates, but not the rates for freight.
- an import ban over all vehicles and tight import controls over spare parts,
- a monopoly situation in the railway (through MR), aviation (through MA), and port (through MPA) sectors, as well as for road construction and maintenance (through PW), and
- a licensing system for private operators to control entry and services,

From 1972 to 1976, the government gave all SEEs the title of "corporation" to move them to a more commercial posture, with separate accounts. Government-staffed boards were replaced by management committees. In 1972, MOTC also formed the Waterway Department, taking over the responsibility to maintain the Yangon channels from the Port Authority (which has managed all sea ports since 1968) and water conservation responsibility from the Department of Marine Administration. The construction sector went through successive changes, namely, through the formation of Public Works Corporation (1965), Construction Corporation (1972), and State Economic Organization (1975), but its mandate remained to carry out on a commercial basis construction works for the government, with a monopoly on highway works.

1989–2011 Period. In 1992, the new government split MOTC into three: the Ministry of Communications, MRT, and MOT. The Communications Planning and Operation Department was broken into two: TPD and DOT. TPD took most of the powers of the previous department, but several of them had already become less relevant. The share of freight allocated by the Central Movement Coordination Committee had steadily decreased and became marginal in the 1990s. Operator licenses were issued routinely and refusals were rare. In 1989, all SEEs lost the title of "corporation" to take their current names. This was meant to signal that they should be more market-oriented. Public Works reverted to its earlier name, but kept its status as an SEE. However, in parallel, all SEEs accounts were consolidated into the state fund account, limiting their financial independence. All revenues were passed to the state fund account, so that SEEs had no incentive to increase them or balance their books. With the exception of IWT, MA, MPA, and MS, which retained more autonomy and kept their own accounts, the government decided what investments the SEEs should carry out and financed them through a separate account. The fuel subsidy system saw its importance reduced after the fuel price increases of 2005 and 2007 decreased the gap between subsidized and black market prices, but the rationing system remained in place as late as 2011. During this period, the monopolies of MA, MPA, and Public Works were also reduced, as the government allowed selected companies to carry out highway works and operate "build–operate–transfer" highways and port terminals, and two new air companies were allowed to operate. However, private rail buses were discontinued.

Democratic Reforms Period (from 2011). In 2011, a civilian government was sworn in, in application of the 2008 Constitution of Myanmar. It quickly implemented political and economic liberalization. The constitution created the regions and states and devolved limited powers to the local *huttlaws*. The economic reforms that had the most significant impact on the transport sector were: (i) the liberalization of the foreign exchange and foreign investments in 2012, (ii) the liberalization of fuel importation in 2011 shortly after the privatization of the distribution points in 2010, (iii) the partial liberalization of the importation of vehicles and reduction of import taxes (gradually from 2011 to 2013), and (iv) liberalization of the aviation market. In parallel, the government requested SEEs to reduce their deficit. This led them to raise fares and lose market share. In 2015, the government split Public Works into a Department of Highways, a Department of Bridges and a Department of Housing, merged TPD into RTAD, and disbanded DOT.

In April 2016, a new democratically elected government was sworn in. Its first action was to restructure the Ministries, including creating a Ministry of Transport and Communications, which took over the responsibilities of MOT, MRT, and the Ministry of Communications.

2 Assessment and Objectives for Reform

Key Findings

Transport sector institutions are ill adapted to the new situation. Myanmar's transport institutions have been shaped by the vision that the government should either directly deliver or control transport services and the industry. They are characterized by overlaps, major gaps regarding the responsibility to plan and regulate, and a tendency to preserve old ways rather than innovate. Their fragmentation reduces the government's capacity to formulate and execute policies, and could limit its ability to mobilize sufficient resources and prioritize good investments. Meanwhile, a dynamic private sector is challenging the viability of state-owned transport service operators, while new actors—the parliament, donors, subnational governments—are increasingly driving the agenda.

Government reform attempts have been in the right direction, but more is needed to shape a strong basis for sector development. The thrust of the government's efforts—liberalization of service markets, corporatization of SEEs, decentralization, increased importance of planning—has been in the right direction. However, reforms address only part of entrenched problems, and there is a lack of consistency between subsectors of transport. A more ambitious reform package is needed.

The main objectives of such reform package should be to:

- **scale-up sector resources**, from a historic level of 1%-1.5% of GDP to 3% or 4% of GDP;
- **find a lasting solution to the SEE crisis**, and doing so, clarify their role and that of the government;
- **create the bases for private sector growth**. Regulations and institutions that foster competition, balanced public procurement, and good governance are needed;
- **put technical planning at the heart of decision-making** to ensure that scarce resources serve top priorities and are at a scale and standard appropriate to needs;
- **enable a strong leadership** of the transport sector in the central government;
- **decentralize effectively**. Transport could be a leading sector in decentralization, but matching packages of resources, responsibilities, and administrative capacity are needed.

2.1 The Weight of the Past

A historical legacy of tight government control... Myanmar's transport institutions have been shaped by the vision that the government should either directly deliver or control transport services and the industry. In 1993, SEEs were responsible for three-fourths of the passenger transport market, one-third of the freight market, and most of the road construction business.[5] The transport and construction markets were heavily distorted

[5] ADB. 2016. Myanmar Transport Sector Policy Note: How to Reduce Transport Costs. Manila

as SEE prices bore no resemblance to costs. There was a lively private operator industry, but it was working at the margins of the system, and had to cope with the erratic supply of spare parts and fuel. The policy ended up repressing the demand for transport.

...has been gradually unwound. Each of the pillars of the state control over the transport sector was weakened since the 1990s but, with the exception of foreign currency exchange and fuel, they were not fully abandoned. The movement control committee still exists on paper but has fallen into disuse, as is the case for other historic committees. TPD still has the power to control market entry and rates through the licensing system, but it does not exert it, so that in practice, the passenger and freight transport market is largely free. SEEs that had a monopoly no longer control their market. RT and IWT, which used to enjoy a dominant position, have now only marginal market shares. MR retains a monopoly over rail tarnsport, but the mode's market share is falling rapidly. In 2013, it was estimated that the market share of SEEs was only 15% for passenger, and 7.5% for freight.

The current role of the government in the transport sector does no longer follow clear and consistent criteria. In practice, the government directly delivers some transport services (IWT, MA, MR, RT). It requires some of the SEEs to deliver cheap transport services to remote areas or serve poor communities, but this is based on historical considerations (SEEs are required to keep operating deficit-making services), rather than following a defined strategy. Government still directly subsidizes rail services, particularly in urban areas, but never supported public bus transport, and reduced its support to other SEEs. Government directly finances transport infrastructure and its upkeep (roads, railways, river) from its own budget rather than from user resources, but there are sizeable exceptions—e.g., "build–operate–transfer" highways. What then are the principles guiding government practice? Control over monopoly situations? Prevention of excessive competition? Organization of services that the private sector does not deliver? Ensure a balanced use of all transport modes? In-house delivery when the private sector does not have required skills? These principles have never been clearly defined in a national statement of transport policy.

A remarkable capacity to preserve, but limited capacity modernize. Government transport agencies have been efficient at preserving old or even antique assets (trucks, vessels, rolling stock), significantly expanding the trunk road and rail networks and maintaining them in basic operating condition, even though budgets were small. Outputs have been extensive, but of low quality. Staff quality and culture have been maintained, but skill sets are often basic and not adapted to a commercial context. Methods and work assets have been carefully preserved, but not modernized. For instance, the techniques used for road construction and maintenance are still the same as in 1991, a time when they were already largely outdated—e.g., the use of hand-laid penetration macadam, discontinued in most countries by that time. This is largely a result of international isolation. MR still manufactures in-house most of its spare parts and even some of its rolling stock. Each element of foreign investment and technical assistance received has led to important improvements but not to wide changes. For instance, most of the testing equipment received by PW in the 1980s are still functioning, but the laboratory remains largely as it was back then. Across the entire transport sector, information and data is still filed manually, even though many entities now own computers and a growing number of staff have the right skills. Where computerized data exists, it is often kept by individuals on their own computers because a more centralized data or analysis structure does not exist.

2.2 Institutional Limits

Confusion, overlaps, and gaps. The organization of the transport sector shares to some extent common features with other countries, but this hides anomalies, gaps, and overlaps. Notably:

- **There are often significant differences between the names, objectives, and responsibilities of entities and their practical roles.**[6] The SEE status can be a source of additional confusion. For instance, PW seemed to work both as an SEE and as a service department. Under its service department "hat," PW contracted the SEE PW to deliver works on behalf of the government, but maintained a separate account from the government.
- **There is no agency in charge of or capable of setting strategic directions, coordinating policies, or integrating investments programs.** The new National Transport Development Plan (NTDP) prepared under the Japan International Cooperation Agency technical assistance and the Joint Coordination Committee are a first step to institutionalizing this function.
- **There is a scarcity of reliable data and information on the transport sector**, and no agency actually monitoring transport performance and efficiency.
- **No agency carries out systematic planning of investments**. The NTDP in 2014 marks a new start, but subsector plans have yet to be devised.
- **Some areas of transport are insufficiently managed, while overlaps are significant in others.** There is no agency overseeing or coordinating logistics and multimodal transport, and no agency is in charge of developing inland ports. While TPD issued licenses, DWIR maintains the channels, and DMA registers and regulates the safety of river vessels, there is actually no agency mandated to develop the transport sector. Safety management has long not been proactively coordinated, up to the point that the Department of Highways (DOH) does not have safety guidelines for road designs.
- **No agency conducts or advises on the economic regulation of the transport sector** (e.g., market entry, prices, subsidies). Transport sector regulatory activity is actually very limited.
- **Some residual powers from previous institutional arrangements are apparent anomalies.** This is particularly the case of the committees under MRT.
- There is **much confusion and ambiguity over responsibilities at the local level** between committees, national departments, and regional or city governments.
- **There is no relationship between user charges and spending in the sector**. It is remarkable that road user charges are collected by RTAD, which are then spent by the DOH.[7]
- **There are unnecessary duplications between agencies**. Each ministry maintains its own training centers, and has similar administrative and corporate services, while lacking some skills (legal, economic, information technology).

Integration of policy, regulatory, management, and delivery functions. It is generally good practice to separate the policy, regulatory, and management functions of the government from the delivery of services. Many governments even separate further either policy from management, or management from regulation. These principles have not been followed in many areas of transport in Myanmar:

[6] For instance, the first stated role of Road Transport is "ensuring free competition and preventing the development of monopoly situations," even though it functions as a private transporter. The objective of the Department of Transport was to "formulate policies, and monitor transport costs and efficiency," but none of its stated functions supported this, and some functions were irrelevant (e.g., "monitoring the G.D.P growth rate of the Ministry which estimated by the states" [sic]). The Transport Planning Department did not plan investments. "Statistics" divisions manage equipment.

[7] The 2008 constitution actually allocates vehicle taxes to the region and state governments, but there is no showing that this is already happening.

- Public Works used to be, at the same time, the road sector policymaker, regulator, manager of the highway network, and largest construction industry contractor. Its internal structure did not provide for a clear separation of these functions.
- Myanma Railways conducts all railway sector functions, delivers large civil works, and even runs hospitals.
- The Department of Civil Aviation is the aviation policymaker, regulator, and airport operator.
- The Myanmar Port Authority is both the manager of the Yangon port, and one of its main operators.

This situation has led transport sector agencies to develop strong delivery cultures. They are much less engaged in policymaking, planning and regulation than their foreign peers.

Fragmentation and limits to decision-making ability. The fragmentation of the transport sector extends to the organizational structure of each agency, each of which has too many levels of management, each of which has a large middle management, and long and complex administrative lines. This has made it harder to manage the sector in all areas that require coordination. There are also signs that this fragmentation has weakened the sector's institutional standing. Indeed, major responsibilities traditionally in the hands of transport agencies are either fragmented between them, not carried out, or out of the hands of the sector altogether. For instance, road sector management is shared between DOB, DOH, and RTAD. The planning of large investments or policy changes has been a political, rather than a technical, process, and often prepared in the president's office. Tariff policy setting has long been with the Ministry of Planning and Finance (MOPF). Fuel rates are administered by the ministry of energy. The SEEs have very little control over their management: in practice, control over services, recruitment, strategy, financing, and investments has been with MOPF or with the political management, with very little technical input.

Limited capacity to pilot change. Transport sector entities share very limited policy-making and strategic planning capacity. They notably lack:

- **Instruments for strategic planning and programming** (e.g., policy statements, annual reports, business plans). Long-term plans seem to have had only a limited influence on actual budget allocations.
- **A culture of technical (economic) planning**. Currently, no entity has the staff skills and the information base (as shown by how difficult it had been to gather information on sector finances and network extent for this report). There is no recognized institution in charge of technical planning,[8] and generally, the economic principles underpinning planning are not well understood.
- **An aura of impartiality and technical legitimacy** needed to systematically lead in the definition of sector policies and reforms, and communicate these successfully to the political management and the public.
- **People with entrepreneurial skills**, albeit with some exceptions. People with private experience or with a business-oriented mindset are few, and fewer still are in a position to apply basic business or economic principles. The management of some SEEs interviewed seemed to have only a very basic understanding of how to operate in a commercial context. What is very positive is that agencies' middle management is generally competent, shows great adaptability, and seemingly does not fear change. However, most of the sector staff share a culture of refusing to take the initiative, deferring decisions, and deciding on an ad hoc basis. This situation seems rooted in a high centralization of decision-making and a lack of devolution of powers at all levels of the ministries, coupled with a fear of punishment for taking the initiative. This deficiency in entrepreneurial skills and decision-making is a potentially strong brake on the current reform plans.

8 As, for instance, what the Brazilian Transport Planning Enterprise (GEIPOT) did in Brazil for many years.

2.3 New Situation

In the last years, the context for government action in the transport sector has greatly changed.

A dynamic, largely unregulated, and often low-end private sector. In spite of appearances, Myanmar's regulation of its transport services and the industry has been light, allowing relatively free entry and pricing in the sector. After the lifting of the main constraints on the industry (liberalization of imports, particularly fuel and vehicles), the private transport industry quickly reacted. For instance, as this economic review shows, the trucking fleet doubled between 2012 and 2014, while the price of freight transport on main corridors probably decreased by a third. Some companies offer quality passenger bus transport services, but this is not generally the case. Most transport companies remain very small and none are able to offer modern logistics services or simply cover the entire country. The private sector, with their small wooden vessels, is positioned market, while IWT, with its steel vessels, control the higher end of the market. In the air transport market, an intense competition has resulted with eight transporters on a small market.

In the transport construction industry, a few conglomerates have created road branches which can deliver large civil works (e.g., expressway, Naypyitaw city construction) and even manage road assets ("build–operate–transfer" road contracts). At the local level, there are companies able to carry out small-scale works. Results are however mixed—e.g., the upkeep of "build–operate–transfer" roads by contractors is generally not as good as that of DOH. This finds roots in the low skill base of the private sector, and in the deficiencies of DOH's processes for dealing with the private sector (procurement, contract management, supervision, and technical standards). Also, most road "build–operate–transfer" contracts generate insufficient revenues to finance investments.

A market crisis for transport service SEEs. SEEs involved in providing transport services (IWT, MR, RT, and to a lesser degree, MA) had long been able to keep significant market shares by offering low quality but cheap transport services. They were not able to recoup their costs, but could rely on implicit or explicit subsidies from the government to keep afloat. However, they were unable to finance their modernization. These SEEs have been deeply shaken by the conjunction of an increase in their costs (removal of subsidized access to low cost fuel and foreign exchange, rise in pension costs), a much more dynamic competition, and a new requirement to eliminate operational deficits, which led them to raise their fares. MA was able to take advantage of very fast air market growth by harnessing both government and private sector financing to fund its modernization. However, other SEEs lost market share and have been in the red since. MR doubled its fares between 2010 and 2013, and lost one-third of its traffic. IWT tripled freight fares, and increased passenger fares, so that by 2014, it had lost two-thirds of its freight market, and had stopped most of its long-distance passenger operations. RT was able to keep stable operations but at a low level, and at the cost of chronic deficits. In FY2013, MR's operational ratio was 169%, Road Transport's was 133%, and IWT's was 116%.[9]

A crisis rooted in statutory limits and shareholder failures. With the notable exception of MA, transport service SEEs have not been able to adjust to this new market context because of constraints implied by their status as SEEs, and the lack of support from the government. The SEE status comes with constraints: SEEs cannot freely decide which services to provide, which tariff levels to offer, dispose freely of their assets, or borrow from private banks or accept external equity; they have limited control over which investments to carry

[9] An operational ratio of 1 indicates that revenues balance operational costs. Financial sustainability is obtained at about a ratio of 80% for transport providers.

out; their staff salaries, benefits and management rules follow the public service regulations and not the market. These constraints are really restricting. For instance, after decisions taken by the government, all SEEs saw their staff and, particularly, pension burden increase, and in the case of RT, by up to 10 times between 2010–2014, following government decisions. While MR's rolling stock and tracks were severely outdated, the government required on MR to make about 90% of its investments into nonprofitable lines. The services that RT carries out for the government are priced well below market and cost-recovery levels. This can also be interpreted as a shareholding failure: the government has not been able to appoint business-minded managers, nor give clear objectives, appropriate flexibility, or required equity support. Facing constraints and overreach by government, managers have retreated from taking business decisions.

Altogether, "the organization of the SEEs has confused public sector roles: the role of government as an owner of a company, mindful of profits and sustainability; the role of government as a regulator concerned with safety, user interests, and competition; and the role of government as a policymaker and organizer of public services. Actually, in practice, instead of fulfilling these functions, government has played the role of a direct manager of the companies, and generally done this poorly.

A financial gap and growing mismatch between budgets, plans, and needs. There is only very partial data on transport investments, and figures before 2012 are distorted by market exchange rates. Available data suggests that between 2005–2013, the government has spent on average 1% of Myanmar's GDP on transport investments (Table 2).

In FY2014, spending may increase to 2.5% of GDP as regions and state government have budgeted very large road investments. Drawing from the National Transport Development Plan, the Yangon Transport Master Plan, and estimates from these sector reviews,[10] it is estimated that total transport investment needs to be 3-4% of GDP in the coming 15 years (Table 3 and Figure 1).

10 ADB. 2016. *Myanmar: Transport Sector Policy Note*. Trunk Roads. Manila, ADB. 2016. *Myanmar: Transport Sector Policy Note*. Rural Roads and Access. Manila, ADB. 2016. *Myanmar: Transport Sector Policy Note*. Railways. Manila

Table 2: Transport Sector Revenues, Expenditures, and Investments (MK billion)

	FY1990	FY1995	FY2000	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Capital investments													
- Road (national govt.)	3.0	11.3	35.0	108.3	117.5	122.3	112.8	106.7	181.9	314.7	596.1	510.1	281.9
- Road (regional govt.)													399.9
- Railway	0.4	3.4	2.7	26.1	32.9	43.3	65.5	74.9	120.2	113.4	111.7	118.6	90.1
- Inland Waterway	0.0	0.0	0.0	1.2	1.4	1.4	1.8	1.7	1.8	2.1	2.2	2.4	1.6
Total	3.4	14.8	37.7	135.7	151.9	167.0	180.2	183.3	303.9	430.2	710.0	631.1	773.5
Expenditures (state-owned enterprises)													
- Road Transport	0.3	0.8	1.4	3.5	4.1	7.7	8.7	7.9	8.5	10.6	0.0	0.0	0.0
- Myanmar Railways	0.7	1.9	6.9	25.1	20.5	34.8	45.2	49.3	52.1	59.3	71.5	84.3	105.2
- Inland Water Transport	0.3	0.7	1.7	4.6	5.2	9.3	12.5	13.3	12.5	12.6	10.9	12.7	11.7
Total	1.3	3.4	9.9	33.2	29.8	51.7	66.4	70.4	73.2	82.5	82.5	97.0	116.9
Revenues													
- Road Transport	0.3	0.7	1.4	2.8	3.7	6.8	7.5	6.5	6.0	7.5	8.3	8.3	7.6
- Railways	0.8	2.1	6.3	20.4	22.7	24.9	27.1	28.3	33.0	33.1	51.0	61.7	62.2
- IWT	0.2	0.4	1.3	3.3	3.9	4.8	6.4	6.6	6.5	7.5	11.0	11.0	10.1
- MRT licensing revenues	0.0	0.1	1.2	1.7	1.8	1.9	2.3	3.5	7.8	16.3	14.3	286.6	268.7
Total	1.5	3.3	10.2	28.2	32.2	38.4	43.3	45.0	53.4	64.5	84.6	367.5	348.5

Govt. = government, IWT = Inland Water Transport, MRT = Ministry of Rail Transportation.

Totals may vary due to rounding.

Source: Public Works and Ministry of National Planning and Economic Development.

Table 3: Transport Sector Financial Needs ($ million)

Transport Investment Needs	2005–2009	2010–2014	2015–2019	2020–2024	2025–2029
Trunk Road Upgrading	900	2,600	2,800	3,700	4,900
Trunk Road Maintenance and Rehabilitation	100	900	1,200	2,300	2,000
Rural Roads		300	2,000	3,000	4,000
Railway Upgrading	200	600	1,800	1,600	1,400
Railway – Other Investments			600	800	1,100
Urban Transport – Yangon			2,000	4,000	4,200
Urban Transport - Other Cities			1,000	2,000	2,100
River Improvements			200	200	200
Ports and Airports			1,400	2,800	4,300
Total Transport Investments	1,200	4,400	13,000	20,400	24,200
Myanmar GDP ($ million)	39,100	53,400	75,100	103,200	138,100
% of GDP	0.6%	1.6%	3.5%	4.0%	3.5%

GDP = gross domestic product.

Sources: Asian Development Bank estimates of trunk road maintenance and rehabilitation, rural roads, and urban transport in cities other than Yangon. Figures for trunk road upgrading, railway upgrading, river improvements, and ports and air ports are based on Japan International Cooperation Agency. 2014. *The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar*. Naypyitaw. Figures for Urban Transport in Yangon are based on Japan International Cooperation Agency. 2013. *The Project for the Strategic Urban Development Plan of the Greater Yangon*. Final Report. Yangon.

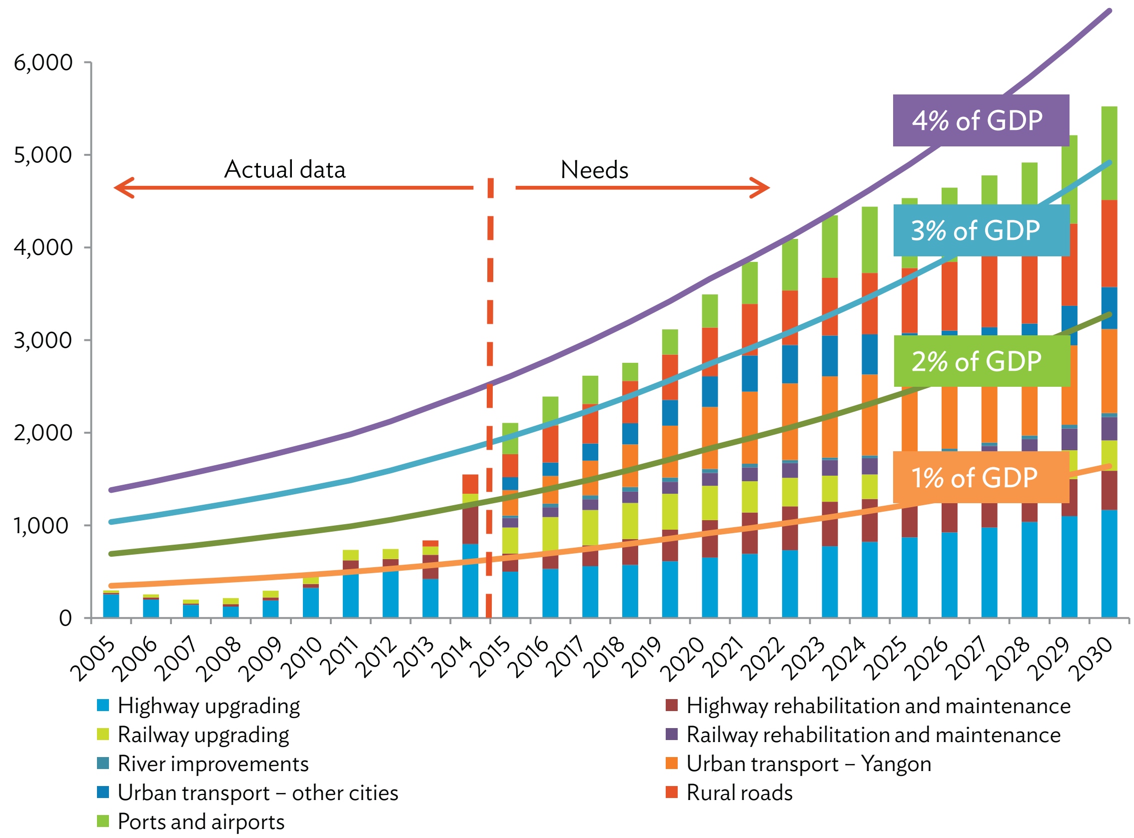
While the 2014 increase in spending is very positive, most of new resources are not directed toward identified needs.[11] This is because investment plans have not yet had an impact on central budget allocations, and also because the new resources are available at the region or state level, which (a) are not bound by central government plans, and (b) have limited areas of responsibility over infrastructure. Actually, central government investments *decreased* between FY2013 and FY2014.

New actors increasingly influencing policymaking in transport because of the gap left by sector ministries. Parliament has emerged as an active policymaker in all sectors since 2012.[12] While it questions the executive branch of the government over the choice of investments, so far it has only marginally influenced government propositions. There is no mechanism that ensures that this situation remains the same in the future. Foreign experiences suggest that Parliamentary influence could be large in federal countries. For example, in Brazil, up to 95% of road upgrading investments have been chosen by Parliament instead of the ministry.[13] Pork barrel over transport infrastructure was similarly common in Mexico until 2005.[14]

A move toward decentralization or federalization requires a rethink of organizations, operational models, and the fiscal framework. Central departments have so far responded to decentralization with minimal changes, creating a confused situation. For instance, in the case of the Department of Highways (i) DOH local staff is appointed by the central government and under its hierarchical control, but is paid by the state or regional governments; (ii) local road network upgrade and maintenance plans are prepared by DOH local staff, under the control

[11] See ADB. 2015. *Myanmar: Transport Sector Policy Note.* Trunk Roads. Manila.
[12] International Crisis Group. 2013. Not a Rubber Stamp: Myanmar's Legislature in a Time of Transition. Brussels.
[13] World Bank. 2006. Brazil: Improving Fiscal Circumstances for Growth. Washington, DC.
[14] World Bank. 2005. Mexico Infrastructure Public Expenditures Review. Washington, DC.

Figure 1: Historic Transport Investments and Future Needs



GDP = gross domestic product.

Sources: Asian Development Bank estimates of trunk road maintenance and rehabilitation, rural roads, and urban transport in cities other than Yangon. Figures for trunk road upgrading, railway upgrading, river improvements, andports and air ports are based on Japan International Cooperation Agency. 2014. *The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar*. Naypyitaw. Figures for Urban Transport in Yangon are based on Japan International Cooperation Agency. 2013. *The Project for the Strategic Urban Development Plan of the Greater Yangon*. Final Report. Yangon.

of DOH headquarters, but reviewed by local governments, and approved by local parliaments; and (iii) the regional and state road network is owned by the central government, but management responsibility lies with local governments.

This arrangement has worked so far, but seems difficult to maintain in the long-run, especially as decentralization is expected to progress further. Should the country become a federal state, this status quo would no longer function. For instance, political discussions could very possibly lead to the transfer of local DOH offices to local governments, in which case only the headquarters of DOH and its special units would remain with MOC. Among other sector agencies, RTAD seems the most likely to be decentralized. In both cases, there would be a need for a careful delimitation of the responsibilities of each level of government. What remains at the central level would need to develop new forms of influence or control (e.g., through regulation, financial incentives, approval of plans prepared by lower levels of government), which seem very far from the current operational models in use.

Organizational challenges compound with fiscal decentralization ones. Since 2012, the government has relied more on block grants and development funds instead of taxes, sector grants, or transfers of earmarked resources, to finance regional and/or state governments. The central government's resources have decreased and become insufficient to finance even national interest projects, so that local governments had to cofinance the projects on an ad hoc basis.[15] This situation does not guarantee that national interests will be protected and that spending will be allocated efficiently. A more lasting framework would rely on earmarked resources; a sector-specific funds transfer mechanism possibly tied to target planning, design, and quality standards; more systematic cost-sharing arrangements; and an alignment of interests, responsibilities and resources.[16]

The existing stage of decentralization has also led to conflicts between subnational levels of governments. For instance, in Yangon, the city government has responsibility over the road infrastructure, including access to ports and railways; the regional government organizes road and river services; and the central government departments organize national road, railway, and port services. Each of these levels of government make decisions affecting other stakeholders, often after too little or any concertation.

Promising Reform Outlines

The government in 2014 outlined promising paths for sector reform, and instructed each ministry to prepare their implementation. These were:

- corporatizing state-owned enterprises under MOT, starting with Myanma Airways, with privatization an option after stabilizing the corporate structure and establishing a viable market share;
- transforming Public Works into a government department exclusively focused on highways after corporatizing its construction activities;
- restructuring Myanma Railways to make it more autonomous, commercially oriented and able to attract private investments;
- reforming the Myanmar Port Authority as a self-sustaining corporatized entity;
- refocusing all ministries as "regulators";
- exploring all options to increase private investment in the transport sector, through infrastructure concessions or joint ventures with an SEE (e.g., to develop land assets); and
- generalizing private sector procurement of goods or works until now delivered by the government, including road works and some railway markets.

These directions are sound and generally in line with international good practices. In practice, sector ministries have been struggling to implement them. The next sections are contributions to this reform agenda and subsequent initiatives impulsed by the new government that took office in April 2016.

[15] For instance, central and regional and/or state budgets have been used to cofinance national road construction and maintenance. There is much variability in cost-sharing ratios between regions. During implementation, it was observed that resources for road maintenance are pooled by DOH staff without clear assignment.

[16] This issue of fiscal decentralization in the road sector is analyzed in ADB. 2016. *Myanmar Transport Sector Policy Note: Trunk Roads.* Manila.

2.4 Proposed Objectives for Transport Sector Reforms

The obstacles identified—the shortcoming of the legacy, the low institutional standing to build from, and the new challenges—should not be addressed individually. Reform efforts should be prioritized under coherent objectives. The measures proposed in this report tend toward:

- **Scaling-up financing resources** to allow the sector to be a key engine of economic growth. An objective to triple resources as a share of GDP (e.g., from 1%–1.5% to 3%–4%) should be considered.
- **Finding a lasting solution to the SEE crisis**, and in doing so, clarify the role of SEEs and that of the government. For SEEs bound to remain within the public sector, the idea is to consolidate their finances, give them clear objectives, and increase their autonomy. For those destined for privatization, the intent is to help them stand on their own, or prepare for liquidation.
- **Creating the bases for private sector growth**. The basic tenets of market-delivered transport services and industry are considered: transparent and predictable regulations, competitive markets and balanced contracts with the government, effective regulation by the government, and good governance.
- **Putting technical planning at the heart of decision-making** to ensure that scarce transport resources serve top priorities and are at a scale and standard appropriate to their needs. Solutions consider new institutions and processes for planning; the need to cultivate staff with faith in objective policymaking, economic analysis, and public good; and the importance of statistical information for policymaking.
- **Enabling a strong leadership for the transport sector in the union government**. Achieving for the transport sector in the union government seems a necessary condition to effectively implement plans and carry out reforms. The solutions put forward seek to eliminate overlaps, clarify missions, and improve coordination. They also touch staff and management models.
- **Decentralizing effectively**. It is considered that transport could be a leading sector for decentralization. However, decentralization needs to be well planned, matching responsibility, capacity, and resources. The union government needs to keep sufficient levers to ensure national interests are preserved in the new setting.

3 Guiding Principles for Transport Policy

Key Findings and Suggestions

A New Transport Sector Policy Statement. The government could clearly express its commitment to market-oriented reforms in the transport sector, and give its interpretation of what this implies. This document, to be issued at the highest level after broad consultations, would guide future reforms. Its principles are as follows:

Transport services and works should be delivered by a private sector that is regulated but generally free of government control. The government should further liberalize the transport service market. It should aim to privatize, after a transition period, all SEEs delivering transport services and construction works. Infrastructure managers should remain public, but operational functions (construction, maintenance, operation) should be privatized whenever possible.

Transport SEEs should be autonomous and managed on a commercial basis. SEEs should become corporations under the control of an independent board, and use commercial accounting. They should have business plans. Infrastructure SEEs should enter into performance contracts with the Ministry of Transport and Communications. The Ministry of Finance should be the only overseer of "service" SEEs.

Obligations and responsibilities borne by an SEE to ensure public services should be mandated by law, regulation, or contract and the costs compensated in a transparent manner. The government should review with Myanma Railways, and potentially Inland Water Transport, Myanmar National Airlines, Myanmar Port Authority, and Road Transport, which services are unviable but needed and assess the costs of such public service obligations.

Users should pay for their long-term marginal costs. Pricing between modes should enable fair competition and efficient use of infrastructure. Railway passenger tariffs should be aligned with long-term costs when it becomes possible to do so. The road user charging system should be restructured, involving the introduction of a fuel tax.

The management of transport infrastructure should be performance-driven. Infrastructure managers should receive clear targets be granted appropriate autonomy, and be accountable for results.

Regulation and contracts with the private sector should be clear, justified, foreseeable, nondiscretionary, and enforced. Competitive procurement should become a norm. The government could launch a systematic review and overhaul of all **"legacy"** regulations.

Transport policies and investment decisions should be informed by a systematic consideration of objective economic and social returns. A law could mandate a project preparation process, including review of economic feasibility by a common committee, before a project can be included in the medium-term transport investment program.

Consultations and participation of stakeholders in policymaking should be pursued. A National Transport Council could be created as a consultative body.

Local needs should be managed by local governments. Transport services, vehicle and traffic management, local ports, and airports could be fully decentralized. Responsibility for local roads and railways could be devolved but management should temporarily remain unified.

Policy Development Status

The National Transport Development Plan has defined new policies for the transport sector as shown in the box below. This high-level statement defines comprehensive and generally consensual objectives. Its emphasis on a multimodal approach to transport is an improvement over the previous body of policies.[17] Reformers and managers would, however, need complementary guidance over the principles and strategies to translate these objectives into reforms. In their absence, the reach of reform attempts is likely to remain limited, and the old processes and ways of thinking—often inherited from the former socialist regime or even colonization—may still be followed.

National Transport Development Master Plan—Updated Transport Policies

(1) Better Planning and Coordination

- Prepare and periodically update the transport statistics for better planning work;
- Establish explicit and systematic coordination mechanisms among transport stakeholders and further strengthen these to achieve higher investment efficiency;
- Inform Myanmar's citizens and international societies of future transport development plans and corresponding actions to encourage the private sector's investment and attract investors more widely;
- Enable community and/or public participation in transport planning and project design, as well as in environmental and social impact assessments; and
- Strengthen and increase human resources in the transport planning and administration sector to monitor, review, and update integrated transport policies, strategies, and corresponding projects and actions needed to meet changing domestic and international transport needs.

(2) Infrastructure Development

- Maintain and improve the existing transport infrastructure, and to extend them to fully support increasing economic activities and meet growing public and social transport needs;
- Maximize the use of transport capabilities in the road, rail, air, maritime, and inland waterway sectors to save costs in the transport infrastructure sector and achieve higher investment efficiencies;
- Strengthen connectivity along the designated development corridors and contribute to urban and regional development along the corridors.
- Ensure connectivity of higher capacity and faster speeds between major transport hubs and growth centers, providing robust transport infrastructure and reliable and cost-effective services.
- Upgrade trunk transport infrastructure and services to international standards, and conforming (ASEAN) transport agreements;
- Develop integrated domestic and international transportation networks to facilitate seamless multimodal transport services; and
- Ensure smooth and secured rural and cross-border transport systems to help develop designated border cities and rural regions.

[17] A full account of them can be found in the National Transport Development Plan.

(3) Better Environment, Safety, and Security

- Encourage the use of environmentally friendly transport systems (e.g., less noise, less vibration, less emission gases, and more fuel-efficient), especially in built-up areas, including the progressive use of modern fuel-efficient (low carbon) technologies in the transport industry;
- Improve traffic safety significantly and reduce the growing number of traffic accidents on roads as soon as possible;
- Raise awareness in the population of the need to achieve environmentally friendly and safer transport behaviors;
- Upgrade the level of safety and security in transporting fuels and other hazardous goods along designated corridors;
- Develop all-weather and natural disaster preventive land transportation by programmed upgrading and maintenance of existing railway, road, bridge, and drainage structures;
- Improve the level of security in the transport sector to ensure cross-border trade and other economic activities with neighboring countries; and
- Monitor and enforce national standards for security, safety, and integrated emergency planning for all transport modes and operations.

(4) Institutional and Regulatory Development

- To clearly define the role of each transport-related agency in terms of assets (land and infrastructure) ownership, planning, development, operation, and maintenance;
- To remove barriers and update regulations and/or customs to international standards to enhance private sector's investment in transport infrastructure and service;
- To plan and define the role of the private sector in investing, operating, and maintaining transport infrastructure;
- To provide accountable and fair investment opportunities for domestic and international investors in the transport industry by updating necessary regulatory frameworks (e.g., public–private partnership (PPP) law, etc.);
- To improve efficiency of state-owned enterprise by reforming organizational structure and by introducing PPPs;
- To improve the knowledge and skills of civil servants and further increase human resources in transport planning, administration, and management to achieve higher levels of transport system development; and
- To adhere to international conventions, acts, laws, rules, and regulations with respect to the transport sector.

(5) Reasonable transport pricing and secured budgeting

- To implement a "market-oriented mechanism" that provides transport infrastructure and services, and further enhances efficiencies in the transport business and service;
- To apply a "beneficiary pay principle" to the transport market and industry;
- To apply "affordable pricing" to improve transport accessibility for all citizens; and
- To secure the needed funds in the annual budget for transport infrastructure development.

Source: Japan International Cooperation Agency. 2014. *The Survey Program for the National Transport Development Plan in the Republic of the Union of Myanmar*. Naypyitaw.

This section sets policy principles that could be followed in future reforms. These principles reflect models of government intervention in the transport sector that are common in other countries. They build upon the proposals put forward in the 1993 Comprehensive Transport Study. Similarly, they could be translated into a second government policy statement in the transport sector. While the National Transport Development Plan gives the objectives of government action in the transport sector, this new statement would define its modalities.

A new **Transport Sector Policy Statement** would clarify:

- the respective roles of the public and private sector (principle 1),
- the governance of SEEs (principles 2 and 3),
- the pricing policy (principle 4),
- the principles of infrastructure management (principle 5),
- the principles behind the regulation and contracts with the private sector (principle 6),
- guidelines for planning investments (principle 7),
- the role of transport sector stakeholders (principle 8), and
- intended distribution of responsibility between national and subnational levels (principle 9).

Such statement could announce intended steps to make SEEs more market-oriented, to reform user charges, to create new institutions, and to restructure the organizational framework. It could also announce a strategy for a legal overhaul, including components of new legislation and regulations.

3.1 Role of the Public and Private Sector

PRINCIPLE 1: Transport services and works should be delivered by a private sector that is regulated but free of generally free of government control.

Government action should focus on policy, planning, and regulation in the public interest. It can orient demand when markets are not functioning, e.g., by ensuring fair pricing. It should also take a lead in coordinating and allocating resources for investments and maintenance in infrastructure networks. However, market control and use of SEEs should be exceptional and temporary.

Notes

In a market economy, the role of the government is to provide an environment where free competition can develop and safety is ensured. Price and market control are unnecessary tools, as competition is generally expected to bring down costs and match services in line with demand. Rationale for government action arises where markets are not competitive (controlled by monopolies and cartels), where there are externalities (protection of the environment), and where markets are imperfect (consumer norms, safety certification).

Inter-urban transport services is an area where government control can be limited to regulation: setting standards (safety, environmental management, consumer protection), and monitoring performance and competitiveness (potentially leading to antimonopoly or cartel actions). The government should also use taxes to finance infrastructure and cover external costs. For urban services, government generally has to take the role of organizer of the services. Government intervention can be either light (e.g., licensing free transporters competing on the market) or heavy (e.g., organizing competition for the market).

State-owned transport enterprises are not a normal tool of government action in a market economy. They can be adopted as a transitory measure, e.g., where the government wants to take an active role in developing the industry in a given direction. However, large SEEs can also discourage private investments. The government should look for substitutes and exit strategies. Where their role can be equally or better performed by the private sector, they should be privatized.

The legal and regulatory framework should ensure a level playing field between SEEs and the private sector, and the neutrality of the regulation. Too-large state-owned enterprises in a sector should be subject to antimonopoly regulation—they may need to be broken up if they distort the market.

Railways are a special case. They mix an infrastructure network—the management of which is a natural monopoly—with services, where there can be competition but scale economies are large. Several regimes exist worldwide: regulated monopoly, separation of infrastructure from services, with competition on or for the market. Their common objective is to ensure that railway transport services are carried out as closely as possible to what a free market would produce.

Current Status

As the share of SEEs in services declined, transport services are increasingly delivered by the private sector. However, transport ministries still manage the railways, the largest airline, the largest river transport service provider, the largest construction company (the construction units of the former Public Works), and the largest road transport company (Road Transport).

The regulatory regime for road and river transport services still formally takes the format of a business license for delivering predefined point-to-point services. Under the 1963 Road and Inland Water Transport Law, the delivery of this license requires the recommendation of the local transport coordination committee, the endorsement of the regional government, and for buses, a separate permit to serve the line. This system seems vulnerable to discretion by local authorities to regionalism (since licenses are local), and leaves open the possibility of market control over rates and quantities of licenses.

Suggestions

The **ongoing SEE reform** follows Principle 1 by seeking to corporatize the SEEs, starting with those under under the former MOT. It should therefore be pursued, and extended to Myanma Railways, MOC construction units, and Road Transport.

IWT, Myanma Airways, Myanma Five Star Line, MOC's construction units, and Road Transport provide commercial services that can be delivered by the private sector. The rationale for keeping them state-owned should be reviewed periodically, and **privatization** should be considered when it is financially profitable for the government to do so.

Some services currently provided by the government and its SEEs could be privatized or commercially procured, without changing the status of the parent SEE. This could concern a large range of activities, including:

- **in the road sector**—road periodic maintenance, routine maintenance, equipment management, design, supervision;
- **in the railway sector**—staff healthcare and other social functions, rolling stock and/or traction provision and maintenance, wagon leasing, track works and maintenance, power and telecommunications, building and land management, station operations, etc., and the railway freight market could be opened to private shippers in the medium-term;
- **in the port sector** port operations on terminals managed by MPA; and
- **in river transport** dredging, and river bank works.

To provide a level-playing field, **companies should be registered under the companies law** and special statuses abandoned. They should all pay taxes. They should also face competitive conditions regarding access to finance, and not receive an implicit guarantee from the government.

The licensing system inherited from the 1963 Road and Inland Water Transport Law could be replaced by an **authorization system for freight**. Under such system, RTAD would maintain a registry of transporters, define conditions of access to the transport profession, and monitor their application. Authorizations would be valid nationwide. The main difference with the current system is that market access would legally become a right granted to anyone who meets minimum conditions, instead of being a privilege awarded by RTAD. Liberalization could be later extended to national passenger transport services (between two states or regions).

3.2 Governance of State-owned Economic Enterprises

PRINCIPLE 2: Transport SEEs should be autonomous and managed on commercial principles.

Those that operate in competitive markets should be driven by profits. They should be fully financially sustainable.

Those that operate in monopoly or noncompetitive environments should be driven by efficiency considerations. They should recover from users their operating costs at least.

Notes

The corporate nature of the SEEs means that they should focus on the delivery of their objectives, which are commercial. This requires the government to define its objectives well (this is not the task of the SEE), avoid changing them too often, and allow full autonomy to the managers delivering these objectives. Government's involvement should be indirect. The SEE management board should be the only governance mechanism for conveying government decisions to the company. The government should limit itself to strategic or policy issues, and abstain from day-to-day management. The manager of the company and the state as an owner should have in mind the financial viability of the company, which is a condition for the long-term achievement of its goals.

SEEs in competitive markets (IWT, Myanma Five Star Lines, Myanma Railways, MOC construction units, and Road Transport) should behave as their private competitors do. Their revenues should cover their operational and their financial costs—typically using a notional cost of government equity. Rates should therefore be fully free of government control, except in monopoly cases. The state should seek to increase the value of the company and let it grow. Should the government not have the means to add equity when necessary, it should allow the company to look for private investors. In these companies, the role of the government should limit itself to that of a strategic investor.

For SEEs in monopoly situations (airports, MPA, and MR), management freedom can be subject to public service constraints. However, even then, the company should retain sufficient autonomy, and seek to preserve its fundamental interests. User revenues should represent a significant share of revenues, a minimum being the recovery of operating costs.[18]

This principle imposes a separation of governance from delivery in the government, which is required to avoid conflicts of interests.

Current Status

Most SEEs are not yet independent and are not independently viable. Only one SEE is evolving this direction—Myanma Airways, aided by strong international competition. This is not the case for IWT, Myanma Railways, and Road Transport. These companies are not sustainable. Passenger services do not even cover direct costs and efficiency is not considered in even the largest investment decisions. Most of Myanma Railways' investments have been for unprofitable lines.

Suggestions

The reform of governance of the SEEs will require **a change in their status**, preferably toward full corporatization under the Companies' law. The companies' charters should give them standard corporate governance, under a management board. They should enshrine the principle of autonomy of decision-making and single responsibility of the board. The composition of the board of directors should include sufficient external people with business skills. One of their functions would be to ensure that the companies' business interests and autonomy are respected.

All companies should prepare business plans. It would be an opportunity to discuss with the ministry of finance the companies' financial policy: target rate of return, dividend policy, and repayment of capital debt.

Myanma Port Authority and Myanma Railways, which operate as natural monopolies, could also prepare with their supervising ministry a **performance contract**. This document would set the companies' target service and productivity levels, and the government's financial commitments toward the companies.

All companies should prepare their transition to **commercial accounting**.

[18] In economic terms, these are the long-term marginal costs. Pricing below these costs can be exceptionally considered when competing modes of transport are *underpriced*—this is typically the case in urban areas for rail transport.

To clarify the role of the government, the **representation of the government on the board** of all SEEs acting in a commercial environment could be transferred to the Ministry of Planning and Finance, or any other ministry designated to supervise all government's SEEs. Oversight of Myanma Railways, Myanma Port Authority, and probably also the airports could become a shared responsibility between the Ministry of Transport and Communications and the Ministry of Finance.

PRINCIPLE 3: Obligations and responsibilities borne by an SEE to ensure public services should be mandated by law, regulation, or contract and the costs compensated in a transparent manner.

Notes

Companies should not be obliged to take engagements that would be contrary to their own interest without compensation. This applies to assets, inherited liabilities, public service constraints, and obligations.

- If the government wishes an SEE to provide transport services that are not financially viable (e.g., transport to remote areas), or at less than their cost (e.g., discount fares for the elderly or the military), the company should be compensated exactly for its losses. The agreement forms a public service obligation (PSO).
- The government should cover as a capital grant the nonrecoverable portion of any infrastructure investments (e.g., secondary rail lines) that it mandates an SEE to carry out.
- The company should have the right to dispose of its surplus assets or receive payment from the government for their upkeep.
- In each case, there should be a legal provision or a contract between the government and the company—not a simple management decision. The burden of the proof should lie on the government, not the autonomous company.
- The government should take over or finance any excessive inherited pension, staff costs, or debt liabilities that go beyond what a private operator would assume.

In the transport sector, the government organizes the delivery of transport services that the free market will not spontaneously deliver, but are socially desirable. Public service obligations do not imply delivery by a monopoly SEE. The transport authority can organize an auction for subsidies, under which the winning company operates the services for a specified period, a specified fare, or a specified subsidy.

Current Status

In practice, the government requires IWT, Myanma Railways, and for some routes, Myanmar National Airlines, to deliver loss-making services, but these companies are not directly compensated. Over half of Myanma Railways' rail network has very low traffic and is unlikely to be financially viable. PSO contracts are not used in Myanmar.

All transport SEEs have large and growing pension burdens (e.g., IWT, Myanma Railways, and Road Transport), and some have large debts (IWT). Myanmar National Airlines was able to negotiate an arrangement where the Ministry of Planning and Finance takes over its past debt and pensions.

Suggestions

It would be useful to enshrine in the charter of infrastructure SEEs (airports, Myanma Port Authority, and Myanma Railways) that **SEEs should not invest their own resources or take over engagements that would return less than their cost of capital**.

All companies should prepare **a registry of assets**. They should identify **excess assets not required for business needs**. Myanma Railways should review all its services and lines to identify those that are profitable and those that are not. Companies should also list all public service obligations bearing on them, and identify their costs. These lists and costs would be a base for discussion with the Ministry of Finance and supervising ministry over future PSO agreements. The need for each service should be periodically reviewed.

The Ministry of Planning and Finance should issue general guidance over its policy regarding the **treatment of inherited pension and debt**. Companies should also review their staffing level in view of their business plans; downsizing costs should likely be covered by the Ministry of Finance.

A new transport law should be prepared to give **a framework for PSOs**.

Drawing from this framework, the government should enter into a PSO with Myanma Railways (potentially also IWT and RT) to **explicitly fund the subsidies** needed to deliver unviable public services, and excess assets or debt. Myanma Railways could then aim to become financially sustainable.

3.3 Pricing Policy

PRINCIPLE 4: Users should pay for their long-term marginal costs. Pricing between modes should enable fair competition and efficient use of infrastructure.

Notes

Transport pricing should be fair and efficient. Optimal economic results are achieved when users pay for the incremental costs they cause. Departures from this principle—either by underpricing or overpricing—come at a cost to society. Transport prices should be in line with costs so that users consume just what they need. All modes of transport should be priced consistently, so that users have incentives to use the most efficient ones. For transport SEEs, a price that covers costs is also a condition for financial independence.

In competitive markets, users pay exactly for the costs incurred by the transport providers, which is efficient. However, they can cause externalities (accidents, pollution, and congestion), which need to be internalized, typically through taxes (e.g., fuel tax) or control measures (e.g., vehicle license quotas).

In monopoly situations (e.g., rail services, port, or airport operations), the SEE should aim to cover long-term running costs. This includes operational and financial costs. This pricing is efficient and also ensures the long-term sustainability of the SEE. For large lump-sum investments (e.g., a new railway line or a new expressway), this pricing may be insufficient to cover financial investments costs. In that case, the government may choose either to subsidize the investment (e.g., tax financing), or to overcharge users above their direct costs in the least distorting manner.

Current Status

This area has much improved but large gaps remain. The situation was that of general underpricing coupled with quantitative control. The removal of fuel subsidies and the policy to raise fares to limit the deficit of SEEs has reduced distortions. However, revenues raised from road user charges remain far from covering all externalities, particularly in urban areas. Myanma Railways also does not yet cover its full costs, particularly for passenger transport. Deprived of resources for maintenance and renewal, MR operates at a very low productivity level.

Suggestions

The government should align rail fares with long-term costs after making the minimum investments in rail modernization needed to restore the railways' natural competitiveness against road or river transport.

Road user charges should be restructured. The thematic note on road user charges proposes introducing a general fuel tax, a heavy vehicle license fee, a restructuring of road tolls, and a gradual differentiation of the vehicle license fee by area.[19]

PRINCIPLE 5: The management of transport infrastructure should be performance-driven. The entities managing the infrastructure should be reasonably autonomous, accountable for their delivery of results, and transparent. Competitive open procurement should be the norm.

Notes

The advantages of commercial management and competition should be pursued even in areas that are natural monopolies, such as for the management of road, rail, river, port, and airport infrastructure. An additional requirement for the public sector is that of transparency and good governance. This means that even when a government agency manages the infrastructure,

- the agency should receive clear and achievable objectives and report results, which can take the form of annual or medium-term performance plans and performance reports;
- its management should have sufficient autonomy to make decisions on how to achieve these objectives, and be held accountable for results;
- whenever possible, goods and services should be delivered by the private sector rather than in-house (unless the private sector does not have the skills or would not result in more cost-effective services), under open tender processes designed to achieve the highest value for money; and
- transparency should be the norm, concerning plans, policies and statements of objectives, performance plans and reports, spending and results, and procurement contracts and payments.

[19] ADB. 2015. *Myanmar: Transport Sector Policy Note.* Review of Road User Charges. Manila.

Current Status

This is generally not the case. Myanma Railways maintains a set of performance indicators since at least 1988, but this is not public information, and it is not clear if the information is used for management purposes. Information generated by each entity is partial and insufficient to enable performance-based management.

The objectives of most transport agencies are not clearly defined and not reported.

Until recently, the procurement norm has been to deliver goods and services in-house, unless there are insufficient skills or equipment available. Public procurement is not transparent and competitive.

Suggestions

All sector agencies could identify a **set of performance indicators** that reflect their objectives and performance, and start measuring them. They could also prepare annual reports that would state their achievements during the past year and objectives for the next 1, 3, or 5 years. These reports could be made public.

Open competitive procurement should be made the norm and deviations the exception. Most countries use a single public procurement law that covers all sectors. Until Myanmar has one, transport ministries could update their own procurement guidelines. Transport entities that are delivering in-house commercial goods and services (see list in Principle 1) should prepare plans for outsourcing them in the medium term.

3.4 Private Sector Regulations and Contracts

PRINCIPLE 6: Laws, regulations, and contracts with the private sector should be clear, justified, foreseeable, nondiscretionary, and enforced.

Notes

This principle calls for establishing quality regulation and rule of law in the transport sector.

- Transport regulations should serve identified goals, be effective, and cost less than their benefits.
- They should be clear and simple for users, and easily accessible.
- They should be consistent, internally and across all levels of the government, and when possible aligned with international standards.
- They should be always enforceable and enforced.
- They should be periodically reviewed.
- Contracts with the private sector should be balanced; opportunities for arbitrary behavior and renegotiations should be minimized.
- Institutions and regulatory processes should be transparent, nondiscriminatory, and show high degrees of integrity.

Applying this principle leads to better value for users. The principle also seeks to decrease of "regulatory" costs for businesses, which can be very large for long-term infrastructure concession contracts.

Current Status

Regulation of services is reasonably clear. There are, however, gray areas where regulation is nonexistent (e.g., railway safety) or not enforced (e.g., rural transport services), and there is much scope for discretionary behavior by local authorities. Regulations for road and river transport services have not been reviewed since 1963. It is generally difficult to find information.

Taking the example of the road sector, MOC's contracts with the private sector are not awarded transparently, their enforcement is weak (much renegotiation) and the government often behaves arbitrarily (it changes contract terms) based on its understanding of what is "fair."

Suggestions

The government could launch **a systematic review and update of transport sector rules and regulations**, potentially leading to their compilation into a common code. The review could be made transparent, i.e., announcing the review, publishing white papers, calling for contributions, etc.

MOC could adapt the well-established **International Federation of Consulting Engineers, (FIDIC) conditions of contract** and model bidding documents for construction works. The FIDIC defines a clear regime of relations between the contractor, the engineer, and the owner of the works. For highway "build–operate–transfer" concessions, MOC could adopt good models in use in other countries. It could develop clear guidance and processes on how to deal with changes in the investment requirements.[20]

The task of reviewing the enforcement of contractual rules, processes, and regulations could be given to **internal auditors and inspectors** in each ministry.

To improve regulatory quality, many countries have chosen to create **an independent transport regulator**, whose mission is to protect users' interests. Myanmar could follow this path. The areas subject to regulation could include: road and river transport services, railway safety, public service obligations, and infrastructure concessions.

3.5 Decision-Making Processes

PRINCIPLE 7: Transport policies and investment decisions should be informed by a systematic consideration of objective economic and social returns.

[20] Further details in ADB. 2015. *Myanmar: Transport Sector Policy Note.* Trunk Roads. Manila.

Notes

The transport system should satisfy user needs in the most advantageous economic, social, and environmental conditions for society. Government policies should take into consideration the full costs and benefits generated. To obtain the highest impacts from scarce resources: (i) investment designs should be optimized to meet demand at the lowest cost, and (ii) resources should be allocated in relation to those investments that have the highest returns.

Implementing this principle requires the following:

- Information on costs and benefits must be available to decision-makers when they take policy, investment planning, and budget programming decisions. Many countries have made the process of preparing information and appraising projects a legal requirement for project approval. Some have made it a policy to prioritize investments in projects with the highest returns.
- Information on investments must be consistent and comparable between projects and modes of transport. This requires using common norms on what, when, and how to appraise. Often, this is complemented by a review process (to ensure objectivity), and postfactor validation (to give feedback over the reliability of methodologies and processes used).
- Appraisers, designers, managers, and decision-makers must understand the concepts and logic underpinning such technical and/or economic transport planning, and actively seek value for money.

Technical planning is generally understood as a necessary process to inform decision-makers, but not to preempt their choices. It seeks to make available the most objective information possible in the most transparent manner.

Current Status

There is no tradition of transport planning in Myanmar. Policy and planning debates are nascent. There is no institutional entity in charge, and no professionals able to carry out economic analyses of transport projects. There is no requirement to carry out even feasibility studies before investments—the practice being to start design and studies after budget approval. The process of investment programming has also not been considered to be technical, only political.

These gaps have been costly. There is much evidence that, from an economic standpoint, investment resources have been allocated poorly. Many new roads or railway investments have been in areas where there is little demand, and hence few benefits to expect, while little or no resources had been allocated to more priority needs. The sector notes on railway and trunk roads document these issues.[21] The design of investments has also often been insufficiently optimized resulting in overdesign (e.g., too much capacity compared to demand) and underdesign (e.g., short-term fixes proving much more costly in the long run).

Steps are underway to strengthen investment planning, including the National Transport Development Plan, the Yangon Transport Master Plan, and the Department of Highways' Road Asset Management Program.

[21] ADB. 2016. *Myanmar: Transport Sector Policy Note.* Trunk Roads. Manila, and ADB. 2016. *Myanmar: Transport Sector Policy Note.* Railways. Manila.

Suggestions

A law could stipulate that transport agencies must manage transport networks by heeding economic and social criteria. The same law could stipulate the need for preparing feasibility studies, including a consideration of economic returns.

The ministries in charge of transport could define **a common investment project preparation process**. The regulation would likely include:

- a number of steps prescribed depending on the scale of the project: at minimum a feasibility study, but potentially also a prefeasibility study, a preliminary design, and a detailed design study;
- the scope of the evaluation at each step (strategic context, demand, technical feasibility, study of alternatives, economic feasibility, financial, social, environmental, etc.);
- the review procedure and approving authority;
- the type and timing of consultations with the public; and
- the sequence of steps from the feasibility study, budget approval, design, and procurement. For instance, some countries make it necessary to budget for design before budgeting for the investment, or require that a detailed design is ready before procurement is launched or that the feasibility study is approved before land acquisition can occur.

Table 4: Example of a Possible Project Preparation, Appraisal, and Implementation Framework

Steps		Types / Threshold	Objectives	Approval Authority	Output
Master planning and/or strategic review		> $50 million	• Confirm opportunity of project • Determine likely scale and technology • Assess likely feasibility and types of impacts • Include in national and/or regional plan	Minister (national projects) or regional minister	• master plan or • strategic review
Feasibility stage	Technical preparation	> $10 million except maintenance	• Choose technical solution and technical characteristics (including alignment within a few XX meters) • Set cost with good reliability (e.g., target within 10% of approved budgets) • Assess environmental and social impacts and mitigation measures • Determine technical, economic, and financial feasibility • Prepare consultation package if required	Implementing Agency DG (<$10 million) with possibility to delegate	• Feasibility study report • EIA • Consultation package
	Public consultations	> $50 million or Any project with social and/or environmental impacts	• Inform and consult with public	Third party may be involved to implement consultations	• Consultation and feedback report

continued on next page

Table 4 continued

Steps	Types / Threshold	Objectives	Approval Authority	Output
Administrative review	> $10 million	• Inform and consult with other government agencies and agencies in charge of finance and planning • Determine reference project cost and financial plan • Determine area for land acquisition • Obtain EIA approval • Finalize project feasibility study	Minister, or cabinet decree and/or interministry investment committee approval (>$50 million) minister or regional minister (>$10 million) implementing agency DG (<$10 million)	• Project appraisal report • Administrative approval • Land "freeze" decree
Detailed project preparation	All except maintenance	• Determine detailed technical characteristics • Determine implementation mechanism and procurement plan • Finalize land acquisition and resettlement plans • Carry out any other specific regulatory requirements	Implementing agency DG with possibility to delegate	• Detailed design report • Resettlement plan • Other regulatory approvals (e.g., water, utilities)
Implementation	All	• Procure works and services • Implement and supervise works • Implement social and environmental measures	Implementing agency	• Procurement packages • Works and engineer approvals
Acceptance and/or Opening	All except maintenance	• Audit quality and safety • Authorize use • Classify and/or reclassify	Minister (>$50 million) or Implementing agency DG (<$50 million)	• Inspection report • Administrative approval and classification
Post facto evaluation	>$50 million	• Assess project performance	Minister or regional minister	• Post facto evaluation report

DG = directorate general, EIA = Environmental Impact Assessment.

Notes: This is proposed for works financed by government. Approval levels will depend on the degree of decentralization. Such process needs to be accompanied by legal requirements such as: (i) projects not in the master plan need to undergo strategic review, (ii) projects cannot obtain next step approval before the previous stage is complete, (iii) projects cannot be budgeted without feasibility study approval, (iv) feasibility study and detail design needs to be budgeted, (v) works cannot be procured without detailed design and supervision.

Source: Authors' own.

The Ministry of Transport and Communications and the Ministry of Construction, maybe with the Ministry of Planning and Finance, could create **a medium-term rolling investment program**. Before a project could be proposed to Parliament for budget approval, it would have to be included in the program, and subject to a preliminary review by all concerned administrations at the technical—not political—level. This program could be prioritized according to economic benefits. Alternatively, the ministries could periodically define cut-off requirements in terms of minimum economic rate of return to match resources with needs.

Finally, the ministries in charge of transport could define **a common investment appraisal guidelines**.

PRINCIPLE 8: Consultations and participation of stakeholders in policymaking should be pursued.

Notes

This principle is common to all liberal democracies. Generally, broad consultations and participation ensures better acceptance of policies and investments, a closer match between decisions and user needs, and more care for nuisances caused. It also empowers citizens. Transport presents specificities, presented below.

Stakeholders. In the transport sector, these are:

- users (motorists' associations, public transport user associations, taxi associations, truck operator associations, etc.);
- communities affected (local governments, nongovernment organizations for special interests—e.g., the environment, the disabled—and persons affected);
- downstream businesses (industrial associations, chambers of commerce, the tourism industry, agricultural groups); and
- the transport industry (professional associations, industry associations, scientific or academic groups).

Levels of stakeholder involvement. Figure 2 gives examples of the various objectives and modalities of stakeholder engagement and impact.

Figure 2: Levels of Stakeholder Engagement

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
GOAL	To inform users and assist them in understanding problems	To obtain public feedback on analysis and alternatives	To work with the public to ensure public issues are considered	To partner with the public in all analysis and decision-making steps	To place decision-making power in the hands of the public
AGENCY COMMITMENT	We'll keep you informed	We'll keep you informed and listen to your feedback	We'll ensure your concerns are reflected and tell you how	We'll always seek your advice and recommendations	We'll do what you decide
TOOLS	Reports Websites Open houses	Comment Call centers Surveys Public meetings	Workshops Deliberative meetings	User advisory groups Participatory decision-making	Road Boards Delegated decisions

Source: Adapted from International Association for Public Participation. www.iap2.org

Current Status

This is not the case. Some of the committees set under RTAD (TPD until 2015) have involved participation from industry representatives (construction, transport operators), but the committees importance has waned. External participation in the boards of SEEs used to be the norm, but the practice ended during the socialist period. Myanmar has drafted the Environmental Impact Assessment rules, which stipulate the need to solicit and consider the comments and suggestions of civil society organizations and affected people, but the rules apparently have not yet come into force (as of end 2014).

Basic information on government action is often missing. Most agencies maintain websites, but information is partial and not regularly updated, with much variation between agencies.

Suggestions

All transport agencies could publish **annual reports**, and maintain comprehensive **websites** to explain their action, their regulations, and their results.

Large agencies could carry out **user surveys** to understand the expectations and perspectives of the public. Satisfaction rates could form part of performance indicators reported.

The government could create a **National Transport Council**. This would be a consultative body, whose mission would be to review and advise on the government's policy proposals, investment plans, and any other question proposed by the government. The council could also assist in organizing public consultations over these questions. It would be independent, composed mainly of transport stakeholders external from the government. This framework could be replicated at the regional and/or state level.

The government could finally encourage the creation of **associations of users and transporters**, the role of whose would be to lobby the government to defend their interests in policy making.

3.6. Decentralization

PRINCIPLE 9: Local needs should be managed by local governments.

Notes

This principle is one of subsidiarity: matters that are of local interest are best managed by local people. Where it works, decentralization reduces the distance between decision-makers and people; it allows custom-tailored solutions to local problems and needs; and it enables participation by local residents, including ethnic minorities, in decision-making. Decentralization allows for experimentation, and for special arrangements in advanced or lagging areas. Finally, it relieves national decision-makers from routine tasks, so that they can concentrate on policy.

Transport sector decentralization is complex for the following reasons:

- **National and/or local interests**. There is no straightforward distinction between national and local interests, neither there is identification of spillovers between jurisdictions which would justify coordination.
- **Efficiency** is not ensured. Particularly, there are economies of scale in the management of road or rail networks (it may be better to manage them centrally), and there are always disparities in the capacity of local executives (raising the issue of equity if one fails to perform).
- **Accountability** of local executives to the local population is required.
- **Influence or control**. The central government usually needs to keep the capacity to control or influence local bodies in matters devolved, and its monitoring and compliance costs need to remain manageable.
- **Resources**. Authority requires resources, hence a need for either local fiscal capacity or for a fund transfer mechanism.

Current Status

Decentralization is underway, but the situation is confused. There is no correspondence between areas of local interests, devolved powers, administrative capacity, and fiscal capacity.

The 2008 Constitution has given regional and/or state governments limited powers over local road networks and ports. Since FY2014, these governments have large resources in the form of block grants from the central government. However, transport ministers generally have very few of their own staff, as the local offices of agencies are under the central government. City and township government committees manage urban transport networks, but rural roads are managed centrally. Commercial transport licensing is a national responsibility, under RTAD, but the decision is normally taken based on the approval of the region, state, or district officials. Licensing and vehicle inspection, while under the responsibility of the national government, is carried out locally with a strong regional, state, or district input.

Suggestions

Areas where full decentralization could be already considered:

- **Transport services**. The central government should set the overall policy and regulatory framework, but authority can be devolved. For trucking and river freight, the government could impose a policy of complete liberalization and national validity of licenses (national registry). For passenger transport services, the concept of "authority organizing transport services" could be used. The national government could be in charge of transport services that cross region or state boundaries, the region or state governments of those that go beyond the city or township boundaries, the city or township development committees of those that are within their area of jurisdiction. Each authority could then either choose to liberalize (free establishment), regulate, or organize the delivery of services (e.g., defining the services and rates, establishing a public company or tendering licenses, subsidizing, etc.). Transfer of powers would require the transfer of RTAD offices to the regional governments but no additional resources.
- **Vehicle fleet and traffic management**. The definition of vehicle standards and registration should remain national, but implementation could very well be decentralized to regions (a transfer of RTAD offices). Indeed, registration, inspection of vehicles, and collection of vehicle-based taxes are routine tasks with little scale economies. Traffic management and safety are local issues; they also could be decentralized with corresponding staff. However, the central government should keep some form of control on traffic management on national highways. Cities may need powers to manage demand.

They could be allowed to (i) set more stringent vehicle environmental standards, (ii) manage traffic in urban areas, including prohibiting the use of some vehicles, creating special taxes or fees, or capping the size of the vehicle fleet, and (iii) raise vehicle registration taxes above national levels.

- **Ports, river ports, and airports of local interest**. The constitution devolves ports and river ports of local interest to the local governments. However, MPA remains the owner and operator of all sea ports. Those that do not serve international traffic could be transferred. The ownership and management responsibility for local airports (by opposition to international airports) could be also transferred to regional or township governments (depending on the importance of the airport). DCA would keep the responsibility for regulation, safety, and navigation services.

Areas where decentralization is possible but requires coordination arrangements:

- **Road networks of local interest**. All roads except national highways could, in principle, be managed locally: rural roads by township and village development committees, urban roads by township and city development committees, regional and/or state roads by regions and/or states. However, only the Department of Highways, DRD for rural roads, and city development committees for city roads have sufficient capacity to do so. Because the road network is not developed, scale economies are large. It should be considered that the ownership and ultimate responsibility for local roads could be transferred, but that the management needs to remain centralized until it is possible to develop local capacity. In this context, DRD and DOH would manage local networks on behalf of local governments.[22] Full transfer may be possible in large word choice areas, such as in the Yangon or Mandalay regions.
- **Railways of local interest**. Railways form integrated systems with large-scale economies. MR has a few short railway lines separate from the main network. The practical responsibility for the upkeep and development of the entire network should remain with MR. Local governments could become involved in (i) their management (e.g., planning their development and maintenance, while financing deficits—and potentially deciding to close the line), and (ii) the organization of local passenger transport services, including financing of PSOs. Relationships between local governments and MR would be contractual. The government could also experiment with letting local governments run services themselves on lines with little national traffic (e.g., railbus).
- **Local transport network plans**. Regional and/or state governments could be responsible for preparing. To ensure consistency, there could be a legal requirement that the plans need to conform national guidance, and that their validity should be subject to national government approval. Should this not be compatible with a federal structure, the national government could seek to obtain the same results by making compliance with such guidelines a requirement before any payments or release of resources.

Areas where decentralization can only be considered in the long run. Region and/or state governments could ultimately manage national highways, ports, and airports. This is the case, for instance, in the United States and in the People's Republic of China. Such devolution becomes possible once local capacity is sufficient to ensure that national interests will be protected. The central government then acts through norms, national programs, and fiscal incentives.

[22] ADB. 2016. *Myanmar Transport Sector Policy Note:* Rural Roads and Access. Manila, and ADB. 2016. *Myanmar Transport Sector Policy Note:* Trunk Roads. Manila

4 Institutions to Lead the Transport Sector

Key Findings and Suggestions

Central Government. To build capacity and improve efficiency of the organizations involved in the transport sector, the government could consider the following realignments.

- **Planning:** Establishing a permanent secretariat to the Joint Coordination Committee, as a precursor to a full-fledged Department of Policy and Planning, which could be assisted by a transport statistics and research body
- **Regulation:** Transforming the Road Transport Administration Department into a Land Transport Regulator, possibly to take the form of an independent authority that also covers railway regulation
- **Highways:** Establishing a Highway Department or Authority
- **Railways:** Creating a new Rail Department
- **Water:** Making Department of Marine Administration the entity in charge of all water sector policies, and either transforming Directorate of Water Resources and Improvement of Water Systems into a River Management Authority, or merging DWIR with Myanma Port Authority into a Port and River Transport Authority
- **Aviation:** Completing the separation of Department of Civil Aviation regulation and airport operation functions.

These realignments would be most effective if the government created in the long-term a **unitized ministry covering all transport matters**.

Local Level. At the local level, the government should refrain from decentralizing more resources until it can develop up coherent packages of responsibility and government administrations. It could assist local governments to build their planning and policy capacity. Road Transport Administration Department local offices are good candidates for such transfer, but the situation is more complex for Department of Highways and Department of Rural Development local offices, which may need to keep dual reporting lines. Region and/or state responsibilities need also be defined vis-a-vis township and city development committees.

Financing Framework. It is possible to finance government investment plans amounting to 3%–4% of gross domestic product annually, under the following assumptions.

- Road user fees should be raised and earmarked. A new fuel tax, heavy vehicle license, and higher tolls could generate about $850 million each year.
- State-owned economic enterprise should become financially sustainable, and their deficits—particularly railways—should be eliminated.
- Private sector investments should be actively pursued, e.g., by improving road concession mechanisms.
- Once the sector is financially sustainable, debt should become a choice instrument, in the form of an infrastructure fund emitting long-term bonds; SEE or transport agency debt pledged on future revenues and/or taxes, or donor resources.

Human Resources. The scale of (re-)training needed makes it useful to invest in existing or new training institutions. Senior managers and executives should be systematically involved in study tours and executive training. To prop-up change in SEEs, the government could hire qualified chief executives to mentor their Myanmarese counterparts.

Earlier parts of this report make the case for reforming the transport sector policy and legal framework. They propose changes to the governance of the SEEs, and a new distribution of responsibilities between national and local governments. They also make suggestions on the tools needed to manage the performance of SEEs and infrastructure agencies, and on planning processes.

This section considers the institutional structures and people required to deliver these new policies and processes. It sketches possible institutional set-ups, but does not to give a blueprint for restructuring.

4.1 Union Government Units

Union government transport institutions should be restructured to address the following issues:

- confusion, gaps, and overlaps which finds root in a fragmented structure;
- conflicts of interests and limited development of policy and regulations, caused by the integration of policy, regulatory, and delivery functions;
- limited influence of the transport ministries over key policy areas, such as investment planning, tariff setting, and resource mobilization, which has led to a focus on delivery over policy; and
- the dearth of tools available to manage change (e.g., statistical information, performance and strategic plans, policy statements), and of people with appropriate incentives and skills.

Any restructuring also needs to factor in the upcoming changes in the ministries' environments, either underway or advocated by this report:

- The corporatization of SEEs will reduce the scope of matters considered by each ministry, and require them to develop new forms of control (e.g., guidance through board, performance plans), and regulatory and/or policy capacity.
- The devolution of the central government's responsibilities and administrations to subnational governments will shrink the ministries' scope and require new influence channels.

Policy-Making and Planning Coordination Units

In the **short term**, there is a need to coordinate the early implementation of the National Transport Development Plan, prepare a common policy statement, launch a systematic review of transport regulations to bring consistency and facilitate multimodal integration, and restructure and supervise transport SEEs along common principles.

In the **medium term**, there is a need to maintain a rolling investment plan, prepare guidelines and pilot the proposed common investment review process, set up mechanisms to channel increasing resources for the entire sector, and develop the statistical bases for policymaking in the transport sector (e.g., monitoring of inputs, outputs, prices, costs, and efficiency of the transport system).

In the **long term,** there is a need to routinely deliver these planning, policymaking, coordination, resource mobilization, and monitoring functions across the transport sector.

Suggestions. The Joint Coordination Committee between MOC and MOTC is a first step to address short-term needs. It could be complemented by the creation of working groups in charge of policy and legal review, institutional restructuring, and statistical development. Each ministry could nominate a team of staff contributing to this process.

A next step in the same direction would be a **permanent secretariat** to the Joint Coordination Committee. This secretariat could be attached initially to MOTC's Minstry Office, whose permanent secretary could serve as the secretary. It would involve permanent staff detached from the three ministries, and new staff to fill functions where skills are limited (e.g., economic and financial appraisal, statistical management). International consultants could support this process, potentially with financing from financing agencies. To facilitate policy coordination, the secretariat could also facilitate working groups on crosscutting issue, e.g., road safety, intermodal transport, or logistics.

Should the ministries be unitized, this secretariat could become a full-fledged **Department of Policy and Planning**. It would be the lead body advising the Minister of Transport and Communications, and in charge of strategic planning and coordination. A body in charge of transport statistics and policy research could be attached to this department.

Modal Departments and Delivery Units

To function effectively, the government needs:

- **modal departments.** specialized administrations under the minister that advise on and execute government policy in a subsector of transport, such as aviation, roads, rail, sea, and river transport; and
- **delivery units.** autonomous, potentially self-financing operational entities which, under the guidance of a department, (i) will manage infrastructure networks or deliver services to users; and (ii) deliver in-house or contract with the private sector. They can be can be agencies, authorities, corporations, involving private or subnational government participation.

Road Sector. In the road sector, policymaking could be coupled with the management of the national highway network into a **Department of Highways** or **Highway Authority**, which would merge the current Department of Higways and the Department of Bridges. In the medium term, it could either take the status of an agency, which would have higher autonomy, finance mobilization capacity, and accountability than a traditional department. It would remain under the ministry but could also act on behalf of regional and/or state governments. In this case, the ministry would need to develop minimal policymaking capacity in the road sector to supervise the agency. Alternatively, the Department of Highways could become a purely national policymaking department, if regional and/or state governments assume all management tasks.

Rail Sector. When MR becomes a true corporate entity, a new **Railway Department** should be created to take over policymaking, planning, and oversight of the company. The department's roles would be to coordinate the implementation of new national railway policies and plans, represent the ministry at the corporation board, negotiate and supervise the performance contracts, monitor and evaluate the performance of the railway sector, establish national railway safety standards, and manage the development of the railway network infrastructure.

Water Transport. A policymaking body in charge of the development of river and sea transport is needed. Currently, the Department of Maritime Administration ensures the regulation and inspection of all vessels and crews but not services, the Transport Planning Department (until 2015) regulated river transport services, the Myanma Port Authority ensures the development of sea ports but not river ports, and Department of Water Resources and Improvement of River Systems manages inland waterways, but has no mandate to develop ports or services. Also, the delivery model needs to ensure that resources (currently in the ports) match needs (in the waterways).

To fill the gaps within this framework, several options seem possible:

- The Department of Marine Administration could become the leading policymaking department in charge of developing all water-based transport. It would keep its regulatory and licensing functions (but these could also become a dependent maritime safety agency, or be delegated to local governments). The DMA would also develop a new policy and planning capacity, takeover licensing of services, and ensure the oversight of delivery units.
- DWIR could be turned into a River Management Authority, in charge of the management of Myanmar's rivers, waterways, and river ports. To function effectively, this authority would require new financial resources, e.g., water taxes, riverbank development taxes, fuel taxes, and maybe a share of hydropower revenues. The MPA could continue to manage the comple relationships at the Yangon river port.
- Alternatively, DWIR and MPA could be merged into a Port and Waterways Authority. This authority would manage and develop water transport infrastructure on behalf of the government. The advantage would be that such an entity could be fully self-financing and could ensure some degree of cross-subsidization from sea transport into river transport (which is insufficiently funded). It also makes sense that the river approaches to Yangon port and the Yangon river and seaports be managed by the same entity. (This was actually the case until 1972).
- Either the River Management Authority or the Port and Waterways Authority would be SEEs under the supervision of DMA.

Aviation. The government has already made steps to separate policy, regulation, and airport operations and navigation services. DCA's organization chart clearly separates "regulatory" and "service provider" functions. DCA still directly operates the Yangon International Airport and 30 domestic airports, but in 2014, it awarded 30-year concessions to private companies to build a new Yangon Hanthawaddy airport and operate the Mandalay airport.

Regulatory Units

The responsibility for regulation is fragmented between RTAD (road vehicles), TPD (road and river services until 2015, then under RTAD), DMA (river and sea vessels), and DCA (aviation). There is no regulating body for the railways,[23] and for infrastructure concessions (road, rail, and port).

There are obvious synergies between road vehicles and service regulation, and advantages in having a single point of contact for business users. Going this way required a consolidation of RTAD and TPD (achieved in 2015), and either a transfer of river transport service regulations to DMA, or a transfer of river vessel regulatory authority to RTAD. The first solution seems more logical, as there are more synergies between river and sea transport than between road and river transport.

[23] The need for a railway regulatory authority is identified in the ADB. 2016. *Myanmar: Transport Sector Policy Note. Railways.* Manila.

In some countries, the regulation of road, water-based, and rail services is under the same authority. This is meant to foster the development of intermodal transport, ensures application of similar technical and economic principles, and can be justified by scale economies—it may be simpler to have just one regulator rather than several ones when capacity is constrained. In Myanmar, there would be advantages in joining road and railway regulations, but less advantages to joining river. This is because railway regulation is a fully new area, while sea and road regulations are already well established.

In many countries—particularly in federal ones (e.g., Australia, Brazil, Canada, and the United States)—the regulatory authority is an autonomous body with high standards of transparency and governance. This set up can be appropriate when: (i) regulatory skills and processes are specialized, (ii) where the private sector would develop better if it is safeguarded against excessive discretion by the government and unfair competition with SEEs, (iii) where government functions need to be separated to avoid conflicts of interests, (iv) where national regulations impact the interests of subnational governments, and (v) where regulatory objectives can be well defined. All these conditions seem to be met.

Suggestions are thus to:

- **complete the merger of TPD and RTAD at the local level in a single window;**
- **transfer river services regulation authority to DMA;**
- transform RTAD at the central government level into a **land transport licensing and regulatory entity**, possibly taking the form of an **independent authority** in the medium-term; and
- mandate the land transport regulator to focus on safety and the development of the private sector in areas requested by the government. Areas of regulation could be regulation and registration of road vehicles, registration and licensing of road transport services (active for national services, regulatory only for local ones), road and railway safety regulation, and management of public service obligations in the road and rail sectors. The authority could also serve as a regulator (or arbitrator) in transport infrastructure concession contracts.

4.2 Ministerial Structure

Main Options

In late 2015, the Asian Development Bank (ADB) technical assistance for Transport Sector Reform and Modernization presented three options for government consideration, which are presented below.

Minimal Change to Ministry Structure (existing until April 2016). The following changes were to take place under this option:

- The joint coordination committee would become a permanent structure with a secretariat under MOTC.
- MOC would create a highway department.
- MRT could transform RTAD into a land transport regulator and form a railway department.
- MOT could restructure the water sector under one of the options mentioned above. RTAD would transfer river transport licensing to MOT.

Merger of MOT and MRT. The following changes were to place under this option.

- The two ministries would be merged as a Ministry of Transport, in a setting very similar to what existed before 1992. MOC would remain separate. Such setting is common in South Asia.

- Department of Policy and Planning could be formed, but it would need to keep coordinating with MOC.

Merger of MOT, MOC, and MRT. The following changes were to take place under this option.

- A single Ministry of Transportation would coordinate all aspects of transport. Such setting is common in much of Southeast Asia, East Asia, Europe and Latin America.
- MOC's housing department would likely not become part of the new ministry.

The choice of a unitized Ministry of Transportation presents advantages in terms of coordination, institutional standing, and resource mobilization. It is the preferred long-term solution. The benefits of a unitized ministry would be that:

- planning would naturally take place within the framework of the national transport master plan and policy statement;
- it would be much easier to develop common statistical base and standardized appraisal methodologies;
- the ministry could develop all aspects of logistics infrastructure and services, as well as other policies requiring close coordination between transport agencies;
- its size would give it a stronger voice for budgeting and financing of transport infrastructure;
- under this setting, it could be easier to earmark road user resources to road or other transport investments; and that
- the structure could be directly replicated at the regional level, ensuring a good coordination between national and subnational governments.

In April 2016, a new democratically elected government was sworn in. Its first action was to restructure the Ministries, including creating a Ministry of Transport and Communications, which took over the responsibilities of MOT, MRT, and the Ministry of Communications.

Other Central Government Entities

An **inspectorate general** would be directly reporting to the ministers. It would fulfill traditional functions of inspection, investigation and possibly audit. Part of its staff could be composed of high-level civil servants who do not find positions in the restructured setting, but whose experience and skills make them valuable to keep in public service. With such composition, the inspectorate could also become an independent advisor to the minister, used on a case-by-case basis to prepare and facilitate policy changes and reforms.

A **legal branch** would be tasked with legal drafting, counsel, and validation of contract and/or regulation. It could be either a separate, or part of an administration department.

A common **training institute** could mutualize all the programs and institutions under each ministry of transport.

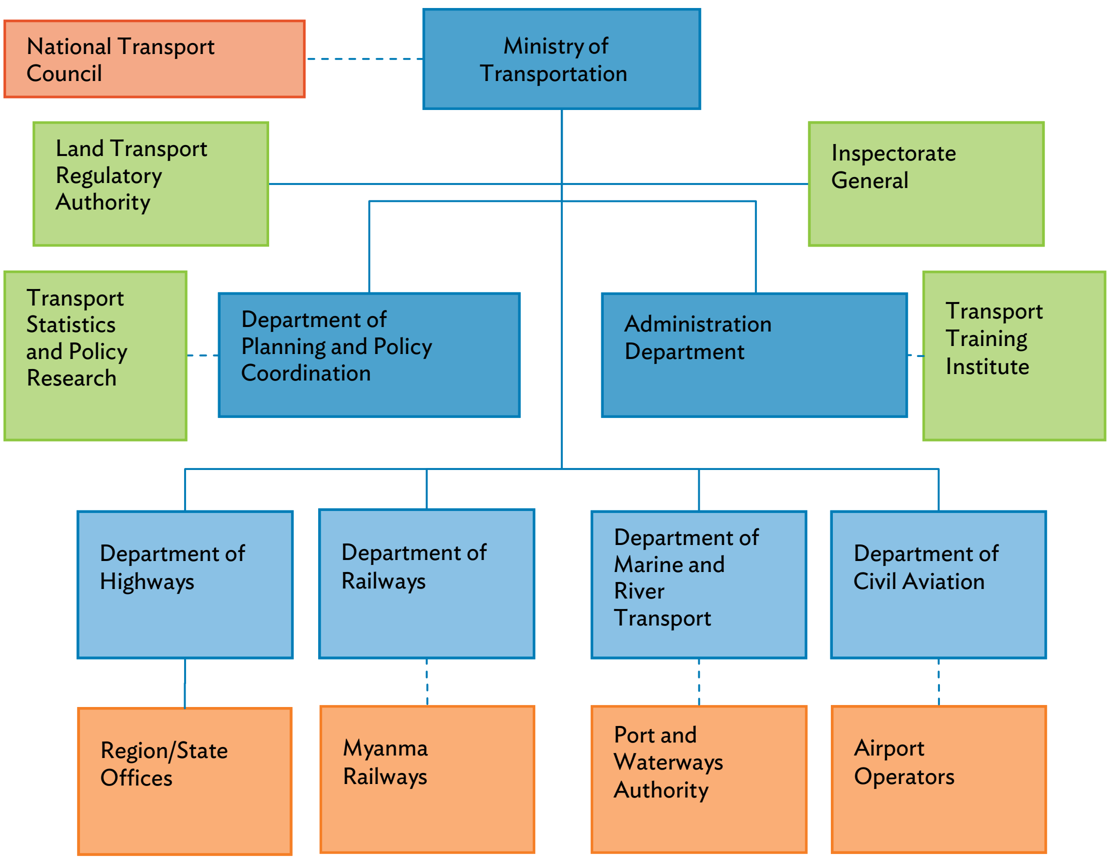
Finally, the national transport council proposed in Section 2 could be a nongovernmental entity linked to the ministries.

Possible Long-term Structure of a Unitized Ministry of Transportation

Figure 3 shows a potential structure for a unitized Ministry of Transportation, drawing from above considerations. The government could consider establishing such structure in the long-term.

This structure does not include IWT, Myanma Airlines, Road Transport, and the possible United Engineering Construction Corporation.[24] This is because in accordance with the principles developed in the previous section, their oversight should be fully transferred to the Ministry of Finance or any other ministry designated to supervise all public SEEs. Myanma Railways and the port and/or waterways authority remain in the organigram, but it is considered that their supervision should be shared between the Ministry of Transportation and the Ministry of Finance or SEEs.

Figure 3: Possible Long-term Structure of a Unitized Ministry of Transportation



Source: Authors.

[24] The United Engineering Construction Corporation is the corporate form of Public Works' construction units in the proposal shared by Public Works management in 2014.

4.3 Decentralized Institutions

Regional Level

As noted in other parts of this report and separate notes, it is necessary to:

- **Broaden the scope of regional governments' responsibilities.** Regional governments could become organizing authorities for all regional public transport services (road, rail, and water-based), with power to enter into public service contracts. They could receive responsibility for local airports. Their responsibility for road vehicles could be clarified to include registration, safety, traffic management, and law enforcement.
- **Rationalize state and/or region government administration**. The regional minister of transport should have authority over an agency. A minimum transport policy and planning capacity would need to be created. The local offices of RTAD could be transferred to the regions. For the Department of Highways, the most workable solution may be for the Department of Highways to designate its staff exclusively working on regional and/or state road networks, as part of a separate branch in each region, and place them under the authority of the regional minister of transport. Alternatively, the Department of Highways could enter into a formal agreement with the region and/or state for the Department of Highways to manage the regional and/or state road network. A similar arrangement is considered for DRD over rural roads.
- **Deal with legacy institutions**. The legal overhaul proposed should be an opportunity to simplify the system of committees. However, this should not weaken coordination and consultations with stakeholders: safety committees could be kept, and new regional and/or state level transport councils could be created following the national model.
- **Develop transparent resource allocation and fund transfer mechanisms** between national and subnational governments. The Department of Highways could develop clear rules for: (i) allocating, and reporting on resources used for, national road maintenance and improvement between regions and/or states, and (ii) sharing national highway costs with local governments. Road user taxes collected locally could be clearly earmarked for local governments, while part of the proceeds of the new fuel tax (see below) could be earmarked for regional and/or state governments (as well as lower levels of government) to finance road or transport works.

Most of these transformations will require major legal changes, civil service restructuring, and for some, constitutional modifications. Such reforms have been discussed. It is important that transport considerations get reflected into final arrangements.

City and/or Metropolitan level

Yangon and Mandalay cities already manage urban road networks. They, however, do not manage urban railways (which are under MR) and bus transport services (which are under the regional minister of transport).

Yangon Urban Transport Authority. The Project for the Comprehensive Urban Transport Plan for the Greater Yangon proposed setting up a Yangon Urban Transport Authority. This permanent structure, placed under the authority of a board, but responding to the minister of the Yangon region, would be responsible for coordinating the development of transport plans, services, and traffic management measures, and would supervise the implementation of the transport master plan. Its functions would take effect in the Greater Yangon area, which includes Yangon city and six peripheral towns. This type of structure is seen in many countries where economic (and traffic) boundaries do not match with administrative ones (e.g., Lagos, New York, Paris, Rio de Janeiro, Toronto).

This idea is promising but needs further analysis before it can be implemented. The proposal considers that the authority's only power would be to coordinate. This solution is meant to facilitate the authority's insertion in the current structures since it does not take powers away from any department or ministry. To be effective, the authority may need more executive powers to organize services, prepare and/or endorse plans, and raise resources. It may be easier if it also takes over the management of common infrastructure. These enhanced powers would require clear accountability mechanisms.

A workable alternative may be to grant the Yangon regional minister of transport the explicit power to organize and coordinate regional transport networks and services in the Yangon area, and approve plans prepared by lower levels of government. As mentioned before, the Yangon region could be a pilot area to pilot the transfer of the management responsibility of the national highway network from the national to the regional government. Responsibility for transport networks and services within Yangon City could be transferred to the Yangon City Development Committee.

4.4 Financing Framework

The overall level of transport investment, as well as the allocation by mode and level of government are not related to identified needs (Figure 2 and Table 4). Transport investments should rise by at least a factor of 3%–4% of GDP, e.g., from $1.0–$1.5 billion to $3–$4 billion annually. This section reviews how to mobilize larger resources for the transport sector.

The union government's budget resources for transport will remain limited. Myanmar's tax resources are small, and transport is not a priority sector In FY2014, region/state governments, for the first time, allocated large budgets for local road improvements, but they had few other areas of responsibility where they could spend national grants. This situation could quickly change when new responsibilities are devolved.

Resource Mobilization Instruments

Accordingly, the government should aim to raise and leverage user resources, in the following areas.

User fees and fares. Transport user fares have risen but they remain below costs in the railways (particularly for passengers). Road user charges are also well below the costs of maintenance and improvement of the network, and externalities. There is no mechanism for cost-recovery in the river transport sector.[25] Such a situation may be fine for users in the short term, but it denies transport agencies the resources to deliver quality services and infrastructure. In the long run, a principle of full cost recovery is the best solution to finance transport infrastructure and services.

[25] ADB. 2016. Myanmar Transport Sector Policy Note: How to Improve Road User Charges. Manila and ADB. 2016. Myanmar Transport Sector Policy Note: How to Reduce Road User Costs. Manila.

The following reforms are suggested:

- Create a **fuel levy** at an initial level of $0.10 per liter.[26] This fee would make users contribute to road network maintenance and rehabilitation costs.
- Create a new **heavy vehicle license fee** to make heavy vehicles pay for the damage they cause to road pavements.
- Restructure the **road tolling program** to cancel tolls where they bring too little revenues and raise them where traffic is sufficient to finance improvement works.
- Keep the vehicle registration tax at a high level for cars, and consider allowing differentiated levels in congested cities.
- Raise rail passenger fares in line with costs, but only after programs of performance improvements have successfully reduced such costs.

It is estimated that road user charge reform could raise user revenues from $450 million annually to $850 million. To meet needs, resources need to be earmarked and leveraged.

Earmarking. There is no use in raising user fees if all revenues are treated as common budget revenues. **Resources should be earmarked and distributed to each level of government according to need**. The benefits in terms of better spending, better accountability, and financial leverage easily exceed the potential fiscal disadvantages.

SEE productivity and deficits. The government should raise productivity and make SEEs—particularly the railways—financially sustainable. The low productivity and cost recovery of some SEEs are consuming precious budget resources. This is particularly true in the case of the railways. Government subsidy to the railway system reached $133 million in FY2013 (counting operational deficits and investments), and could quickly top $200 million a year.[27] Other SEEs have been experiencing deficits (e.g., Road Transport, IWT) but in smaller amounts.

Private sector investments. PPPs can play a role in sector financing but typically not more than 10%–25% of sector investments, and then only with a robust investment framework.The government has already actively sought private investments in port, airport, and road infrastructure. The port and airport program has been relatively successful, but the road "build–operate–transfer" schemes have failed to mobilize large private resources.[28] Other countries have made strong strides in this direction and can be used as a template. Brazil and India are good examples. The sector note on trunk roads proposes changes to the road concession mechanisms and supervision capacity to raise private investments in the road sector.[29]

Debt emission. Debt financing could be much expanded. A good example is the People's Republic of China, which financed about two-thirds of its transport infrastructure through debt.

- The Government of Myanmar could set up an infrastructure fund to issue long-term bonds to provide cheap and long-term financial resources to private transport investors and municipalities.
- Government transport operators could take on debt backed by their future tolls, user fares, port fees, or fuel tax revenues. Debt financing seems possible for road, ports and airport sectors; it

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[26] ADB. 2016. Myanmar Transport Sector Policy Note: How to Improve Road User Charges. Manila.
[27] ADB. 2016. *Myanmar: Transport Sector Policy Note*: Railways. Manila.
[28] ADB. 2016. *Myanmar: Transport Sector Policy Note*: Trunk Roads. Manila.
[29] Footnote 28.

requires that the status of the operators allows debt emission. Until Myanmar Railways reduces its deficits, it is unlikely that it can self-finance investments or take on debt.

- The government could request international financing institutions to mobilize larger, nonconcessional resources to finance cost-recovery toll road, railway, or port projects.

Financial Scenarios

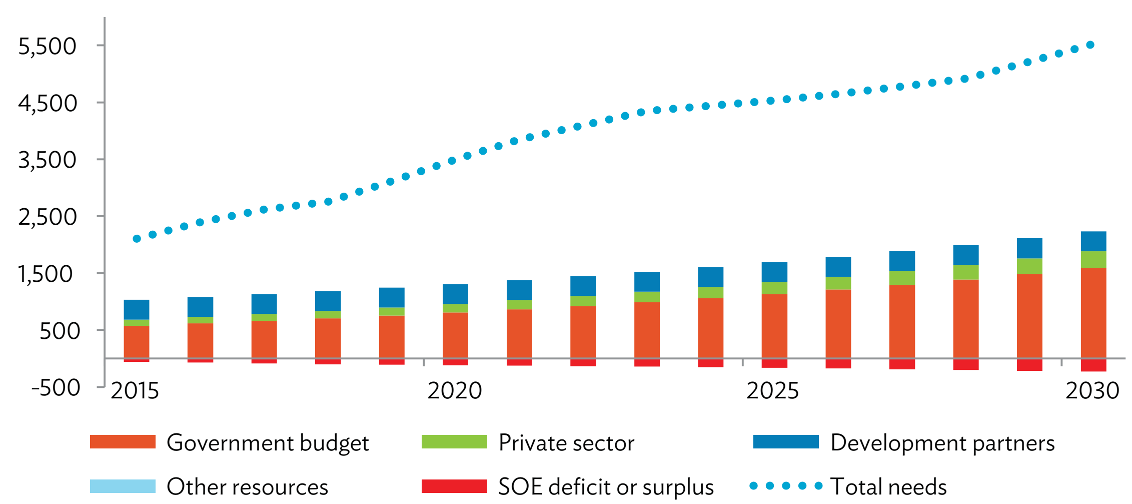
To illustrate the potential of each type of resources are three financing scenarios. They show that each financing instrument should be actively mobilized to meet needs (Table 5).

Scenario 1: Continuation of past trends. Government resources remain the largest source of sector financing, but follow historic trends, starting from about $600 million annually. Development partners and private sector resources increase in line with GDP, from their base of about $350 million and $100 million in 2014. SEE deficit increases steadily from $45 million to $100 million by 2020. Only 30% needs can be met.

Scenario 2: Active mobilization of resources. Government resources rise to $1 billion annually by 2017, SEE deficit is eliminated by 2020, new road user resources are generated ($400 million additional), private sector resources are doubled, and development partners raise financing to $500 million each year. In this scenario, 75% to 80% of needs are met.

Scenario 3: Optimal resource mobilization. Same assumptions as in scenario 2, but also with: further doubling of private sector investments (reaching $500 million annually by 2023), SEE to reach an operating ratio of 0.8. Debt is emitted, backed by earmarked resources and SEE profits, potentially reaching $400-$550 million annually. In this scenario, all needs are met.

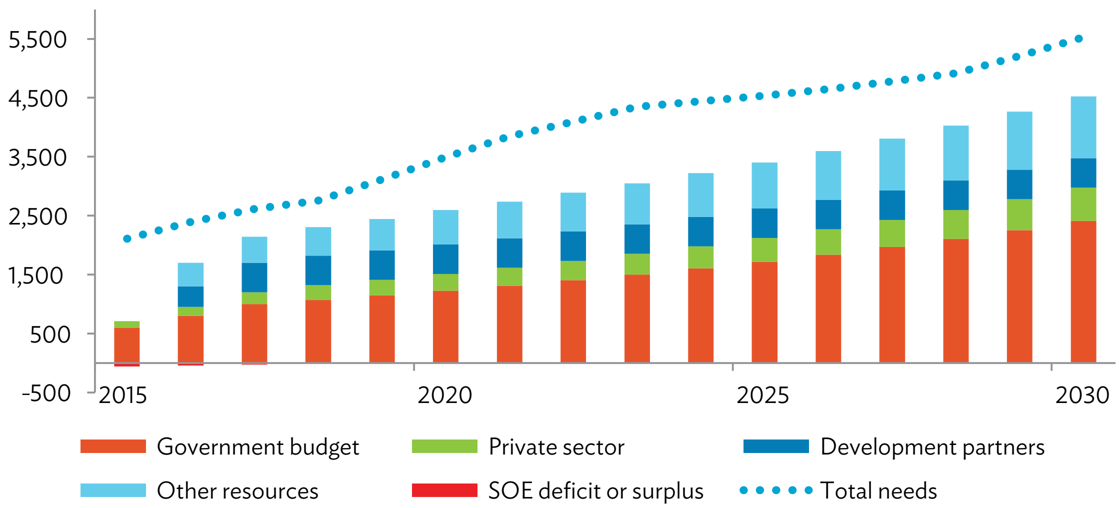
Figure 4: Resource Mobilization Potential—Past Trends
($ million)



SEE = state-owned economic enterprise.

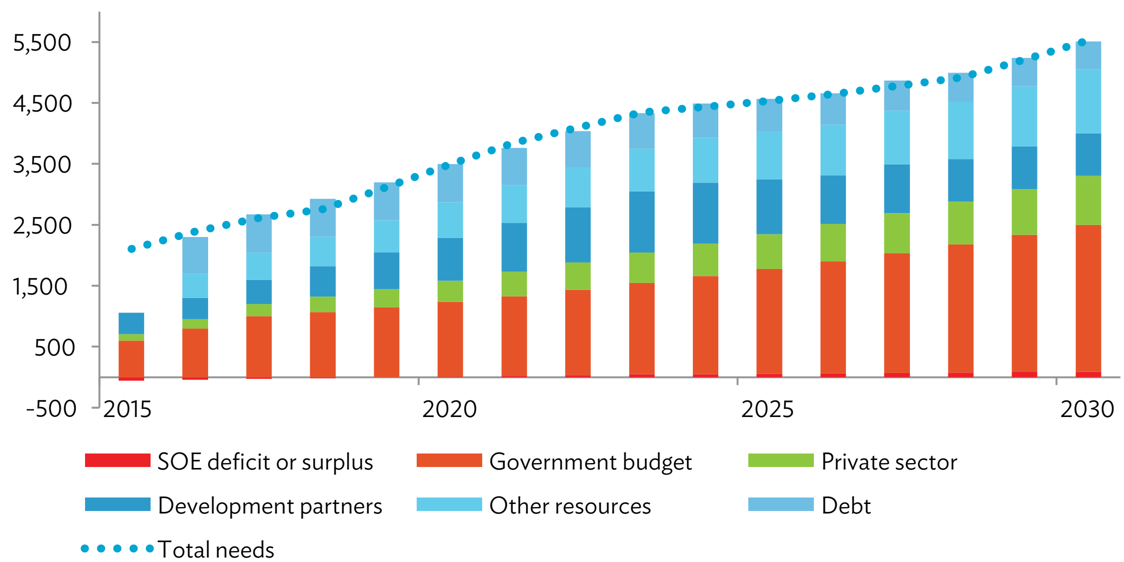
Source: Asian Development Bank estimates based on a model developed for the study.

Figure 5: Resource Mobilization Potential—Active Resource Mobilization Strategy
($ million)



SEE = state-owned economic enterprise.
Source: Asian Development Bank estimates based on model developed for the study.

Figure 6: Resource Mobilization Potential—Optimal Resource Mobilization Strategy
($ million)



SEE = state-owned economic enterprise.
Source: Asian Development Bank estimates based on model developed for the study.

Table 5: Resource Mobilization Scenarios ($ million)

Resources	Situation in 2020 Scenario 1	Scenario 2	Scenario 3	Situation in 2025 Scenario 1	Scenario 2	Scenario 3
Government budget	800	1,220	1220	1,130	1,720	1,720
SEE deficit / surplus	(120)	0	10	(170)	0	60
Private sector	150	290	350	210	400	570
Development partners	350	500	700	350	500	900
New sector resources	0	590	590	0	780	780
Additional debt	0	0	550	0	0	530
Total resources	1,180	2,600	3,420	1,520	3,400	4,560
Total needs		3,500			4,540	
Financing Coverage	34%	74%	98%	34%	75%	100%
Share of GDP	1.3%	2.8%	3.7%	1.2%	2.8%	3.7%

GDP = gross domestic product, SEE = state-owned economic enterprise.
Source: Asian Development Bank estimates based on model developed for the study.

Funds Transfer Mechanisms in the Road Sector

A transfer mechanism for new sector resources will be required.[30] Options available are:

- **Grant options.** The central union government transfers to local governments can include unconditional grants (in which the use is not earmarked to the sector) or conditional grants (which are earmarked to the sector). They can be separated for recurrent budget (maintenance) and development (construction works). They can include performance-based elements (e.g., efficient use of spending). They can be project-based, in which case they may finance 100% of identified expenditures or match local funds at a given or negotiated share. The choice of the grant option will affect the degree of actual decentralization.
- **Revenue options.** Each level of government may be financed through separate taxes, or through the same taxes, using a revenue sharing mechanism.
- **Formulas.** There is a need to define the basis for the transfer (defined share of revenues, cost-reimbursement or needs estimates), and the basis upon which the pool will be divided (e.g., in function of the size of the road network, the condition of the roads, population, etc.)
- **Type of Earmarking.** User revenues may be linked to budgets, either informally (a practice of the Ministry of Finance), formally (a legal requirement, e.g., with a separate line in the budget) or directly (amounts collected go into a separate fund not managed by the Ministry of Finance).

In the road sector, the basic structure of a new financial framework integrating the reform of user charges mentioned above could potentially be as follows:

Fuel tax resources could be collected centrally, initially earmarked for road maintenance and rehabilitation, and allocated to each level of government (union, regional and/or state, district, township) according to needs (e.g., road network length, type, condition). Allocations may be performance-based, with bonus given for good performance, and subject to monitoring and reporting (e.g., through annual reports).

[30] Also discussed in ADB. 2015. *Myanmar: Transport Sector Policy Note.* Trunk Roads. Manila.

Heavy vehicle license fees could be collected locally (probably by RTAD). This revenue could be pooled with fuel taxes before redistribution according to the principles defined above.

Vehicle registration taxes are mainly taxes on cars collected at the municipal and/or district level by RTAD. The local governments could keep a share of the proceeds, and a certain percentage could be channeled back to the state and/or regional and central governments to finance road investment works.

Funding Responsibility. Costs can be shared between levels of government. For instance, the Government of Japan funds 75% of the costs of national expressways, 66% of national roads, and 50% or less of local roads.[31] In the United States, the federal government is responsible for 80% of the financing of the national roads, but does not take responsibility in maintenance financing. (It only transfers resources from the fuel tax to local governments). Most countries seem to rely on predefined cost-sharing ratios, rather than leave it to negotiate on a case-by-case basis. This is likely the way Myanmar should go. A starting point may be (i) to allocate responsibility for funding maintenance of national networks with the central government, and that of local networks with local governments, and (ii) for the central and local governments to share the responsibility for financing improvement works, with the cost-sharing ratio adjusted in relation to the national importance of the road, and according to the states' poverty level.

4.5 Human Resources

The rest of the decade will be one of profound change for Myanmar's transport ministries and SEEs. There is a serious shortage of skilled planners, engineers, administrators, and managers. This shortage can lead to flawed policies, incorrect investments, inefficient operations, failure of corporatized companies to meet business opportunities and, among others, corruption in procurement. There is also a need to break silos, entrenched mentalities, and corporate cultures that would slow down the process of change.

Civil Servants

Hundreds of managers and specialists need to be retrained. Given this large demand for training, a number of options can be considered:

- Senior management staff, officials, and SEE managers could participate in overseas **study tours** and **short executive trainings**. At this stage of Myanmar's opening, study tours would be excellent investments. Taking staff who have not experienced how business functions outside Myanmar to other regional countries to meet with people involved in similar businesses is a good way to open minds and eyes to new possibilities.
- Staff could be enrolled into refresher trainings in universities. The curricula of these universities would likely need to be improved, potentially with the support of well-known **international universities** in the transport sector.
- A specialized **transport management academy** could be created to train middle management. This would not duplicate the existing training centers of each ministry, which have focused on technicians and office workers.

[31] ADB. 2012. Financing Road Construction and Maintenance after the Fuel Tax Reform. Manila

- **Training centers** could invite qualified trainers, and translate and/or adapt existing training materials available in English language.

For the past 25 years, the selection of senior government officials had been based on their connection to the military establishment. While this helped to create a common government ethos, it was often not the best approach to providing high quality transportation to the users. In the new economy, all senior officials of all economic ministries and agencies should be selected on merit.

It will be important to recruit younger professionals that have a modern understanding of management and education that fosters accountability and independent decision-making, and facilitates their accession to decision-making positions.

In the transition to a unified ministry, it will also be important to unify career streams and actively encourage the transfer of staff between former ministries.

State-Owned Economic Enterprise Managers

Both the selection and training of the chief executive is critical to the long-term health of the organization. Some private sector institutions in Myanmar have gone overseas to find the kind of expatriate Myanmarese professional who can bring the international business style back to Myanmar. But there are few of those professionals. Training the new chief executive is a viable option, typically for managers who have not yet reached 50 years old.

One of the best models for training a chief executive is on-the-job training. Institutions around the world that are transiting to a fully corporatized structure use a mentoring approach to on-the-job training. In that model, the organization transitioning to a corporatized model hires a newly retired or otherwise available, ex-chief executive from a reputable international company for a 2-year period. That "trainer" will come with experience and an understanding of the systems and processes needed to survive and prosper in a competitive marketplace. The two co-chief executives—the trainer and the trainee, sit in the same room and possibly at the same desk. The decisions, discussion of options, debates, and meetings are held with both in the room. Over time, the new chief executive begins to exercise more and more control so that by the end of the 2-year transition, the new executive is fully trained and confident about managing the company. This model is recommended for the corporatizing transport state enterprises in Myanmar.

5 Restructuring Transport State-Owned Economic Enterprises

Key Findings and Suggestions

The government's priority should be to build corporate governance and to develop sound businesses rather than to push for early privatization and to cut financial lifelines. Transport state-owned economic enterprise need a new governance structure, new management, and new financial systems, while learning to serve customers. However, no SEE is profitable, and some do not have sound businesses, viable assets, or managerial cultures yet. A 5-year transition period to a new model should be considered (may be up to 10 years for railways), with gradually declining government involvement and support, and which may be up to 10 years for railways.

Clean balance sheet. The Ministry of Transport and Communications, and the Ministry of Construction could jointly negotiate common terms with the Ministry of Planning and Finance regarding SEE financial performance targets, treatment of excess staff and pension obligations, inherited debts, surplus assets, treatment of land, public service obligations, and timetables for restructuring. The rule of thumb should be that old liabilities should be borne by the government rather than saddled on the new company, and that excess assets should be sold.

The corporatization process itself could be completed within **1–3 years,** with support from external advisers, under the supervision of a common corporatization team and the SEE establishment board.

Options for key SEEs are as follows:

- **Construction Units of the Ministry of Construction**: Form three or more medium-size companies, invite strategic investors, privatize entities once contractual models and financial systems are in place.
- **Myanma Railways**: Corporatize in two entities (separate freight operations from passenger operations and infrastructure management), identify PSO needs for urban and nonviable rail lines, prepare a business and rationalization plan, as well as a performance contract.
- **Inland Water Transport**: 5-year transition to a new business model centered around cargo and ferry operations, discuss PSO for ferries and services to remote communities, sell assets to invest in modern equipment and possibly loading facilities.
- **Road Transport**: Search joint ventures opportunities for viable parts of the business, but close operations and/or sell nonviable parts.
- **Myanma Port Authority**: Privatize terminal operations to concentrate on port management function.

5.1 Corporatization Principles

Principles of Separation

Real Corporate Status. To be effective, transport SEEs should be restructured to have:

- **An Independent Board of Directors**, which is the top level of management. This is different from the current practice in autonomous SEEs of relying on internal management team boards. The board should have responsibility over the company. Managers should report to the board, not to the ministers. Directors should be selected for their expertise and should be responsible for the corporation governance and the direction of corporate development.
- **A Chief Executive Officer** (CEO) who reports to and is responsible to the board for the overall performance of the company. His or her selection is critical. The CEO should be selected on the basis of merit. Managing a government department is usually not the same as managing a corporation. Often, it may be advantageous to bring in an outside CEO.
- **Accountability for Performance**. Management and staff must be held accountable for achieving targets. The final metric is the successful achievement of targets for business growth, revenue, and profitability.
- **Effective accounting and auditing**. The financial accounts are where the company's performance can be measured. External audits ensure accuracy and integrity.
- **A clear focus on customers.** The job of the corporation is not to run trains or buses or river vessels, it is to serve customers. The corporation must align its corporate structure and business processes on this objective.
- **Freedom to set prices to service markets.** This means both upward flexibility and downward flexibility. The need to constantly improve productivity to match the other competitors in the marketplace will control prices. Where customer revenues cannot cover operating costs, either the market should be abandoned or, if the government deems that market to be essential, then a public service operation subsidy should be paid.
- **Freedom to decide to make, buy, or sell.** All functions need to be subjected to a rational and impartial assessment of whether it is essential to keep in-house or contract to a supplier. Equipment may be expensive and difficult to maintain. It may require special expertise to operate efficiently. Many corporations have decided to such as data processing or accounts management are services that can be contracted out. Equipment supply and maintenance can be contracted. Infrastructure maintenance can be contracted. A similar review is required for assets: Are they necessary? Should they be kept, improved, or sold?

Government Control Mechanisms. As explained in Section 2, the government's control over the companies should take three forms:

- As the owner of the company, the government is represented on its board. It is suggested that the Ministry of Finance should be the sole supervisor of SEEs acting in a commercial environment (construction units of MOC, IWT, MA, and RT), while the oversight of delivery units of the government (airports, MPA, and MR) could become a shared responsibility between the proposed new ministry of transport and the ministry of finance. As the owner, the government should require the companies to prepare corporate **business plans**.

- Delivery units that remain under the new ministry of transport should prepare **performance contracts**. These contracts would ensure an arms-length relationship between the government and the corporation. Among others, they define the **public service obligations** of the corporation.
- The corporations should be subject to **regulation** as all private businesses in the sector.

Corporatization Suitability

Not all SEEs have the same rationale to remain under public ownership, nor are they all able to generate funding from users sufficient to allow independent operation.

Government ownership rationale. The question is "*Does state ownership of this business deliver any social benefits that cannot be delivered in another, better way?*" If the answer is yes, the company should be corporatized but remain in the public sector. If the answer is no, its privatization should be considered when possible. The rationale for government delivery of transport services is generally weak. It is stronger for transport infrastructure managers, as their privatization can require an advanced public–partnership framework.

Readiness. To be ready for corporatization, an SEE needs to meet the following criteria:

- most of its income comes from customers;
- it is profitable or nearly profitable; and
- it is able to meet a certain level of satisfaction of customer's needs.

Privatization can be further considered if the company also:

- has a track record of producing timely and accurate financial reports;
- competes in a market place; and
- has low level of protection from competition.

Table 8 examines the various agencies involved in the transport sector for their suitability for corporatization. Starting from the top right quadrant of the Table are those enterprises for which there is an unclear public sector rationale and which are also likely financially sustainable. This includes at the outset, Myanma Airways and the construction units of MOC. These should be fully corporatized, and considered for privatization. At the other end of the scale, in the bottom left quadrant, are those enterprises where there is some public sector rationale and which are unlikely to be financially sustainable. These are DWIR and Myanma Railways. Myanma Port Authority is a special case as its business (port management) is viable but until 2011, had been running systematic deficits. In the top left hand quadrant are those enterprises that have a clear public sector rationale and are likely to be financially sustainable. This includes some airports. In those cases, other countries have often pushed the enterprises to become financially self-sustaining, but leave the ownership in public hands.

Table 6: Corporatization Suitability

	Some public ownership rationale	Unclear public ownership rationale
Likely financially sustainable	Airports	Myanmar National Airlines MOC's Construction Units
Not financially sustainable	Myanma Port Authority Myanma Railways DWIR	Road Transport Inland Water Transport

DWIR = Directorate of Water Resources and Improvement of Water Systems, MOC = Ministry of Construction.
Source: Author.

The final group refer in terms of quadrants for consistency comprises enterprises that have little public sector rationale and are not financially viable. In practical terms, only two options are viable. One is to find a way to merge or otherwise change the business environment to make them more financially viable. The alternative is to sell them for the value of assets and allow the private sector to serve the market. Road Transport and IWT fall into that category.

Change Management

The government has followed a decentralized approach, whereby all ministries prepare the corporatization of the companies at their own pace, subject to varying pressure from the Ministry of Finance to cut deficits and subsidies. This has led the most dynamic companies (e.g., Myanma Airways) to stride ahead, while others were unsure of their fate. The conditions for corporatization—particularly the treatment of land assets, pension liabilities, public sector obligations, and inherited debt and staff—have been left open to negotiation on a case-by-case basis.

A common framework for corporatization would be a surer way to success. The ministries in charge of transport could take the initiative to negotiate with the Ministry of Planning and Finance a common strategy, including financial terms. A next step would be to set up a corporatization team to help all SEEs prepare business plans and, when needed, restructuring plans, set up commercial accounts, and other steps toward their corporatization.

5.2 Common Corporatization Terms

Profitability Targets

As a rule of thumb, corporatized transport units need to generate an operating ratio of about 80%. That means that the direct costs of operations equal about 80% of revenue, leaving 20% for working capital, administration, and investment.

None of the SEEs achieve that level of financial viability at the moment, Myanma Airways being the closest as of FY2013 (after reaching it for the previous 3 years), and Myanma Railways the furthest. The cumulated deficit or surplus of the five transport SEEs selected in Table reached $45.6 million in FY2013, most of which coming from Myanma Railways.

Inherited Debt

Most of the SEEs carry some component of long-term debt. Myanma Railways' long-term debt was reported to be only 2.7% of its assets in FY2012, but by FY2013 interest charges represented 16% of revenues and 27% of revenues. Road Transport does not have long-term liabilities. In 2009, Myanma Airways took on a concessional loan for the purchase of three aircrafts, which it will start to service in 2015, and is still servicing a small Canadian International Development Agency loan from 1976. Inland Water Transport's books still include a historic World Bank loan and an Overseas Economic Cooperation Fund loan with a residual value of $25 million. These loans were long kept in arrears as were all loans to international financial institutions. This issue is handled directly by the Ministry of Finance.

Table 7: Revenues, Operational Expenditures and Operating Ratios of Selected SEEs
(Revenues and expenditures in MK billion)

	FY2010			FY2011			FY2012			FY2013		
	Rev.	Exp.	OR	Rev.	Exp.	OR	Rev.	Exp.	OR	Rev.	Exp.	OR
Myanma Railways	33.1	59.3	1.79	50.1	71.5	1.43	61.7	84.3	1.37	62.2	105.2	1.69
Road Transport	7.5	9.0	1.20	8.3	8.7	1.05	8.2	9.3	1.13	7.6	10.1	1.33
Myanma Airways	18.7	15.9	0.85		18.1	0.80	41.6	33.2	0.80	39.5	37.6	0.95
Inland Water Transport	7.3	12.4	1.70	11.0	11.7	1.06	11.0	12.9	1.17	10.1	12.1	1.20
Myanma Port Authority	3.8	6.6	1.74									
Aggregate deficit			32.8			17.9			17.2			45.6

Rev. = revenues, Exp. = operational expenditures, OR = operating ratio (expenditures over revenues).

Note: FY2010 data available for Myanma Port Authority

Source: Asian Development Bank estimates based on data from Myanma Railways, Road Transport, Myanma Airways, Inland Water Transport, and Ministry of National Planning and Economic Development.

As a rule of thumb, the government should take over historic debts not related to productive assets. This review suggests that this is mainly an issue for Myanma Railways.

Staff and Pension Obligations

SEEs restructuring to focus on their core viable business face the issue of staff retrenchment costs and pension liabilities. All SEEs have reduced their staff, up to the point that some have more pensioners than staff. MPA staff was reduced from 11,000 to 3,200 between 2011 and 2014. IWT has 3,400 staff and 4,500 pensioners. MR reduced its staff from 23,000 in 2011 to 20,000 in 2014. In FY2013, pensions represented:

- 1% of MA's revenues ($0.4 million)
- 8.5% of MR's revenues ($5 million)
- 13% of IWT's revenues ($1.3 million)
- 20% of RT's revenues ($2 million)

Excessive pension costs and staff retrenchment costs should be taken over by the union government. Pension costs account more than half of the deficit of IWT and Road Transport, and could push the companies quickly to bankruptcy. However, the pensionable staff of the SEEs remain public servants under the Government of Myanmar public service staff rules. Regardless, these liabilities would remain with the government.

Two approaches can be used. One option is to establish a provident fund, to manage the pension costs over time and to fund staff retrenchment. This approach is attractive to the pensioners because it is actuarially sound and the monies are managed by an independent professional pension fund. Pension obligations of current and future staff can be dealt with through the provident fund. Historical pensions need to be capitalized, but to adequately capitalize the provident fund usually requires a fresh infusion of government capital (potentially financed by a loan from an international financing institution) or alternatively, sale or conversion of land assets owned or allocated to the SEE to raise funds to provide capital for the provident fund. Loans from international financial institutions in some countries can be used. Both those funding methods should be considered for the corporatized transport service delivery units.

The second option is simply for the government to transfer the pensioners from the responsibility of the SEE to the government as part of the overall government pension obligation.

Infrastructure and Equipment Assets

Corporatized SEEs should only bear the cost of infrastructure that they use as part of their corporate activity. This is most relevant for Myanma Railways, since more than half of the network experiences little traffic, making it unlikely to generate more revenues to cover the costs to maintain it. Myanma Railways should assess the costs of keeping the lines open and run the services desired by the government. After a public review of whether or not to keep open each line, the deficit should be covered under a public service obligation.

Corporatized SEEs should also be free to sell or scrap their excess equipment. This is particularly relevant for IWT's vessels, Myanma Railways rolling stock, and Road Transport trucks. The corporations should estimate requirements based on traffic forecasts, and sell or scrap the excess fleet.

Land

Most transport entities have accumulated considerable land over many years. This land is often carried on the balance sheet at a (minimal) historical book value that bears little relationship with the current market value of that land. The attachment of land to the corporate entity is one way of addressing the need to have a strong balance sheet. But to achieve that result, the land should be valued at current market rates. This will dramatically increase the land value component of the balance sheet, but will carry with it a large tax obligation. However, the valuation process can be lengthy and controversial, delaying corporatization.

An alternative approach is to transfer all land other than core land (to be used by the corporatized unit) into a union government's independent land management company charged with maximizing the return to the government from land assets. The corporation can receive in exchange either nothing (the book value), or a notional amount negotiated with the government. The land can also be used as capital for the provident fund discussed above. As corporations expand and need more land, they can lease it for a market-base fee from the land management company. But the cost of land—as rent on the land—enters the income statement of the operating company and because that cost impacts the profitability of the company, there will be a conscious effort to keep that cost to a minimum.

Public Service Obligations

It is inevitable that some services delivered by SEEs will not be commercially viable and as a result, some level of public service obligation will be needed. This will particularly be important for IWT (ferries), Myanmar National Airlines (links to remote airports), Myanma Railways (secondary lines), and Road Transport (government staff transport).

During a transition period, there are advantages to awarding the public service obligation directly to the SEE, but in the longer-term, substitutes should be considered. From the SEE viewpoint, public service obligations are a good source of revenues, but they limit autonomy and business growth perspectives since they depend on the government. From the viewpoint of the Ministry of Finance, directly awarded public service obligations can appear as subsidies to unproductive entities.

At the minimum, the government should establish the actual costs of the public service obligation (from an examination of the SEE accounts, requiring some analytical accounting capacity). These costs should be borne by the government entity most benefiting from it. The cost of running secondary railway lines can seem unimportant for the central government, which is unlikely to carefully consider their usefulness. Region and/or state governments and city governments (for the Yangon Circular Railway) would be in a better position to make informed judgments if they can decide upon the services and pay for them. The contracting public government should be able to exert pressure to raise productivity through periodic renegotiation of the contract.

As soon as possible, public service obligations should be tendered out for the minimal subsidy. The services can be contracted to a monopoly operator over a longer period in exchange for a subsidy, the level of which can either be expressed as a minimum payment per user, or a fixed payment covering deficits.

5.3 Corporatization Process

Table 8 sets out the key steps and role of government and the company during the corporatization process. The steps requiring the most inputs, and potentially external support, are:

- the appointment of the board and recruitment of the CEO;
- the valuation of assets;
- the definition of a viable business plan and negotiations of financial targets;
- the management of human resources issues; and
- the introduction of business management systems.

The process can take 1–3 years. The cost of international advisors can range from $1–$2 million for a small SEE, up to 10 times this amount if advisors are requested to carry out all these tasks for a company as large and complex as MR.

Table 8: Corporatization Process

Government Task	Corporation Tasks
Preparation	
Prepare policy statement to corporatize the corporation	Prepare registry of assets
Establish a corporatization unit	Initiate preparation for installation of commercial accounting
Draft corporatization law	Identify excess assets and deficit making services
Review laws and regulations restricting competition with the corporation	Identify regulatory constraints bearing on the corporation
Prepare company registration documentation	Obtain company registration documents
Appoint establishment board: • Establish qualifications • Seek nominations for external directors • Advertise and/or identify potential CEO • Appoint board directors	Directors to appoint CEO CEO to appoint and/or confirm senior managers
Development of Restructuring and/or Business Plan and Performance Contract	
Identify corporation core business, revenues, and suppliers	Research business demand and profit sources
Identify areas where the corporation is a monopoly and decide upon regulatory regime	Review impact of residual constraints and possible substitutes
Value SEE assets	Identify required assets to run the business and treatment of excess assets
Decide how much debt the corporation can carry	Identify manageable debt burden
Decide treatment of staff retrenchment and pension liabilities	Consult staff Prepare arrangements for severance, redeployment, training, and change in status of benefits (housing, health, education)
Decide treatment of land	
Decide what government guarantee that will be offered for each corporation debt	Identify minimal government guarantee required
Decide targets for cost minimization, service levels, productivity targets, rate of return, dividend, and other financial policies	Negotiate with Ministry of Finance realistic targets, based on financial model
Decide what infrastructure and services should be covered under public service obligations, and review costs and performance	
Decide upon future public support for investments	Prepare investment and financing plan
Government to define position of government directors at the board regarding business plan and to sign performance contracts	Board to approve business plan Board to allow CEO to sign performance contract
Setting Up Administrative Services	
	Identify management systems needed for new business: commercial accounting, human resources, information technology
Appoint a unit to take care of residual claims	Identify legacy rights and obligations: contracts, civil or criminal legal liabilities, statutes, and regulations

Table continued

Table 8 continued

Government Task	Corporation Tasks
Set up a scheme to fund government obligations regarding staff retrenchment and pension issues, treatment of land	Appoint people to manage staff transition
agree with corporation on purchase price	Prepare for taxation and accrual accounting Complete business valuation process Define accounting policies
Award licenses and public service obligations	
Take charge	
New board to replace establishment board and take control	Public relations campaign to present company

Source: Authors.

Privatization Options

Corporatization for some companies is a first step toward privatization. There are various methods:

- The government can do a clean sale, whereby 100% of the company is sold to a single buyer. This is the easiest method.
- The government can also keep a majority or minority share, or a golden share. Partial sale requires managing the interests of government and minority shareholders, and is again more complex, as each condition reduces the value of the company to the private investor.
- The government can sell shares at an initial public offering.
- The government can offer staff buyouts, during which management and staff could buy the shares from the government. This is common where staff believe that changing the owner will make it easier to raise capital and turn an underperforming business around. As insiders, they are in a good position to make this judgment. The risk is that they lack access to capital and skills.
- The government could pay someone to take over a losing business with the hope that the new management could turn it around, and stop public losses. The risk is that the investor simply runs down the company and liquidates it.
- In some cases, only the viable part of the company is salvageable. The rest is liquidated or sold by parts.

The government has emphasized joint ventures as a preferred way to develop SEEs. Two types of joint ventures can be considered. Conventional joint ventures involve establishing a new firm with the contribution of both partners to develop new markets. Another option is that the SEE transfers all its (viable) operations to the joint venture. The SEE continues as a legal entity. This second solution is close to a partial sale of the company subject to the limits mentioned previously.

5.4 Implications for Transport State-Owned Economic Enterprises

The situation and restructuring options of the following transport SEEs is analyzed in detail:

- **The construction units of the Ministry of Construction** are discussed in the ADB 2016 publication *Myanmar Transport Sector Policy Note: Trunk Roads.*
- The case of **Myanma Railways** is discussed in the ADB 2016 publication *Myanmar Transport Sector Policy Note: Railways*.
- The case of **Inland Water Transport's** case is reviewed in Appendix 1 to this note.
- The case of **Road Transport** is reviewed in Appendix 2 to this note.
- The situation of **Myanma Port Authority** is discussed in Appendix 3, but development and restructuring options are just preliminary because of a lack of recent data.

APPENDIXES

APPENDIX 1
Inland Water Transport

1. Assessment and Perspectives

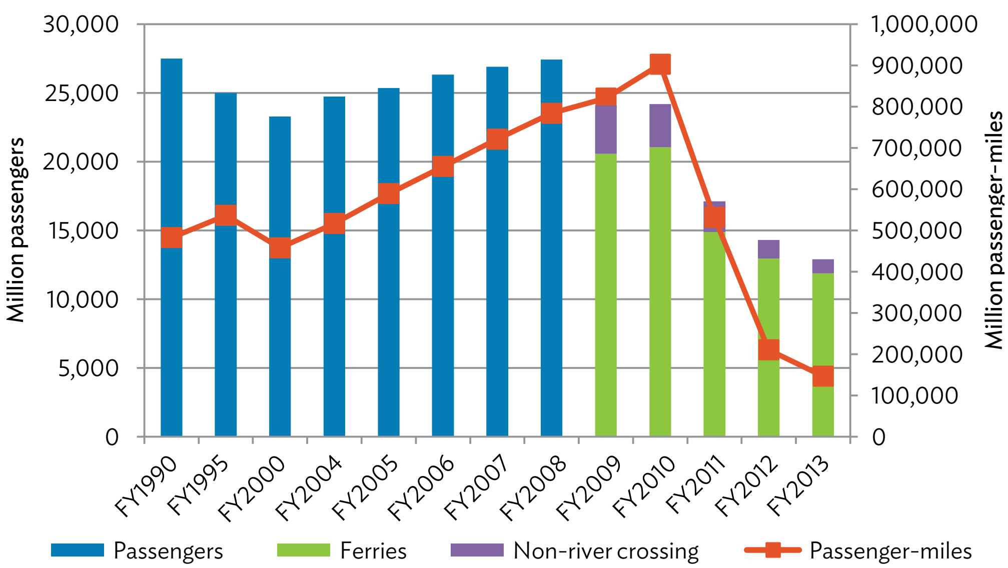
Status and Nature of Market

Inland Water Transport (IWT) is an state-owned economic enterprise (SEE) under the Ministry of Transport. The mandate and responsibitlity of IWT is being updated in a draft IWT corporatization law. For the past 50 years, IWT has functioned under the requirements of the Road and Inland Water Transport Law of 1963. The mandate and role of IWT is:

- to transport passengers and freight along the navigable waterways of Ayeyarwaddy River, the Chindwin River and also in the Delta areas, Kayin States, Mon, and Rakhine, and
- to operate ferry services for the convenience of passengers and vehicles.

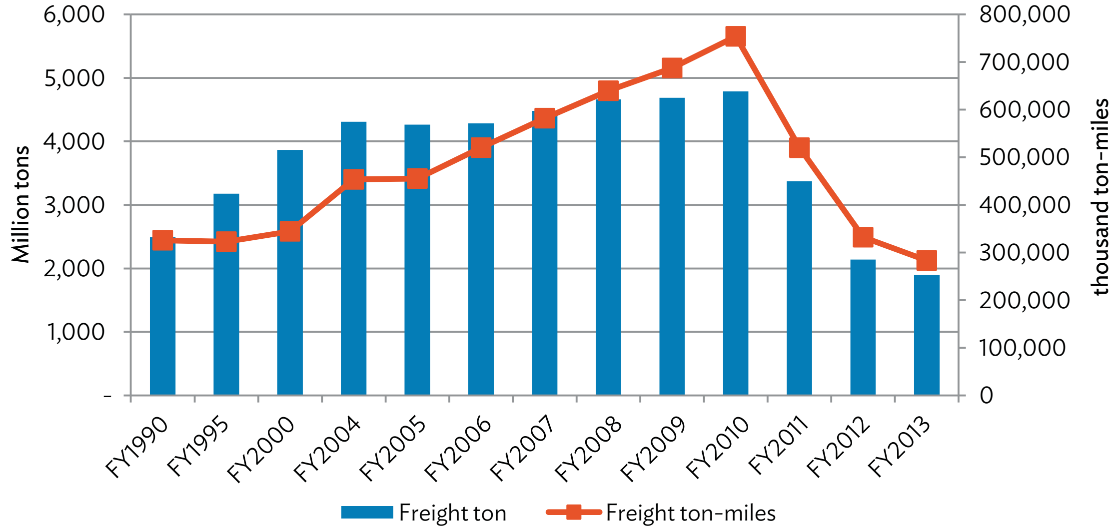
There is no clear rationale for keeping public ownership of IWT. Such services are equally delivered by the private sector, which comprises many smaller, more competitive operators. According to the framework defined in section 5, IWT should be considered for quick corporatization and privatization after a transition period.

Figure A1.1: Inland Water Transport Passenger Traffic



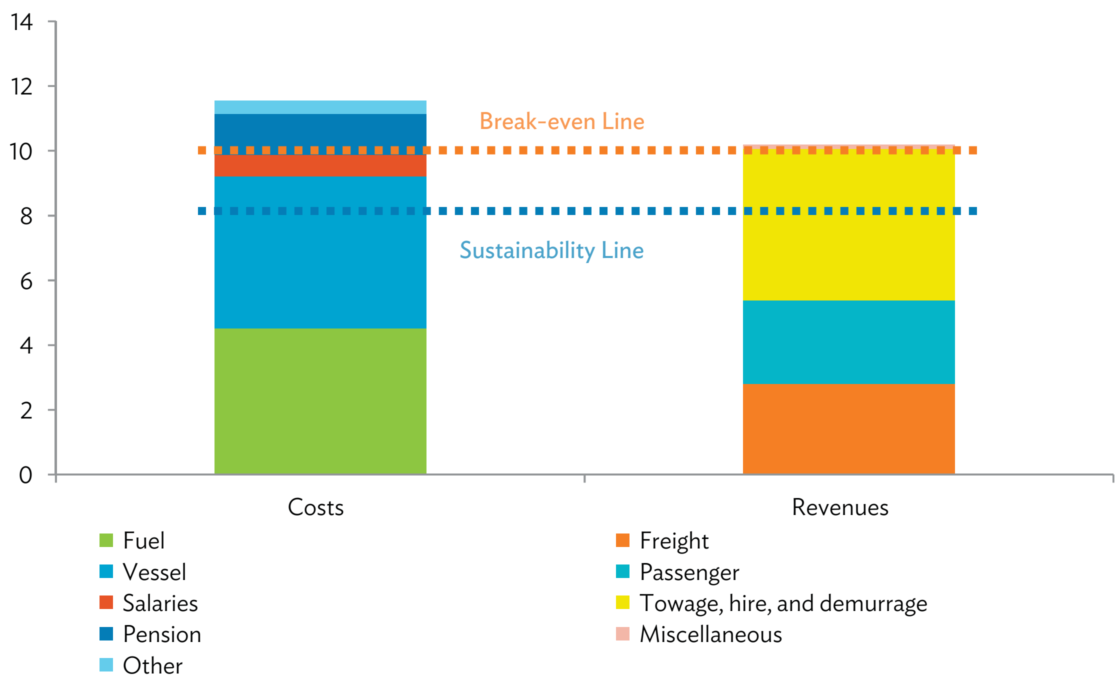
Source: Asian Development Bank estimates based on Ministry of National Planning and Economic Development, and Inland Water Transport. 2014. Annual Traffic and Financial Accounts. Yangon.

Figure A1.2: Inland Water Transport Freight Traffic



Source: Asian Development Bank estimates based on Ministry of National Planning and Economic Development, and Inland Water Transport. 2014. Annual Traffic and Financial Accounts. Yangon.

Figure A1.3: Inland Water Transport Costs and Revenues as of 2013 (MK billion)



Source: Inland Water Transport annual traffic and financial accounts; Asian Development Bank estimates.

Issues

IWT has 3,400 staff, against a sanctioned staff level of 10,900. The sanctioned staff levels are not likely to be achieved as traffic has fallen sharply over the past few years. Operating ratio is about 120% With reduced liability for pensions and debt, it could be close to 100%, still above benchmark of 80%. However, significant changes are needed to become a stable operator. The lack of profitability and the challenge of recovering market share will keep staff levels at the current level, or may be even lower in the future. Staff are government employees and as such are entitled to government pension guarantees. Key indicators of performance are shown below.

Components of a Potential Business Model

Market viability for freight is within sight. For passengers, only ferries and niche markets are still viable and the business will keep on shrinking.

Freight Market Outlook. For freight, river transport is already a low-cost carrier for low-value commodities (e.g., cement, fertilizer, wood, coal and ore, paper) over distances longer than 300km.[32] The competitiveness advantage would increase greatly, provided that: (i) the government carries out minimum investments in river channelization and river port mechanization, and (ii) vessels of 300 deadweight tonnage or higher are increasingly used. Simulations show that river transport could also be competitive for medium value commodities along the Ayeyarwaddy River (e.g., petroleum products, grain, and agricultural products).

Current bulk tonnage moved on all modes totaled 76 million tons in 2013. This can potentially increase to 180 million by 2025, and up to 425 million tons by 2040, not including containers. This study estimate a potential market for river transport along the Ayeyarwaddy of 30 million tons by 2025. Current 20-foot equivalent units handlings number 400,000-450,000 in Yangon Port. This is likely to double in the next 5 to 7 years. None of the 20-foot equivalent units traffic is now handled by rail or water.

IWT is in a good position to seize this market, being by far the largest river transporter, and the only one with large ships. IWT will need new equipment (e.g., self-loading vessels), and a more aggressive commercial management, and will potentially need to invest in terminals.

Passengers. For passengers, river transport is only a viable alternative for very low income people over short distances, and only in situations where bus transport is at a disadvantage (e.g., river crossing, connections with the Ayeyarwaddy delta). In terms of travel time (at best 5 knots on the average), river transport cannot compete with road transport. People-transport on the rivers will eventually be confined to remote areas where there are no road accesses and to tourist and leisure travel.

The nature of the market suggests that the government should consider setting up public service obligations for social reasons. The public service obligation should initially be with the historic transporter, IWT, but after a transition period of 2–5 years, they could be tendered out, and eliminated whenever they do not meet a strong rationale.

[32] The basis for these estimates is in ADB. 2016. *Myanmar Transport Sector Policy Note*: How to Reduce Transport Costs. Manila

Reducing IWT's operating cost can come from the following areas:

- **Fleet replacement.** The highest components of operating cost are related to vessel and fuel. IWT's current fleet is old and has not kept pace with changes in cargo packaging. In many ways, the design is ill suited to modern shipping practices. Replacing it with a tug and barge system of operation is far more efficient in terms of physical handling of cargo and fuel consumption.
- **Rationalizing its services.** Scheduled services in which a vessel carries both passengers and cargo need to be separated into cargo services and passenger services. Services that are not profitable should be discontinued. River transport has clear advantage over modes for long hauls and emphasis should be given to services with distances over 100 km.
- **Mechanical handling of cargo.** Application of mechanical means (cranes, forklift trucks, stackers, etc.) to cargo handling is possible when proper terminal facilities (jetties, warehouses, working areas, etc.) are available.
- **Bulk shipments.** It is advisable to ship cargo in bulk, where the commodity is amenable to bulk handling, and where bulking is not possible, to unitizing, palletizing, shrink-wrapping, etc. for loading.
- **Container shipping.** Containers shipping yields significant cost advantages. In addition, containers that are destined to or originating from inland ports can be transported on a "through-bill of lading" without having to break bulk or consolidation in Yangon, reducing overall transport cost.

2. Options for Restructuring

Option 1: Partial Sale of Inland Water Transport

Without recovery of the navigable river system and basic services, IWT will be bankrupt in 2 years. Then sale of IWT in pieces is the most likely option. This is feasible as parts are valuable: some subsidiary units, some vessels, and land assets and buildings.

Option 2: Full Sale of Inland Water Transport To a Private Investor

This will require a change in regulations limiting ownership in IWT to allow full control by a new investor. Conditions of sale need to define requirements to retain staff; limitations to the sale of assets, particularly land; and a commitment to continue as a full inland waterway transport operation. Private sector bidding should be international to limit collusion.

Option 3: Conditional Corporatization with a Time Limit

IWT continues to implement the new business plan but under severe physical constraints. Support from the government to rebuild a navigable river system and create some ports is essential for survival. If no support is available, then options revert to 1 or 2.

Option 3 is recommended. It is conditional, since a lot of work will need to be done and it is unclear whether the IWT has the resources or the energy to carry out the needed restructuring. The success of the option is predicated on the government, through the Directorate of Water Resources and Improvement of Water Systems and possibly the Myanma Port Authority creating a viable river infrastructure for navigation and shipping. For IWT, it needs to be restructured to address customers' needs. That means business re-engineering and development and an agreement on financial relief from pension and debt obligations from the Ministry of Transport and the Ministry of Finance.

Table A1.1: Options for Restructuring Inland Water Transport

Option	Benefits	Drawbacks	Constraints	Comments
Partial Sale of Inland Water Transport	Sale of pieces may yield the highest return to the government. Shipyards, dockyards, vessels may be attractive to other investors or operators. IWT land can be retained by the government and managed separately.	There is likely to be staff redundancy in this option. Some staff can remain with the assets as crew on vessels and workers in maintenance or fabrication yards. Most others will lose jobs. Remote services will need to be provided on a PSO basis.		Piecemeal sale of the assets of IWT may be the most effective means of realizing value to the people of Myanmar from IWT but it effectively gives up on the option of having a significantly large company working in the inland waterways sector.
Full Sale of Inland Water Transport To a Private Investor	Full privatization of IWT will require the government to allow full ownership of over 50% controlling interest. Possibilities exist for a shipping company or freight forwarding company to buy all of IWT.	Without changes to the navigation system, the same concerns exist as for IWT currently. Companies may want IWT for its assets but that may not give the government the return it expects. Restrictions would accompany the sale.		Sale to a private investor is possible but the investor is likely to act rationally and that means liquidating as much of IWT as is liquid. To forestall asset stripping, the government will likely impose limits on the sale
Conditional Corporatization with a Time Limit	Option similar to Option 1 above. IWT remains as an SEE and exists. Staff remain. New management systems are developed. River terminal docks are built and moved into place. Local jurisdictions cooperate with managing the river ports.	Uncertain ability to survive until infrastructure is restored. Uncertain ability to recapture lost traffic, particularly passengers. Cargo traffic is more viable but depends on river ports. River ports also depend on river navigation. Unlikely to get a navigable river system in time.		Corporatization may be possible although difficult. The Ministry of Finance will need to agree to structural changes in the financing of IWT for areas like pension obligations and historical debt. Land assets and other assets will need to be sold. A business plan will need to be prepared, and a fixed timeframe needs to be agreed upon. It is suggested here that 5 years should be sufficient to show whether IWT can exist as a separate entity or whether the parts are worth more than the whole.

continued on next page

Table A1.1 continued

Option	Benefits	Drawbacks	Constraints	Comments
Maintain Status Quo	IWT can continue as is with limited government funding but gradually losing market share. Investment in river infrastructure may make IWT more viable over time. IWT will target long distance bulk transport. IWT can construct its own ports. Joint ventures with local jurisdictions are possible for port support	Uncertain ability to survive until infrastructure is restored. Uncertain ability to recapture lost traffic, particularly passengers. Cargo traffic is more viable but depends on river ports. River ports depend on river navigation. Unlikely to get a navigable river system in time.	• Commitment of the government to provide a sustainable river infrastructure and navigable river management system; • Commitment of the government to provide basic riverbank infrastructure (ports) to support more efficient long distance cargo transport; • Commitment of the government to support "basic social service provisions" for remote communities and the poor; • Decision by the government that IWT can provide services more effectively than the growing private sector river operators	It is not likely that the government will agree to this option. This is the best-case option if IWT remains as a government entity on the government budget. But much depends on the investment in the river navigation system and without that there is no future for IWT.

IWT = Inland Water Transport, PSO = public service obligation.
Source: Authors' own.

3. Development of a Restructuring and Business Plan

IWT will need to be reformed into a company that can exist and prosper when the inland river navigation and shipping infrastructure are restored and the river ports are created. The IWT business plan could consider the following:

- developing a revised organization structure focused on customer service, allocating responsibility and accountability for performance;
- developing a new staffing plan to move to a merit-based organization with the possible infusion of international experience to help train senior managers;
- developing a financial control and monitoring system to allow IWT to monitor the profitability of the various services;
- negotiating public service obligation arrangements from the government for services that are not able to cover their full cost of operation;
- financing renewal of vessels from the sale of old vessels;

- selling maintenance or fabrication facilities that are not profitable and unlikely to become profitable under the new business focus;
- selling unused land to create a pool of working capital to allow for vessel refurbishment or renewal;
- developing river ports in cooperation with landside municipalities, beginning with Mandalay Port;
- developing a marketing and customer service department to target increased movement of bulk freight; and
- negotiating with Yangon Port terminal operators to develop a sea-to-river transfer mechanism to allow for container movements up river once the Mandalay Port can handle container transfers from vessel to dockside.

This transition is likely to require about 5 years to develop and implement. It is likely that some government support will be needed during that period, depending on how quickly the navigation system can be restored and how successful are the discussions about establishing river ports.

APPENDIX 2

Road Transport

1. Assessment and Perspectives

Status and Nature of Market

The stated objectives of Road Transport (RT) are:

- to ensure free competition for road transport to prevent development of transport monopolies;
- to provide safe transport services;
- to provide transport services to safeguard national sovereignty, support border areas development, state-run development projects, state-sponsored ceremonies, and other transport services required by the state; and
- to participate in the domestic production of motor vehicles, spare parts, and major repair of the RT fleet.

In practice, Road Transport is a passenger and trucking company. Its main business is to serve government freight and staff transport needs. As a side business, RT leases its trucks to its own drivers, and commisioned passenger transport services such as pilgrimages.

There is no clear rationale for keeping public ownership of RT. Such services can be equally delivered by the private sector, which again comprises many smaller, more competitive operators. According to the framework defined in section 5, RT should be considered for quick corporatization and privatization after a transition period.

Road Transport has close to 3,000 staff (Table A2.1). The road freight services division provides freight transport through 18 branches established in the significant towns of various regions and states of the country. Out of 18 branches, 3 are in Yangon City. It operates a fleet of 1,245 trucks of which about 1,100 are operational. Passenger Services operates a fleet of 284 buses out of 6 branches in Yangon City to operate urban and intercity transportation. It also extends services at two other major cities—Mandalay and Mawlamyine. There are 4 main base workshops responsible for providing repair and maintenance services and production of motor spare parts. Three are located in Yangon and one in Mandalay.

Table A2.1: Road Transport Staff

Department	Admin Officer	Other	Finance Officer	Other	Operations Officer	Other	Engineering Officer	Other	Total Officer	Other
	49	382	11	166	0	1667	28	639	88	2854
Total	426		179		1667		677		2942	

Admin. = Administration.

Source: Author's own, based on data provided by Road Transport.

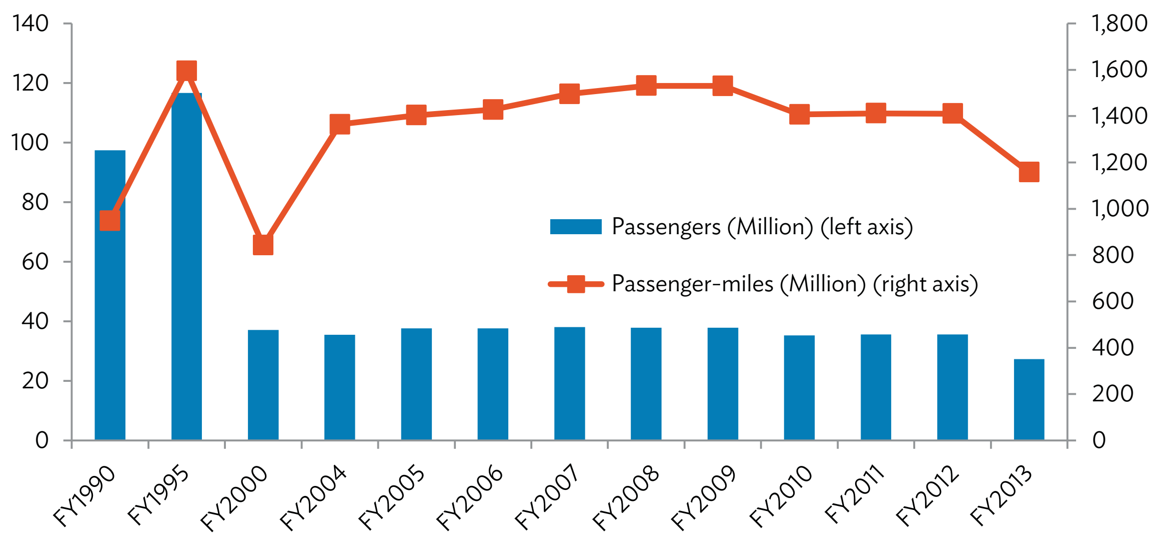
Issues and Concerns

RT market is stable, but its market share has dwindled. It is estimated that RT accounts for about 1% of road freight and 5% passenger inland transport volumes in Myanmar. This is well below its 1990 shares of 6% and 50% respectively. The company's traffic has stagnated since 2000 for passengers (Figure A2.1) and since 2005 for freight (Figure A2.2), in a quickly growing market.

RT is a large company, but not of critical importance to the sector. Its fleet comprises 1,100 trucks, mainly of medium size (6.5 to 10.0 tons capacity), and 285 large buses (40 seaters). It has 3,000 staff. This makes it a large company in a country where road operators are small. However, its fleet only accounts for 2% of the nation's heavy duty truck and bus fleet. The company's bus fleet was reduced in the 1990s from above 800 to the current level. The truck fleet has decreased marginally (1,385 trucks in 1990).

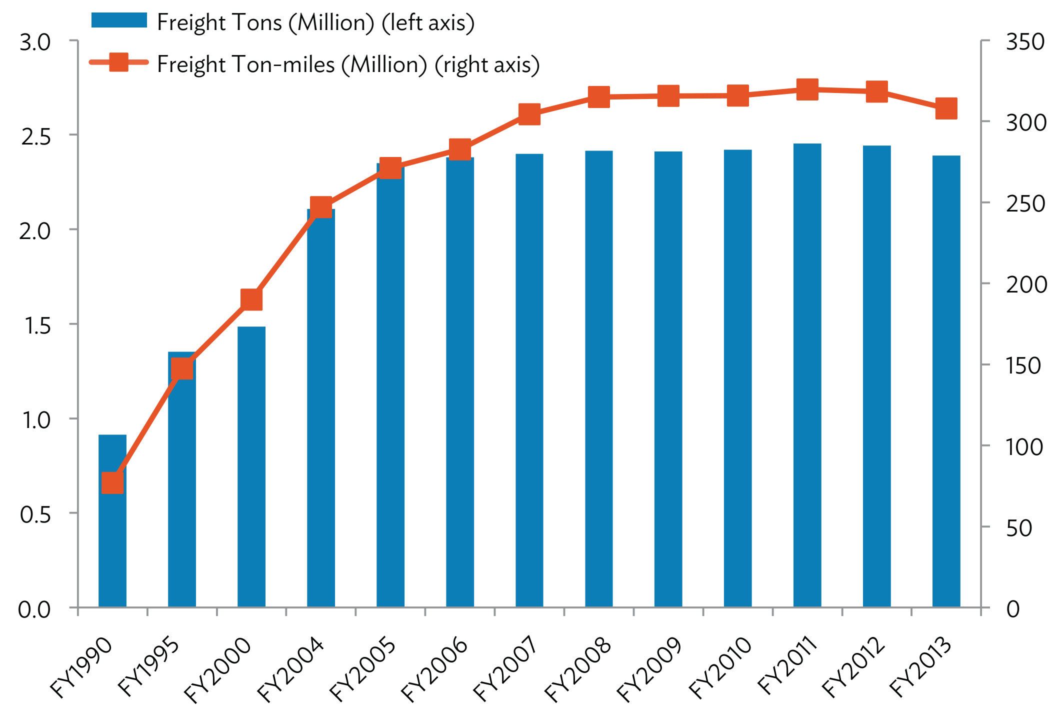
The service offered has been constrained by cost and by equipment. RT's urban passenger service is now largely dominated by bus services to the state-owned factories in the new industrial development zones around the main cities. Some service is also provided to the remote rural areas and in response to emergency situations.

Figure A2.1: Road Transport Passenger Traffic



Source: Authors' own, using data from Road Transport and Ministry of National Planning and Economic Development.

Figure A2.2: Road Transport Freight Traffic



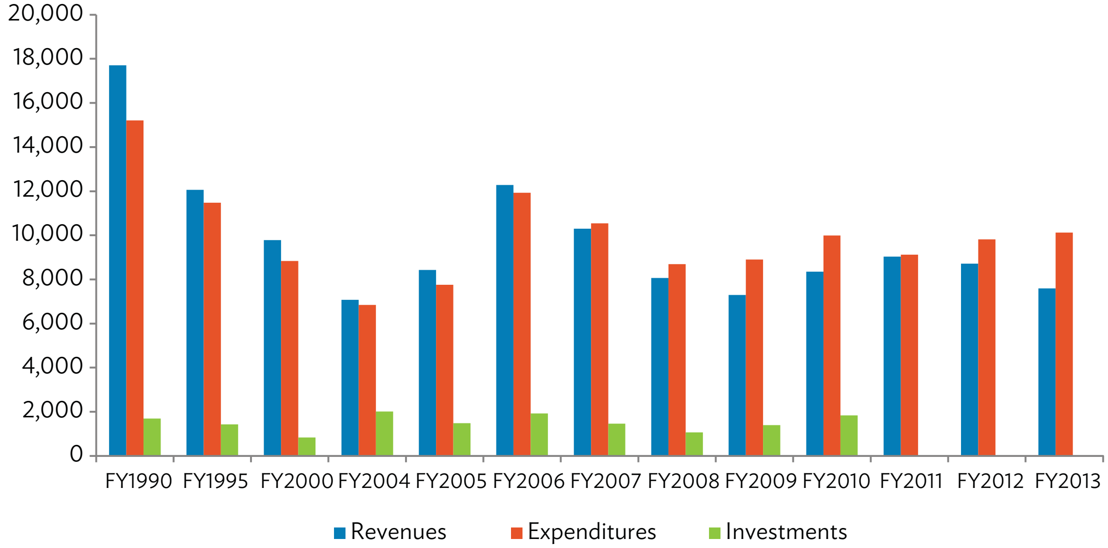
Source: Authors' own, using data from Road Transport and Ministry of National Planning and Economic Development.

RT also provides bus services for public servants to commute from Yangon to Naypyitaw each week—to Naypyitaw on Sunday and to Yangon on Friday. Charges are MK 3,500 ($2.72) per trip, with MK350 ($0.27) for insurance. Commercial ticket prices are MK 6,700 ($5.21) per trip. There are four routes approved between Yangon and Naypyitaw and two routes from Mandalay to Naypyitaw. RT operates 247 buses (198 in service)—76% of which are older than 15 years. At the moment, RT carries approximately 1%–2% of the passenger traffic in the country.

Freight transport is normally provided to government companies or to customers looking for low cost service. Discussion with RT management suggests that about 25% to 30% of annual revenue comes from carrying cane to the crushing factories. Especially given unmade roads, this is rough work that higher value carriers are not interested in supplying. For this traffic, RT contracts for industrial service and net revenues are split between RT and the drivers.

Truck drivers also rent the vehicles for a month (approximately 70% to 80% of fleet) and are able to use the vehicles for other business in addition to the RT business. RT has first call on the vehicles when business is available but if a monthly rent is paid for the vehicle, the time used to carry RT goods or passengers is added to the monthly rental time. Rentals range from MK250,000 ($194.57) to MK350,000 ($272.40) per month. Drivers are responsible for parts, maintenance, and all fuel cost. Revenue from RT business is divided by formula with the drivers.

Figure A2.3: Road Transport Revenues and Expenditures
(Constant MK million, 2013)



Source: Authors' own, using statistics from Road Transport and Ministry of National Planning and Economic Development and ADB calculations.

Financial Viability and Sources of Revenue

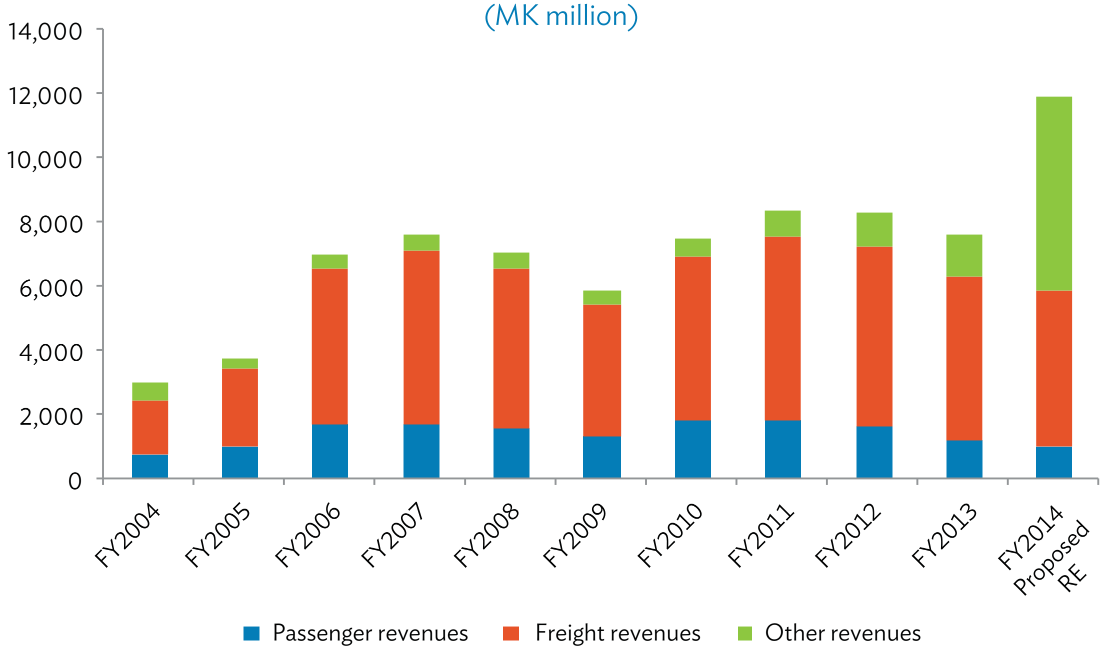
RT has made operational deficits since 2007. The gap is widening since 2012. In FY2013, the operational ratio was 133%. A road transport company should have an operational ratio of about 80% to be profitable in Myanmar. Over the past 2 years, RT lost about $3.5 million on operations but it received about $13 million of government operational support and capital. It currently has about $11 million of working capital so it is in a relatively healthy capital position if it wished to use that funding for future investment. However, since 2012, the company has experienced a reduction of its average rates coupled with an increase in its unit costs (Figure 3).

Freight makes about 67% of RT's revenues, and passenger 15%. Other revenues (land and building lease, training revenues) have grown in recent years to 18% of total revenues. They may account for half of FY2014 revenues if the government accepts RT's 2014 proposal to lease part of its land or buildings (Figure A2.5).

Figure A2.4: Road Transport Unit Costs and Revenues
(Constant MK 2013)

Source: Authors' own, using on statistics from Ministry of National Planning and Economic Development.

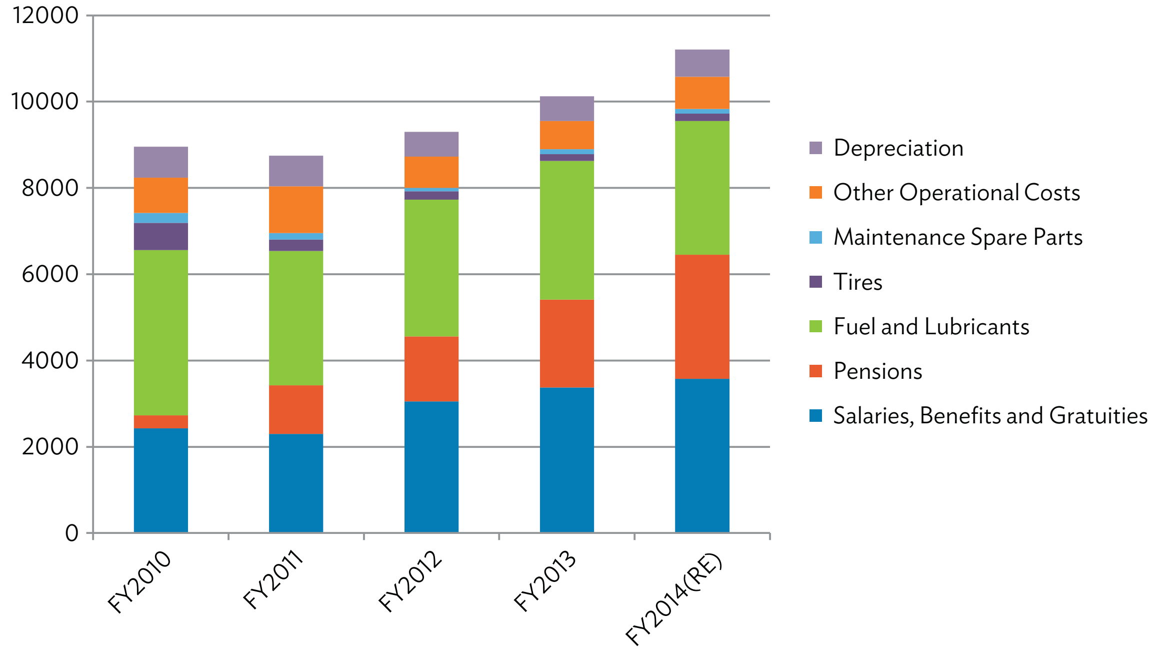
Figure A2.5: Road Transport Revenue Composition
(MK million)



RE = Revised Estimates.

Source: Authors' own, using on statistics from Road Transport.

Figure A2.6: Road Transport—Operational Costs
(MK billion)



RE = revised estimates
Source: Authors' own, using data from Road Transport.

Competitiveness

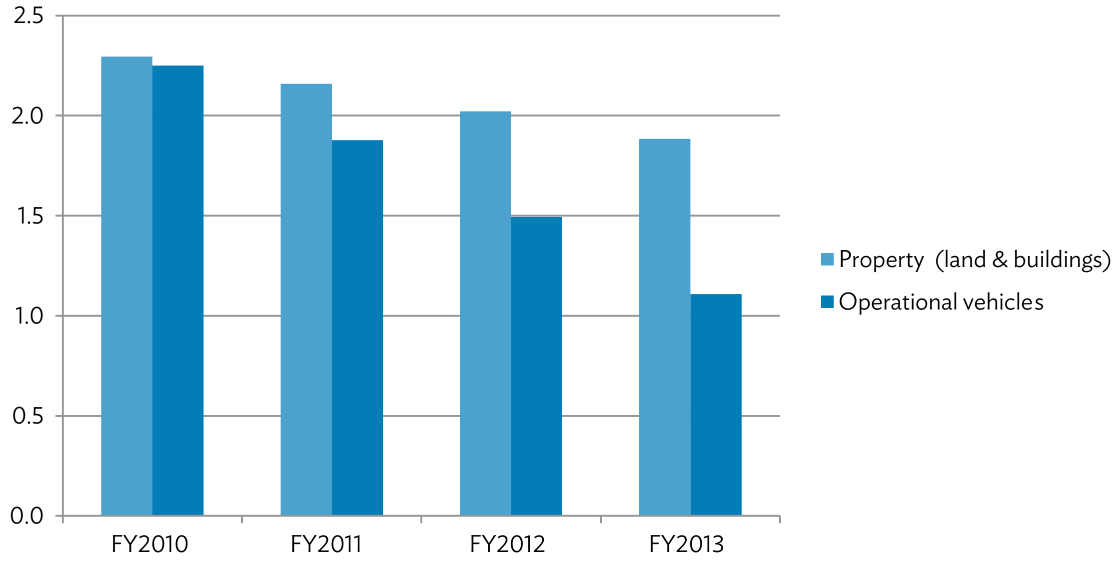
It is difficult to compare RT on a competitive basis with a private company, as its business involves both leasing and operations. Since RT leases out its truck fleet and since the drivers are responsible for maintenance, parts and fuel, the cost structure of RT is different than a private fleet. Figure A2.6 shows the breakdown of RT's operational costs.

Their striking feature is the large and growing size of salary and pension costs. Pension cost remain high on a percentage basis because while RT leases vehicles to its drivers, and drivers are essentially now entrepreneurs, they also remain on the RT staff books and accumulate pensions.

Assets

Only two categories of assets are significant on the RT balance sheet—buildings and property and vehicles. The value trend for both is downward as shown in Figure A2.7. This reflects the lack of asset renewal reflected in the depreciated book value decline. It also suggests that the land value is at historic book value and not current market value.

Figure A2.7: Book Value of Road Transport Assets ($ million)



Source: Authors' own, using data from Road Transport.

Fleet

The fleet is generally old and outdated. Approximately 75% of the bus fleet is more than 15 years old. Most bus companies depreciate their bus fleets over a 12-year life. In RT's case, most of the buses are beyond their normal working life. Buses are sourced from a variety of companies, illustrated in Figure A2.8. The many types of buses complicate maintenance and also supply of spare parts (Figure A2.9).

Figure A2.8: Age of the Bus fleet

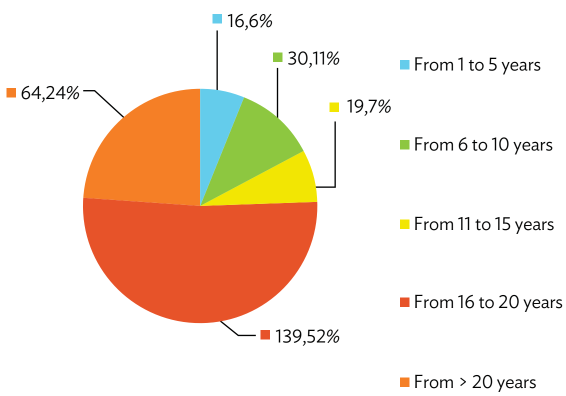
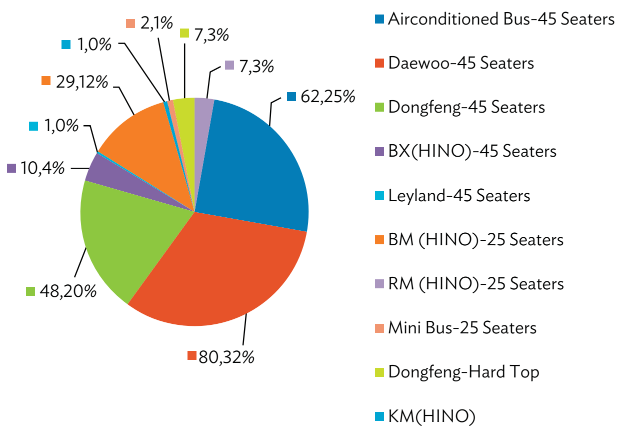


Figure A2.9: Composition of the Bus Fleet



Road Freight Department's truck fleet is mainly composed of medium trucks of 2 axles, with a loading capacity of 6 tons–10 tons. These trucks used to be the norm in Myanmar when it was impossible to import larger trucks. Since the relief of constraints on truck imports, their high running costs have made them uncompetitive, except on secondary corridors and rural roads.

2. Options for Restructuring

Asset Sale

Sale of assets may not raise much money. Vehicles are out of date and there is not likely to be a strong market for them. Depots are useful but only a limited number may be attractive to the private sector. In many cases, the depots can likely be given to the municipality to be used as municipal bus stations or freight forwarding depots. Noncore land can be retained as a government asset and used to cover the cost of pension obligations and to pay for redundancy to staff. The biggest drawback to this option is the impact on staff, many of whom are unlikely to find positions with the companies who purchase the assets. As a result this may be the least attractive of the options.

Unitized Sale

Sale by international tender is a viable option. The attraction of this option is the full transfer of staff could be made a condition of the sale. This will ensure all staff keep their jobs with the new company and, in turn, it will assure the new company that the knowledge of the staff will not be lost in the sale. The sale can be defined to include only those assets that are considered core. This would include most of the depots and all of the main buildings but would not include noncore land. That would normally be reallocated to the governments property management company. A transaction advisor would normally be hired to manage this kind of sale.

Joint Venture Sales

A number of new companies can be established with willing joint venture partners to assume control over selected components of the current business or to identify and transition parts of RT into a new business. This has the advantage of linking components of the RT business to competent partners who understand and are interested in working with those components. The staff currently working with those components of business can be retained by the successor companies, but it is likely that not all staff will be able to move to this joint venture model and the remaining staff will need to be considered under a different model.

Corporatize as a Share Limited Company

It is hard to see how RT can survive in a competitive market without drastic changes. This model can also be combined with selected agreements with joint venture partners to make the company more stable and where possible, to improve the fleet assets. This option leaves the door open to staff participation in the new company and the transition to a share limited company will instill new energy and entrepreneurial commitment to the future health of RT. It also requires aligning the RT business model with the competition:

(i) aligning fuel cost with market prices, (ii) subsidizing the difference between rates charged on government contracts and market rates, (iii) using current assets (land) to invest in fleet modernization, enter new markets and reduce staff, as well as look for joint ventures, (iv) reduce or stop the increase in pension costs. At the moment, RT has sufficient cash resources to embark on a modest fleet renewal program. But such a strategy will quickly deplete the current cash resources. It is only a viable option if in the longer term, RT has a viable business model that can be competitive. It is not possible to judge that possibility at the present time, since RT has never operated as a fully competitive commercial company.

Table A2.2: Options for Restructuring Road Transport

Option	Benefits	Drawbacks	Constraints	Comments
Asset Sale	This option may maximize the value to Myanmar of the current RT assets. Land value may be attractive and raise significant money. Some small transfer of business to the private sector.	This option essentially just wraps up RT and it will cease to exist. Staff will be laid off and will need to find new jobs. This may be difficult for the government to support.	Staff rules will need to be followed. Pension obligations will need to be respected. Open bidding for equipment and sale of land is needed to ensure probity.	While fairly straightforward, this option will have a strong, negative effect on staff and for that reason it may be the least attractive option for the government.
Unitized Sale	All assets are transferred. Staff are transferred and keep their jobs. Business can rely on high quality management systems from purchaser. With right partner, a good opportunity for success in future.	A condition of sale will be to withhold some noncore land assets. This may reduce the attractiveness of the RT company to outside buyers. Equipment will not be valued highly. Value of sale to the government will be modest.	Likely need a transaction advisor to set up the privatization process. Many models exist. This is not a difficult option but needs to be structured sensibly. A transaction advisor will give useful guidance on how to structure the sale.	This may be a viable option and should be considered in the development of the business plan. It will keep RT alive. It may prosper under new management. Staff can continue with RT and pensions can be covered by sale of noncore land.
Joint Venture Sales	Attractive because lines of business can be matched with other competent companies in the same lines. Staff can transfer to the new companies and keep their jobs.	Not all of the current business is likely to be attractive. Some will be left behind. Some restriction on transfer of land assets will be needed for the lines of business companies.	This is largely the planned approach currently underway. Limits remain on percentage of ownership in the RT companies. This may need to be changed in the regulations.	This option has the potential to rescue parts of the RT business and some of RT staff. The JVs are likely to require controlling interest in the JV company. The residual RT may then become a holding company with shares in a number of other companies.

continued on next page

Table A2.2 continued

Option	Benefits	Drawbacks	Constraints	Comments
Corporatize as a Share Limited Company	This follows the MA model. It offers opportunity for part of RT to survive as a company. The size is modest but it could exist in the private sector. Land sales may be needed to recapitalize and buy vehicles.	Little marketing experience. Bus service is mainly for public servants and not commercial. Truck traffic is low value and not competitive with other companies. Some business may be possible. Needs development of a business plan.	Little marketing and private sector management capacity. Vehicle fleet is very old and needs replacement. Other companies in the market are very aggressive and have a head start. Success may be difficult to achieve.	This is a possible option. It offers the chance of future success but it is a challenge. It will require more management time and may lead to a catastrophic collapse. If this option is chosen, staff should be willing to support it.

JV = joint venture, MA = Myanma Airways, RT = Road Transport.
Source: Authors' own.

Recommended Option

A modified form of the joint venture model is likely the most attractive for all parties. Currently, RT is in negotiations with a company from the Republic of Korea interested in establishing a freight forwarding company in Myanmar, partly using RT assets. Some contracts—such as the bus service to factories or public servant transport to Naypyitaw, if accompanied by a defined public service obligation, may also be attractive to a private investor. RT has the capital needed to provide its share of any joint venture initiative. But that option as noted above is unlikely to be able to employ all the current staff.

Once the options for establishment of joint ventures have been considered and exhausted, then the residual part of RT that has little prospect of commercial viability on its own will remain. A number of options can be explored for that residual. For instance, drivers can be given the truck that they rent, and with a pension buyout they can become owner operators of their own business. Some of the bus drivers may wish to retain the service contracts to the Yangon Region industrial estates and continue that business. It is likely that one or more of the potential joint venture will wish to use some of the vehicles as a starting point for a new business, so some of the drivers will be retained. Because the book value of the vehicles is now so small, there is very little impact on the balance sheet in transferring those vehicles to the drivers.

The working capital base can also be used to pay for redundancy or retraining for other staff. As the economy of Myanmar begins to grow rapidly, educated and trained staff will be in high demand and it will not be difficult for staff to switch from one job to another.

3. Development of a Business Plan

The above options are currently being considered. A business plan based on the strengths of RT and options for joint venture with private partners, both international and domestic need to be defined. The selection of joint venture partners and the establishment of those new companies with transfer of assets and staff is the first order of business.

The business plan should then also define what the strategy and practical steps are for continuing some of the business areas that may be attractive to some parts of the company (regional bus service) and what action can be taken to ensure that the residual staff are treated fairly and are given a chance to move to other parts of the economy. As noted in option 3 above, this may involve establishment of a share-limited company for the residual business or the establishment of RT as a holding company with shares in a number of independent businesses.

This business plan should be reviewed and approved by the Ministry of Transport and Communications. Its implementation should not take more that 18 months.

APPENDIX 3
Myanma Port Authority

1. Assessment and Perspectives

Status

Ports are administered by the Myanma Port Authority (MPA). MPA reports to the Ministry of Transport and Communications and is headed by a managing director. Yangon is the primary gateway to the country. Eight other ports (Dawei, Kawthong, Kyaukphyu, Mawlamyine, Myeik, Pathein, Sittwe, and Thandwe) serve as feeder ports. In its current form, MPA was founded in 1989. Its headquarters are in Yangon. The defining laws that govern the MPA were all enacted before independence.

MPA is responsible for providing terminal facilities and services to shipping. However, despite the nomenclature, which infers a national body (port authority of Myanmar), it considers itself responsible only for the provision of facilities and services to international shipping while domestic shipping (including inland ports) is the responsibility of IWT. Consequently, while MPA has a healthy balance sheet in the past and facilities for international shipping are generally adequate, facilities for domestic shipping are not.

Several terminals operated by the private sector are engaged in container handling. These terminals are owned by MPA and leased to operators for a specified period under certain terms and conditions.

MPA staff has reduced from 11,000 to 3,200 over the past 3 years. Officers currently number approximately 300. A new board of directors has been formed with seven members as below:

- chair
- managing director
- port operations director
- shipping operations director
- legal specialist
- business specialist
- management specialist

At the moment, legislation is being passed to change the status of MPA into a more autonomous corporate entity. Under the pending law, MPA staff would remain as government employees with all rights. MPA noted that it can set its own salaries but as with IWT, this may mean it can top up government stipulated salaries. Looking forward, MPA sees staff stabilizing at around 4,000.

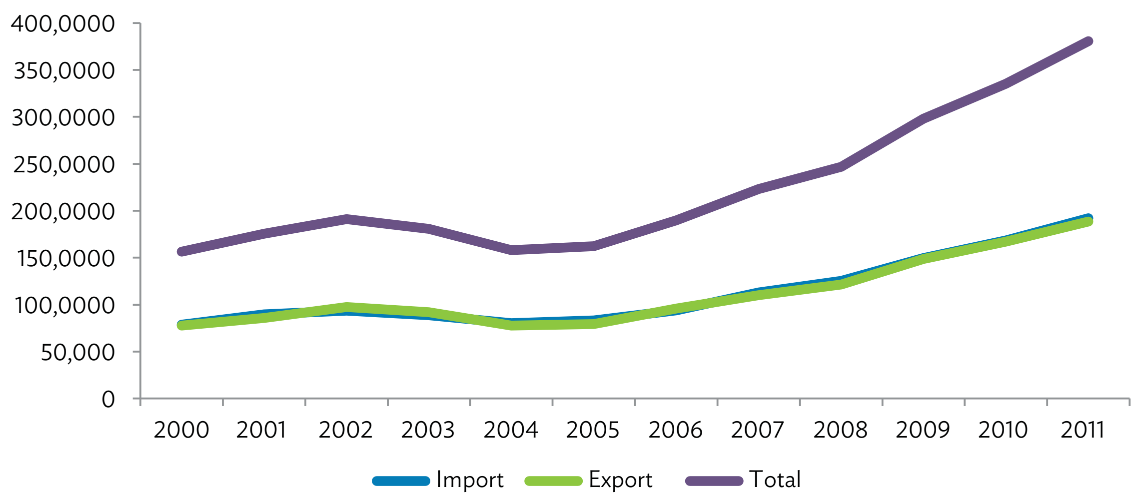
MPA will have the right to amend fees for services provided to users. But all requests to amend the fee structure will need to be submitted to the MOT for review and approval prior to implementation. Foreign or domestic investment in port service operations is now allowed and will also be allowed in future. This covers areas such as port terminal construction and operation and contracted delivery of services such as stevedoring. Currently in Yangon port are eight terminals of which seven are private and one is owned by MPA. In addition, it has 18 international wharves, two inland container depots and 40 pontoon type jetties catering to domestic traffic.

There is a clear rationale for keeping public ownership of MPA. Port ownership and management is a function that is more often than not directly under the control of the national and/or local governments. However, the operation of the large port is very susceptible to private delivery and competition. According to the framework defined in section 5, MPA should be considered for quick corporatization, aim for financial sustainability and sign a performance contract with the government. MPA terminal operations could be privatized.

Issues and Concerns

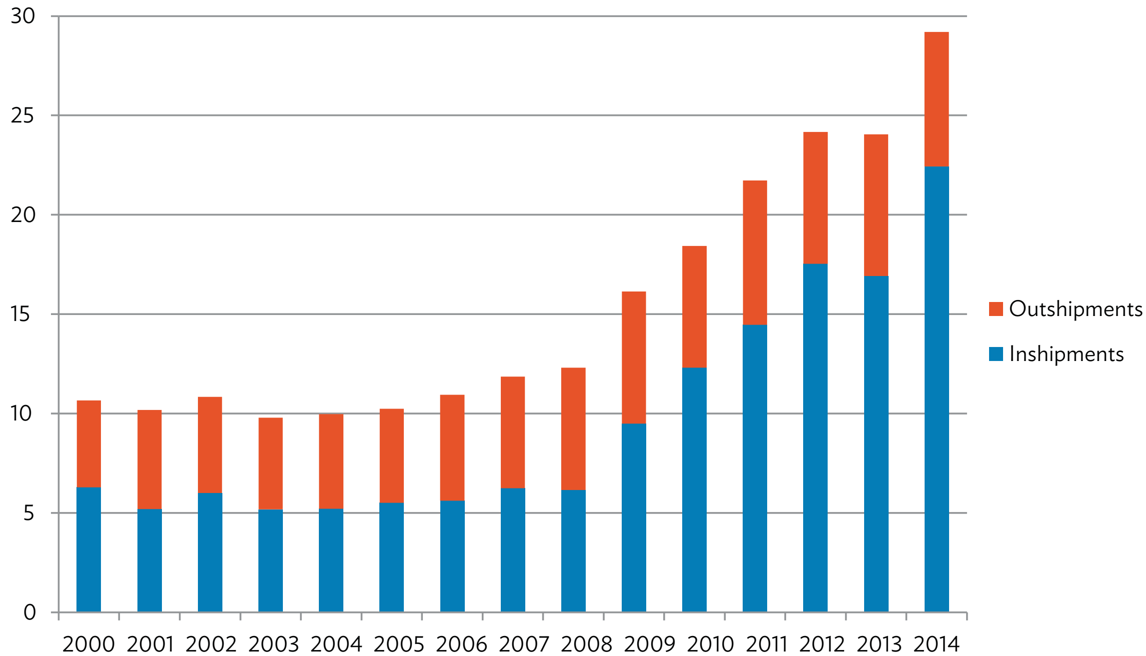
Traffic. Traffic handled by MPA has been fairly steady, in the region of 12 million tons until 2008 when it rose quickly to over 20 million tons. The increase has been particularly sharp for containerized cargo.

Figure A3.1: Myanma Port Authority Annual Traffic
(in Twenty-Foot Equivalent Units)



Source: Authors' own, using data from Ministry of National Planning and Economic Development.

Figure A3.2: Myanma Port Authority Total Traffic
(Million Tons)



Source: Authors' own, using data from Ministry of National Planning and Economic Development.

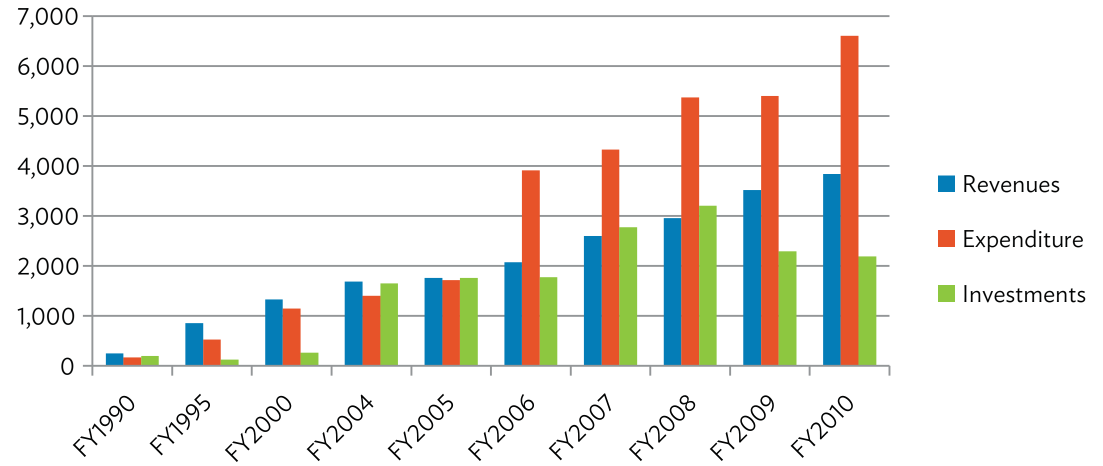
Revenues. From 2007 to at least 2011 (last data available), MPA has not been covering its costs. The revenue and expenditure by year are shown in Figure 15. In the period 1991 until 2007, MPA revenue and expenditure were largely perfectly balanced. But these costs rose when fuel prices were increased in 2007, while revenue did not increase in line with costs. This may be explained by the lack of adjustment to the levels of fees and charges in the legislation that were defined in 1998 and have not been changed since.

In March 2011, MPA began dredging the Port of Yangon to increase the size of vessels that can dock at the port to 35,000 deadweight tons, up from the current capacity of 15,000 deadweight tons. Maintenance dredging is also needed for the two constraining lower river bars with virtual continuous dredging needed off Monkey Point. The lower bar is not frequently dredged relying instead on tidal range to increase the available depth. MPA provides compulsory pilotage services for incoming and outgoing vessels. There is no vessel traffic control system and pilots are responsible for the movement of the vessels in the port area. Stevedoring services are provided by the port.

2. Options for Development and Restructuring

MPA can generally follow the process of corporatization described in section 5 of this report. Should deficits have remained since 2011, MOT should make it a priority to raise MPA rates to restore its financial balance and reach the proposed benchmark operating ratio of 0.8.

Figure A3.3: Myanma Port Authority—Revenues and Expenditures
(MK million)



Source: Authors' own, using data from Ministry of National Planning and Economic Development.

A business model based on the principle of public ownership and private sector operation is appropriate. However, while the arrangement is generally satisfactory, it appears that there is room for improvement. The number of berths is high and throughput per berth is low. Terminal operators' performance needs to be improved by requiring them to meet certain targets as a condition of the lease (berth throughput, vessel turnaround time, dwell time of containers in terminal, equipment downtime, etc). Berth productivity can be improved by increasing the deployment of more equipment (quay cranes and yard stackers) and use of information technology to drive operating systems and procedures. Adequately equipped and properly operated, a throughput per berth of 1 million twenty-foot equivalent units is achievable.

The port of Yangon has outgrown its location and there are compelling reasons to relocate it to a more suitable place. It occupies land in the heart of the city that can be put to more productive use. It is limited by space for expansion. Traffic to and from the port adds to the road congestion in the city. In addition, Yangon is located up the river a distance from the sea in confined waters. Access to the port is difficult and limited to vessels drawing a draught of less than 9 meters. A new location with deeper water and better access has to be found if Yangon is to be able to handle the new generation of container vessels.

MPA could develop a river–sea interface. The linkage between the sea and the river system in Myanmar does not exist. River vessels rarely put to sea. Seagoing vessels do not move upriver. The interface point is at Yangon but there are no facilities for ease of transfer of cargo from river to sea or from sea to river. Such transfer facilities are essential if the river system is to perform as it should. Particularly important are means of moving both bulk cargo from river to sea and vice versa as well as containers. Ship-to-ship transfer is possible. Self-unloading equipment can also be used to support bulk movements.

Away from Yangon, ports in the country appear passive. Little development has taken place in these ports. For a country the size of Myanmar, only one gateway port (Yangon) does not seem sufficient. One other port for the north and one for the south of the country would be desirable.

In addition, MPA could play a useful role in the development of river ports. The lack of formal river ports has been identified as a severe constraint to the development of river transportation. Part of the reason behind this situation is that there is no clear authority in charge of developing these ports. Rather than create new authorities, it could be advantageous to make MPA the manager of river ports. In this model, MPA could create local subsidiary port authorities jointly owned with local governments.

Ship movements in the harbor can be intensive. Until a new location is found, ship movements in the harbor are expected to increase. In a busy port, traffic monitoring and movement control is essential to safe navigation. The installation of a vessel traffic management system (VTMS) may be timely.

This report also suggests (section 4) the potential interest for a merger of MPA and the Department of Water Resources and Waterway Improvements (DWIR) into a Myanma Port and Waterways Authority. This setting would present advantages as it would: (i) simplify the interfaces around the river port of Yangon, (ii) give a single entity a clear mandate to develop the water infrastructure, (iii) create synergies, and (iv) allow some cross-subdization between linked activities. This organization would have a mandate to develop water transport infrastructure in the country. It would be self-financing from port access and operations charges, dredging contracts and sale of material, operation of river ports and terminals, and user charges for river operations.

Myanmar Transport Sector Policy Note
How to Reform Transport Institutions

Better transport is essential to Myanmar's development. After decades of underinvestment, Myanmar's transport infrastructure lags behind other regional countries. Sixty percent of trunk highways and most of the railways need maintenance or rehabilitation. River infrastructure does not exist, while 20 million people lack basic road access. Can the transport sector deliver upon the master plan's objectives? What is needed to improve the quality of the infrastructure and services for the industry? How can basic transport services be provided to all? How can Myanmar reduce the economic and social cost of transport? This report is an attempt to answer these questions.

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