



# Lessons from Urban Transport

Selected Proceedings from  
a World Bank Seminar

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The World Bank  
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# Foreword

Robert Picciotto

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In the words of Stanley Fischer and Rudiger Dornbusch, two basic forces combine to create cities: the benefits of specialization and trade, and transportation costs. Concentration of population in cities makes economies of scale feasible for both production and marketing. Conversely, the productivity of cities is defined by the quality of the services that a city offers to its entrepreneurs, producers, and consumers.

Efficient urban transport contributes to this productivity, and the textbooks tell us that the basic dilemma of urban transportation is that, in a congested city, the marginal cost imposed by an extra road user is higher than the average cost the user incurs. These externalities obviously include health problems; environmental issues; and, of course, the aggravation of urban life.

Effective design of urban transport projects calls for the resolution of collective action dilemmas. Market failures in urban transport cannot be overcome solely through the provision of public goods—a larger road network or public transport, for example. Social cooperation, staggered working hours, zoning, and the like are also needed.

Hence, the solution the seminar explored was a mixture of public expenditure management and institutional change. Beyond project outputs, which include the construction of infrastructure associated with those projects, new forms of service provision that induce more economical use of time, energy, and road space were considered—along with equitable access to urban transport by the poor.

From an evaluation perspective, what we were interested in was an approach to the institutional assessment of urban transport projects, a goal that has proven rather elusive.

Three sets of factors are involved in creating our evaluation framework for urban transport projects. First, structural factors such as zoning, which are closely linked with public policy and municipal management, must be considered. They are government goods that help to shape the demand side of urban transport. Second, evaluation must capture the quality of public transport policies and programs that help define the supply

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side. As toll goods, urban transport services require a mix of hierarchy and market institutions. Finally, there is traffic management, which is a public good, and thus requires both local participation and hierarchy.

The contrasting requirements of these three sets of factors suggest the need for hybrid institutional designs that combine the efficiency of private transport operation with the equity of public oversight and popular participation. Accordingly, the focus of this seminar was appropriately directed toward issues of political economy and institutional development.

Participants discussed:

- Urban transport as a fundamentally regional issue
- The crucial importance of capacity building, in the context of increasing decentralization of transport responsibilities
- The necessary nexus of land use and transport in urban planning
- The need for a new model combining urban, transport, and infrastructure planning
- The need to give more attention to the regulatory framework governing the many aspects of urban transport systems
- Similarly, the importance of considering modalities of financing from a holistic view that encompasses objectives of land use, governance, and the needs of transport system users, including the poor.

The participants in the seminar included distinguished policymakers, academics, and practitioners. This was precisely the mix required to explore an exceptionally thorny set of issues. Experiences in developed and developing countries were brought to the table. Taken together, such experiences provided a useful and balanced perspective on the international issues of urban transportation.

*Robert Picciotto*  
Director-General  
Operations Evaluation Department

# Introduction

Antti Talvitie

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Changing the urban transport system is a complex undertaking. It cannot and should not be undertaken without taking into account the affected interests and the political constituencies of urban transport, who often are the poor as well as the rich. For example, attempts to make the urban transport system operate more efficiently by introducing competition for markets; by increasing cost recovery by raising fares; or by rooting out corruption from the system by means of better enforcement of the operating practices can fail, and often do fail, no matter how desirable these objectives and programs may appear on paper.

The failure occurs if the affected interests or the political constituencies consider that plans cannot be sustained because of the lack of capacity to plan for an areawide system, an inability to keep operators out who do not conform to the rules of competition, user-side subsidies cannot be agreed on to compensate for loss of welfare by the poor from higher fares, or weak rule of law makes enforcement dishonest, not a rare occurrence. Failure may also occur if it is believed that the reforms can be easily reversed, and hence the projected benefits not attained, because of government's loss of support from key constituencies. In sum, if it is perceived that the promised gains may not materialize or that they may be appropriated by groups other than those intended, changes cannot be made. The physical and political gridlock, on the streets and in the institutions, a double prisoner's dilemma, continues and is observable in many cities.

The situation is made more difficult because there also are interest groups attached to the externalities, such as environmental groups and bi- and multilateral organizations, that have their own views and agendas that affect urban transport improvements. For example, increasing or redesigning street space, in short supply in most

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developing country cities, or property rights in, or related to, urban transport are issues that are rarely addressed, although motorization has merely begun.

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Plans and  
programs  
based on what?

Designing a credible plan for improving urban transport is not easy. The mere economic and physical content of plans and programs is insufficient. The affected interests evaluate urban transport plans both in political and economic terms. This broad topic is the subject before us. The multidimensional issues to be discussed by the panels include:

*Institutional Framework for Urban Transport*

- Planning organizations and financing mechanisms for streets, roads, and public transport. Relationships to the planning and delivery of other urban services. Private sector role, including that of the route associations.
- Decisionmaking and public participation processes in urban transport.
- Property rights and curb rights in planning and designing public transport services.
- Regulation, contracting, and enforcement for the market and in the market competition. The role of route associations in regulation and enforcement.
- Initiation and management of the process of change.

*Political Economy of Urban Transport*

- Fares, subsidies, and cost-recovery in urban transport, including the expansion of transport in relation to the income and income distribution of the users.
- Informal transport and its coexistence with formal transport operations.
- Access of the poor and the disadvantaged to urban transport—for example, women and people in shantytowns.
- Urban growth and motorization and its effects on transport infrastructure, access to jobs and housing, the environment, and resettlement.
- Rule of law and its effects on traffic management and regulation.



PART 1:  
Session One

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# The Institutional Framework of Urban Transport

John Flora

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*Robert Picciotto, director-general of Operations Evaluation, opened the seminar and introduced the moderator for the first session, John Flora, transport adviser, the World Bank. The speakers for the first session included Janet Oakley, director of transportation, National Association of Regional Councils; Botond Aba, general manager, Budapest Transport Limited; Stephen Del Giudice, member, County Council, Prince George's County, Maryland; and Jorge Rebelo, principal transportation specialist, Latin America and Caribbean Region, the World Bank.*

One of the primary points for consideration today is the importance of the Operations Evaluation Department to our work in the transportation sector. We want to make sure that the Bank learns from its lessons in the future.

The transport sector now accounts for 19 percent of the total Bank portfolio. The sector is growing at a rate of almost 20 percent a year, and a large part of that growth is taking place in the urban sector. The Bank is preparing an urban strategy that will cut across all Bank networks. This strategy will include all work taking place in an urban context, including the efforts of the Poverty Reduction and Economic Management (PREM), Human Resources, Environmentally and Socially Sustainable Development (ESSD), and Finance, Private Sector, and Infrastructure (FIPSI) Networks.

As a part of the development of this strategy, there are a number of workshops, seminars, work programs, and think pieces being developed. This workshop is an input to development of this strategy. But I want to emphasize that this is a place for free thinking, for people to express their views; we are not necessarily implying that what we will consider is Bank policy, or not Bank policy. We want to discuss the issues and lead up to a framework that will help guide our urban lending in the future.

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Moving to a consolidated urban transport strategy.

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# The Metropolitan Planning Organization and Urban Transport Planning

Janet Oakley

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The Association of Metropolitan Planning Organizations represents more than 140 of this country's 340 metropolitan planning organizations (MPOs). I would like to provide you with an overview of the evolution of MPOs in this country and then discuss some of the current urban challenges we face and the institutional opportunities and limitations that MPOs have in responding to these challenges.

## Legacy of the Interstate Highway System

The federal statutory mandate for urban transportation planning grew out of the construction of the interstate highway system in this country, which was authorized by the Federal Aid Highway Act in 1956. And with the establishment of its companion revenue apparatus, the federal highway trust fund, the construction of the 44,000 miles of the interstate system began in earnest.

In urban areas, however, the impact of highway construction was both swift and devastating. Highway engineers were concerned predominantly with engineering design standards and cost containment. This led them to construct multilane swaths of pavement and other structures through urban areas that carved up neighborhoods and walled off chunks of land.

From this early experience came the requirement that construction decisions affecting the interstate be coordinated with comprehensive urban planning. Several national conferences were held to determine the guidelines that would shape that process. In 1962, the first federal legislative mandate that required urban transportation planning as a condition for receiving federal funds in urbanized areas was established. Urban transportation planning was to be

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Construction decisions affecting the interstate system must be coordinated with comprehensive urban planning.

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carried out cooperatively by the state and local governments, which at the time meant the technical and professional staff of local governments.

Two features of the 1962 act are particularly significant. First, the act required that the planning process be conducted at the metropolitan or regional level rather than at the city level. Second, it required that the planning process be carried out cooperatively by states and local communities through the creation of multijurisdictional MPOs. In addition, some federal financing for the planning process was available at the time, which helped to ensure the speedy creation of MPOs.

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The 1960s—  
the golden  
decade for  
planners.

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The 1960s, which became known as the golden age of urban transportation planning, were a period of extensive data collection. Rigorous analytical methodologies were put in place, and local governments came together with the states to plan their regional highway systems. Planning focus was long term, regionwide, and systems oriented.

The 1970s brought oil embargoes, gasoline shortages, and rising environmental concerns. The list of major new issues that required a response from the planning process grew considerably, to include safety, citizen involvement, preservation of parklands and natural areas, transportation for the elderly and handicapped, revitalization of urban centers, and energy and environmental concerns. Urban transportation shifted to shorter-term horizons, to corridor-level studies, to system management studies, and to contingency planning.

In the 1980s, the concept of urban transportation planning fell out of favor. Economic pressures forced an even shorter-term horizon for transportation planning, and the federal government showed less interest in transportation planning, shifting increasing amounts of responsibility, authority, and oversight for planning and implementation to the state and the local governments.

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With this decentralization came the opportunity for greater diversity in the planning process. High-growth areas continued to focus on longer-term systems development plans, while the more stable areas were looking at short-term strategies for economic revitalization and system preservation and rehabilitation. Overall, however, transportation planning in the 1980s suffered from benign neglect.

Until the beginning of the 1990s, metropolitan transportation planning evolved technically and analytically to a fairly high degree of sophistication. And while the information produced by the planning process was very valuable and was used in crafting strategies, the actual decisionmaking with respect to transportation investments remained highly centralized, and it was tied to the funding institutions within the federal government and the states.

The states generally made their investment decisions behind closed doors, negotiating with individual jurisdictions and politicians. The MPOs served to bundle the projects together, but they actually made few real decisions. With the exception of some limited environmental dissension, there was little public or stakeholder interest or involvement in the technical planning process that led to the decisions, and, as long as funds were evenly distributed, the investment decisions that were made generated little interest or controversy. In essence, the pre-1990 period was characterized by a highly centralized, technocratic decisionmaking process for investments. This was not necessarily a negative feature, and the process was certainly easier and less contentious than it is today.

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Clean air legislation ensured that transportation programs incorporated strategies to meet air quality goals.

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The 1990s brought federal legislation with landmark implications for metropolitan transportation planning. The decade opened with the Clean Air Act Amendments of 1990, which called on the transportation sector to meet the nation's air quality goals. At the time, almost one hundred areas were in violation of air quality standards.

The clean air legislation introduced a complex and strictly defined planning process to ensure that transportation programs incorpo-

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ISTEA guided operation, management, and investment in transportation.

rated agreed-upon strategies for meeting air quality goals. The framers of this legislation were concerned not only about air quality, but also with leveraging transportation investments to reverse the trend in development patterns that consumed an inordinate share of resources and led to relentless sprawl; declining and dysfunctional central cities; and unattractive, congested, and unhealthy suburban neighborhoods.

## Lessons of ISTEA

In 1991—at the end of the interstate construction era—the landmark Intermodal Surface Transportation Efficiency Act (ISTEA) was constructed to guide operation, management, and investment in transportation. ISTEA was designed to complement the emerging philosophy that transportation investments should be used to achieve broader national, community, and quality-of-life goals, while simultaneously enhancing mobility.

ISTEA served to shift the focus in transportation and land-use linkages to include greater consideration of the impacts of transportation on the environment, strategies to improve equity and access for all, and increased emphasis on systems preservation and management. It is one of the first successful policy initiatives in recent times to establish a standard for the devolution of responsibilities to state and local governments, with unprecedented flexibility in the use of federal funds, while demanding greater fiscal and system performance accountability.

ISTEA offers some key features and important lessons. First, it forced a transition from centralized, top-down decisionmaking to more effective, decentralized state and local government partnerships and collaborative decisionmaking, with a more relevant role for the local elected officials. ISTEA achieved this transformation in several ways:



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- It directed a portion of federal resources directly to metropolitan areas. These areas do not receive a large amount of federal funding, but the funding they do obtain is a guaranteed source of project support, and they lacked such stable, guaranteed funding at the metropolitan level before ISTEA.
  - ISTEA assisted in forging partnerships by requiring joint involvement and participation by the state and local governments in all phases of the planning process, from the development of long-range plans to the determination of shorter-term resource allocation.
  - ISTEA emphasized accountability. It required a comprehensive, up-front assessment of user-base needs; the long-term costs of system maintenance and operations; economic and quality-of-life impacts; and the relative effectiveness of different mixes of capital, technological, and management strategies in meeting mobility needs.
  - ISTEA fostered greater accountability by requiring a more open and transparent decisionmaking process. In other words, it acknowledged that the public needs to be fully informed of the basis of transportation investment decisions.

Accountability also extends to finances. ISTEA requires fully constrained transportation plans and improvement programs. This brings a reality check into the process. Over the short term, this has meant that some projects have been delayed, or even abandoned. Over the longer term, it has forced metropolitan areas to face their resource shortfalls and devise strategies to bridge the gap.

ISTEA also brought an emphasis on improved systems efficiency, management, and operations. The legislation permits federal funds to be used for an array of preservation, management, and operational projects. This has diminished the bias in past legislation in favor of new capital construction.

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Finally, ISTEA placed much greater responsibility on the planning process to seek meaningful involvement of all stakeholders. But the real question is, have we seen a difference in outcomes because of this legislation? Have we seen a difference in the types of projects that are being advanced and in the general satisfaction of the public?

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The human side of transport performance measurement.

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In the types of projects selected, change has been slow. Many projects were in the pipeline and had to move through. But change has indeed come. A group of consultants has estimated that in a quarter of their studies, in at least 30 percent of the cases, the outcomes and the strategies developed would have been different, as would the mix of projects and capital and management strategies. But perhaps the best measures of success are other indicators of performance: lives saved; injuries reduced; improved access; improved system reliability, measured in travel time variability; diminished impact on the environment; and overall customer satisfaction. The system is just beginning to move toward performance-based planning and the measurement of the effectiveness of investments.

## Challenges to MPOs

A number of challenges face MPOs in the provision of urban transportation, and MPOs offer institutional opportunities for dealing with these challenges, but they also have some limitations.

First, customers are simultaneously demanding both improved mobility and a better environment. This has led to much divisiveness. Extremists at both ends of the debate, rather than working together, have frequently caused gridlock, increasing legal challenges, and the implementation of suboptimal transportation strategies. With the 1992 Rio Conference and the latest accord on greenhouse emissions, there is now increasing pressure for more sustainable transportation to provide a more reasonable balance between

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environmental and economic goals and to ensure that we do not irretrievably compromise the economic and environmental health of future generations.

MPOs offer an opportunity to provide a forum to bring together the political, civic, and environmental communities to address these issues on an appropriate substate or regional basis. Many of the strategies that must be considered to deal with these issues, however, require a commitment to national strategies, such as further technological improvements to produce cleaner vehicles. The tools available to MPOs are limited in such cases, and many are politically unacceptable. Congestion pricing has frequently been offered as a strategy to deal with environmental issues and sustainable transportation, but it remains politically unacceptable.

Another challenge is the pressure for greater attention to equity issues. Under ISTEA, MPOs have been given unprecedented flexibility in allocating resources between highways and transit, between capital construction projects and maintenance and operations, and between central cities and their suburbs. With this new flexibility has come greater scrutiny of the impacts of investment decisions on low-income and minority populations. Some analysts suggest that past practices led to increased subsidization of the wealthiest white suburban communities. It is at the regional level that these equity issues can best be addressed, but impediments remain.

For example, a major portion of federal transportation resources is still directed to constructing and maintaining higher-system roads—the interstates, expressways, beltways, and arterials—rather than local streets and transit systems in our central cities. Moreover, the use of regional tax-base sharing, regional transportation taxes, or other regional financing mechanisms—financing tools that can more effectively deal with some of these equity issues—are still unavailable. They are generally considered only in academic debate, and not in the political sphere.

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Bring together  
the political  
and civic  
communities.

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The challenge of sprawl is another important issue. Again, as with equity issues, the MPO offers the opportunity to provide a forum for discussion. The importance of a mechanism to bring together the political and civic communities should not be underestimated. But the MPO still lacks the tools to deal effectively and forcefully with the land-use/transportation linkages. Land-use regulations, zoning, subdivision controls, and the like are still the jealously guarded prerogatives of local government, and they will continue to be so in the foreseeable future.

MPOs and their regional scale of governance for transportation planning and regional resource allocation offer efficiency of scale. ISTEA recognized the role that these organizations play in delivering a more efficient transportation system. Nevertheless, a number of challenges remain that can be addressed through federal programs. More important, meeting these challenges requires a new consensus and commitment to collaboration at the local level.

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ISTEA will change, and the MPOs can support the new ISTEA.

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## **The Future of ISTEA and the MPO**

We are facing reauthorization of ISTEA.<sup>1</sup> The reauthorized ISTEA, TEA21—Transportation Efficiency Act for the 21st Century—authorizes substantially more monies for surface transportation, preserves the air quality provisions, and extends the flexibility of fund use. It appears that the predominant issues relate to funding and equity issues among the states. The concept of collaboration and partnership among the state and local governments through MPOs is entrenched. It also seems that the role of federal funding in metropolitan areas will not be challenged.

We believe that MPOs across the country have much more to do to improve their technical and political capacity to implement the visions of ISTEA. However, real and meaningful progress must come from the bottom up, with improved models for regional governance in metropolitan transportation planning.

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## **Comment: *John Flora***

Several points in this presentation should be highlighted as close to the work we are all doing right now. The first is measures of effectiveness. This is critical to all of us, and something we have to define. How are we going to measure the impact of what we are doing in our urban transport programs?

The second is the MPO, the regional planning body. Transportation, like solid waste collection, among other activities, is a regional issue. But how do we bring this concept to bear in the countries where we work, particularly in the many regions where a city is actually made up of 12; 14; and, in the case of Santiago, 32 municipalities?

A third important consideration is local government. As decentralization takes place, the impact of programs at the local level will be increasingly determined at the local level. While we all recognize this, we must come to grips with the fact that we are authorized to deal and make loans directly with the national government. If the national government does not agree to underwrite a project, we have problems.

So how do we get local government impact? This is another highly important issue, not just in urban transport, but in our overall work as well.

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<sup>1</sup> The reauthorized ISTEA TEA 21—Transportation Efficiency Act for the 21<sup>st</sup> Century—authorizes substantially more monies for surface transportation. It preserves the air quality provisions and extends and flexibility of fund use.



# The Framework of Urban Transportation: The Case of Budapest

Botund Aba

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As a former Socialist country that is now moving from a planned to a market economy, Hungary has initiated practices that may well be of unique relevance to other transition countries, as well as to those in the developing world. The approach cannot be compared with the experiences of the Western, developed world.

## Institutional Relations

Budapest Transport Company (BKV) has two main regulators. The owner, and main shareholder, is the municipal assembly of Budapest, but there is also a professional regulator at the federal government level, the Ministry of Transportation.

At the national level, there are at least two, but in some cases four to six, different ministries responsible for local transportation in Hungary. The Ministry of Transportation is charged with professional regulation and is the owner of the Hungarian railways and roads. The Ministry of Finance is responsible for the state budget, and thus for social subsidies in Budapest. Pensioners and students receive a social subsidy for transportation. The Ministry of Interior Affairs is the supervisor of the local municipalities, and the newly created Ministry of Privatization is the owner and supervisor of the bus companies formerly owned by the state. The Ministry of Environmental Protection and Land Use Development and the Ministry of Industry, Commerce and Tourism are also sponsors of public transportation programs.

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Many industries and agencies claim ownership.

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Overall, this configuration is quite difficult to manage, and there are high levels of turbulence in the government agencies in connection with the division of responsibility. At the municipal level, there is a

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more clearly defined relationship among interested parties. Nevertheless, there is still great complexity. Budapest has 24 city committees and 23 districts; the largest district is headed by the lord mayor. The 24 committees cannot agree on the public transport question, although the mayor is the single person responsible for the public transport sector. Nevertheless, all the local authorities have different rights and remedies, which leads to constant controversy among the bodies.

There are other institutions involved as well, including the National Public Transport Association, which is a professional lobby, and the Associate Budapest Transport Association, which is a commercial and traffic union of local operators, such as Hungarian Railways, the Bus Coach Company, and Budapest Transport Company. There is strong demand that the Budapest Transport Association include private operators as well. The association needs a contract among financing parties, government, municipalities, and operators, independent of ownership. The Chamber of Commerce and Industry of Budapest, a revitalized organization, is also involved in transportation. It has just received the authorized taxi regulations. All the research and planning institutes are private, although they have close relationships with the governmental and municipal bodies. A central regulatory body for public transport is lacking in any of the ministries.

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Public transport  
in decline.

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## **Performance Issues**

In the 1980s, 82 percent of transport was publicly provided, and 18 percent was provided by private individuals. In 1994, the ratio was 67 to 33, and it is quite clear that public transportation is decreasing, and the city is becoming congested.

Parking conditions are intolerable. Air pollution is bad. Decreasing public transport availability is leading to ever-greater private



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transport. Public transportation must thus compete very strongly with individual transport.

Financial conditions are worsening. A comparison shows an increase in net costs of transportation of 275 percent; in real terms, the rise is 72 percent. The subsidies for providers have experienced a smaller increase; ticket prices have undergone a tremendous increase, 600 percent, 132 percent in real terms; and the list goes on.

## Regulation

Regulation of transport is difficult because each branch and sector is governed by its own set of regulations. There are regulations for rail, for road, and for air and water transport, but there is no regulation for passenger or freight transport, although logistical links among the various sectors are developing. For example, if one takes a plane to Budapest, a minibus or a taxi can be ordered from the plane. The conveyance takes the passenger to a hotel, where tickets can be purchased for public transportation. Although such logistical relationships have been developed in passenger transportation, there are no laws to regulate them.

Although the law cedes responsibility for local transportation to the municipalities, it does not obligate them to provide that service. The result is that government need not provide resources for local public transportation.

There is a strange law governing concessions—this is a law “borrowed” from Germany—which provides priority for regular operators. It means that if a concessionaire ceases operation, the general “regular operator” can take back the service.

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The law gives responsibility for local transportation to the municipalities, but it does not oblige them to provide that service.

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On the national level, the Hungarian transport policy was enacted in Parliament in 1996. The main goals include promotion of a balanced

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regional development of the country, among others. This policy has been criticized. It has no reality. It is a wish list only, and there are no budgetary or financial resources that go with it. A Budapest transport development plan was made in 1994, but it has not been accepted by the General Assembly. It is an odd case. It is working, but it has no basis in law.

According to the plan, the main goals are to decrease the demand for additional transport through management of land use development, differentiated improvement of traffic control to achieve its satisfactory functioning, to mitigate harmful environmental impacts, and the like. There is a written contract between the municipality and Budapest Transport Company, a contract that provides a good basis for both sides to clarify owner-property relationships. Because the arrangement is not market-based, the Budapest Transport Company carries out studies of its effectiveness and performance that should have been the province of the municipality.

A couple of words about the involvement of the private sector are in order. In the rail sector, privatization has not progressed because it is not profitable. The rest of the passenger transport sector, however, is profitable. Rail provides negative profitability. It requires a lot of money, which makes it unattractive as a privatization candidate. The long-distance and tourist bus companies and the suburban bus companies provide profit, and there is real demand to buy these companies. This process, however, has been delayed for a year because of next year's elections, and the government does not want to increase the tariff level too much before elections.

Budapest Transport Company operates bus, metro, train, trolley, and taxi services. But metro, train, and trolley do not provide profit. The metro might provide profit if it were operated effectively and if there were sufficient passengers. The taxi sector is completely privatized and provides good profits.

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Private capital does not enter the transport market without municipal and state guarantees, and the strong demand of the public transport sector for assets and labor hinders private capital participation on a larger scale.

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Shortage of capital constrains private sector investment in the public transport sector.

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During the past six years, the state has given the largest subsidies to the Budapest Transport Company. These were canceled in 1997. The municipal subsidy, which included a performance bonus, has decreased dramatically. The third source of financing, revenues, appears to have reached a constant level. The fare subsidy, which is related to fare income, supports pensioners and students. Altogether, these funding sources currently provide almost 40 percent cost recovery, in comparison with the 20 percent realized in the late 1980s.

Individual public transport operations operate under a variety of financing arrangements. The state-owned rail receives a social and a production subsidy. Investment support for tracks is also available. The state-owned bus company receives only a social subsidy and investment support. Budapest Transport Company and taxi and other private operators have no external funding support except the social subsidy and contractual support. There are only two private bus operators in Budapest, and not more than ten in all of Hungary.

## Decisionmaking

In the context of decisionmaking and management, I can discuss only matters related to the Budapest Transport Company. The service level—networks, stops, type of coaches, and cars—is decided by the Transport Department of City Council, through a special committee for environmental protection and city operation. This is a committee of the General Assembly, which is an elected, nonprofessional body. It works well, but it takes a great deal of time. Information support and studies are provided by the BKV.

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Multiple entities, little coordination—with the operators in the middle.

The investment, if it is a new investment, whether in tracks or the metro tunnel, is determined by the General Assembly of the Budapest City Council. The allocation of such resources is decided in accordance with my views or those of the board of the company.

Tariff level and structure—including types of tickets, cars, tariffs, and reductions in tariffs—are determined after preparatory work by the Transport Department (through the General Assembly) in agreement with the Ministry of Finance. When a decision is to be made to sell property, a special committee in the municipality is called upon. There is a board that provides guidance to the Budapest Transport Company, but the general legislation is prepared and passed after coordination by the Ministry of Transport.

In sum, while responsibility for transportation resides with the municipality, revenue generation is the province of the Ministry of Finance. Professional regulation resides in the Ministry of Transportation. There is very weak coordination among the three entities—and in the middle of all this are the operators.

### **Comment: *John Flora***

Again, several items we all deal with all the time stand out. One is the importance of regulation: how this is done, whether there is too much or too little, whether or not it facilitates or hinders operation and provision of services, and the like.

Another important area is financing, and we cannot get away from this. It is very important. The level of cost recovery is one issue, but more important is how to pay for services. Where do these subsidies come from, and are they sustainable?

# The Role of Local Government in the Provision of Urban Services: Prince George's County, Maryland

Stephen Del Giudice

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I will talk about three different things today. The first two are probably a little theoretical, or even philosophical, and the third is a recent planning process that I have been involved in here in the Washington metropolitan area.

Let me say a little bit about my background. As indicated, I was the mayor of a small town for a period of about five years. It is a suburb immediately outside the District of Columbia. One of the original trolley suburbs of the city, Takoma Park. We saw a revitalization of the city and the city center with the coming of the subway system, which brought back the old-fashioned means of transportation that gave birth to the town in the first place.

I have also now served as a member of the County Council in Prince George's County, which is the county that surrounds the District of Columbia immediately to the east. This is another area that is served by the metropolitan area subway system, and I am going to speak a little bit about some of the efforts in land-use planning for that service.

I have also served for 12 or 13 years in a number of different capacities with the Washington Metropolitan Council of Governments. I consider myself a regionalist. I have been very active in the Washington Metropolitan Council of Governments, as president; board member; and, since 1991, on the Washington Regional Transportation Planning Board.

Timing is everything, as they say. I assumed positions of leadership with the Transportation Planning Board in the early 1990s, with the

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advent of ISTEA legislation, and was chairman when the first long-range plan was produced under the new legislation. I also had the opportunity to participate in the creation of the National Association of Metropolitan Planning Organizations (MPOs) as MPOs assumed greater significance in transportation planning for this nation.

But as I thought about today's topic and the issue of institutional roles, I decided to focus on two elementary but fundamental conclusions that are often overlooked in much of contemporary thinking and discussion about transportation planning. I have concluded that the success of a transportation system in a free market economy rests significantly—more than we recognize—on the strength of local government institutions.

The second fundamental issue is that in a free market economy, transportation is the product of both collective and individual decisionmaking—a very complex process. And transportation itself, which is a form of collective decisionmaking, must try to account for both and bring about a balance between that collective decisionmaking and collective activity, on the one hand, and individual activity, on the other. The balance is very difficult to maintain.

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Balancing  
collective and  
individual  
interests and  
decisions.

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Despite our best efforts to plan and design systems, there are both collective and individual decisions being made and actions taking place that create problems for the systems and the plans and designs made for them.

When we discuss transportation today, the focus is often directed to national systems. In the history of transportation planning in this country, for example, the advent of the interstate highway system and the national systems have dominated much of the discussion about transportation planning. This is understandable, because today there is an even greater focus on the notion

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of the international marketplace, which has become readily accessible through telecommunication.

## **The Role of Transportation**

Transportation has been an essential part of the fundamental function of communication. In previous ages, humankind needed transportation to communicate. Unless individuals were talking face to face, some means of transportation was required to communicate the message. That changed in the nineteenth century, and in the twentieth century it is changing still more rapidly. As we enter the twenty-first century, it will have changed beyond anyone's comprehension—one can walk around with a computer that fits in the palm of the hand and make contact with someone on the other side of the world. Transportation is no longer needed to engage in that marketplace, and this is changing market dynamics. It is thus not unusual to think about the international market and national systems, and to overlook the local connection.

## **A National Focus**

The national focus is not new, nor does it contradict the notion of a free market economy. For example, a principal motivating factor in the formation of the United States was the desire to regulate interstate trade. In the early period, under the Articles of Confederation, the federal government recognized that it could not properly regulate the competition in trade among the states, and it initiated something called the Potomac Conference, which eventually led to the Philadelphia Convention, giving rise to the United States. And how many of us really think about the interstate commerce clause as one of the founding principles of the United States? But it is there, in the federal government's role in regulating trade and creating systems of transportation on rivers and other systems that gave rise to transportation and commerce.

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## Moving to a New Orientation

In the United States today, we often talk about our regions competing in the international marketplace, and the current trend is to move more aggressively toward planning regional transportation systems. I consider myself a strong advocate of this approach. As a former president of the National Association of Metropolitan Planning Organizations, I definitely believe that there is an important role for regional planning.

Many of the old national, local, and state institutions are going through a transition as we refocus on regional planning. This effort brings together the various levels of government that have control over transportation resources, funding, and systems. Local government, in particular, is being brought into that discussion and given control over land-use authority.

## Local Government Institutions

Regional planning, while important, cannot be a substitute for strong local government institutions. A regional authority, a regional government structure, and regional systems—even if they are simply transportation systems or authorities—must, to some degree, rely on the strength of local governments as the fundamental building blocks.

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Strong local government is essential.

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Local governments play a critical role in transportation. We all recognize that transportation is essentially an economic and social activity, and that it is as much a product of local land use as it is of the national or international marketplace.

All transportation activity, even that in the international marketplace, essentially begins at the local level. A good is manufactured in a warehouse. More often than not, it is then transported by truck on a



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local road to a state or interstate highway system, which leads to a port or an airport, allowing the good to enter the international market. But it begins locally.

While we focus on the national and state systems of highways and other kinds of facilities, we tend to overlook local governments' control of a huge proportion of the roads and facilities in our countries. The local street networks are still within the control of local governments. Local and state governments, not national governments, exercise the primary functions of maintenance and operation. And despite the role of national and international standards, it is the local governments that have the primary function of enforcement. And as noted in OED's *Lessons and Practices* (see Annex), if you do not have a local institutional, judicial system, or other rule of law to enforce the rules and regulations, the systems will fail.

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We tend to forget that local governments control a huge proportion of roads and facilities.

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Although there may be inhibitors to one's ability to deal directly with local governments, part of what we, and the World Bank, need to start thinking about is how to strengthen the capacity, authority, and ability of local governments to participate as part of the transportation network. As we build this local system, we will have a base upon which to build the regional systems and to make sense of the network of local systems.

## **Achieving Balance in Planning**

The second issue I wanted to raise is this inherent tension in transportation planning. Like most government activities in a free market economy, transportation planning must recognize and balance the complex mix of collective and individual decisions that are made by providers and consumers. Again, this tension is vividly demonstrated in OED's *Lessons and Practices*, which presents two extremes of the political, economic, and philosophical balance.

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In the one instance, the critical issue is how to introduce some degree of private enterprise into centralized, monopolistic systems. At the other extreme, the problem is how to regulate the activity of informal private entrepreneurs who undercut the competitive ability of the private sector provider, especially where the rule of law is absent.

## **Behavior and Choices of the Individual**

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Why do people make the choices they make in their travel behavior?

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It is the same fundamental philosophical problem: how does one deregulate and regulate without overregulating? The fundamental tension between regulation and private action is demonstrated on many levels. Let me speak a moment about what I consider to be a particularly difficult problem in my area. We often do not spend enough time thinking about social behavior and social psychology, why people make the choices they make in their travel behavior. This is a particularly difficult problem for us in the United States.

There used to be a cigarette commercial that read: “I’d walk a mile for a Camel.” Today, no one in this country would walk a mile for a Camel. If you were to recast that ad today, it would be “I would drive a city block for a Camel.” People in many environments, including the suburbs, have the ability to walk to a local convenience store, but they do not. That is part of our land-use dilemma. But even where there is a choice, people will not walk or ride a bike, because we have become so dependent on the automobile for convenience. This is an example of an individual behavior pattern that is difficult to accommodate in our plans, because all the best practices in land use say that if you put the convenience store within walking distance, people will walk. But they do not. How does one plan for that?

Another example involves my current work on a land-use plan for the area that is immediately adjacent to a transit stop. Like all plans, our goal is to plan for the highest and best use of the land around the transit station. It is conceivable that it will reduce automobile use

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and maximize utilization of our investment in the transportation facility.

The planning for one particular parcel, right on top of the subway station, calls for a mid-size mixed-use complex—offices, retail stores, and some residential development. It sounds like a great plan. But we forget the role of the capitalist. The man who owns the land has a contract offer from someone who wants to build a grocery store right on top of the subway station, with an abundance of parking in front of the grocery store. The community wants a grocery store. We tried to convince the man that he should at least put in footings that would support an office and retail complex, or perhaps some residential development, above the grocery store. He was urged to think of the longer term, but he does not want to make that investment. One can plan for the highest and best use, and land use is certainly part of the answer. But the role of the capitalist in a free market economy makes the dilemma particularly difficult.

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ISTEA took a number of steps to strengthen the MPO, but it also created some dilemmas.

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## **Vision for the Twenty-first Century**

As Janet Oakley pointed out, ISTEA took a number of steps to strengthen the role of the MPO, but it also created some difficult dilemmas. For example, the law required that plans be fiscally constrained, that transportation plans cannot include facilities without funds to support them. In other words, no more pie-in-the-sky plans—your plans have to be fiscally realistic and constrained.

We adopted our first fiscally constrained long-range plan in 1993–94, and we cut one-quarter of the plan because we could not pay for it. The reality is that we do not have the resources to do the kind of building that we did in the 1960s and the 1970s, because the cost of maintenance, operation, and upgrading were never included in our calculations. Now 70 percent of our money is going into operation and maintenance, and we have very little money for new construction.

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We have just completed a draft of what we call a vision plan for the Washington metropolitan community to review. We will be accepting comments, and it is hoped that we will adopt this vision plan in the coming year. This is a three- to four-year effort to try to come to grips with how we can plan without the resources to build. Needless to say, there has been a great deal of discussion in Washington. Many people have been involved in the discussions with the Board of Trade, which is lobbying hard for us to build new facilities.

What is interesting about this vision plan is that it does not include a single facility. It is a strategic planning document that starts with a vision of the Washington metropolitan area in the twenty-first century, adopts eight goals, and includes objectives and strategies to realize the vision. It is going to be very disappointing for many people because transportation plans usually include lines on a map, which this plan does not have.

There are four points in the plan. First, we have moved from the old hub-and-spoke design of an urban community to a spiderweb form, if you will, and that is what we want to try to realize. One of the critical dilemmas in our world is how to get from suburb to suburb without using an automobile and without the current congestion on the roads. Second, there is a need for better coordination of land-use and transportation planning. Third, new regional funding mechanisms are required—and, frankly, I do not know how we are going to achieve that. Fourth, there is a new priority in spending. The first priority is to maintain the existing system. The second is to improve the operation and capacity of the existing system, especially through the introduction of new technology. And the third priority is to grow gradually, incrementally, as we build this web, providing better connections among the regional employment centers in the suburbs and improving access to the downtown area.

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**Comment: *John Flora***

Once again we have been reminded of the importance of local government and the need for regional planning in conjunction with the local governments.

In addition, Mr. Del Giudice raised the importance of the role of incentives, both to the user and the private sector. What is very important is the role of the public and the private sectors, and there must be incentives.



# Transportation Management: The Case of Brazil

Jorge M. Rebelo

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A few years ago, the Brazilian government decided to abolish the federal agency in charge of urban transport, simply because the 1988 Constitution indicated that urban transport was in the jurisdiction of local authorities, meaning the states and municipalities. The federal government wanted to get out of urban transport completely.

At the same time, the government approached the Bank to finance the decentralization of the urban railways through their transfer from the federal government to the states. The federal government ran urban rail transport in most of the metropolitan regions, and it wanted to pass the responsibility to the states and let the states own, run, and manage the system and be responsible for any subsidies.

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Devolving to  
the states.

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While it sounded interesting as a way to bring transport closer to the local authorities, the Bank representatives wanted to take a look at the country and the metropolitan regions before making a decision. There are quite different metropolitan regions: São Paulo, with over 16 million people; Rio, with about 8–10 million people; and Recife, Belo Horizonte, with around 3 million people. So it was necessary to consider what the problems might be and what strategy would be used before looking at whether financing the decentralization was worthwhile.

## **Jurisdictional Issues**

The problems that we encountered in most of the large metropolitan regions in Brazil seem quite similar to those mentioned by Ms. Oakley and Mr. Del Giudice. Several levels of government—federal, state, and municipal—were involved, with conflicting objectives.

For example, the federal government ran urban rail. Most of the buses were under municipal government control, but if they crossed municipalities, they would be under state control. In some cases, that meant that if the political parties had conflicting objectives, a major problem would arise. There was also a lack of modal and fare integration. One of the great advantages in Europe is the integration of fares. One can use two or three modes very easily. Here in Washington, we cannot do this easily either, which is one of the major failures of the Metro system.

Lack of uniform tariff and subsidy policies is another common problem faced by most urban transport planners. The state sets one tariff schedule, while the federal government implements an entirely different one, alleging that it is supporting the poor. This created too many large, competing investments. In some of the metropolitan regions, the state would approach the Bank for a new line of credit for a metro line that is to cost \$1.2 billion. The next day, the mayor would announce that the Bank is being asked to fund a new high speed rail (HSSD) program, magnetic levitation. The competing interests are not talking among themselves.

In most cases, we found that money is scarce for maintenance. Five years after the federal government invested in a system, the equipment would have fallen into disrepair, reducing both service provision and quality. That meant that many passengers would move to other modes or would not use that mode of transportation any longer. There is also very little money available for new investment and rehabilitation, which hampers expansion and the installation of new systems.

Finally, the Brazilian government is heavily involved in rail-based systems. Nevertheless, this was the system that the government wanted to transfer to the states and municipalities. But look at the problems. It was very difficult to plan, to set logical tariff or uniform subsidy policies, or to plan for maintenance, expansion, and running of the systems with low subsidies.



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## A Strategy

The Bank and Brazilian practitioners finally arrived at an interesting strategy:

- First, establish a regional transport coordination commission, similar to the U.S. MPO.
- Second, integrate urban transport land-use and air quality strategy. In many of the metropolitan regions, there were no plans. For example, if a mayor wanted to build or to introduce a bus system, in the context of the metropolitan region, there was no plan, nor was any accommodation made for air quality, except in São Paulo, where the situation was critical. There was a general lack of a vision for the future.
- Third, as mentioned by Mr. Del Giudice, establish the financing mechanisms to ensure long-term financial sustainability.

Although the federal government in Brazil invested a great deal in railways, and most of the buses are in the private sector, the systems are in bad shape. This is because the necessary funding is not provided, from the general budget or any other source. So what are the sources for financing? Is it approaching the Bank once in a while? That cannot suffice, because many of the systems have subsidies, and these must also be covered. The situation of the Metro in Washington is much the same. Subsidies are a problem. Who is covering those subsidies? Why isn't the Metro concessioned out to the private sector?

- Fourth, ensure progressive private sector participation. The Bank's ODs cover the importance of private sector participation. The Brazilians themselves acknowledge the importance of private sector involvement. The Bank and the borrower were in agreement on this issue.

Brazil is a developing country, and yet it is not. The metropolitan regions are very sophisticated. For example, São Paulo is a city of 16 million people, with 13 million trips each day. The Metro carries 2.5

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million people, and if our Metro had to handle that load, with the rate of failures experienced here, it could not.

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Multiple negotiations to develop acceptable solutions.

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We can say that we are utilizing legal means with mixed results. There is a strategy. For example, we do not finance a metropolitan region that is unwilling to set up some sort of MPO or Regional Transportation Coordinating Commission (RTCC). The RTCC will involve representatives of the three levels of government, or, in most cases, the state and the municipalities of the metropolitan region. This is very important because in Rio, for example, the state and the municipality have different political parties in power. None of them is going to relinquish the power of assigning routes or entry or exit of buses and so on, because that means losing power. But at least they can discuss these issues, and have some sort of forum to analyze the common problems—that is what we are trying to achieve. If we are not able to get the formal RTCC, at least we are able to bring the parties together to talk and to come up with solutions.

For example, how can we integrate fares with a smart card that is going to be used by several operators if we do not have communication among the three levels of government? Do not forget, they continue to have the power over their areas. The mayor of Rio is in charge of his municipality. He sets the fares for the buses there, but if a bus crosses two municipalities, this authority goes to the state. What we normally require is that they establish an agenda for discussion and send us the minutes of the meetings, which means that they have to talk and they have to provide something, and these are the main objectives.

The parties have forgotten all the techniques introduced in earlier times, such as economic evaluation of projects. If they have three or four major projects in a given metropolitan region, the government bodies would not evaluate them from an economic standpoint. The competing interests would sometimes approach a variety of lenders—one might approach the Inter-American Development Bank,

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while another might turn to the Bank. By talking with the other banks, we were able to come up with a joint approach that requires an economic evaluation and a financial analysis of each project. The transport commission should also be charged with looking at the land use and air quality strategies periodically. Finally, the commission must promote user participation and decisionmaking.

In Brazil, Recife currently has a formal RTCC, which was the first one, but it was mainly set up to oversee the buses. Known as the EMTU, it is going to be expanded to absorb the rail system. São Paulo also now has a formal RTCC. Madrid and Toronto have RTCCs, and the situation in Madrid is particularly interesting. It is at the government level, has power and money, and covers the whole area.

Let us move to the next aspect, which owes much to John Flora. When he reviewed some of my loans, he insisted that we should not only have rail and the busways, but also good traffic management. This is often not part of a major project. For example, if there is to be a rail system, it is necessary to have a traffic light system that makes sense. Or you may want to institute congestion pricing; but in many cases it is difficult. Traffic engineering, however, pays in most cases.

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It is the generalized cost of transport—travel time, fare, and reliability of the system—that counts.

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## **Changing Orientation: The Master Plan**

We are changing the mentality of the rail people in Brazil. In the case of Belo Horizonte, we were able to arrange federal government financing for a traffic light system for the city, although the main effort is a rail project. We knew that if we did not improve the conditions around the system for automobile traffic, we would not see the advantages of the main project. What is the advantage for the user? In the end, it is the generalized cost of transport—the travel time, the fare, and the reliability of the system—that counts. We have to work with as many possibilities as we can, and these should come from an integrated urban transport schedule.

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Sketch planning is a practicable approach.

These master plans, however, take a very long time. If we request provision of a master plan by the end of the project, it is too late. We cannot use it. What we need is sketch planning. Models can be created with sketch planning that build various scenarios, give different outputs, and can be discussed with politicians. Then one can go back through the plans until the one that makes sense is found, and that plan can be filled out in detail. This approach has been used in São Paulo and Belo Horizonte, for example.

## Financing Mechanisms

Financing mechanisms have been a continuing problem, made more difficult by the Bank's opposition to earmarked funds. Now that position is changing for roads. Brazil's constitution prohibits earmarked funds, so a portion of highway funds, for example, cannot be used to finance urban transport, which creates a problem.

In some countries, such as France, there is transport funding through a salary tax, a type of earmarked fund. In Brazil, a different system is used. The federal government mandates that any employer with more than 10 formal employees, and a home-to-work trip for an employee that costs more than 6 percent of his or her salary, must pay the difference between 6 percent of the salary and the cost of the ticket. It is a bit more directed in terms of subsidy, but it is still not a solution, because there are many informal employees not covered by the system. What type of subsidy should they have?

A third method is the sale of additional floor space. For example, financing for a subway may be the goal. The area around the metro has zoning regulations, but those regulations can be changed to allow for more floor space, which can be sold, and the proceeds divided between the subway project and the municipality.

Brazil does very little advertising on transport properties, although it can raise 2 to 3 percent of the gross revenues of the systems. There is

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also the potential of real estate development, which Hong Kong has used with great success, as has Washington. If one works well with real estate development, advertising, and other sources, 5 percent of the gross revenues of the system can be raised, which is not negligible.

Finally, there is progressive private sector participation. This used to be jargon in the Bank, but no longer. Growing numbers of systems are seeking private sector participation in the operation and management of their transport systems.

Brazil had one advantage. The buses were almost all in the private sector, but the rail and metro systems were not. Now Brazil is moving to give concessions for metros and rail systems because the subsidies were horrendous. In Rio, for example, the government had to pay US\$100 million in subsidies annually for the rail system. The fare had to be set low, because the people who use it are poor.

If the private sector becomes involved, the supposition is that the operation will improve. The concession will be negative in some cases, which means they will have a subsidy, but the amount of the subsidy for a span of years will be known beforehand, and there will probably be a royalty. Because the systems serve between 300,000 and one million people daily, the volume is sufficient to do that.

Those looking at investment in rehabilitation have concluded that there is no way they can fund all these large projects unless they have BOTs. This approach is being applied in Line Four of the São Paulo Metro, and possibly in Salvador and Buenos Aires as well. Buenos Aires is an example of long-term concessions.

In Brazil, a number of busways have been concessioned to the private sector since the system was constructed 20 years ago, with the possibility of using some of the land in the system.

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An opportunity  
for the private  
sector—but  
with some risk.

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**Comment: *John Flora***

I think it is very clear that there are a number of issues to be discussed. Jorge has actually implemented the types of things that were discussed by our panelists, and even he will admit there are still questions to be answered.

# Floor Discussion

John Flora, moderator

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One of the critical issues is how one accomplishes this work within the confines of the existing political dimensions. I think Mr. Del Giudice explained this very effectively. How does one go into a city and talk about making the types of changes that we just talked about? How does one get the private sector involved? Where does one get the financing to support the private sector? It is not possible to charge \$1.50 to ride the subway in most of the cities in the developing world. There are innovative financing mechanisms, such as a tax on hotel rooms, that can be used. Can such mechanisms be used everywhere?

How to finance mass transit is one of the issues that Jorge Rebelo has run up against very strongly. The project in São Paulo was held up for one simple reason: one-third of the financing has yet to be nailed down.

**Question:** On the issue of financing, it seems that the extent to which an urban transport system requires a subsidy—and everyone agrees that a subsidy is justified, and the subsidies support the externalities the system produces for the surrounding communities—then should not the subsidies come out of local government budgets and be based on property taxes?

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Where should the money come from?

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*Mr. Rebelo:* Yes, they will accept the rationale. This is the situation here in Washington. A portion of the property tax goes to Metro. At least, they used to show that in the tax receipt every year. And that makes sense—one is paying for externalities.

Line Four of the São Paulo Metro was supposed to have such a subsidy. I sold the idea exactly that way, that the subsidies were covering the externalities. Then someone asked to be shown how this operated, and we quantified all the environmental aspects and

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accidents, and so forth, and compared that with the subsidy planned for the Metro. The subsidy can be justified with a high-volume metro.

The use of property tax should be a financing option. But, again, if the metro is under state control and property tax is collected by the municipality, and property tax is one of the main revenues, the major taxpayers in the municipality will not relinquish funds unless they have control over the metro, which has been done in some cases.

*Mr. Del Giudice:* We are one of the jurisdictions in the Washington metropolitan area that uses property tax to provide some of our funding subsidy for mass transit. But this practice is rare, and with the growing pressures on local property taxes from education and other institutions, it is becoming increasingly difficult to tap the property tax.

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With decentralization, the local government gets increasing responsibility, but does not have taxing authority.

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I think this brings us back to a point made by John Flora, that as we deal with decentralization, the local government becomes the depository of increasing responsibility, but we do not have taxing authority. We have a property tax. Some local governments may have access to income or sales taxes. One of the interesting questions is how to broaden the tax base authority of local governments. Other issues arise, including how to create a regional policy so that one area is not placed at an economic disadvantage. If only one jurisdiction has a sales tax, then obviously people will move to another part of the region to do their business.

*Mr. Abo:* One short remark about externalities. A few years ago, Hungary introduced a special environment tax on a variety of products. The tax provides about 25 billion forints annually. It has been divided into two parts: 5 billion forints are used to finance environmental protection projects, and the remaining 20 billion are considered general tax revenue. The real question is how large a portion of this tax is given back to transportation.



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We asked the inhabitants of Budapest whether they would like to see a tariff increase, a dramatic tariff increase, or if rapid transport should be financed with taxes. The answer was very interesting. More than 70 percent said they would prefer tax-financed public transportation. We might assume that this 70 percent uses public transport. But it was not the case. More than 50 percent of those who drive automobiles said they would like to see tax-financed public transport because it would reduce traffic congestion.

**Question:** Would any of the speakers care to imagine what they would see as a workable institutional framework for urban transport that might include three levels of government— that is, local, state or provincial, and central?

*Mr. Del Giudice:* I think that something interesting is happening, and it is happening internationally, as Jorge Rebelo demonstrated. While there is a fundamental role for local government in transportation, exclusive control of land by local government is not necessarily a good thing. Land use should be considered in a broader perspective.

One of the things we see happening in this country, in states such as Oregon and Washington, and now in Maryland and other states, is that state governments are largely leaving control of local land use in local hands, as long as certain goals and broad principles are satisfied.

I think that we are moving toward developing a mechanism—I do not know what it will ultimately look like—that will permit sharing of jurisdiction between state and local governments. There is a decentralization, a devolution of authority from the federal government, and one of the things localities need to seek in this context is control of the pocketbook. If the federal government is going to get out of the business of urban transport, it must give us the ability to control the revenues, which it has not done.

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No taxation  
without urban  
transportation?

It is a wonder we have not had another Boston Tea Party. Currently, 4.5 percent of the federal gas tax is used to pay the general federal deficit. Jurisdictions are crying for transportation dollars, and want to use the property tax to come up with those dollars, while the federal government is taking gas tax money to pay for—who knows—overspending in the defense budget. But something must be done in the devolution of taxing authority, and I think that we are moving toward some kind of regional sharing between state and local governments.

*Ms. Oakley:* I just want to mention that there are very few alternative models of regional governance, at least in our experience, and you know the ones that are frequently mentioned. Portland, Oregon, has an elected regional authority with responsibility not only for transportation, but also for solid waste and for the convention center; Minneapolis-St. Paul has an appointed regional body, but it also benefits from some sharing of the regional tax base.

The jury is still out on the effectiveness of these alternative models of regional governance. I think that there is a movement in Congress to decrease the level of federal taxation and to allow local jurisdictions to raise the taxes themselves.

The real issues reside in the current institutional arrangement, the competition in regions in the country, as well as within the municipal regions. While I recognize and support the need for strong local governments, we must look for new models of governance that recognize that the traditional model places some areas at a competitive disadvantage.

PART 2:  
Session Two

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# The Political Economy of Urban Transport

Antti Talvitie

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*Following a brief recess, the seminar continued. Antti Talvitie, senior evaluation officer, the World Bank, served as moderator for the session. The speakers included Martin Wachs, professor and director of the Transportation Center, University of California, Berkeley; Alton Fletcher, consultant, New York City Transit Authority and the Ministry of Public Utilities, Jamaica; Ron Kirby, director of transportation planning, Metropolitan Washington Council of Governments; and Kavita Sethi, economist, the World Bank.*

Dr. Fletcher is partly responsible for this panel. During the OED audit of the Kingston Urban Transport project last spring, the professor asked me if I wanted to ask him questions, or should he just tell the true story. As I normally do in these kinds of meetings, I said, tell me everything. And he did. During the next three or four hours, it occurred to me while listening to him, that urban transport is not separable from the political economy of that small country. And on reflection, I concluded that this is the case everywhere. Institutional and political development do not automatically follow technical and economic development in society, particularly in urban transport. Ignoring political and economic considerations will lead to solutions that are unsustainable or that cannot be implemented.

This workshop seeks to address this broad and multidimensional issue. There is only one issue, really, but it is huge and unclear. We will hear about it now.



# Financing Mechanisms for Urban Transport

Martin Wachs

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When we design transportation projects—what to build and where to build it; whether it should be a highway, a transit lane, whether two lanes or four—we typically decide first whether the benefits of the project in the aggregate are sufficiently great to warrant its cost. Having decided that the benefits are worthy of the costs, that we should build it because it will benefit certain constituencies to such a great extent that it is worth the cost, the second step is to figure out how to pay for it. We go out and look for federal programs in the United States, or government programs or World Bank programs in other countries, or design a tax system, hotel taxes, or the like to try to package a financing mechanism to make the project work. In the United States, we often first determine whether there is a federal program available for a certain kind of project, and then design the project because we want to get the federal dollars.

## Interdependence of Finance and Project Design

In most cases, the physical characteristics of a project are separated from its finance. Such an approach to project finance is inefficient, often socially unproductive in the long run, and contributes to an expensive or an unproductive transportation system. Moreover, it is probably wrong to think of finance as an issue separable from that of the design of the physical characteristics of the project. How one finances and how one prices the service are as important in the delivery of benefits and the incurring of costs as the physical characteristics of the project, and they should be thought of together from the very start. The project planning should include very detailed attention to finance. And there is a political economy dimension to this that is very important.

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Financing and pricing should be part of project design from the start.

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## Two Cases: New York City and Los Angeles

I want to give just a couple of quick examples. In *New York City*, in 1909, the Lower East Side of Manhattan had a population density of 400,000 people per square mile—an astounding number, even by today's standards in the most densely populated developing countries. As solutions were discussed and debated—at the very beginning of the profession of urban planning—there was a clear consensus that lower-density housing should be built on what was then the periphery of the city, including the areas of the Bronx and Queens. It was also decided that the new housing estates should be connected to the employment opportunities to be found downtown by a very grand public transit system, which we all know as the New York Subway.

Part of that discussion directly related to finance. At the time, many of the transport routes had distance-based fares—one paid on the basis of the distance traveled. The idea was to build the more extensive system and to finance it in such a way that there would be a flat fare system, so that new immigrants would not be forced to live in the city center because of their low incomes, which rendered them unable to pay the higher distance-based fare to travel between homes in the newly settled areas and work.

The flat fare was also promoted by the argument that if the people in the inner city had to pay the same as those who traveled longer distances, they benefited by virtue of shorter trips. They also would benefit from reduced congestion in the inner city. Overall, the balance was considered equitable in the benefit-cost distribution.

It is interesting to me that we now talk about building subway systems as a way of redensifying the city. We say that the automobile has caused dispersion, and that we should turn to rail systems to bring about higher densities and transit-oriented developments at the transit stops. But we do not pay attention to the financing



mechanisms. Yet in many metropolitan areas, we still have an essentially flat fare system, and the flat fare system, as the New York example demonstrates, is associated with decentralization of the city. The technology itself does not either increase or decrease density. Pricing of fares, however, which was closely related to the way the system was financed in the New York case, has a direct effect. We ignore the significance of financing in bringing about the desired behavior, the desired effect on urban form. We concentrate solely on building the system, on its physical characteristics.

One more example. In *Los Angeles*, a proposal was made in 1925 to build a regional rail transit system, and it was probably one of the greatest tragedies in the history of that metropolitan area that it was voted down. The report of the consultants hired to evaluate the proposal concluded that the needed system was not affordable. Even in 1925, automobile travel was growing so rapidly, and the city was decentralizing so extensively, that there was not enough money within the city to build a system that might bring about recentralization.

Urban development specialists argued, first, that they had to raise transit fares by as much as 40 percent. In that era, the transit system was privately operated by a monopolist transit operator. Consequently, the idea of dramatically increasing the fares to finance the expansion of the system of six or seven rail lines was very unpopular. The citizens were very much opposed to it. They asked why they should pay more money to a monopolist, when instead they could just buy an automobile. The political economy of the situation was largely defined by a perception that the automobile was an escape from traffic congestion and from monopoly control.

But second, and even more interesting, the suggestion was made that the City of Los Angeles should acquire the property in the vicinity of this transit station. It should then clear the property, build a subway system, and lease or sell the property to real estate developers for

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very high-density development at the transit stops. The financing for the system would come first from the rents—from owning the land and operating real estate development there—and, second, from the profits that would be realized when the land, now more valuable because of its location next to the transit stops, was sold.

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Land use has to be planned—like financing.

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The plan attempted to do two things: to guarantee the market for transit by the higher densities at the station sites and to place financing at the heart of the plan. Financing was not to be a separate component, an afterthought. The idea was to plan the financing mechanism along with the physical system.

Again, the voters did not like the idea, and the Chambers of Commerce and private industry groups (this is six or seven years after the Russian revolution) did not want public ownership of land. They saw the plan as a step toward Socialism, and they voted against it.

The City of Los Angeles is now building a rail transit system, and they are not financing it through a mechanism that relates to land use in any way. They keep telling the citizens to just give them time, because land use will adjust to the next system. But there are relatively few changes in land use taking place at the station sites; thus, patronage on the system is very low in comparison with the forecasts. As a result of low patronage, fares have been raised to cover some of the deficit. Higher transit fares clearly cater to the rich, who make long trips from the suburbs, and thus benefit from a relatively flat fare structure. The poor in the inner city, who desperately need transit, are abandoning the system because they cannot afford the rising fares. The only ones continuing to use it are the poor who are so transit-dependent that they have no alternative. It is very unfair that the poor are paying an increasingly high fare for short trips in the inner city, while the greater subsidies go to those making longer trips from the outlying area. Consequently, since they started to build the transit system in Los Angeles, transit use has decreased by about 20 percent. A small increase in the rail system

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has resulted in a substantial decrease in bus use, largely because of the fare structure.

## **Congruence of Urban Planning Goals and Financing**

The point is simple. First, the development of an urban metro system should not first address accessibility, savings, and travel time as the initial basis for launching a system. Second, one should not ask, in isolation from these other considerations, how the money should be raised, and then go to the World Bank, the national government, or elsewhere and say, let us think of a hotel tax or a real estate tax, because we need the money. The question I would ask is: Does that form of taxation complement the political and economic objectives of building the transportation system in the first place? And if it counters those, it may be very damaging, or even dangerous.

There is a wonderful part of *Alice in Wonderland* in which Alice says that she is lost and does not know which path to follow. The Cheshire Cat responds, “Where do you want to be?” And she says, “I don’t know where I want to be.” And the Cheshire Cat responds, “If you don’t know where you want to be, then the path that you follow doesn’t matter. Take any path.”

The point I am making is closely related to that quandary. If we do not know where we want to be with the transportation system, if we do not know whether we want to bring about a concentration of land use in the city center or bring about dispersion, we do not know which path to follow. If we do not know where we want to be, a sales tax that produces money is as good as a cigarette tax that produces money or a hotel room tax that produces money. But if we do know where we want to be, then the financing structure and the pricing ought to reinforce movement toward that objective, and not be independent of it.

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## European and U.S. Experiences Compared

The importance of these points can be shown through a comparison of the experiences of Europe and the United States. It is certainly true that in Western Europe, and much of the world, automobile use is increasing rapidly, as is decentralization of metropolitan areas. But use of public transit in Europe is much greater, especially for work travel, than in the United States. There is also much greater use of cycles, trams, metros, and so forth in Europe, even as auto ownership grows. A number of researchers—John Cooper at Rutgers University and others—have shown that continued use of public transit has much to do with the way it is financed and priced.

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Transport services in Europe are priced to encourage the use of public transport. Not so in the United States.

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In many countries in Europe, the tax on a new automobile is equal to the selling price of the automobile. Although most households have one or two automobiles, few have three or four, as is often the case in the United States. The presence of fewer automobiles, in turn, reinforces the use of the metro system. It is not that public transit is subsidized more in Europe than in the United States per vehicle mile. Instead, the way all transport services in Europe are priced encourages and reinforces the continued use of public transport for many purposes. And the way transit is being financed in the United States tends to decrease public use.

### **Comment: *Antti Talvitie***

This presentation certainly speaks to all of us very clearly. We often overlook financing in project description. Financing often has little to do with how pricing is done, what benefits are desired, and how payment for those benefits is arranged. We will return to this topic.

# Lessons of a Failed Project in Jamaica

Alton Fletcher

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I want to relate a story to you of a project that failed in Jamaica, not because we did not know where we wanted to go, but because we did not like the costs associated with the journey.

## Background

Jamaica, a former British territory, had a good transport system, including the Jamaica Omnibus Service and the Jamaica Railway Service, which operated successfully until the end of the colonial period in 1962. Soon after that, the operations began to run into financial problems. Successive governments failed to provide timely fare increases, so the transport services could not afford to purchase new equipment. At the same time, they reduced the scope of their service and, as we say in Jamaica and in many developing countries, the “robots” started taking over.

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The gradual collapse of a functioning system.

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When the robots (informal, and often illegal transit operators) started taking over, cash problems began to plague the companies. Eventually the government took them over, and that is when the trouble started. There is a mentality in developing countries that once a government takes over a private enterprise, the property becomes theirs, and the people want to take the trains and the buses without paying.

At the same time, successive governments refused to approve fare increases. They established a board to review tariff requests, which led to a massive increase in informal operators.

The railways eventually stopped operating, and the Jamaica Omnibus Service ceased operating as an organized system. The government promoted a package-holder system: they selected a few “main”

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operators, and gave them ten routes; these operators contracted with individual operators to provide the service. In effect, they fragmented the bus service. By 1995, Jamaica had 800 different operators with, at most, five buses each. And the majority of operators were single owners.

The transport authority in charge of monitoring and regulation had a very difficult job trying to keep the individual operators in line. The operators did not complete their routes; if they were going east, but noted that there were many people waiting for a bus across the road, they would empty the bus, turn around, pick up the new group of passengers, and go the other way. They also began to charge what they wanted to charge, despite government-regulated fares. They posted people—a similar practice has been observed in Tokyo—to encourage passengers to come to their bus because their bus traveled faster, had music, and so forth.

## Attempts at Reform

The World Bank funded a transport sector study that looked at all modes of transport in Jamaica. Out of that study came a recommendation to rationalize the bus system in the Kingston metropolitan region. Plans were drawn up, and the Bank provided funding.

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A misjudged recommendation from the Bank.

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The first recommendation to the government was to avoid subsidizing public transport, and instead to move to a franchise system, which was eventually attempted. Kingston was divided into five areas that were supposed to be reasonably equal in the amount of revenue each franchise holder would receive. It was also thought that the government could not operate the system, and the obvious step was to move it to the private sector and to provide it with the incentive to operate the service. Plans were made to accomplish this.

Before the plan took shape, the authorities announced a date for restructuring the public transport system. The poor traveling public

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in Jamaica was pleased to hear this, and they had high expectations. They thought they were finally going to have a good transport system.

Everyone was enthusiastic about the reform of the public transport system now, and they expected Alton Fletcher, who had come from New York City, to sort out the whole business.

When I arrived in Kingston, and realized that a date had been set, I protested to the government, stating that the date was unreasonable. Reluctantly they agreed to set another date. Again I protested that the new date was not right either, but they persisted. We started to put the plan together, assembling bidding documents and so on.

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Time was  
running out.

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Once we began to develop the plan in earnest and sat down with other consultants, we realized that the new date set by the government would not work. We tried again to get it changed, and the government switched the date once again.

We organized the system into five franchises and set up a bidding process, prequalification, and then the awarding of the franchises.

Along the way, we began to look at the economics of the bus system and realized that bus fares would have to be increased from a low of 100 percent at one end to 300 percent at the other, based on distance.

The government disagreed, although the kind of system it wanted required the level of funding that these fares would produce. We compromised, planning for fewer but more crowded buses. The government disagreed with this proposal as well. Negotiations became mired at this point, and the implementation date was fast approaching.

We went through the bidding process and awarded the franchises. The consultants operating the project were wary of those who had

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Hope,  
promises, and  
disappoint-  
ment.

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been identified as operators because the operators would not be able to control the fleet needed or to gain financing for the project because the bidding document did not include the fare table, which the government had rejected.

The implementation date arrived, and of course nothing happened. The franchise holders could not get the buses from the 800 individual operators, they did not have depots, and they did not have financing.

We gave them about \$5 million, in Jamaican dollars, to paint the buses, buy tickets, and buy uniforms, but it takes more than that to run a transportation system. On the date of implementation, March 1, 1995, the system was no better than it was prior to this attempted implementation.

## **Lessons from Failure**

There are several lessons to be gained from this experience:

- An implementation date should not be set without first consulting with those working on the project.
- Governments need to understand the cost of the service to the public, and the financing mechanism required, well ahead of time.

The Jamaica Omnibus Service operated well, but they operated for eight years without a fare increase. The operators in Kingston have now operated for at least two years without a fare increase because the process of getting one is long and difficult. Nothing will happen unless an operator chooses to make the attempt, and complain to the ministry that service cannot continue unless fares are raised.

Exhaustive proof must then be presented, followed by a long period of bargaining. Ultimately, the operator and the ministry more or less split the difference, and that is what the operator will get.



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Such a random approach to financing just does not make sense. There is no planning. Systems cannot operate in this manner.

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Deluxe pirate services outside the system.

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The government is reluctant to approve a fare increase because it does not believe the system has improved sufficiently to warrant the increase. The government also believes that the people, including commuters, cannot afford it.

Nevertheless, the commuters seem to have been signaling that they can afford increased fares. When the system failed in Kingston, one innovative franchise holder looked at his bid document and realized that he could operate a premium service without asking the government for a fare increase. He mobilized funds to buy air-conditioned vans and started operating an executive service that cost J\$60. Among the amenities he offered were orange juice and coffee.

This J\$60 fare compares with J\$14 on the regular bus for the same trip. But the customer is provided with an air-conditioned bus, does not have to stand, and receives a newspaper. This operator's service was oversubscribed. We had to tell him to stop expanding this service, because he was neglecting the regular system. So he continued to be oversubscribed.

Other franchise holders started doing the same thing. They were, in effect, getting a fare increase through the back door. This is an example of why we advise that the market be allowed to take care of fares.

The government recently realized that operators cannot finance depots, buses, and training. To address the problem, the government purchased land, built depots, and bought buses, which were then leased to the operators.

We began leasing the buses to the operators, but they are not paying their leases. And our hands are tied, because we cannot take the

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**Benign neglect  
of the sector.**

buses back, because if we do, the commuters will suffer. And with elections around the corner, we keep quiet about it. So we are caught.

We also signed a ten-year franchise agreement with the operators, which handcuffs us for that period. Only two of the ten years have passed.

After this election, I believe that something will happen. I am not quite sure what it will be. It is important to note also that bus operators in developing countries occupy a special position, because an operator with one bus is a leader in a community. People must go to the operator when there is a funeral, a church outing, or any civic event. At election time, the operator will transport people to the polls, meetings, and so on.

The operator is very important, so when he tells a politician that a new system will hurt him, the politician will help him. This is one of the problems we have faced in implementation. Right now the five franchise holders are supporting the political parties, and the parties will remember that. So a large part of the problem has to do with the connection between individual bus owners and their stature in the society or in their community.

Overall, I believe that the reason public transport in developing countries is treated rather shabbily is that it is seen as the choice of the poor. If it could instead be seen as forwarding the economic development of the country, it would become a priority for the government.

**Comment: *Antti Talvitie***

This presentation raises the issue of competition and how it can provide services at a competitive cost. The consultants calculated that the maximum fare for the regular public service would be J\$56,

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as I recall. This was part of the fare table that was not included in the bidding documents because the government thought it was too high. And then the minibuses began to provide executive service at J\$60; a somewhat lesser service was provided at J\$30 per ride. That service included ensured seating and air-conditioning, but no orange juice, coffee, or newspaper. The market knew what the fare level should be and what people would be willing to pay. We interviewed the operators who provided these services, and they were doing very well.



# A Comparative View: Urban Transport in Manila and in the Washington, D.C., Metropolitan Area

Ron Kirby

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The theme I want to emphasize is a continuation of what other speakers have had to say—there are many improvements in urban transport that we have not been able to implement because of institutional obstacles, outdated or ineffective institutional arrangements, inappropriate or nonexistent regulation, and inappropriate pricing strategies. That is the bottom line.

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Institutional obstruction and public inertia combine to block improvement.

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We have been struggling with these issues for a very long time. Manila in the early 1980s is a good example. We made many recommendations for action to improve the transport system. Not one of these actions was taken, and the system is now in much worse condition than it was in the 1980s. Not only were the original recommendations not followed, but many new problems have also appeared. It is quite daunting.

Let me just run through a few examples of the kinds of problems that could be addressed easily if we could just get a handle on the institutional regulatory, pricing, and funding issues.

## **The Case of Manila**

In Manila, buses competed fiercely with one another for passengers. I have a wonderful photograph from the 1980s of a bus that had pulled up to pick up a passenger. Another big bus pulled up, turned at a right angle to the other bus to get in front of it, blocking two full lanes of a major arterial highway. This kind of behavior is seen all the time, creating tremendous inefficiency.

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Neglected street repairs disrupt traffic. Some of the traffic lanes are out of use because there are major potholes that have not been filled. Because of lack of enforcement of traffic laws, it has also become common to see people going the wrong way up a one-way street. Pedestrians spill over onto major arterial roadways. Some pedestrian barriers have been put in, but the problem remains, reducing available traffic lanes.

Further disruption of traffic is created by the practice of the traffic police to override the automated traffic signal system. The police have a little box. When in their wisdom they decide that the traffic is not moving well enough, a single policeman can change the cycle times at one intersection, which then disrupts the intersections on the many streets connected with it. This practice destroys the effectiveness of a major traffic signal investment program.

A modest geometric improvement in secondary roads would be helpful, including designation of priority truck routes. The system is also unable to get high-pollution vehicles off the road. These vehicles, known locally as “smoke belching,” are supposed to be controlled by a special squad—the smoke belching squad—that is assigned to find these vehicles and get them off the road, but they have had very little success.

There is also a preoccupation in Manila with the so-called mega-projects. It is believed that these projects, which include light rail lines, major highway improvements, and the like, will make a major improvement in the metropolitan area. They are usually accompanied by the tantalizing notion of foreign financing, which is not quite there, but maybe it is there. Such projects have very shaky financial underpinnings, and the government often becomes involved without a full understanding of the finances and then finds that it is left to pay unanticipated outyear costs. I recall one comment that exemplifies this problem. In the early 1980s, we were concerned about some of the light rail investments. One of the government officials said

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The govern-  
ment is left  
holding the  
very expensive  
baby.

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“Well, at least it’s not as bad as the nuclear power plant that we built, which is closed down.”

## The Case of Metropolitan Washington, D.C.

We also have a number of major problems in the Washington area. The problems are different, but they share the same basis as those found in Manila: inappropriate institutional structures. As Steve Del Giudice mentioned earlier, we have had a massive federal investment in a 103-mile rail system, a very nice rail system, but we have not made maximum use of the system in our development policies.

A more important issue is that we have not provided adequate funding for the rehabilitation and maintenance of this \$10 billion investment. The policy of the federal government is that they built the system, and it is up to the local jurisdictions to maintain it from their own resources. We are struggling now to find those resources, and we are falling behind in maintenance and rehabilitation of a very major investment.

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Little provision for capital replacement and rehabilitation.

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We are not maintaining our bus systems, and they are shrinking. The population is growing, and the economy is growing, but the bus system is being cut back for lack of funding. In both the centralized system and the suburban systems, we lack adequate provision for capital replacement and rehabilitation. We buy buses and we run them down because of the vagaries of local budget processes.

In the District of Columbia, we have not provided sufficient money to repair and rehabilitate the roads and bridges. We do not have a proper mechanism for funding and ensuring snow removal from our major roads. The mayor of the District of Columbia said that he felt that the neighborhoods should receive priority, and sent the plows there—this is where his voters live. Meanwhile, the arterial roads were not treated. It is institutional issues like this that are really quite troubling.

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In the suburban jurisdictions, Maryland and Virginia, requirements of the federal and state governments provide enough highway funding, supplied primarily by gasoline taxes, to maintain and rehabilitate their existing roads, but they have very limited opportunity to expand capacity. We have projected about a 70 percent increase in vehicle miles of travel over the next 30 years, but only about a 20 percent increase in capacity. Such an increase in capacity will be possible with existing revenue sources, assuming that gas taxes increase along their historical trends. Despite the inclusion of assumptions for that growth, we are still considerably short of what will be needed.

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More fuel-efficient cars, but lower tax revenues.

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## Funding and Land Use

One of the dynamics at work in the United States is that most of the revenues for highway funding come from gasoline taxes and user fees. Over time, these sources have not kept pace with inflation, and vehicles have become more fuel efficient. We did a little anecdotal example that showed that if one traveled the Capital Beltway now in a fuel-efficient car, the trip would generate about 90 cents in federal, state, and local gas taxes. In the 1960s, the same trip taken in one of the gas guzzlers of the time would have generated, in today's dollars, \$2.70. We are thus receiving about a third of the revenue per vehicle mile that we were getting 30 years ago, and that is a good part of the reason we are not out there building a lot of new facilities. This is unlikely to change, because there is tremendous resistance at the federal and state levels to increasing gas taxes.

Another problem has been an inadequate policy response to the growing congestion on our freeway system, which is leading to costly delays for the movement of high-value persons and goods. The only area in the United States with a more severe problem in this regard is Los Angeles, and we are closing fast in congestion costs per vehicle. The impact this will have on our economic growth is beginning to worry our business leaders, as well as the rest of us. It is certainly affecting our quality of life and the environment.



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Stephen Del Giudice mentioned that the coordination of land-use policies with transportation policies is totally inadequate, not only in rail transit, but also in linking development in suburban office parks and residential areas with roads and transit. We are doing something wrong. If we are going to have this kind of suburban development, we must build more roads. If we do not want to build more roads, it would be better not to have that kind of development. We now have the worst of both worlds. We are getting the auto-oriented development, and we are not building the roads. The result can be seen out on the roads every day, and every year it is getting a little worse.

We also have a focus in this region on mega-projects, particularly a few very controversial facilities. This is the legacy of the institutional structure. Over the past 30 years, the big money has come directly from the federal highway program and the federal transit program to state highway departments and the regional transit authorities.

Although some flexibility was built into the system, these funding channels remain in effect. So the initiatives for large projects, the kinds of projects that create interest among the electorate and the politicians, come when these agencies, with their history of building on a large scale, initiate studies of new corridors. The question they ask is where is the next place we can build something, rather than what is the most important thing we could do in the metropolitan transportation system. The answers to these questions are often not the same.

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Paying our own way.

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I think the United States is moving away from this traditional funding structure. The interstate highway program is essentially complete. Funds are now allocated to the states by a formula, which creates other issues, as Janet Oakley noted. The pipeline for large capital investments by the federal government for rail transit is largely drying up. This is a message that our elected officials need to hear and convey to their citizens: we need to look to our own resources, not to that magic pot of federal money.

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## The Importance of Vision and Political Economy

Steve Del Giudice described the vision process we went through to address these problems, which speaks to the recommendation to set up a forum for dialogue among all of the parties involved. This is an essential first step, but it is not enough. We must go beyond that.

We have spent three years getting input from citizen, business, and environmental groups. Many ideas were offered—from repeal of the environmental laws and building rapidly, to refusing to put down another square inch of asphalt. The position of most people is somewhere in between.

Organized groups with very powerful information machinery have come to our elected officials and our board to represent the extreme positions. If other viewpoints are not represented, the discussion tends to become focused on these polarized views. We have had to struggle to get our elected officials and our citizens to see that there is more to the world than arguing about this or that facility, that there are many things that need to be done, that we all agree need to be done, and that we must work together to amass the needed resources.

A remarkable aspect of the vision statement, as mentioned by Steve Del Giudice, is that our elected officials worked together to craft this vision. They wrote it themselves. They gathered the public input, and then they took it upon themselves to detail what should be done. As staff, we essentially held their pencils and made flip charts. One observation that really struck me was that the first thing they asked was “what is the problem here?” They requested many briefings. The last thing of interest to them was where to build a new facility.

These elected officials are not in the business of administering funds. It is their job to respond to their constituents, who want the trans-

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portation problem addressed. That worldview completely changed the way they looked at the transportation problem. And as Steve pointed out, they came up with a plan that does not specify one new corridor or one new facility.

When the press saw the plan, they focused on what was *not* there. They wanted to know what would be done about this or that corridor. I responded that on the contrary, that was not the most important issue right now. Those controversial corridors are going to be the subject of debate for a long time, and there were more important issues that we needed to address. They may not make good news, they are not as controversial, but we need to address them. The press, however, had yet to come to grips with discussing the issue in this way.

## Future Funding

This leads me to my final point. I think the MPO structure in the United States has been very beneficial. It has created institutions and regional transportation coordinating councils. We have the resources to do the technical work, and we have pretty good technical information. We also have good representation of all of the key players in the process. We have involved the public and all the interest groups. And we have begun to identify the main issues.

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The traditional sources of funding are drying up.

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The problem is money, and who controls the money. The old money, which came from the federal highway and transit programs to the states and the local transit agencies, is drying up, and the first priority for that money is rehabilitation of existing structures. These traditional funding sources are just not in the game the way they used to be. We cannot look to them to build a brand-new facility. Everyone is finally realizing that these agencies do not have the funds.

What is going to replace the traditional model? What we are looking for—and Steve Del Giudice mentioned this earlier—is a revenue

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source for the metropolitan area that can be built from the regional economy, whether from a regional gas tax, tolls, sales tax, or some combination of measures. The public will need to be told ahead of time what those measures are, and be asked to pay for them. This approach has been successful in some metropolitan areas. In San Diego, for example, they used a model that I would like to follow. They laid out a well-balanced plan and passed a referendum and a tax to fund it over a 20-year period. The government did not simply ask for more money, with the promise of explaining to citizens later where and how the money would be spent. This represents a critical change from the way things have been done in the past.

That is the way we are going. We are looking for ways to raise funding in our regional economy. We want the federal and state governments to continue playing their roles, and if they can play larger roles, that will certainly be better for us. But regardless of what they do, no matter how ISTEA is changed or what the state agencies do, it will not be sufficient to deal with the critical issues of growth and rehabilitation in our region. We need to create a new layer of funding and project implementation on top of the traditional sources.

I think we now recognize this. We need to lay out some priorities for the public, and we are working on that now. Our congressional representatives told us yesterday that if we are willing to help ourselves, they will support us with new legislation that will set up a new institution, legislation that will give the MPO the power not only to plan, which we have now, but also to implement, which we cannot do now. We cannot gather in money, float bonds, contract for a new road or a transit system, and the like. This is the authority that we need.

## **Applications to Developing Countries**

Developing countries need much the same authority. After regional coordinating groups are established—and this is an essential first

step—they must be given resources and the ability to allocate those resources to priority projects within the transportation system as a whole.

There is nothing quite like having money on the table to get people to participate and become interested in what you are doing. If there is no money on the table, it is difficult to get a crowd to talk about plans.

In conclusion, in addition to setting up new institutions and creating the forums for discussion, money must be brought into those institutions to implement their priorities. Many of the proposed measures are quite modest—improvements in pedestrian traffic, organizing enforcement of public transport, and the like.

I think the World Bank is in a good position to do these things. The Bank's ability to lend would allow it to attach terms that would provide for the creation of the needed institutions, as well as giving them the power to be effective.

### **Comment: *Antti Talvitie***

I think many here think very much along the lines that you presented. The question is, how are we going to implement it?

You mentioned the integrated urban plans, how important they are and how difficult they are to implement. We have experienced the same thing. Integrated urban projects, important projects, often well-conceived, are very difficult to implement.



# Urban Transportation in Transition Economies

Kavita Sethi

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It is probably common knowledge—but I will repeat it—that the command economies have been relying heavily on a highly subsidized public sector supply of urban transport. They have had extremely good service networks, ranging from simple street-based bus lines, to tramways and metros. It has been normal to find modal shares of public transport in a range of 90 to 95 percent—for work trips, of course. And this is, I think, perhaps a unique situation in the world.

Political independence and economic liberalization have caused dramatic changes in the established patterns of production and trade. This has led to major declines in the gross domestic product (GDP) and fiscal revenues of most of the transition economies.

## Effects of Decentralization

In an attempt to address the decline in GDP, the governments have included decentralization as one of their strategies. This has involved moving public utilities from the control of the state to the jurisdiction of regional and local governments, but without the accompanying intergovernmental transfers or the ability to collect taxes or to borrow.

Municipal governments have thus been given the responsibility to handle public transport services, but they have not been given the means to close the huge cost-recovery gap. This has led to a rapid decline in services. In some cases, the availability ratios have decreased from 40 percent for electric transport to about 65 percent for buses.

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Autonomy—  
but without  
resources.

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This decline has led to the perception of a crisis in public transport. In the early 1990s, for example, operating bus fleets of several cities in Russia saw declines of up to 40 percent from peak levels in the 1980s. Cost recovery from fare box collections in the post-liberalization phase have fallen as low as 10 percent of operating costs. Of course, a number of factors have contributed to this problem, including the financial performance and service efficiency of public transport enterprises; the desire of the government to improve, or at least maintain, social equity; the political feasibility of alternate options; and legislative restrictions.

## **Obstacles to Reform**

There has been a certain amount of consensus—or consensus is now emerging—about the main causes of decline or, conversely, the obstacles to reform. There are three main obstacles:

The first is *unfunded social obligations*. Laws in the former Soviet Union have obligated operators to offer free or reduced fares to a wide range of passenger categories. These include people who are defined by employment and social status or are war veterans, victims of nuclear accidents such as Chernobyl, or children of large families.

The scope of these discounts and exemptions is wide—typically only 25 to 30 percent of the passengers are required to pay full fare. In Russia, only 9 percent of the passengers pay full fare. Collection problems are further lowering fare box revenues.

The second source of decline or obstacle to reform is *the regulatory system* of the former Soviet Union. A major objective of public services was social equity. This led to government specification of the quantity and quality of services offered, as well as the fares for the service. The control of the operational parameters—quantity, quality, and price—has continued in the post-liberalization phase.



This has restricted the capacity of transport enterprises to generate revenue. The enterprises have responded to the cash deficiencies in a manner familiar the world over: they have deferred maintenance and are gradually losing roadworthy vehicles. In some instances, the number of buses on the road has been declining between 5 to 10 percent each year.

The decline in roadworthy vehicles has also led to cuts in services in fringe areas, which are typically populated by the poor, and sometimes, as in the case of Kazakhstan, by ethnic minorities. It is thus not entirely clear how well the government-granted fare privileges and the established quantity-quality targets are actually fulfilling the objective of serving the needs of deserving groups.

The third source of decline, and possibly the most important deterrent to reform, is the *internal organization of public transport enterprises*. In most cases, we find that low cost recovery has not simply been the result of the social fares, but also an outgrowth of the inefficiency of public sector operators as producers, their inferior technology and work procedures, and their overreliance on internal production of goods and services that do not have much to do with their core function. This whole process has been made worse by the crisis mentioned above.

It is possible that once the financial basis of operations is improved, the physical assets can be renewed, but it is much more difficult to deal with the divestiture of noncore activities. Unions are strong, and they resist measures perceived to be against their interests. There is particularly strong resistance when the existence of the public transport enterprises is jeopardized by the entry of private operators.

We have to remember that the former Soviet Union does not have a tradition of a private sector. It is not as if one can say, okay, the

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Monopolies were not abolished, but now must compete.

public transport enterprises are not functioning very well, let us bring in the private sector and transfer responsibility for service provision to them. Given the absence of a market culture, there seems to be something of a bind. How does one proceed to implement reform in this situation? I have thought about these questions in light of what has been happening in the Ukraine, where I was living for the past year.

## Lessons from the West

There has been a change or major reform in the industrial countries, particularly in Western Europe, over the past decade or so. So what was the rationale, the need for reform, in these countries?

The main causes of this wave of reform included the media. They created an atmosphere of crisis by reporting on public transport sector inefficiencies. In addition, there were concerns about increasing subsidy needs, so that state intervention suddenly seemed to have become the norm.

The intervention in most of these countries came about through legislative changes or state-appointed—that is, central government—boards, and led to the enhanced role of the private sector. In the majority of the cases, government-owned monopolies have been opened to competition under a parliamentary mandate. In the United Kingdom, Denmark, Finland, and Sweden, central government intervention was required to specify that public bus transport systems would be converted to competitive trip tendering, and often a timeframe was specified.

It appears that the ability of the central government to intervene in the public transport domain has been critical in bringing about a transformation and an enhanced role for the private sector. The transformation clearly has been successful, as exemplified in the United Kingdom.

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## Transport in Transition: Devolution to Localities

Can one posit that what we really need is strong central government intervention in the transition economies, as well? Even if we were to accept this argument, the transition economies do not have strong central governments. In most cases, these governments seem to be recognizing the need for reform and the broad directions it should take. But it is also clear to politicians at all levels that changing the rules of the game is going to carry a cost. Almost all the changes would have a redistributive impact and would impose losses on some constituents, while benefiting others.

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Who benefits?  
Or should all  
benefit—even  
potentially?

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The pervasive nature of fare privileges is one indicator of the electoral strength of those who are the beneficiaries of these privileges. On the one hand, the losers in a reform are a fairly well-defined group: they are the people who are currently enjoying fare privileges and the employees of public transport enterprises. On the other hand, the beneficiaries of change are a somewhat amorphous group. It will include all users of public transportation and the private entrepreneurs who may enter the market, when they are allowed to do so.

So the net impact is uncertain. Strong support groups are not emerging quickly. There is also a fear that if major changes are introduced, there will be social unrest.

In brief, the short-run redistributive effects seem to exceed the long-term benefits, and central governments are reluctant to be seen as changing the status quo. It is not that they do not understand the need for change. They may well understand it, but they do not want to be seen to be making it.

Nevertheless, given that the central governments are reluctant to make these changes, we have the important opportunities provided

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by the devolution of responsibility for local services to the local level. This could be either municipal governments or regional governments.

It is not clear what has driven this devolution of responsibility. It may have been financial—that the central government wanted to be rid of the fiscal burden—or it may simply be a political calculation. However it came about, the devolution of responsibilities seems to provide an opportunity for change.

The shift in responsibility has been fairly well advertised, so that urban residents in the transition economies know who to blame if the bus does not arrive today.

The continuing decline in urban transport is seen as a failure of local governments to fulfill obligations to local populations. Although there has been a change in the work culture in transition economies, there is a potent hangover of meeting targets, fulfilling specified objectives, and so on. When the public transport service in the local area is not working, the blame is squarely placed on the local government.

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**Municipal governments taking the lead.**

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The stigma of failure is a very powerful motivating factor, and for the municipal governments, the cost of failing to provide services seems to be higher than that of rocking the boat. This has made local governments not only receptive to change, but often the instigators of change.

Of course, it is not just political calculation that is driving change, but also the financial implications. Cities are left without any sources of increasing revenues, and in an attempt to improve finances, they are streamlining management, cutting costs, improving fare box collections, and transferring financial responsibility for exemptions to the departments sponsoring the continued exemptions.

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In Russia, some cities have refused to honor federal exemptions. Some cities have overruled them, and others are coming to see that private operators cannot make profits if required to offer fare privileges. In Kiev and Odessa, private operators have been licensed to offer services without any obligation to carry privileged passengers.

For the most part, the higher fares being charged by private operators—and the fares are in some cases about 60 percent higher than those of publicly owned transport—are not being announced as changes in government policy, nor are local governments advertising that the private sector may refuse to carry fare-exempt passengers. They are simply allowing the enterprises to do all of these things.

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Tacit permission to operate efficiently.

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These changes seem to be improving local transport. Cerepovec has achieved 100 percent recovery of operating costs, and Odessa has a growing private sector that carries roughly 20 percent of all public transport passengers.

The changes being introduced by strong local governments are demonstrating what is possible and what is not. To some extent, they are lowering the risk of untried solutions. It was emphasized earlier that the role of the local government is important and that we need to consider it, and it speaks to the point that in the transition economies, the local governments are offering a window through which reform may be introduced.

Local governments are offering successful models that could be upgraded, and they are also helping to reduce the public barrier. When people see that there is an improvement in transport services, they see visible signs of privately owned and operated buses. These buses may be charging higher fares, but they are available when needed. These observations lessen public resistance to reform or to increases in fares. This sentiment filters through to the politicians,

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who recognize the changing public mood, respond to it, and are more willing to instigate and implement change at a higher level.

## **An Appropriate Role for Central Government**

Given that the big success story here seems to be that the local governments are innovating and taking the first step in bringing about change, what is the role of the central governments?

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Operators are playing Russian roulette.

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Although it is well-established that the change needs to come at the local level, such change alone is not sufficient to resolve the nationwide problems. The problem of urban public transportation encompasses all cities in the former Soviet Union; it is not restricted to small pockets. Change introduced in one or two places, for example, needs to be upscaled and replicated.

What local governments are doing is providing the momentum. The central governments need to support these initiatives, which would also reduce the risk of private participation. Without national mandates or national decrees that prohibit certain practices still in place, private operators are at a high risk. They are asking for high returns to risk, in a situation that is legally not very clear. One may be allowed to charge higher fares, but then again, one may be asked to take buses off the streets tomorrow because the central government has decided that it does not like what the local governments are doing.

Piecemeal changes are useful, but they are insufficient to resolve the nationwide crisis. Parliamentary support is needed to mainstream and speed up the reforms.

# Floor Discussion

Antti Talvitie, moderator

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*Question:* A number of panelists have implied that those planning transport have not taken finance into account, have not identified the total envelope and worked within that envelope.

*Mr. Kirby:* There is a distinction in what we have done in the United States between the annual programming process and long-range planning. The annual programming process has always been financially constrained. It has been tightened up a little, but if you look at the six-year program of projects in our region or within state departments of transportation, or Metro, you will see that they have always been in line with the available resources.

The problem was that the long-range plans, over 20 or 25 years, were lists of things that anticipated funding from unknown sources. What has changed with ISTEA is that there has been a requirement to face up to the long-run problem.

*Mr. Wachs:* There were two aspects to my statements about finance. One deals with the notion of financially constrained planning—that is, to plan within the boundaries of what is financially feasible under existing funding mechanisms. But the second point I would like to emphasize is that it is also possible to use the financing and the pricing mechanisms associated with the financing of a project or program to bring about some of the planning goals, to finance it in such a way that there is pressure to develop land adjacent to the transit stops if there is a desire to use transit to affect land use. That was one example. And I think we do better at the first. Certainly, in many places we are developing plans that are financially constrained.

But 50 and 60 years ago, we did better at the second than we are doing now. We are not using the financing mechanisms to reinforce changes in travel behavior that we might like to achieve, or changes

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in urban development patterns that we might like to see, which in turn would make the investments more viable.

**Question:** I have a question for Professor Wachs. Up until recently in the World Bank, it was almost gospel that to finance urban public transport investment, we had to see complete fare recovery from the fare box within a reasonable period of time, or we were not interested.

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Taxes or user fees— whatever they are called, they should be raised.

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I think what I heard you say was that perhaps a better way to deal with this would be to take a look at the economic impact of the investment, and then go back and look at financing mechanisms. Is that correct?

*Mr. Wachs:* Exactly. I cannot think of any reason, if you want to cope with traffic congestion in a major metropolitan area, not to transfer some of the economic benefits that car users obtain to the transit sector as well. And in the United States, of course, we have had a long history of using what we do not even call taxes, but like to call user fees. Gasoline taxes are not labeled by those who promote them as taxes. They are promoted as user fees. And many of us believe that they ought to be higher to account for some of the externalities that the automobile imposes, and there could certainly be a transfer from those collections to support public transport.

**Question:** Do you think that is practical in developing countries?

*Mr. Wachs:* I certainly do not think that I can generalize about developing countries. They are too different from one another. But I think it is practical for some.

**Question:** Following a little bit on the fare box and other sources of revenue, if we improved the theoretical underpinning of our arguments, what have we done recently to quantify externalities, in the broadest sense, for the politicians who make quantitative arguments?



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*Mr. Kirby:* I think that is a very good question, and one of the things I have been struggling with recently is that many metropolitan areas of the United States use a sales tax to support their transit systems. We do not have such a sales tax in the Washington, D.C., metropolitan area, and we desperately need money to rehabilitate our transit system. So, naturally, that is coming up.

The question is exactly yours: Does this make any sense? Is this a logical way of doing things? From the point of view of political reality, a tax has been used because a relatively small tax raises a lot of money, because one is building on a very large base. With a half-cent sales tax, more revenue is gained than one might get from a five-, seven-, or eight-cent gasoline tax.

There is also the issue of what the political market will bear, which becomes the predominant part of the debate for elected officials. But one would like to have a little more behind this kind of initiative than that. And I think it is a question that deserves a little more exploration.

**Question:** It seems to me that what we should do is to get these measures out of the political arena. I would say that one ought to have some principles that are nonnegotiable, like cost recovery.

*Mr. Wachs:* I think that it is much more important to have the political consensus to move forward with a project than it is to have principles that one sticks to as firm rules of decision. Certainly the experience in one city after another has been that it is much easier to arrive at a political consensus that occasionally damages some of the principles that I would like to observe.

In California, I opposed the use of sales taxes to build transportation facilities in most metropolitan areas, and I have argued for regional gas taxes instead. But the difference between the two is actually more extreme than Ron Kirby has suggested. In Santa Clara County,

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Be flexible enough to move forward—or risk being marooned on principle.

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where San Jose is the biggest city, it was found that equal amounts could be raised by a one-cent, 1 percent general sales tax and an 18-cent-a-gallon gasoline tax. And while the 18-cent gasoline tax would be much more consistent with my principles for financial equity and alignment of the payer and the beneficiary, it was politically impossible to get the voters to consider the gas tax. In contrast, a one-cent sales tax seemed quite plausible to them—it seemed like a much smaller amount.

So, yes, it violates the principle that you are talking about, but it resulted in the building of quite a bit of infrastructure and the funding of some of the operating deficits, and in the end it probably resulted in more use of public transport and a modest reduction of traffic congestion, but certainly not a dramatic reduction.

**Question:** One clarification, Mr. Wachs. Was that sales tax challenged in court?

*Mr. Wachs:* It was challenged in the state courts on the basis of complex and arcane issues that are probably only of interest to Californians. The voters had passed a measure that said that special-purpose sales taxes could not be increased without a two-thirds vote of the electorate. This was brought to court, and the debate was whether it is a general sales tax or a special-purpose tax, because one is subject to the two-thirds requirement and the other to a majority requirement.

The interesting outcome was that the courts ruled that it required a two-thirds vote if it was a special-purpose tax. They went ahead in Santa Clara County, and they framed the measure as a 1 percent increase in the general sales tax, and included a separate advisory measure on the ballot that advised the county supervisors to spend it on transportation. Both measures passed, and so technically it now complies with the state law, and it has been upheld in court.

# Closing Remarks

Anthony Pellegrini

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*Mr. Talvitie introduced Anthony Pellegrini, Director, Transportation, Water, and Urban Development Department, the World Bank, to close the workshop.*

Let me start by emphasizing how important I see urban transport becoming over the next few years.

## **Greater Demand for Urban Transport Assistance**

Urban transport is something that borrowers, whenever I visit a country, are asking for more frequently, and they are asking for much more World Bank involvement. We are going to face the dilemma of how we respond to the potential increase in borrower demand for assistance in urban transport, not just because of the simple mobility issues, but also because the problems of cities and urban transport are affecting the way countries are perceived, and they see it broadly affecting their international competitiveness.

Several years ago, the Bank sponsored an investment forum for the Philippines during its Annual Meeting, which was attended by bankers who were there for the annual meetings, including the minister of finance and key cabinet officials. The first question from the audience was: Mr. Finance Minister, you are asking us to come and invest in your country. When we visit Manila, the problems of congestion and air pollution, caused by the chaos in urban transport, lead us to believe that there are governance problems that are quite serious, as well as the simple efficiency issues of being able to conduct business in an environment like that. How do you expect us to invest in those kinds of circumstances?

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So it is true that the congestion and air pollution issues have enormous consequences in our client countries, both for the economy and the health of the population.

## Areas of Agreement

I found much agreement among the different speakers here.

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Agreement—  
but not  
uniformity.

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- There was broad agreement on the role that *regional transportation* bodies play. Urban transport is a regional issue. But it was also very clear that these regional transport bodies are not a panacea. You cannot will them to be effective. Particularly with decentralization becoming increasingly important, with autonomous local governments playing a larger role, and local elected officials being given more and more responsibility, it is critical that local governments, which are the constituent bodies of the regional bodies, work effectively if the regional bodies are going to work well.
- Unfortunately, these bodies do not always have the power, the staff, and the abilities to operate effectively. *Capacity building* through projects, through technical assistance, is one mechanism, but we need to be realistic both about what can be achieved that way and the timetables for the work. We have a problem of *increasing decentralization* and importance at the local government level, and yet how this all fits together is something that we all need to work on with our client countries.
- Many people have spoken about the *land-use/transport nexus* and how we cannot plan the way we would like to in a market economy, that we cannot do the kind of land-use and transport planning that we would like to do. Land-use planning can only be done now in the most crude way, through some kinds of zoning measures.
- We lack *a model, an approach in planning*, and this area needs attention. Some examples of strategic planning were mentioned, but I think we all need to start thinking about what an example

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might mean—is it generalizable, and is there a way of doing strategic planning with physical transport planning, with infrastructure planning in a way that makes sense for the future? We need to think about what the new models are for dealing with this land-use/transport nexus.

- There was not much discussion of *regulation*. It came up a few times, but regulation clearly is important in making the whole structure work. Regulation of fares, the structure of the industry, the environment, and safety are all going to be very important. They are essential parts of what we need to do to make systems work.
- *Financing* did get a lot of attention, and it is very clear—I think there was unanimous agreement on this point—that financing and transport planning cannot be separated. It does not make sense to plan something that cannot be financed, and I think we have all moved away from that.
- It is also important to remember that *the way projects are financed* influences what gets done, because there are many more ways of financing investments today than there were five or ten years ago. These different ways of financing investments will dictate how things operate and what gets done. They will influence land-use planning. They will certainly sway modal choice, but they will also influence what is feasible to implement.
- *Subsidies* as part of the financing plan received a fair amount of discussion, and it is clear that subsidies are justified. There are externalities, and this justifies subsidies. It is not the case that the Bank has always been opposed to subsidies. We were, but not because of a principle of opposition. Instead, it was thought that subsidies would not lead to the right kind of solution, because the subsidies were not affordable. The subsidies involved in subway systems in developing countries ten years ago were clearly unsustainable and not affordable in most of the countries we were dealing with.

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Things have changed, partly because of the possibility of bringing in the private sector, which leads to different levels of efficiency in both operating and building systems, but also because new sources of finance have become available. I think what was unaffordable before is more affordable now in some cases, which permits us to consider measures that we could not consider before.

The other consideration with subsidies is that one needs to be sure one can count on them. When an annual political decision determines the level of subsidy for a given project, the project is likely to get into trouble very soon, and certainly the maintenance and operation is unlikely to be ensured. That is one of the reasons people are now looking to things such as road and transport funds that have a secure level of funding. It is a pragmatic, practical reason, and we are looking to try to develop systems that will allow these to serve as proxies for user charges. They are not general taxes that are sequestered as a matter of principle. We want to make these more user-oriented and develop the regular sources of funds that a more commercial operation of an enterprise would use. We are interested in these funds as a means of achieving a more commercial orientation in the regular funding of the systems that we are trying to develop.

- This leads to a great deal more interest in *private sector involvement*, because bringing in the private sector typically involves contractual arrangements for either finance of a public service obligation or funding through a mechanism such as a road fund, or financing through external sources. But the key to the interest in the private sector is the new sources of funding and improved maintenance, and what has not been mentioned is innovation: operating innovation and technology that would ordinarily not come from public sector management.
- Ron Kirby reminded us that while we are thinking about how to finance the structural investments associated with urban transport—the larger investments—there are many small

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measures in *traffic management* that need a great deal of attention and time but do not need a lot of money in each case. Nevertheless, they do need to be funded, because they are essential to a functioning system.

- I was a little bit surprised that after the recent issue of *The Economist*, which declared that *congestion pricing* is the solution for the future, it has not come up at all, except that it is not on the political radar screen. And I think it is not only absent from the political radar screen here, but it is not on the screen in our member countries either. I do hope that it provides a better answer for the future, because we certainly do need something like it.
- The other point I noticed is the conflict between the technical knowledge that we have of what ought to be done, how to do it, and the principles that should apply, and *what is politically feasible*. As democracy and decentralization take hold in many of the countries where we operate, planning becomes more difficult, and we need a new way of providing technical input into the political decisionmaking process.
- I think that we all need to recognize that we must be *creative* in every project, that there are no formulas—there are *principles, but no formulas*—for how these principles are to be applied in particular cases. We need to know the principles. We need to know why they apply, why they are valid, but the application itself needs to be very creative and pragmatic. We need to be creative in financing, in regulation, in institutions and prices, and in how to bring in the private sector. I think the hallmark in all of our operations needs to be creativity. We need to be creative in helping these democratic institutions arrive at the kind of balanced decisionmaking that is needed. And I must say I agree with Ron Kirby that the advantage of the Bank is that we bring the possibility of capital financing and resources when these decisions can be done properly, and it is hoped that we can use those resources to leverage such decisionmaking.





# Annex

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# Lessons & Practices 11: Urban Transport

Antti Talvitie, Binyam Reja, and Farah Ebrahimi

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*The World Bank has provided more than \$3 billion in loans and credits to support urban transport projects in client countries. The projects generally include support for capital investments, institutional strengthening, and policy improvement. This issue of Lessons & Practices examines Bank-supported urban transport projects completed during the past 20 years, with a particular emphasis on the policy components of the projects and recent experiences in competition and private sector participation in public transport.*

*Eighty-seven percent of the projects had satisfactory outcomes and reached their physical targets. But the impact on institutional development was substantial in only 30 percent of the cases, and sustainability of benefits was rated likely in 66 percent of the cases that were rated. The success of traffic management measures depended largely on strong rule of law and organizational capacity to implement the measures. Policy objectives were rarely met, and actual financial performance fell far below expectation. Often, investments that were expected to pay for themselves did not. Cost recovery was rarely achieved, and policy measures to bring competition to the sector often failed.*

*Two forms of competition were recently introduced in developing and transition countries: competition for the market (competitive contracting) and competition in the market (mostly from informal transport). The review argues that competitive contracting is constrained by high transaction costs, inadequate government organizational capacity, an undeveloped private sector, and myriad informal operators that interlope on the operations of contracted providers. It suggests integrating the informal sector by establishing property rights to minimize interloping, and to strengthen route and bus operators' associations to overcome the collective action dilemma inherent in the informal sector operations. It also outlines a participatory and evolutionary approach to designing a sustainable institutional framework for the operation of scheduled public transport services.*

## Introduction

Over the past 30 years, cities worldwide have been growing at an unprecedented rate. By the year 2000, the urban population of developing countries will have doubled over the

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1975 levels, and more than 100 cities will have populations of over one million. By 2020, more than 60 percent of the world's population will be living in urban areas. The rapid urbanization of developing countries has meant that basic services (housing, water and power supply, sewerage, transport) frequently fail to keep up with demand. Moreover, cities continue to lure people from the rural areas, creating pockets of poverty and contributing to political, economic, and environmental ills. Despite these problems, cities remain centers of growth and productivity in developing countries, contributing 50-70 percent of GNP.

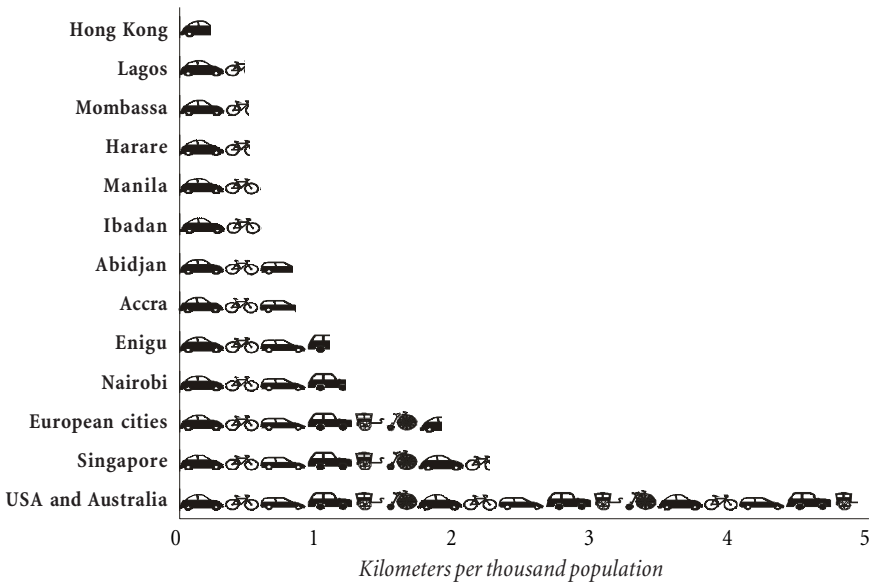
Urban growth and expanding income inevitably lead to *motorization* of cities, increasing the demand on urban infrastructure. Higher incomes in liberalized economies, in particular, have enabled people to purchase motor vehicles and move from human/animal-powered to motor-powered modes of transport. As cities spread and their populations grow, both the number and length of journeys increase, so that vehicle-kilometers traveled rise faster than the population, multiplying demands on urban infrastructure. Yet urban growth makes the building of transport networks more expensive, as land becomes scarce and competition for its use more intense. This results in congestion and extensive pressure on limited infrastructure resources, a phenomenon akin to the tragedy of commons highlighted by social scientists.

## Challenges in Urban Transport

Although developing countries have relatively low levels of motorization, cities in developing countries have disproportionately high incidents of traffic accidents and are more vulnerable to problems of air quality, congestion, and inequity in mobility. These problems are aggravated by:

- Inadequate *road infrastructure* characterized by poorly designed street networks and poor maintenance. Roads and streets in the suburbs are often unpaved and in poor condition; those in low-income neighborhoods are no better than narrow paths. There is no hierarchy to classify streets by their function as arterial, collector, and local streets, providing mobility, access, or both. Cities may have high land-use density, as in Sao Paulo, or low, as in Delhi, but their street network per person is very low, at 0.4–0.8 meters of street length per capita. Hong Kong, at the extreme, has only 0.23 meters per person. This compares with 2 to 3 meters per capita in typical European cities and 5 to 9 meters per capita in U.S. and Australian cities (figure A-1). When high land-use density

**Figure A-1: Street capacity in selected cities**



Note: Figures for European, U.S., and Australian cities are averages.

is combined (or results in) low street length per capita, the problems of inadequate road infrastructure are further exacerbated, resulting in extreme forms of congestion and diseconomies of scale in street network expansion.

- **Ineffectual traffic management.** The street networks have inadequate traffic control at intersections, deficient and poorly enforced traffic laws, virtually nonexistent traffic facilities for pedestrians and nonmotorized transport, and weak urban land-use planning. Pedestrians, street vendors, and motorized and nonmotorized vehicles often share the same space, each moving at a different speed, without much traffic control. The deficiency in suitable traffic management contributes to the worsening of auto-related *externalities*, such as air pollution, accidents, and chaotic traffic jams.
- **Inadequate public transportation.** In many developing countries, public transportation is provided by monopolistic entities operating antiquated, poorly maintained equipment. Typically, maintenance facilities are poorly run and in deplorable condition. Public transport is further hampered by inadequate road infrastructure

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and high congestion. Attempts at providing exclusive lanes often fail in infancy because of lack of enforcement and the perception that the measures are uneconomic use of scarce road capacity. The deficiencies in public transport are often ameliorated by *informal transport* operators, who operate in an unregulated environment, resulting in chaotic operating practices.

- *Weak institutions.* Many municipalities in developing countries lack adequate organizational and financial capacities to plan, design, procure, and implement physical and operational improvements in urban transport. Organizations responsible for urban transport are fragmented and their responsibilities and duties are not clearly delineated. Regulatory, licensing, and decisionmaking practices and financial arrangements are weak and lack transparency. Moreover, the institutions suffer from acute scarcity of financial resources and lack of access to affordable credit. They depend on municipal government resources, which are so stretched that the institutions are unable to pay for a share of project costs and maintain their assets.
- *Unfavorable policy and regulatory framework.* Like in most sectors, policy decisions in urban transport are notably constrained by political considerations. The beneficiaries of the projects are often the poor and middle-class, who wield significant political power. Consequently, desirable policies regarding pricing and cost recovery are often postponed or never instituted. Political economy considerations also make policy decisions on street rationalization, agency downsizing, and restructuring difficult. For similar reasons, many municipalities do not adequately enforce traffic regulations and licensing rules.

Projects in Eastern Europe pose new issues: institutions, managerial practices, equipment, and even the infrastructure need to be overhauled. Transport systems have been handicapped by highly centralized decisionmaking and sole-source procurement systems, state ownership and operation of all urban public transport, extensive free ridership privileges, and unsafe and pollution-causing vehicles.

## **Bank Policy and Lending for Urban Transport**

In 1975, the Bank issued its first policy paper on urban transport. Despite several modifications since, the basic principles defined in the paper have remained essentially the same. Bank policy is geared toward improving coordination and planning mechanisms, enhancing the management of urban transport systems and increasing their

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financial viability, and reducing recurrent budget expenditures. More recent policies address new concerns, such as pollution abatement, traffic safety, metro development and expansion, nonmotorized transport, and greater private sector participation.

Transport assistance was often designed to fit into an overall integrated urban development effort, because most urban services are interdependent, and hence best considered in conjunction with other issues affecting urban development, such as housing and sewage. It was also conjectured that economies of scope are gained when operations and maintenance of several urban services are organized under one metropolitan institution.

The Bank's support for *mass transit* projects, particularly those that operate on exclusive right-of-way, has been minimal. Notable exceptions are the Tunis (1973) and Porto Alegre, Brazil (1980) projects. The Bank's reluctance to fund mass transit stems from two factors: the minimum capacity of any exclusive right-of-way for public transport is large and construction costs are inevitably high, and cost recovery from users is rarely attainable. Some client countries, however, have financed mass transit facilities through their own tax revenues or through bilateral financial arrangements with donor countries and the private sector. More recently, the Bank has supported large-scale mass transit projects in Rio de Janeiro (1993), Belo Horizonte (1995), and Recife (1995) in Brazil, and Pusan (1994) in Korea.<sup>1</sup>

Since it began lending for urban transport in 1972, the World Bank has approved \$3.3 billion in support of about 40 projects worldwide. In early 1997, 20 projects were under way. They combine physical works with measures to strengthen institutions and improve policy; projects typically consist of three elements:

- *Capital investments* to construct and maintain roads, railroads, and bridges; procure buses, equipment, and spare parts; and construct maintenance facilities.
- *Institutional measures* to improve the operation of transport enterprises, modernize administrative arrangements, monitor performance of the urban transport sector, train staff, and improve planning, programming, traffic engineering, and procurement capabilities in the implementing agencies.
- *Policy measures* to promote efficient operation and sound financial management of urban transport, pursue safety and environmental goals, improve cost recovery, foster competition and privatization, and reduce regional imbalances.

## Performance and Lessons of Experience

Thirty Bank interventions in urban transport have been completed and evaluated over the past 20 years: 18 as stand-alone transport projects and 12 as significant components of urban development projects. The main performance ratings of these projects are shown in table A-1. Of the 30 projects, 26 (87 percent) had satisfactory outcomes. *The re-estimated average economic rate of return* of urban transport projects was 30 percent, compared with 43 percent at appraisal.

The review gives specific attention to 17 projects in 5 countries (3 in Brazil, 2 in Côte d'Ivoire, 1 in Jamaica, 7 in India, and 4 in Korea). The projects were chosen to reflect the geographic and thematic range of Bank interventions and to allow lessons to be drawn at the project and program levels.

### Physical Objectives

*In upgrading infrastructure, most projects achieved and some even surpassed their physical objectives.* The projects helped stem the further deterioration of the urban transport system in the countries studied. The three urban transport projects in Brazil helped establish exclusive bus lanes in some heavily traveled corridors and significantly improved the transport facilities in many of Brazil's urban areas. Under the Third Urban Transport Project, for instance, 1,000 km of bus routes were paved in 146 cities, resulting

**Table A-1: Performance of 30 urban transport projects**

<i>Project outcome</i>	<i>Institutional development impact</i>				<i>Sustainability</i>	
Satisfactory	16 (10)	Substantial	4 (1)	Likely	7 (5) <sup>a</sup>	
Unsatisfactory	2 (2)	Modest	5 (3)	Uncertain	2 (1)	
		Negligible	1 (3)	Unlikely	1 (2)	
		Not rated	8 (5)	Not rated	8 (4)	

*a. Numbers in parentheses indicate ratings for 12 urban development projects with transport components.*



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in reduced vehicle operating costs and increased access by the poor to a more reliable and comfortable service. Similarly, the Bombay Urban Transport Project financed the procurement of 700 new buses, constructed and equipped three bus depots and a workshop, and improved three existing depots and one workshop. The improvements helped remove serious bottlenecks on high-volume bus routes.

*In contrast, traffic management measures had fewer successes for three reasons: low absorptive capacity of the borrowing country, weak legal systems, and insufficient government commitment to traffic management.* A significant portion of the traffic management component of the Jamaica Urban Transport Project was not implemented for lack of capacity and government interest, although the road maintenance measures were successfully completed. In Côte d'Ivoire, the Urban Development Project supported the installation of computer-controlled traffic signals in Abidjan. But the municipality did not have sufficient technical capacity and maintenance funds to keep the signals working properly.

Project designs often failed to consider whether the legal system was able to sustain the new traffic rules being instituted. For example, because traffic rules were poorly enforced in Abidjan, the new traffic signals, even when working, appeared to be of limited use in controlling traffic. And since drivers did not respect the exclusive bus lanes built through the project, the measures failed to improve the city's traffic flow. In contrast, in the Brazilian cities that provided strong police enforcement, traffic management programs had greater success. It appears that traffic management measures require strong rule of law if they are to be effective. There is no point in having synchronized traffic lights if drivers do not adhere to the lane demarcation and the government does not have the policing capacity or the political will to enforce traffic rules.

*Integrated urban development projects were often difficult to implement.* The Second Calcutta Urban Development Project, for example, was large, ambitious, and complex. It was intended to finance 54 subprojects in 11 sectors, provide technical assistance to Calcutta Metropolitan Development Authority (CMDA), and support a major policy program for municipal reform. After several modifications, both in cost and design, the project was completed two years later than planned, and some of the project components were later dropped and others transferred to a subsequent project.

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## Institutional Development

*Institutional development impact was considered substantial in 30 percent of the cases. Integrated urban development projects rarely met their institutional objectives:* developing an areawide organization to address multiple responsibilities is difficult and not easily redressed through technical assistance. The technical assistance extended to CMDA, for example, had negligible institutional impact. The two urban development projects in Côte d'Ivoire failed to meet their institutional objective of creating an Ivorian capacity to plan, supervise, and monitor urban transport improvements.

Institutional development proved less complex and more successful in stand-alone transport projects. The three projects in Brazil, for example, substantially improved the country's then transport agency, Empresa Brasileira dos Transportes Urbanos, enabling it to appraise and supervise subsequent Bank-financed urban transport projects and to deal with national urban transport policy issues. In Korea, the Bank supported government efforts to establish an institutional framework to facilitate urban transport management and redress regional disparities.

Many of the projects (13 out of 17) reviewed had important policy components as part of their institutional development effort. In general, they were directed at restructuring public transport and improving the financial viability of the urban transport system through such measures as cost recovery, improving pricing, and developing the private sector. On the whole, policy objectives were not met.

Few governments were convinced that user-based cost recovery was desirable for ensuring economic sustainability; they thus were reluctant to risk political discontent by raising fares to the required levels. As a result, full cost recovery from users was rarely obtained. In cases where the Bank maintained ongoing dialogue with the borrower (as it had with the Madras and Korea projects), government policymakers were more receptive to the Bank's policy suggestions. In Korea, for example, Bank support of the government's regional development initiatives earned the Bank much good will, which subsequently helped the Bank introduce the modern concept of transportation system management (TSM) and enabled it to work with the government in developing successful lending programs. In the Madras projects, the government achieved substantial cost recovery from users and replicated the arrangement in other projects.

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*Cost recovery is made difficult by the high-cost environment*, often resulting from strong labor unions and inefficient organizational structures. In Jamaica, a bloated labor force and bad labor relations were causing the public bus operator of the time, Jamaica Omnibus Service, to incur unusually high operating losses, requiring the government to subsidize 40 percent of the operating cost. In Brazil, although the construction of rail under the Second Urban Transportation Project relieved traffic bottlenecks in downtown Porto Alegre, ridership was 55–80 percent lower than projected, compelling the government to subsidize 80 percent of the operating cost.

Policy failures were particularly common when project design failed to give full consideration to the private sector in the provision of transport services. The Calcutta Urban Transport Project illustrates the problem. The project provided assistance to the public bus and tram companies in a city where private operators provide nearly 80 percent of daily passenger trips. Instead of strengthening private operators and changing the city government's role from service provider to regulator, the project provided capital investment to the public companies and sought to reorganize them and institute a policy of fare increases to cover costs. But the companies failed to cover their costs (no fare increases took place) and continued to lose their share of passenger trips (despite the new vehicles). By the end of the project, the operational and financial performance of the public companies had worsened. In contrast, private operators continued to cover their costs at the same fare levels charged by the public operators.

## **Sustainability**

The sustainability of projects was deemed likely in 66 percent of the cases rated (see table A-1). Many factors affect sustainability of project benefits:

- Sustainability of benefits requires adequate maintenance funds and an effective organization for maintaining the facilities without external support. But in some of the projects (for example, the two Côte d'Ivoire projects), lack of maintenance funds and weak local technical capacity put sustainability at risk.
- The benefits from traffic management measures quickly dissipated because traffic volumes increased faster than projected, outstripping the technical capacity of the measures, as was the case with the successfully implemented traffic system management in Seoul.

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- Long-run sustainability is dependent on whether a sustainable arrangement for cost recovery is in place. In addition, when traffic volumes were lower than anticipated, governments were forced to provide large subsidies (as in Porto Alegre).

## **Fostering Competition and Private Sector Development**

Recent Bank literature, notably the *World Development Report 1994* (which focused on infrastructure) and the *1996 Sustainable Transport: Priorities for Policy Reform*, calls for greater private sector participation and competition in the provision and operation of urban transport services. For the approach to work, an appropriate institutional framework is needed—one that delineates the roles of the private and public sectors, while enhancing their cooperation. Experience from borrowing countries (for example, Argentina, Bangladesh, Chile, India, Jamaica, Kenya, Philippines, and Poland) and current literature yield early lessons on two types of competitive framework: competition *for* the market and competition *in* the market.

## **Competition for the Market: Competitive Contracting**

Under competitive contracting, the regulatory authority or the parastatal transit agency delegates the operation of transit services—the franchise—to private providers but retains planning and policy decisions. This is considered to be a middle ground between complete privatization and monopoly provision of transit services. Bidding for this franchise can bring competition and entrepreneurship to an otherwise publicly owned and regulated industry.

Franchise bidding has three outstanding features:

- The operations and planning of transit service are separated. A government department plans for services and takes charge of drafting and monitoring the contract. In some cases, the government owns the assets, while operations remain in the hands of cost-conscious private entrepreneurs. This approach lessens labor union pressure and induces innovative services and the use of fewer capital-intensive vehicles.

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- Franchising allows the government to provide subsidized contract services without setting up a public agency to carry out the operation. Complete privatization might leave some areas without service, as some markets may be too thin for private providers to recoup their investment.
  - A sustainable transit system may need an anchor service, with established routes and schedules, as well as services in new markets. But unlike informal transit, which is a low-cost, low-skill operation, formal, scheduled operations require special managerial skills and organizational capacity, as well as access to credit for establishing routes and schedules and for running services in new markets. Few private bus companies in developing countries, however, have the capacity or access to credit to establish such a system. In such cases, the government may want to intervene to establish the anchor service and delegate its operations to private operators.

Several factors, however, lessen the appeal of competitive contracting. First, the transaction costs and the government institutional capacity requirements for competitive contracting are high. The contracting agency must stipulate the quality standards of the service (specify routes, schedules, type of vehicles, and the like), the forms of compensation, and general responsibilities of the private contractor. After contract award, it must monitor and enforce the contract, both of which tasks require substantial institutional capacity. One of the reasons for the disappointing outcome of the Jamaica bus franchising scheme was that the authority in charge of monitoring and enforcing the franchise agreement did not have the resources (and the political discretion) to proceed with the task.

Second, many developing and transition countries have too few qualified private bus companies to make the bidding competitive. In some cities in Poland, for example, contracts are awarded by “negotiations” between the city and a *single* provider. In Jamaica, the evaluation selection committee found that none of the potential bidders met the minimum requirement to compete for the franchise. The bidders did not have the organizational capacity to run a coordinated, scheduled operation, nor did they have the financial resources to renew the fleet and build depot and maintenance facilities.

Third, even if it is possible to get enough bidders at the initial contracting stage (for instance, through a cooperative arrangement of individual owner-operators), the

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arrangement may only help the winner to develop a competitive advantage over the losers during the contract renewal stage. The scheme may thus turn into a bilateral monopoly, where subsequent contracts or contract renewals are done through negotiations instead of competitive bidding. Moreover, contenders may initially bid low to win the contract in anticipation of achieving a monopoly position later. Hence, competitive contracting schemes need to be carefully designed to guard against the formation of bilateral monopolies.

Fourth, in a rapidly growing city and in changing market conditions, a government-controlled competitive scheme may have all the bureaucratic rigidities that inhibit responsive actions to changing conditions (for example, in getting route changes and additions to respond to new neighborhood development).

Finally, competitive contracting assumes that there is no competition *in* the market. But in many developing countries, informal transport providers operate freely and interlope on the routes of the contracted providers by running ahead of the scheduled service and picking up waiting passengers. When Jamaica Omnibus Service was franchised to the private sector in 1984, 27 percent of the daily passenger trips in Kingston were being provided by informal minibuses operators, compared with only 19 percent by the franchised public operator. This undoubtedly affected the viability of the franchising scheme. Most governments have enacted laws against interloping (as was the case in Kingston). But where the rule of law is weak, interloping persists and the contracted firm may continue to lose passengers and become insolvent.

## **Competition in the Market: Integrating the Informal Sector**

Informal urban transport in developing countries ranges from one-person rickshaws or motorcycles to 25-passenger minibuses. Their ubiquitous presence forms part of the urban landscape of developing countries, and increasingly of urban centers in the former socialist countries. Their existence alongside formal services creates competition in the market and puts competitive pressure on the formal operators.

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Informal operators enjoy certain market advantages. They have the flexibility to change their schedule in response to changing market conditions. They can negotiate traffic more easily and deviate from fixed routes. Hence they are often faster and run more frequently, while charging a fare comparable to that of the scheduled services. But the formal scheduled services—the anchor of the transit system—provide the focal point for passenger congregation and develop the transit market. Without them as anchor, the market for transit services cannot be sustained.

Notwithstanding their advantages, informal operators also pose problems. They headrun on the scheduled services, taking riders from them, and they disrupt traffic by lingering at the curb to collect passengers. Informal transport is dominated by owner-operators (or their agents) who only seek to maximize their profits, with little regard for the effect of their actions on the rest of the operators and the system as a whole. This leads to the well-known collective action dilemma where private motives are incongruent with the public interest, and thus need incentives and compulsion to make them compatible.

Many governments try to curb informal operation, but with little success. The better approach—one that brings order and draws on the full benefit of the competitive pressures introduced by the informal sector—is to integrate the informal operators into the formal sector. This can be done, first, by establishing curb rights to minimize interloping and, second, by strengthening and involving route and bus operators' associations to overcome the collective action dilemma inherent in informal sector operations. This approach will align the individual operator's profit motives with the traveling public's interest in adequate scheduled service.

## **Property Rights, Route Associations, and the Rule of Law**

The establishment and protection of the property rights of the transport operator to the waiting passengers on curb zones, routes, or jurisdictions are essential to establishing a sustainable formal scheduled bus service and a competitive transit service. When property rights are established and policed against interloping, private bus companies are not only more likely to invest in establishing routes and schedules, they are also more

likely to invest in developing new markets because they have assurance of being able to appropriate their investment.

Some form of property rights is used regularly, albeit imperfectly, in many cities. In developed countries, taxis and jitneys are prohibited from picking up passengers from official bus stops. In developing countries, particularly in Latin America, route associations establish de facto property rights on routes. But because property rights are often not enforced, route associations are forced to use strong-arm tactics to prevent interloping on their routes.

The government as the provider of roadways and curb spaces (and the lawmaker) will have to establish the rules governing passenger pick-up and drop-off on curbs—such as disallowing taxis from picking up passengers on bus stops—and confer the rights to operate on a given route or jurisdiction. Together with the holder of property rights, the

**Figure A-2: Curb rights in different markets and conditions of the rule of law**

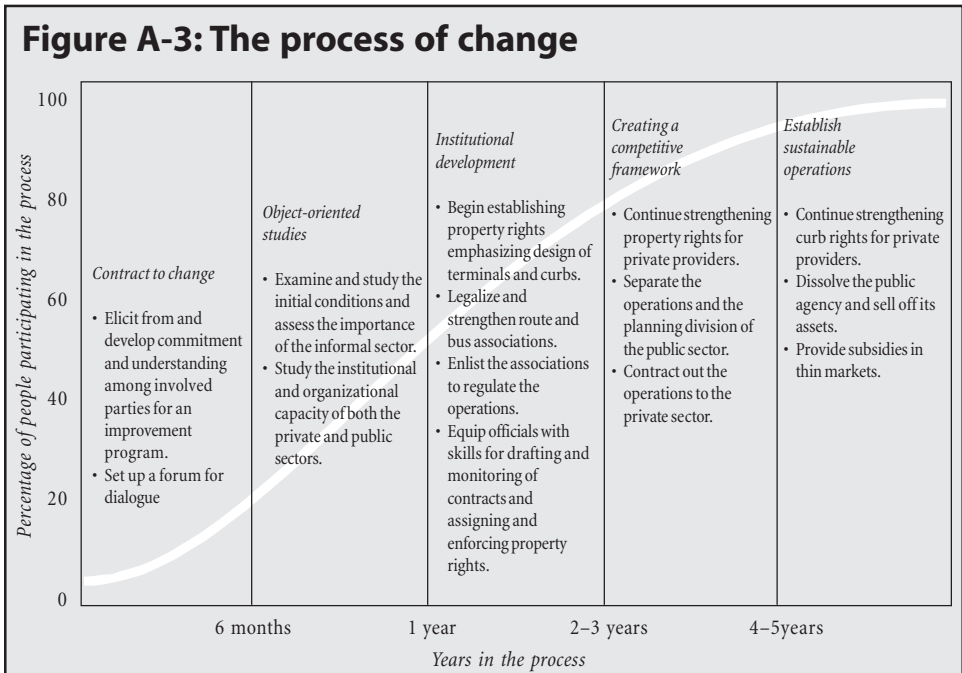
<i>Market</i>	<i>Rule of law</i>	
	<i>Strong</i>	<i>Weak</i>
<i>Thick</i>	The establishment of curb rights allows formal and informal providers to operate on the same route in relative harmony.	Interloping by informal operators will dissolve scheduled service. But transit service is sustained by informal operators. Prominent role should be given to route and bus associations.
<i>Thin</i>	Exclusive curb rights need to be established for formal operators; informal operators should only be allowed to pick up at designated stops.	Informal operation will dissolve anchor service; consequently, transit service may altogether disappear. Government needs to subsidize transit fares to make informal services less attractive in order to sustain the transit market.



government will police against interloping. The type of property rights selected, however, will vary, depending on whether the market is thick or thin, and whether the rule of law enforces a system of property rights (see figure A-2).

*If the market is thick* and the rule of law generally upheld, formal operators can be given exclusive rights on curbs, and informal operators can be allowed to pick up and discharge passengers at designated stops. If the rule of law is weak, interloping by informal operators will make exclusive curb rights irrelevant. But informal operators will continue to ply the routes, confident of finding passengers, and passengers will congregate, confident of finding service. As a result, the scheduled service (as the anchor) may not be essential for sustaining the transit market.

In such situations, the route and bus operators' associations will need to be strengthened to bring order to the transit service. In many cities, informal operators form route associations to rationalize services, provide members with access to credit and group



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insurance, and protect routes from interlopers; associations also lobby governments for market-based regulations of fares and services. In exchange, members abide by the rules governing the association and refrain from interloping on each other. Although route associations sometimes operate as cartels (by limiting entry and setting fares, for example), they generally help to rationalize the transport system and fill the regulatory void left by a weak institutional framework.

Associations need to be legitimized and allowed to enforce their rules, such as imposing nominal fines on members that interlope or fail to adhere to schedules. They also need to set up incentive mechanisms for their members, such as providing credit and group insurance. The legitimization and incentive mechanisms of the associations will dampen the collective action dilemma inherent in the individual operators, and thus minimize socially wasteful operating practices. Route associations, however, have to be prevented from becoming price-gouging cartels by ensuring open entry to the industry and fostering the development of transparent property rights for potential providers.

*If demand is thin* but the rule of law strong, formal operators can be given exclusive rights on curbs, but the curbs must be kept separate from those of informal service providers, because demand may not be sufficient to sustain competition. Since the law is respected, interloping by informal operators will not pose a problem; consequently, the anchor service will be preserved and transit service sustained (with subsidies when necessary). But if both demand and the rule of law are weak, interlopers may decimate the transit market by transgressing on the curb rights of formal operators. In such an environment, subsidizing fares to bring them below those charged by the informal sector will discourage interloping, thus helping to preserve the anchor service, and hence the transit market. At the same time, the government will need to strengthen the rule of law to stimulate the transit market.

## **The Process of Change**

Providing an adequate and efficient urban transport system not only requires investment in improving the road infrastructure and the vehicle stock, but also policy formulation that gives full consideration to the absorptive capacity and the rule of law of the specific country. Projects designed to bring improvement in traffic management and

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public transportation are particularly constrained by whether the country has the capacity and rule of law is strong enough to support such initiatives.

To strengthen the rule of law and bring beneficial policy changes in the urban transport system, the government may create a forum in which all parties can participate to formulate policies and regulations. Such a forum—involving transit providers, route and bus operators’ associations, members of user groups and drivers, policymakers, and other interest groups (such as the business community)—can safeguard against the government’s tendency to overregulate and to arbitrarily enforce transport rules and regulations; it increases the likelihood that the property rights and regulatory frameworks will be sustained.

Commitment to an improvement program begins with ownership and intellectual understanding of the change process. Building such commitment and understanding requires a well-sequenced process. Figure A-3 shows how a typical participatory change process may evolve. The details of the change process, however, may vary from one place to another depending on the local conditions and the peculiarities of the problem. But, in general, the process begins with an understanding of the initial conditions, after which changes are introduced gradually, drawing on local professionals and residents for information in selecting and implementing interventions, observing effects and adjusting for undesirable and unforeseen consequences, and emphasizing continual person-to-person communication with relevant actors.

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<sup>1</sup> A recent World Bank Discussion Paper (S. Mitric, “Approaching Metros as Potential Development Projects,” 1997) offers a new rationale for supporting mass transit projects. The author notes that Bank support would (1) contribute to the technical quality of project selection and implementation, (2) act as catalyst and leverage for the adoption of more coherent and sustainable urban transport strategies, and (3) facilitate public/private partnership to improve project outcomes.