



Executive Summary

Throughout the past decade transport projects have played a pivotal role in the support of economic development and poverty alleviation. This evaluation assesses the Bank's activities in transport during the period 1995–2005 as well as its preparedness to meet emerging challenges. It concludes that past performance has been well managed and effective, especially for intercity highway construction and rehabilitation, that the Bank's approach to transport contributed to private sector development particularly through private contracting of maintenance, that project outcome ratings have shown a steady improvement since the early 1990s, and that key elements of the current strategy—sustainability, private sector involvement, and urban strategy—remain relevant today.

However, the evaluation also concludes that transport must now focus more attention on confronting cross-cutting issues such as traffic congestion, environmental damages, safety, efficiency, and affordability.

This focus will necessitate more innovative, multi-sectoral approaches to resolve these complex and urgent country and global concerns. The Bank may have to reconsider its priorities to fully address these challenging social, political, and environmental issues and shift resources to ensuring efficient multimodal transport, improved rural linkages, and better urban transport.

Over the next 35 years 2.5 billion people will be added to the current world population of 6.3 bil-

lion. In developing countries, much of this growth will be urban; the number of cities exceeding 1 million inhabitants is well on track to surge from 268 in 2000 to 358 by 2015. This expansion, coupled with continuing globalization and trade liberalization, is expected to accelerate significantly the demand for the transportation of both people and goods.

The motor industry, for example, may have reached maturity in the developed markets of North America, Europe, and Japan, but globally it is poised for huge expansions, led by the motorization of China and India. Within a few years, China will replace Japan as the second-largest national market after the United States; over the next 20 years, more cars may be built than in the 110-year history of the

industry. Similar growth is expected in the aviation and maritime industries; only railway expansion is likely to be at a slower rate.

Although such vibrant growth may appear welcome, the scenario has a darker side as well. Today's concerns about high fuel prices will inevitably be magnified. Road transport already accounts for nearly a quarter of the man-made gases contributing to climate change. Pollution, noise, ugliness, and wasted time from traffic congestion also impose substantial societal costs. Marine oil pollution, crowded skies, and security issues also add to an increasingly dismal global transport outlook.

In developing countries the problems of congestion and pollution are further compounded by poor road safety, which has led the World Health Organization to declare road safety an international public health issue. Just over a century after the first motor vehicle-related traffic death in 1896, 1.2 million people are killed on the roads annually and 50 million more injured. More than 85 percent of these victims are from developing countries.

Public transport offers clear advantages for reducing congestion and pollution and for increasing safety. But progress has often been disappointing, because private vehicle users rarely pay the true costs they impose on society, thus encouraging urban sprawl. At the same time, decentralized cities with lower population densities and long trip distances increase the cost of providing public transport. The urban poor, usually residing on city peripheries, tend to become marginalized by a lack of accessibility. Meanwhile, the rapid growth of megacities is raising concern about worsening air quality, the adverse effects of which fall disproportionately on the poor.

The Bank's Response

Transport accounts for nearly 6 percent of global gross domestic product. It is thus no surprise that the Bank has provided more than \$30 billion, or well over 15 percent of its total lending commitments, in support of transport projects during the past decade. In the past 5 years there has

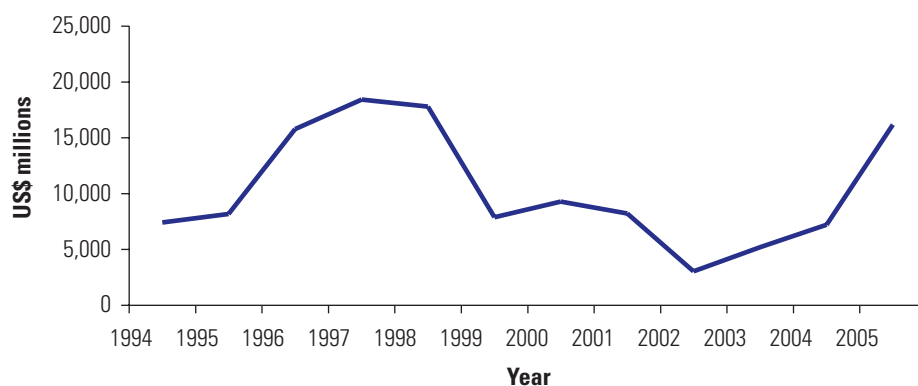
been a scaling up of transport investment as the link between poverty reduction and transport has become better understood. It is therefore timely that the Bank is now updating its strategic approach to the sector to address some of the more menacing impacts of global transport expansion and can take into account this evaluation, which includes an assessment of the Bank's readiness to meet such emerging challenges.

The World Bank's current transport strategy is influenced by three key documents. The *World Development Report: Infrastructure for Development*, published in 1994, promotes an expanded role for competitive markets in transport. *Sustainable Transport* (World Bank 1996) focuses on the need for transport systems to be comprehensively sustained—economically, environmentally, and socially. Finally, *Cities on the Move* (World Bank 2002a) focuses on the urban aspects of transport. The three elements—sustainability, private sector involvement, and urban strategy—all remain relevant today but require adjustment and a different approach to meet the challenges of the coming decade.

Private Sector Involvement Below Expectations

Optimism was high in the early 1990s that the private sector could assume a large part of the responsibility for funding both transport infrastructure and services. However, market expectations with respect to infrastructure turned out to be far too ambitious. After a dramatic decline during the financial instability of the late 1990s, when private sector transport projects in developing countries were seen as too long term and risky, confidence returned in 2005 (see figure ES.1). Nevertheless, despite a few early highly publicized failures, important progress was made internationally, and successful private concessions were effected in all modes of transport.

Although the outcome of such private investment in developing countries has been largely positive, transport concessions are still most common in middle-income countries, such as Argentina, Brazil, China, Mexico, South Africa, and Turkey. In these countries the volumes of traffic, especially

Figure ES.1: Private Sector Investment in the Transport Sector

Source: World Bank data.

for toll roads, are more attractive and there is sufficient public sector capacity to engage with the private sector. The Bank has nevertheless continued to encourage private investment even in lower-income countries; it realized that one successful project can still have a huge impact on such economies.

Port concessions in developing countries have generally been successful, as in India, the Republic of Korea, Mauritius, and Poland. Railway concessions in general, however, have been less satisfactory because governments intervene more often on pricing and labor issues. A Bank-supported railway concession in Tanzania, for example, had overly restrictive bid conditions and failed to attract private sector interest. Recently, security has also become an important issue at ports, airports, and border crossings.

Bank projects featuring private sector concessions have not grown substantially during the past decade but have seen modest growth in the International Finance Corporation (IFC). Clients generally turn to the Bank Group either for advice or when an investment is perceived as risky. In recent years, knowledge of how to set up toll-road concessions has matured, and the Bank is now able to offer services such as reimbursable technical assistance and partial risk guarantees. Where the Bank has supported or facilitated con-

cessions, they have usually been rated satisfactory or better, for example, roads in China, railways in Brazil, and ports such as Dar-es-Salaam in Tanzania and Port Louis in Mauritius.

For the foreseeable future, however, the public sector will continue to be the major owner and operator of basic transport infrastructure. This is true especially as the sector is dominated by roads, which have public good characteristics. The Bank increased its commitments for public sector transport projects once it realized that sufficient private sector investment would not be forthcoming. Evidence from Latin America has shown that a reduction in infrastructure investment (including transport) is associated with economic growth and that the gap in infrastructure expenditure relative to East Asia is widening.

The Bank's most important contribution to involving the private sector has been not in outright privatization, but through the many road programs in which it has encouraged private contracting. Also influential has been the abolition of departmental construction and maintenance and its insistence on competitive bidding for contracts. It has also had some success in encouraging the establishment of commercially run road agencies and the creation of road funds to bring greater stability into financing recurrent road expenditures, especially in Africa.

For railways, many governments are not prepared to agree to long-term concessions, such as in Morocco and Romania. The Bank nevertheless has been able to help improve accountability and transparency in financing arrangements, including openness about subsidization arrangements for noneconomic services and a greater willingness to divest noncore business components.

Although sustainability has improved, at least as reflected in Independent Evaluation Group (IEG) ratings at completion, the current reality is an understatement of what is required for truly sustainable transport infrastructure. This is because maintenance tends to have a lower priority for cash-strapped governments, despite good intentions, and because many countries are politically unstable—civil unrest can quickly undo all the good work that has gone before.

Mixed Institutional Progress

Effective governance and capacity building are integral to ensuring sustainability. The transport sector is certainly not immune from corrupt practices, especially in large construction projects. Although the sector's adherence to Bank guidelines for procurement and competitive tendering partially constrains the scope for corruption, the sector has until now lacked an explicit anticorruption strategy.

The Bank has generally had a mixed performance in helping to strengthen client institutions, with mostly modest results in low-income countries (especially in Africa) but better results in middle-income countries. In this regard, most road agencies and some railway reorganizations ranging from Ghana to Côte d'Ivoire have demonstrated greater effectiveness following Bank-supported technical assistance, but in some other countries the results have been less favorable.

Training, however, has often been aimed at assisting the immediate project and thus is less likely to have any broader or sustained impact. Often, the timing of training interventions has not been synchronized with the organizational changes needed to improve public sector performance. Institutional change takes time, and the

duration of the project intervention is relatively short. Institutional objectives therefore need to be more realistic and should be pursued incrementally through a continuing support program that extends beyond the transport sector itself.

Good Project Performance, Lagging Monitoring and Evaluation Efforts

IEG transport project ratings have shown steady improvement since the early 1990s. Good balanced portfolio performance has also been achieved among other things in large countries such as Brazil and China and in several smaller countries, including Latvia, Lao People's Democratic Republic, Morocco, Nicaragua, Peru, and Senegal. The rate of improvement overall, however, is less favorable when the largest borrowers are excluded; the concentration of transport commitments in China and India alone has increased from 31 percent to 40 percent of all transport lending over the past decade.

The good economic rates of return and outcome ratings are noteworthy, but the sector has lagged in developing practical performance indicators for the sector. Progress with monitoring and evaluation is also frequently hampered by a lack of baseline information.

Performance Difficult to Sustain

The volume of commitments is 40 percent higher today than it was in 2000. Greater productivity in the financial sense has been achieved, partly because of the large contingent of similar intercity highway projects and the availability of tools for rapid appraisal. Other factors have been the move toward programmatic lending and increased project size. But if transport is to effectively address the emerging issues, the question of staff skills needs attention.

There is evidence from staff interviews and Quality Assurance Group reviews that transport projects are particularly affected by perverse incentives against staff undertaking highly beneficial yet complex projects with valid safeguard damages related to major resettlement, environmental issues, and the presence of multiple stakeholders. In addition, there has been a relative neglect of

knowledge dissemination and sector research, the latter being significantly lower than would be expected from a sector with such a large project portfolio.

Because the Bank provides just 2 percent of total infrastructure spending in developing countries, it needs to try, wherever possible, to make a difference by demonstrating new approaches. Typically this will involve a significant increase in time and effort, which may mean greater selectivity of new projects. Although valuable analytical and advisory assistance has been carried out in several countries, the effort is spread rather thin, and awareness of this high-quality work is often not shared as widely as is warranted. More focus on such work is clearly required as an input into future Country Assistance Strategies (CASs).

Urban Transport, Rural Roads, and Multimodal Transport Increasingly Relevant

The composition of the transport portfolio (in which roads account for nearly 80 percent of Bank transport commitments) is a cause for concern, if the sector is to remain relevant. Highways will continue to be important, and the level of support should be customized by Region and country, but other transport modes and themes are growing in both importance and relevance. It will be essential to see transport opportunities with a multimodal setting of integrated urban and rural concerns.

Multimodal projects aimed at removing internal as well as cross-border trade barriers can significantly reduce freight costs. They can help improve the affordability of consumer goods and raw materials for the productive sectors. Linked to this, more projects of a logistical nature involving rail and container terminals should be anticipated. The relevance and impact of multimodal approaches is likely to increase.

There are also likely payoffs to projects addressing complex urban issues, including congestion, safety, and pollution; projects such as the air quality management projects in Mexico City and Dhaka and the assistance to China in developing insti-

tutions for sustainable urban transport will increasingly be needed. But the number of such projects financed by the Bank in recent years has fallen slightly rather than increasing, as one would expect. A major constraint is lengthy preparation time, and the lack of support and incentives for staff to get involved in more intricate projects is another factor. The Bank's current restrictions on subsovereign lending are also affecting demand for urban transport projects.

Issues of greater rural linkages, rural productivity, and environmental management are likely to be of growing importance for poverty alleviation. Recently an indicator was developed to measure accessibility (important for the Millennium Development Goals, addressing freedom from hunger and better health). There now can be a much more informed debate about the relative priority of transport improvements when preparing CASs.

Emerging Challenges

The Bank's existing transport strategy, with its focus on sustainability, urban transport, and the encouragement of greater private sector involvement, remains broadly valid. But clean, affordable, and safe transport are important challenges for the coming decade. Transport has a crucial role in helping resolve the nexus of issues associated with energy, land use, urbanization, and climate change.

Affordability concerns not only the rural and urban poor, but also freight economy aimed at improving competitiveness and stronger economic growth. This clearly cuts across all transport modes and services. Greater emphasis on safety also can be strongly justified. It is predicted that by 2020 road accidents will become the third-largest contributor to the global burden of mortality and injury. Bank-financed projects have until recently rarely addressed road safety holistically. A revised approach involving comprehensive multisector projects covering education, police, health, public works, and other departments is under development. Pedestrians and nonmotorized transport users have been found to be especially vulnerable in developing urban areas.

Especially in the larger cities, air quality is a serious concern as the number of motor vehicles continues to grow rapidly, worsening the volume of emissions. Increased support to urban transport will provide opportunities to explore reducing long-term energy demand through traffic management, traffic pricing, limits on the use of private automobiles, and greater support for mass transit systems and public transport in general. The Bank may make increased use of funding sources such as the Global Environment Facility, the United Nations Environment Program, and carbon finance initiatives in future years to tackle some of these important developments.

Yet this evaluation shows that past Bank experience, with its relatively narrow, albeit successful, primary focus on roads, will be insufficient to provide for the Bank's future response to these emerging challenges. Transport is developing into a complex multisectorial business that will require expertise from many different disciplines. The pace of change is also accelerating, and the next generation of projects is expected to have a much more urban focus. Although the demand for highways will remain the core business, it is anticipated that the Bank's clients will increasingly seek support for more complex projects and that this will gradually lead to a significant redeployment of resources and a reexamination of priorities. This can be enhanced by the recent merging of the Infrastructure and the Environmentally and Socially Sustainable Development Networks. The new priorities will require greater focus and innovation to ensure continued Bank relevance. A systematic evaluation of the recent experience with multidonor programmatic lending initiatives such as Sector-Wide Approaches (SWAs) is expected. In Africa an evaluation of the outcome of the unique Sub-Saharan African Transport Policy Program (SSATP) will also be important to refining future strategy.

Overall, the sector is at a crossroads, where it has a good window of opportunity to attain a higher level of relevance and offer a better level of support to its clients.

Recommendations to Bank Management

- Ensure that the focus of the Bank's transport operations goes beyond intercity highways and gives more attention to issues of growing urgency, including air pollution, traffic congestion, safety, affordability, and trade. This could entail a trade-off between a portion of traditional highway business and the newer, more complex challenges.
- Prepare a Bank Group transport strategy with a sixfold emphasis: (i) greater attention to air and water pollution and realizing environmental gains; (ii) achieving greater synergies across relevant sectors—building on the merging of the Bank's Environmentally and Socially Sustainable Development and Infrastructure Networks; (iii) enhancing knowledge sharing and analytical and advisory services and their contribution to country strategies; (iv) continuing to support private sector participation through close coordination among the Bank, IFC, and the Multilateral Investment Guarantee Agency; (v) increasing attention to governance and corruption issues; and (vi) redeploying staff and budget resources accordingly.
- Build up the sector's monitoring and evaluation efforts and align them with the new strategy, including through (i) the development over the next year of relevant intermediate indicators applicable to the broad range of projects; (ii) the launch of an enhanced program of rigorous impact evaluations for selected programs; (iii) a comprehensive self-evaluation of the experience with SWAs within 3 years; and (iv) an independent evaluation of the SSATP program within 2 years.