

Roads to Growth and Development

Key Messages

1. **Development of the Trans-Java Highway and addressing the backlog in expressway development.** Considering its long term socioeconomic benefits, the GoI should consider making a strategic decision to develop the trans-java highway project. As one possible option, the GoI could pre-fund land acquisition and consolidate different concessionaires into a single holding company with open capital to raise additional financing from private investors (shareholders).
2. **Separation of policy formulation from service delivery** and clarification of roles and responsibilities of the road sector institutions:
 - ◆ Set up a sustainable financing mechanism to preserve all roads based on second generation road funds principles;
 - ◆ Introduce and mainstream Output and Performance-Based Road Contracts to maintain and manage road projects on long term basis (3-7 years);
 - ◆ Restructure national road management in line with business-like management practices: Establish an autonomous national road agency for non-toll roads;
 - ◆ Establish semi-autonomous regional road agencies for the strategic planning and management of extended provincial road networks (Provinces and Kabupaten).
3. **Prepare a national road safety strategy and plan of action** that sets specific timeframes for a scaled up institutional strengthening program and targeted interventions.

Where Indonesia Stands Now

Transport by road accounted for 70 percent of freight ton/km and 82 percent of passenger/km, making it the predominant transport mode in Indonesia. Transport investments fell from over 2.2 percent of GDP before 1997 to a low of just over 0.7% percent of GDP in 2000, and have since risen to around 1.7 percent of GDP in 2007 (Figure 1). This level of investment has not been sufficient to meet Indonesia's growing demand for transport infrastructure, and is becoming an impediment to socio-economic development and around 15 million people in remote communities still lack direct access to the all-season road network¹.

The government recognizes the challenges and is taking action to fill the gap, allocating more than 60 percent of total public expenditure in the transport sector to roads in 2008. The government has also initiated a number of fiscal and legislative reforms, including:

- ◆ **The amendment of the Traffic and Road Transport Law No 22**, that notably provides for the establishment of a road preservation fund (Article 30).
- ◆ **The creation of a fiscal space through the reduction of fuel subsidies.** The October 2005 fuel price increase added approximately US\$10 billion to the budget annually making possible increased in spending on development priorities, including roads. The removal of the remaining large energy subsidies (especially fuel) would further reduce distortions in transport costs and allow increased spending on transport priorities.²
- ◆ **Enhanced private sector participation.** Legislation was passed and the Risk Management Unit (RMU) in the Ministry of Finance (MoF) was created to enhance private sector participation in infrastructure. The enactment of Perpres 67/2005 and Kepres 38/2006 set the criteria for Public-Private Partnership (PPP) projects requiring the government's financial support. Progress has also been made through the establishment of special funds for land acquisition.

1 Making the New Indonesia Work for the Poor; World Bank; 2007

2 Making the most of Indonesia's new opportunities: Indonesia Public Expenditure Review, 2007, World Bank

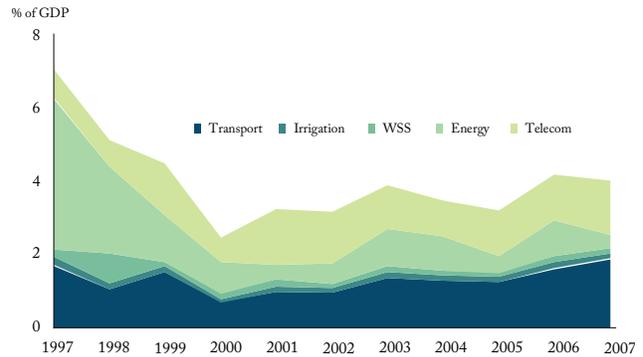
- ◆ **The separation of the regulatory and service delivery functions of toll roads** through the restructuring of Jasa Marga and the creation of a new regulatory body (Badan Pengatur Jalan Tol (BPJT), 2005). Resolving the land acquisition issue remains high on the government’s agenda.
- ◆ **Strengthened of procurement procedures at the Ministry of Public Works** through improved electronic-procurement systems.
- ◆ **The devolution of the responsibility for managing provincial and district roads to local government**, to encourage responsiveness to citizens’ needs.

Despite these advances, a number of challenges specific to the roads sector must be addressed for Indonesia to realize its full socio-economic potential:

- ◆ **Congested arterial roads and under-investment in expressways need to be addressed.** At the national level, a lack of high standard arterial connections – along major trade and commercial corridors – and congested arterial roads increase travel time and transport costs. While some progress has been made in the legislation of the toll road sub-sector, progress to date in the implementation of PPP projects has been poor. Only 650 km of toll roads are in place, mainly in urban areas, compared with an estimated need of about 2,000 km³
- ◆ **The overall quality of regional roads is deteriorating, and the condition of national roads has yet to recover to the level in 2000.** Despite funding increases and a renewed emphasis on maintenance, roads have not returned to pre-1997/98 situation. The percentage of national roads in good and fair condition has improved from 81.6 percent in 2006 to 83.3 percent in 2008, but has not returned to 87 percent observed in 2000. More than a third of the provincial roads and more than half of the district-level road network are in bad condition (Table 1). The low level of all-season access inhibits poverty reduction and limits access to services for the poor, particularly in eastern Indonesia.
- ◆ **There is a lack of sustainable financing mechanisms for road maintenance.** The preservation of road assets should be financially sustainable, but recent spending patterns reflect an overdependence on public budgets. Revenues raised through vehicle ownership and license fees, fuel levies and various road-user charges at the local and national level exceed road preservation expenditures. However, these revenues are considered as general taxation and legislation prevented the creation of a sustainable financing mechanism for roads.

3 Source: Strategic Plan: Ministry of Public Works 2005-2009, published March 2005 .

Figure 1. Total investment in infrastructure as a share of GDP



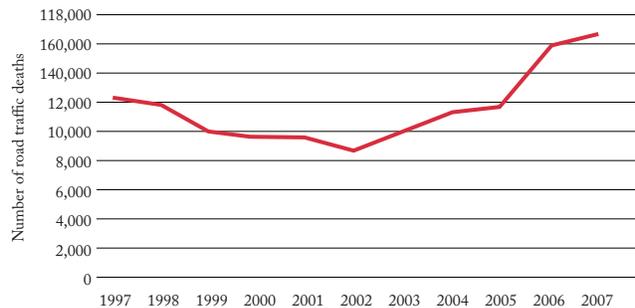
Sources: Government statistics for national and sub-national governments; Annual reports for state-owned enterprises; World Bank’s PPI database for private investment, excluding cancelled projects.

Table 1: Road Network Conditions

Road Status	Length (km)	Good & Fair (percent)	Bad (percent)
National	34629	83.0	17.0
Provincial	46499	63.0	37.0
Regency	240946	43.0	57.0
City	25518	96.0	4.0
Toll	649	100.0	0.0
Total	348241	54.0	46.0

Source: PJM 2005 and KMPU 2006 and DGH 2008

- ◆ **Road management capacity and performance is weak.** Typically programs and budget allocations are insufficiently based on objective criteria, are not transparent and lack public consultation. These shortcomings have been exacerbated by very lengthy procurement procedures and the poor control and supervision of the quality of road works. The cost of poor road service delivery is high, the works are often of low quality, and collusion between contractors remains a problem. The Director General of Highways (DGH) operates at a very high staff/network length ratio suggesting room for improved road management practices. DGH staff/network level is 12.5 staff/100 km. This is more than six times higher than the recommended efficiency level of 2 staff/100kms.
- ◆ **Poor road safety is a serious and increasing problem.** Approximately 50 people die on Indonesian roads every day. Motorized traffic, including motorcycles, are expected to continue to increase significantly, which will exacerbate the situation, unless urgent action is taken (see Figure 2).

Figure 2. Indonesia: Trends in Road Traffic Deaths 1997-2007

Source: National Police

Policy Priorities of a Rising Indonesia

In view of its size and socio-economic development aspirations, there is a need to develop a safe and efficient transport sector, in which roads play a major role. To achieve this goal, decisive action is needed in a number of key areas:

- ◆ **Develop the Trans-Java Highway.** A highlight of the Government Program for the years ahead could include a push to complete the Trans-Java as a critical element of the backbone road infrastructure for Indonesia. The traffic congestion along main traffic corridors and approaches to major cities on Java is particularly serious. Providing a high quality, limited access expressway system across Java, linking the key cities of Jakarta and Surabaya, will have important economic and social benefits. This would require the strategic decision to pre-fund land acquisition and consolidate concessionaires into a single holding company with open capital and the ability to raise additional financing from private investors (shareholders).
- ◆ **Address the broader investment backlog in expressway development.** Greater attention has been paid in recent years to diversifying the sources of financing for toll road investment. Experience suggests, however, that there are limits to the extent that public financing can be replaced. One way to meet the financing challenges is to overcome current constraints around PPP projects' preparation and implementation by: (i) investing more time and financial resources in project preparation, (ii) improving project selection, and (iii) enhancing the dialogue with investors and lenders. This last will require a champion for PPP projects and a commitment to implement a minimum number of adequate toll road projects through PPPs. As an intermediate step, technical assistance for project preparation (e.g. transaction advisor) should be provided to BPJT.

- ◆ **Separate policy formulation from service delivery** and strengthen the overall institutional framework, to clearly differentiate the roles played by key road sector stakeholders in terms of policy formulation, policy delivery and works execution.
- ◆ **Set up a Road Preservation Fund to provide the sustainable financing needed to preserve road assets.** The cost to the economy of a deteriorating road network is three times higher than the cost of maintaining road assets. Developing a sustainable funding mechanism for road maintenance is the key. Any mechanism should be designed and operated based on the "user pays" principle and secured by levying road user charges, including fuel levies and vehicle license fees. The amended traffic and transportation law explicitly mentions the creation of a Road Preservation Fund. Such a Fund should be established in line with Second Generation principles, characterized by clear rules and regulations regarding roles and responsibilities, strong oversight by a joint public-private board, sound financial systems, and a lean and efficient administrative structure. The agency managing the fund should act as a purchaser, rather than a provider of road maintenance services.
- ◆ **Introduce more efficient and business-like management practices.** Every effort should be made to increase road management efficiency. Efficiencies and cost reductions can be gained and passed on to road users by improving financial and managerial accountability, addressing the shortage of technical staff and providing a competitive remuneration structure. Another way to attain efficiency is by mainstreaming the use of Output and Performance-Based Road Contracts (OPRC) into road projects.⁴OPRC contracts are awarded through competitive bidding. Potential service providers propose a monthly lump-sum fee per kilometre of road to be managed and maintained, and contractors are paid not for "inputs" or physical work executed, but for the final "outputs" or outcome, based on the quality of work. This type of contract can significantly improve road conditions (Box 1) and expand the role of the private sector, from the simple executor of works to the management and preservation of road assets.
- ◆ **Build road management and financing capacity at the regional level** to improve the quality of provincial, kota and kabupaten roads and the rural transport infrastructure to increase access to services and markets. This will need improved management and technical capacity building programs for provincial, kabupaten and kota level institutions using national associations or technical institutes a system to transfer knowledge

⁴ A pilot 100 km road project using the OPRC approach is one of the components of the World Bank Strategic Roads Infrastructure Project currently being implemented in Indonesia.

and capacity from the national to the regional level that does not undermine local decision-making authority. A medium-term strategy encouraging the establishment of semi-autonomous road agencies to strategically plan and manage the extended provincial road networks is another step.

- ◆ **Increase road safety by preparing a national road safety strategy and plan of action.** Such a strategy must cover the safety requirements of road users and engage all stakeholders across government, the private sector, non-governmental organizations, media and the general public. It should also be linked to strategies in other sectors (e.g. health) and set ambitious safety targets, complemented by a national action plan setting out specific interventions to achieve within specified timeframes.

Box 1 - Output-based Contracts: Provincial road maintenance in Argentina

The impact of performance-based road maintenance contracts in Argentina (piloted in 1996–1997) led to the share of roads in poor condition falling from 41 percent to 6 percent, and in unit costs dropping between 12 percent and 18 percent. The economic rate of return was estimated to be 60 percent because of the savings in vehicle operating costs.

How The World Bank Can Help

The fiscal and legislative reforms undertaken by the Government of Indonesia provide a sound basis for the development of a sustainable road sector. The World Bank is currently providing selective support through a program of policy advice, institutional reform and investment financing in the road sector. The World Bank's support builds on its considerable global knowledge and experience helping many countries engaged in ambitious road management and financing reform programs.

Infrastructure Development Policy Loans and Investment Programs

Through the Infrastructure Development Policy Loan (IDPL) series, the World Bank is engaging with the government in a dialogue, focusing on the most critical policy bottlenecks. The IDPL series proceeds in parallel with analytical work and investment loans to improve the standards of non-toll roads and to preserve national road assets.

Two roads projects are being implemented, with World Bank support. **The Second Eastern Indonesia Region Transport Project** focuses on improving links in the road network of 16 provinces and approximately 190 kabupatens and kotas in eastern Indonesia. The **Strategic Roads Infrastructure Project** is improving the capacity and quality of national roads on Java and Sumatra, improving road safety and increasing the efficiency, quality and transparency of works and procurement.

Two additional road projects are being prepared. The Western Indonesia Road Improvement Project to increase the capacity of major arterial roads along the Western road corridor in Sumatra. The Road Preservation Project is designed to improve the maintenance of the national road network through performance based financing.

Analytical Advice and Technical Assistance. An assessment of the road construction industry in Indonesia is being undertaken to gain a better understanding of the constraints and issues, while identifying opportunities to improve the investment climate. A Public Expenditure Review (PER) of the transport sector is also being prepared. The PER will help the government make informed decisions about the optimal allocation of public resources improving prioritization, efficiency and effectiveness in the transport sector. In the future a road safety management capacity review, with the objective of achieving a consensus on capacity weaknesses and the measures needed to address them is under consideration.

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