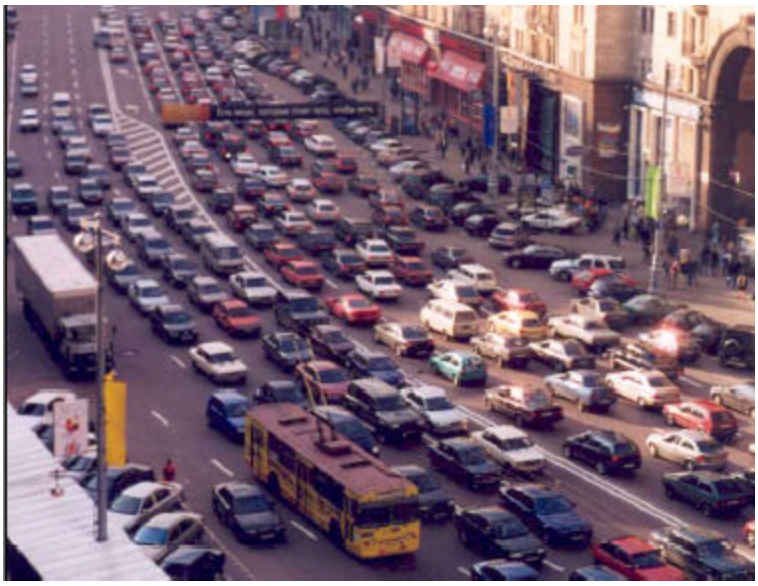
Report No. 25188 ECA

Urban Transport in the Europe and Central Asia Region:
World Bank Experience and Strategy

December 2002

Infrastructure and Energy Services Department
Europe and Central Asia Region

Work in Progress



Document of the World Bank

ACRONYMS AND ABBREVIATIONS

CIS	Commonwealth of Independent States (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan)
CODATU	Coopération pour le Développement et l'Amélioration des Transports Urbains et Périurbains
CSB	Central and Southeastern Europe and the Baltics
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
ECMT	European Conference of Ministers of Transport
EU	European Union
IFC	International Finance Corporation
OECD	Organisation for Economic Co-operation and Development
OED	Operations Evaluation Department of the World Bank
PSO	Public Service Obligation
UITP	International Union of Public Transport
WB	World Bank

This paper was written by Slobodan Mitric, Lead Urban Transport Specialist, ECSIE, under the guidance of Eva Molnar, Transport Sector Manager, ECSIE. Kenneth Gwilliam, Transport Economics Advisor, TUDTR (now retired); Roger Grawe, Country Director, ECCU7; and Richard Clifford, Country Manager, ECCU1 were peer reviewers. Contributions of Graham Smith, Lead Transport Specialist, Richard Podolske, Senior Urban Transport Specialist and Ben Eijbergen, Transport Economist, all from ECSIE, and Richard Scurfield, Sector Leader, Transport, TUDTR, are gratefully acknowledged.

Table of Contents

List of Text Boxes in the Executive Summary

List of Text Boxes in the Main Report

URBAN TRANSPORT IN EUROPE AND CENTRAL ASIA REGION: WORLD BANK EXPERIENCE AND STRATEGY

EXECUTIVE SUMMARY

This paper casts a retrospective look at a decade's worth of World Bank involvement with urban transport problems in the Europe and Central Asia (ECA) region, and proposes a sector strategy for the next decade. The paper's main objectives are to provide a common thematic basis for urban transport inputs into the making of country-specific assistance strategies, and thereafter to guide urban transport project and sector work included in the business plans agreed under these strategies. It is a companion volume to the forthcoming ECA Transport Strategy Paper, which covers all modes of transport. It also represents a bridge between the project-related and policy studies done for specific cities/countries in ECA, and the Bank-wide urban transport policy, whose latest expression is the document Cities on the Move: The World Bank Urban Transport Strategy Review, published in August 2002. Also, urban transport activities being highly interdependent with other aspects of urban life and economy, this paper is related to parallel Bank writings on urban development, water, and environment in the ECA region.

Retrospective

In the early 1990s, the abandonment of central planning, the introduction of pro-market reforms by most countries, and the break-up of production and trade arrangements in the region led quickly to a severe and long-lasting recession, with downstream impacts in all economic sectors. Central governments reduced or withdrew their financial support for local services, while municipal governments, newly given full responsibility for these, could not provide the requisite subsidies. In urban public transport, the subsidy load was huge given cost recovery rates of 10-25%, an arrangement, which had been consistent with low wages and high public expenditures, but could not now be sustained. Urban transport operators, public-owned monopolies carrying 80-90 percent of non-walk daily travel in cities, found themselves in crisis, unable to provide services at hitherto high levels, much less replace and upgrade their equipment and infrastructure. Pressures to raise fares and remove fare discounts and exemptions were resisted by passengers whose real incomes had also fallen. Worse yet, many passengers refused to pay even the existing low fares, with serious consequences for business revenues of the service providers. Some better off cities (Budapest, Moscow, Prague) managed to sustain services, usually with the help of the state, but even there the financial deficits meant that maintenance and operations were under-funded, and fleet replacements were deferred. In the majority of cities in Russia and Central Asia, the deficits were so large that normal operations became impossible. Informal private operators and arrangements, an anathema in the socialist countries though common in Turkey and elsewhere, rose to fill the supply gap. At the same time, in the largest cities, the increase of motorization led to traffic congestion, the urban road networks having been constructed with a continuing dominance of public transport modes in mind. This placed an additional pressure on the performance of those public transport modes, which operated in mixed traffic (street-based buses and trolley-buses, and sometimes tramways). The result was a veritable region-wide crisis in urban public transport (Box 1).

Box 1:The chain of events leading to a public transport crisis in post-socialist cities

on the government side
fall in the output of the national economy
reduction of national and local tax revenue
decentralization multiplies fiscal pressure on municipal governments
decentralization makes cities solely responsible for local services
reduced local government ability to subsidize public services
pressure to raise prices of public infrastructure and services
pressure to reduce service levels

on the household side
reduction of real wages for most people
loss of employment
slide into poverty
reduced ability/willingness to pay for public services
simultaneity of pressure on all fronts to pay more for poorer services

on the service provider side
increase in non-payment of fares by passengers
reduced subsidies
financial losses
reduction of investments
reduction of maintenance expenditures
progressive decay in the fleet, infrastructure and equipment
pressure to increase fares
downward pressure on services
increased competition by informal transport operators
loss of patronage due to mode shifts or lack of capacity
pressure to downsize
reduced job security
reduced interest by top employees to remain or new ones to be hired

Responding to these developments, the Bank provided both project finance and advice. Between 1990 and 2002, it financed 8 free-standing urban transport projects, amounting to about $0.6 billion in loans, and carried out 3 in-house sector studies on this subject. The first batch of five projects (all completed) addressed the looming transport service crisis by lending to public-sector operators in about 20 cities in Russia, Kazakhstan, Hungary, Latvia and Turkmenistan. Their objectives fell into three categories: (i) helping cities in the provision of essential transport service;(ii) striving for efficient and financially sound operations; and (iii) reducing public expenditures. The first was to be achieved by financing fleet renewal and rehabilitation, and the last two by increasing cost recovery from fares, rationalizing subsidies, increasing the cost efficiency, and bringing in the private capital. All projects succeeded in their service objectives, most succeeded in increasing cost recovery, and some were unusually successful as catalysts for regulatory reforms covering both public and private operators (Kazakhstan). The second batch of 3 projects, undertaken after 1997, moved away from funding fleet renewal of the public operators and their restructuring towards direct facilitation of private sector growth and competitive service awards (in Uzbekistan and Kyrgyz Republic), introduction of modern traffic management principles (Moscow), funding urban road maintenance, and reforming road management and financing in the cities (Kyrgyz Republic).

Major factors affecting the future urban transport strategy

At the turn of the century, there is a sharp divide between countries in ECA. In the west of the region, most countries have become functioning market economies, have come close or exceeded the level of economic output of the late 1980s, and have moved to decentralized political and administrative power. Some are approaching membership in the EU. In the eastern part of the region, changes on both economic and political front, and their impact on the standard of living, have been much lower. In all countries, inequality and poverty are much greater than during socialism, increasing as one moves eastward. In response, the overall ECA strategy is a triple-focused pursuit of private-sector driven growth, sound public administration, and equity. In addition, ECA places high priority on all matters related to global public goods, notably environmental quality and knowledge production and sharing. The strategic concern for equity takes the form of attention to the provision of basic services, social safety nets, and participation.

While acknowledging the differences within and between countries in ECA, cities in the region differ from those elsewhere in the world due to their central planning heritage. Box 2 summarizes their present characteristics, and identifies events and factors deemed to have the highest relevance for making an urban transport strategy.

Box 2: Urban transport in the ECA region: the prevailing conditions

Cities and transport systems*: Stable-size urban populations, with some intra-urban migration away from central areas in large cities. Very few cities above 3 million. Land use patterns featuring low-density downtowns, high-rise residences at fringes, and unusual presence of industry and brown zones in central cities. A system of urban activities, transport infrastructure, services and organizations still posited on the dominance of public transport modes. Transport operators in large cities still in public ownership and preserving monopoly. Private-owned bus operators reaching for dominance in smaller cities and in eastern ECA, some within a budding system of competitively-awarded franchises, others weakly regulated. Public transport pricing policy still constrained by low average incomes and inconsistent with government capacity to pay operating and capital subsidies. Unprecedented rise in motorization plus increase in auto use, therefore modal shifts away from public transport and a large and growing "choice" segment in the remaining passengers. Road networks ill-adapted to rising traffic loads. Traffic congestion and its negative downstream impacts, especially accidents involving pedestrians, school children.*

The social environment*: poles of economic growth, with great differences within and among countries and cities. Multiple and simultaneous price pressures on the population. Income inequality and poverty, even in successful countries. Overlap of poverty with other sources of vulnerability (age, physical handicaps) to create difficulties for journey to work and other basic access needs. Wealth drives motorization and creates pressures to invest in roads. Poverty drives public transport fare and service policies.*

Natural environment*: temporary reprieve due to collapse of industrial production in 1990s, now threatened by recovering growth and increased automotive pollution (made worse by continuing presence of old vehicles). Environment protection still weak both as regards legislation, institutions and practice.*

Agents of change*: city governments, newly responsible for the provision of local services, with low financial capacity, no independent credit-worth, and still sorting out the questions of jurisdiction and power over resources with state governments, especially as regards road funding, fare increases and fare exemptions. Fragmentation of administrative responsibility for various aspects of urban transport, both on city and national levels. Low capacity for traffic/parking management and traffic safety. Urban planning institutions and instruments still not evolved to deal with new conditions.*

Initial frame of local decision-makers*: investment-oriented, using normative approaches to service standards and technical solutions, and political approach to pricing, but stymied by lack of funds.*

Across the region, three issues dominate the urban transport scene. The first is an unfinished business from the previous decade, namely the lack of fully coherent fare-subsidy policies in urban public transport. The prevalent fare levels result in a subsidy load still too large to be sustained by public budgets, threatening the long-term prospects of this mode, with potentially damaging environmental consequences. On the demand side, the main obstacle to fare increases remains not poverty but a lack of significant wage growth for the majority of the population and the simultaneity of price pressures in basic urban infrastructure and services. Large population segments resist losing price privileges until they have experienced tangible gains from the reforms. On the government side, the expenditure capacity of local governments remains a problem, as are the intergovernmental relations when it comes to deciding on general fares, discounts and exemptions, compensation and subsidies. The second issue is also an inherited one – the relative roles of the public and private sector in the provision of public transport services and the form of competitive mechanisms therein. Public-owned and still less-than-efficient monopolies are dominant in the more prosperous west of the region, while heterogeneous mixes of public and private owned operators, the latter with varying degrees of regulation, co-exist in the eastern part of the region. The third issue is an emerging one - the rise of motorization at unprecedented rates. Some cities in ECA have reached ownership levels typical in Western Europe (400 autos per 1,000 population). Car users are free of constraints of point-

of-service pricing and bear a relatively light load of fuel taxation. Road use pricing and funding, nationally and in cities, are still in the infancy, with the chain from fuel taxes to city road budgets especially long. All this, against the backdrop of scarce road space in major cities, poses new problems of traffic management and urban road planning, and also exacerbates the problems of street-based public transport services.

The proposed strategy

The proposed strategy in perspective of past Bank activities. *The strategy underlying the first batch of Bank-funded projects was a response to an acute crisis, focusing on public-sector investments to improve transport services, reforming price/subsidy relations to achieve the financial sustainability, and bringing in the private know-how and capital. In the second, smaller batch of projects, most attention was on the creation of competitive markets in public transport services while branching out modestly into the road traffic domain. The proposed strategy retains the past orientations to improve cost recovery and create markets, but extends the notion of the market to urban roads as well, and adopts a more complex framework cognizant of poverty and environmental issues of urban transport.*

The proposed strategy (shown in Box 3) has five pillars*: (i) preferred policies; (ii) institution building; (iii) investment options; (iv) knowledge-related activities; and (v) partnerships and linkages.*

In the policy sphere, the principal new feature of the proposal is to extend the emphasis on economic pricing beyond public transport services to the urban road sector. The longer-term goal is to have some form of locally based road use charges, aiming to manage the demand for road space as well as provide revenue for local transport budgets. This involves a large change, sure to create disbenefits to powerful constituencies, and not yet sufficiently accepted and tested in EU countries. It would also require major advances in decentralization. For all these reasons, a staged approach is called for. The first stage will involve the use of road pricing substitutes such as traffic restraints and parking charges, coupled with the reform of national systems of road user charges to ensure an appropriate transfer of funds to cities. The preparation for introducing locally based road charges in the second stage will in the short-term focus on knowledge aspects and institution building.

In the public transport mode, the past focus on increasing cost recovery is retained but in a more mature framework of system-wide economic pricing and service quality parameters. Here, an underlying tension between poverty and environmental concerns is recognized. To resolve this tension, it is proposed to move the responsibility for social assistance from the public transport pricing agenda into an all-encompassing social protection system. This process has already started in some ECA countries, and is essential for both the financial health of service providers and improving targeting and delivery of social benefits

The proposed continuation of market building efforts in public transport services, based on its promise of greater cost- efficiency and the mobilization of private capital, will have to confront the difficult issues of fare/subsidy policies, surviving public-sector operators and informal private operators. Overall, the approach is to move all street-bus operations towards competitive service awards. A more conservative approach is taken to rail-based and other modes having dedicated infrastructure, where the systems (though not necessarily operations management) are likely to remain in public ownership.

Box 3:The proposed strategy

***Policy priorities**:*

- *Pricing and funding of urban roads: urban aspects of national fuel taxation and proceeds allocation (in the short/medium term), locally-based (congestion) pricing in the longer term (links: national legislation for fuel taxation and funding arrangements; municipal finance)*
- *Substitutes for locally-based road use pricing: traffic restraints, parking charges and standards, street priority for public transport vehicles*
- *Pricing, revenue collection and funding for public transport services (links: similar actions for other urban utilities, municipal finance)*
- *Public transport subsidy reform: targeting of social assistance, transfer of assistance administration away from public transport operators (links: other urban utilities)*
- *Social dimension of urban transport: impacts and corrective measures relative to low-income, handicapped and other vulnerable populations*
- *Market creation: expansion of competitive award of operations and maintenance for both roads and public transport services (links: other urban utilities, private sector development)*
- *Reform "paths" for public transport enterprises remaining in public ownership (especially those with dedicated infrastructure)*

***Institution building priorities**:*

- *Capacity building at city level to support the competitive approach to service delivery, specifically the creation of transport authorities*
- *Capacity building at the city level for traffic/parking management*
- *Capacity building at national and city levels for traffic safety activities*
- *Capacity building at city level for investment planning*
- *Capacity building at national and city level for social protection aspects of designing, pricing and funding urban transport systems*
- *Legislative reform of the intergovernmental roles and relations relative to ownership, regulation, pricing and funding of urban transport systems*
- *Participation in the global knowledge creation and dissemination systems*

***Funding agenda**:*

- *Costs of "negative concessions" in awards for public transport services*
- *Equipment for public transport authorities (fare and information systems)*
- *Vehicle and infrastructure investments for public transport systems remaining in public ownership (tramways, trolley-buses, metros, suburban rail, busways)*
- *Projects involving the conversion of street space to public transport use*
- *Traffic control systems, traffic/parking management improvements*
- *Equipment and training for traffic safety*
- *Maintenance and rehabilitation of road infrastructure*
- *Large-scale (road and public transport) expansion projects*
- *Investments linked across sectors under a common theme, e.g. "green" investments in engine and vehicle replacement;*

***Knowledge agenda**:*

- *City-specific urban transport reviews and/or participation in city development studies;*
- *Thematic studies: poverty and urban transport, social costs of urban traffic; progress in market creation; and urban rail systems in ECA cities.*

***Links and partnerships**:*

- *for joint work on all aspects of the strategy: with transport, urban, social protection, environment, and private sector development inside the Bank; with IFC.*
- *for joint/complementary investments, with kin institutions (EBRD, EIB).*
- *for policy consultations, capacity-building and knowledge activities, with government organizations (ECMT, OECD, EU) and professional and client-based groups (City Alliance, UITP)*

Capacity-building efforts follow directly from the preferred policy, focusing on the regulatory institutions needed for public transport franchising and on traffic and parking management. In addition, capacity building will be required for transport and land use planning.

The choice of funding options and investment categories is policy-driven, and respects the criterion of high selectivity. In public transport, the current trend away from financing bus-

based public sector companies will continue. In this domain, it is recognized that, even if competitive franchises are introduced, a gap between the sum of fare revenues and total costs will be too large for most cities' budgets in the near future. In helping to leverage the franchising approach, future projects will finance this gap on a tapering basis and also include other investment needs of the budding public transport regulatory authorities.

In cities with metros and other rail-base modes operating on exclusive right-of-way, future projects will finance their rehabilitation and extension, while promoting greater efficiency and coherent fare/subsidy policies for these systems. Investments involving the conversion of road space to exclusive public transport use, especially those involving bus vehicles, will be especially favored. In the road sector, road maintenance/rehabilitation and traffic control systems are a good match for the policy drives for market creation in road maintenance and construction, and for introducing traffic restraints and parking charges.

The knowledge pillar includes two kinds of studies. The first involves site-specific studies, of the kind done in the early 1990s, to provide strong empirical grounding for all other activities. The second is thematic, on subjects where the information lacunae are the most evident, such as social costs of road traffic, transport as an instrument for poverty alleviation, and urban rail systems.

A key aspect of the proposed strategy is the recognition that a narrow conception of free-standing urban transport projects, with cities as clients, will not be effective. The reform of social protection and problems of sub-sovereign lending require stepping out of sector and local government boundaries. So do the initiatives like local road use pricing and public transport regulation. Also, the demand for urban transport investments in ECA measures in billions of dollars, which is huge relative to what the Bank funding has been or what it could be in the future. Links and partnerships are therefore essential, in policy alignment, in project finance, and in capacity building and knowledge spheres. Some links will be Bank-internal, be it with other kin sectors within the Bank and with IFC. Participation in multi-sector urban projects and multi-modal national transport projects with urban components will be needed to complement free-standing urban transport projects. Urban transport issues will need to be added to country-level policy and lending agendas (e.g. in SAL/SAC operations). External links will be with other development banks and government organizations (EU, OECD, EBRD, EIB), and with client groups (UITP, City Alliance).

***Adapting the strategy to country and site-specific circumstances.** It is recognized that countries in ECA differ widely as regards the degree of transformation in the economic and political sphere, the level of economic output achieved and the rate of growth. It follows that the proposed strategy will have to be molded in practice to suit local features, demands and preferences, as well as the Bank's global and regional agendas. EU candidacy (a proxy for wealth and availability of other assistance) and city size are the simplest criteria for defining site-specific strategies. In large cities of EU-candidate countries, the focus will be less on investment and more on knowledge-oriented activities, unless an opportunity arises to help introduce major policy changes, e.g. local road use pricing. In smaller cities in non-EU-candidate countries, typically with bus-based systems, the strategy will focus on the development of the franchise regulation, and the sorting out of cost recovery and public-private supply issues. The real challenge will be to deal with rapid motorization in large cities in countries that are not EU candidates, exemplified by Moscow, where full features of the strategy will apply.*

URBAN TRANSPORT IN EUROPE AND CENTRAL ASIA REGION: WORLD BANK EXPERIENCE AND FUTURE STRATEGY

1. INTRODUCTION

Urban roads and public transport services are essential for the daily lives of citizens and for the local economy, increasing in importance, as cities grow larger and travel distances to work become too long for walking. The importance of urban public transport services is unusually pronounced in the client countries of the World Bank in the Europe and Central Asia (ECA) region. The socialist-era heritage of cities in ECA includes a predominance of public transport modes in passenger travel, based on a universal access to low-priced and good-quality transport services. The passage from central planning to market-based economies, marked in most ECA countries by seismic impacts on economic and financial well-being of governments, companies and households, has weakened this dominance on both demand and supply sides, and has threatened the service quality and the universality of access. Throughout the 1990s, a fall in economic output and average incomes, and emergence of mass poverty, has been concurrent with a rise of fortunes for some population strata. The first affected the ability to pay for public services, and the latter stimulated an increase in motorization. The subsequent recovery, where it occurred has tended to accelerate motorization without a like relief for public transport services and the supply of urban roads. The results of this on the street scene, in terms of transport service availability and quality, have posed a unique challenge to urban societies in ECA, with intertwined growth, equity, poverty and environmental concerns.

The paper in hand does two things. First, it assesses a decade's worth of Bank-funded urban transport projects and in-house urban transport studies in its ECA client countries. Second, it proposes a strategy for future operations, based on the lessons learned from previous Bank activities and recent developments in ECA's cities.[1] Its main objectives are to (1) provide a common thematic basis for urban transport inputs into the making of country-specific Bank assistance strategies, and thereafter (2) guide urban transport project and sector work for countries and cities in ECA, in line with adopted strategies. In another dimension, the paper embodies a link between the World Bank-wide urban transport policy, as expressed in the recent report Cities on the Move: The World Bank Urban Transport Strategy Review (2002) and the urban transport activities of the Bank in the Europe and Central Asia (ECA) region. Similar papers will be produced for other regions, serving as vehicles for communicating regional experiences and prospects both within and outside the Bank.

[1] The region includes the ex-socialist countries of Europe and Central Asia, and Turkey. All of the past projects and studies dealt with the transition countries and none with Turkey. An urban transport project in Bursa, Turkey, was prepared and appraised in 1997, but the matters stopped there due to unresolved municipal finance issues transcending the project itself. The paper in hand, especially the retrospective chapter, focuses on the ex-socialist countries, but the proposed strategy is cognizant of Turkey's urban transport issues, and provides a generic base from which a Turkey-specific sector strategy could be readily developed.

Strong interdependence between different sectors in the urban dimension, and within the transport sector, posed a difficult question of boundaries for this paper, reflecting jurisdiction and cooperation issues between different groups and institutions in the professional community, be it in the client countries, or inside the Bank. The adopted approach is thematic, therefore narrow. The paper focuses exclusively on the free-standing urban transport activities (projects and studies) carried out by the Infrastructure and Energy Services Department, and its institutional predecessors in the ECA regional department. In dealing with transport issues, an attempt has been made here to stick to matters which are within the decision making power of city authorities. A forthcoming ECA Transport Strategy (2002), to which the paper in hand is a companion, will focus on road funding, safety, and other national-level issues. Other subjects essential to urban transport planning – urban development, fuel standards and taxation, and environmental quality – have received or will receive a detailed treatment in separate thematic papers. In line with the current matrix management structure in the Bank, various syntheses of these separate papers will be done as needed to make the country-based, sector-based, or city-based assistance strategies, leading to time-bound business plans and work programs.

The text is divided into 5 chapters. After this introduction, Chapter 2 provides the country and urban transport setting in ECA at the beginning of the preceding decade. Chapter 3 reviews Bank's urban transport projects and sector studies in the period 1990-2000, and their tentative results. Chapter 4 surveys the current state of cities and their transport systems in the region at the beginning of the new decade, and developments in the Bank and elsewhere likely to affect future Bank activities therein. Finally, Chapter 5 proposes and discusses the elements of a new urban transport strategy for ECA. The main text is followed by bibliography, briefs of past and current projects (Annex 1), a list of best practices in urban transport (Annex 3), and building blocks for urban transport strategies in terms of policies (Annex 4) and investments (Annex 5). The provision of these exhaustive lists is meant to underline the point that the proposed strategy is selective and assumes the inclusion of a host of important but routine activities in all strategic options.

2. ECA REGION IN THE EARLY 1990s

2.1 Macro-Economic and Political Events

Starting in the late 1980s, the central planning approach to economic organization was abandoned or collapsed in Eastern/Central Europe, Russia and other countries, which had been a part of the Soviet Union. The initial phase of the process of moving away from central planning (as in Russia), or market socialism (as in Hungary and Poland) started by the abandonment of production targets, the liberalization of prices and trade, cutting public expenditures, reducing various forms of protecting public-sector enterprises, and generally reducing the role of the government in the economy. This was accompanied by actions to enable and stimulate various forms and degrees of private sector growth, including the privatization of the state companies. In the political sphere, the countries moved to introduce multi-party, electoral democracies, and decentralize political and administrative power. The inter-country trade arrangements and the division of labor, embodied in the COMECON agreement, also broke down.

Quickly, these processes led to a massive and lasting contraction of national economies and very high inflation. Measured in the worst years, relative to 1987, the real

GDP fell by 15% in Poland (1991) and 35% in Russia (1995).[2] The GDP fell during 7 consecutive years in Russia and 10 years in Ukraine. The average annual inflation throughout the decade 1990-2000 was 20% in Hungary, 26% in Poland, but 102% in Romania, 163% in Russia, and 244% in Ukraine (World Bank, 2002). The inflation rates remained in double digits throughout the decade even for the most successful reformers.

The fall in economic output reduced sharply the overall public expenditure capacity, with complicated and variable downstream effects on the capital and current budgets, on different levels of government, and different economic sectors. This dealt a powerful blow to the traditional arrangement whereby the government took from the successful enterprises and gave to the weaker ones, and also subsidized heavily or provided free an array of social infrastructure and services.

The contraction of economies was not accompanied by massive lay-offs of workers, as had been done, for example, in the U.S. during the Great Depression. Russia's nominal unemployment rate increased to just above 3%, the Czech Republic was even lower, though in Eastern European countries it increased to about 12-15%.[3] In some countries, there was a massive exodus into retirement. Consequently, there was a dramatic fall in real wages and pensions received by individuals and households. In the 1988-1993 period, real per capita income fell by 12% in the Czech Republic, 26% in Hungary, 42% in Russia, and more than 60% in some Central Asian Republics. The wage and pension payment delays were sometimes months long. Poverty increased from 14 million (region-wide) in 1989 to 140 million in 1996, affecting nearly 40% of the total population of these countries.[4] Especially affected were unemployed workers with large families, and some retirees. All this placed great pressure on the social assistance institutions, and created a political backlash against transition.

Not everybody was a loser in the early stages of transition. The gainers were mainly in the emerging private sector, whether this be in the formal or the gray economy. Included here are people employed by the mushrooming, locally grown private activities in the manufacture, trade and services; employees of companies set up by foreign investors; or those who profited from the way the privatization of state-owned industries was being carried out, especially in the energy and other natural resource sectors. Data indicate a sharp jump in income polarization, with a particularly high level of inequality in Russia, Ukraine and the Central Asian republics.

2.2 Cities

The ECA region at the end of the 1980s had an unusually high degree of urbanization (67% overall, Russia 74%), which had been driven by planning decisions rather than organic economic development processes. With exception of Moscow and St. Petersburg (population of 9 million and 5 million, respectively), main cities in this region tend to be under 2m, with medium densities, and stable or low-growth population

[2] Unless otherwise note, the numbers cited in this section are from Milanovic, 1998.

[3] These are aggregate numbers and mask large variations between cities. In Poland, for example, the unemployment in Warsaw never reached 10% but went to 30% in Lodz. Low residential mobility tended to raise unemployment whereas the presence of fast and low-priced intercity rail or bus services tended to decrease it.

[4] The underlying definition of poverty threshold is a daily expenditure of $4 per capita in international dollars.

(growth rates under 1%).[5] This also is in sharp contrast with cities in all other countries that are clients of the World Bank, where rapid growth of urban population is the norm. Another distinguishing feature of socialist cities is to have built massive, high-rise housing developments at city edges. Housing complexes typically were bereft of all but the most essential services, and far from places of employment which tended to be concentrated in city centers, including unusually high proportion of industrial jobs (Bertaud and Renaud, 1994). This meant heavy radial home-work journeys, and the corresponding transport infrastructure oriented towards public transport modes. The underlying assumptions for this approach to urban development included free land, cheap energy, cheap transport services and low individual motorization.

For residents, life in socialist cities was based on low-priced, even free housing and services. Service networks, be it water, electricity or public transport were quite extensive. The flip side of this was that cash wages and pensions were low. A greater part of household expenditures went for food and discretionary spending. Many of the services (housing, health, child care, vacations, home-to-work transport) were provided directly by enterprises to their employees and families. Likewise, city finances were based on turnover taxes paid by local enterprises, a portion of which was retained by the city governments to pay for infrastructure and close the large gap between user fees and costs of service provision.

All this changed with the onset of the macro-economic events described above. Local enterprises, hitherto the fiscal engines of cities (and of state governments), were unable to continue in this role because of the deep recession, and were eventually relieved of this role through tax reforms. Most countries moved to decentralize, though with large variations in the scope and depth of the power and resources transferred from the state budget or generated locally. In the front-line reforming countries, e.g. Poland, city governments were given the jurisdiction over the provision of most local infrastructure and services, the ownership of the local utility enterprises, and the ownership of housing and (some) road infrastructure. As regards city finance, turnover taxes on local enterprises were replaced by a combination of block grants from the state and revenues to be generated from local taxes and user fees, with a gradual shift from the former towards the latter. This development was positive in that it put local matters into the hands of the local leaders, but it had a drawback in that there was a mismatch between the local governments' new responsibilities and the funds immediately available from the new sources. The scale and the speed at which the ownership and responsibilities were transferred from the states to cities were not matched by the scale of resource transfers and/or increase in local resource mobilization. The cities were given the unenviable task of increasing previously very low user fees for various municipal services and infrastructure on a population whose real incomes had fallen, and/or increasing local taxation on the damaged and fragile local economy. The alternative was to cut services at the same time that the new electoral democracy made local politicians dependent on their voters' satisfaction. Most cities failed to solve this dilemma. For enterprises providing various municipal services, this resulted in a gap between costs and revenues. The gap was measured in nominal terms by annual accounting losses, but would have been far greater if constraints to spending were taken into account. Over time, under-spending led to poorer services, lower efficiency of production and a decay in the companies'

[5] The slow-growth feature applies only to ex-socialist cities in ECA. In Turkey, urban growth is much faster and density patterns are quite different, often with extreme densities in the historic centers. Turkey has one of ECA's three mega-cities - Istanbul with 6.6m population.

equipment and infrastructure. Even in the richest cities of this region (Budapest, Prague, Warsaw), the sudden gap between the total revenue and the aggregate expenditure responsibility was very difficult to fill, and services faltered. In poorer cities in Russia and the Central Asia, with a partial or stalled decentralization, the poverty of city treasury led to nothing short of a crisis in the provision of essential services.

2.3 Urban Transport

The inherited transport patterns in socialist cities had three major distinguishing features. First, as noted above, the urban structure involved a planned and rigid separation between homes, jobs, and services. This tended to increase trip lengths and rates, and reduce the potential for walking or biking to work. Second, motor vehicle ownership and use rates were low. For example, in 1990, auto ownership in Poland, a country with one of the highest motorization rates in the region, was 138 vehicles per 1,000 population in 1990. This compares to 400-800 in the Western Europe. Third, the reliance of the population on public transport modes was extraordinarily high. These modes carried as much as 90% of all non-walk travel, had extensive networks, and were low-priced. Road infrastructure was less well developed, reflecting the public transport policy favoring public transport modes. In cities under 0.5 million inhabitants, public transport modes consisted mainly of street-based bus lines, but larger cities had tramway and trolley-bus lines, many on reserved right-of-way, and most capitals above 1 million people had metro lines.[6]

Urban transport service providers were state-owned or city-owned enterprises, organized by vehicle type (separate bus, tram, and metro companies), or united into a single company with a monopoly on intra-urban travel. In either form, they had several structural problems pre-dating the beginning of the transition. The long twilight of socialism left them not only with over-age rolling stock but also with yesterday's technology, especially as regards bus vehicles. These were known for their short economic life, and high levels of fuel consumption, spare parts usage, and pollutant emissions. Internal organization of the enterprises was unwieldy and the staff was plethoric, especially in the administrative departments. The core functions of transport operations and maintenance were often swamped by in-house auxiliary ones. This organization reflected a drive for self-sufficiency arising from the weakness and unreliability of outside suppliers in the old COMECON network.

On the service side, the route networks, nominal service frequencies and fare structures diverged widely from those that would have been used following an economic and financial discipline. As noted above, charging low fares for public transport services was standard practice in socialist countries. Some groups (pensioners and the school children being the most numerous among them) were given further discounts off already low fares and others like war veterans were exempted from paying. In Tbilisi, it was estimated that 50% of all passengers enjoyed these extra discounts. In Russia, there were 64 categories of people exempt from paying for travel on public transport vehicles,

---

[6] It is worth comparing this situation with that of China, another socialist country undergoing rapid change. By and large, the role played in East European and Russian cities by public transport modes, especially street buses, had been played in China by bicycle. Rapid motorization is affecting this street-based and physically vulnerable mode in a highly deleterious way. On the positive side, street-based bus transport is seeing its passengers increase. This is much easier to do, including the private sector participation, than to down-size an existing, inefficient industry.

accounting for about 60% of travelers. The cost recovery from fare revenues therefore was quite low, e.g. 20-25% in Budapest and Prague in the late 1980s, and 6-12% for bus companies in Russian and Central Asian cities. As noted above, the corollary of low cost recovery was a high dependence on budget subsidies, directly or indirectly leaning on local businesses.

As the 1990s decade began, accumulated pathologies of a system in decline intersected with consequences of the first wave of the above-cited macro-economic reforms (Box 2.1). The revenue base of the public transport companies collapsed because of the twin weaknesses in the local government budgets and household revenues of passengers. The funding squeeze first affected the companies' expansion and replacement plans. Maintenance and repairs were the next to suffer, and eventually the services started breaking down.

The immediate responses to these problems varied widely between countries, cities and companies, depending on the initial conditions, the nature of the reform process, and the capacity to adapt and take political risks. Poland adopted a shock-therapy approach to the changeover. In Warsaw, fare increases and other actions brought the cost recovery in public transport services to about 70%, with some loss of service quality. In Budapest, with a large-scale metro and suburban rail system to take care of, fares were increased substantially, but eventually lagged behind inflation. The cost recovery hovered around 35%, and the losses appeared in the books of Budapest Transport Company, though the service level still held. At the opposite end were urban bus companies in Russia, Caucasus and Central Asia, which started the decade with the lowest cost recovery levels. These companies did not move rapidly to increase fares or even ensure rigorous fare collection at prevailing fare levels. They were faced with a progressive immobilization of the fleet to a point where only a small fraction of the fleet could be placed in service, and people literally could not get to work. The Tbilisi Metro could only operate intermittently due to electricity shortages. The decay of services in turn made it difficult to raise fares. As if the problems with fare levels were not enough, there was a sharp increase in cheating (traveling without tickets). Anecdotal evidence from the medium-size Polish cities, where service levels had dipped considerably, indicated illegal travelers to account for about 50% of all travelers. In Budapest, where fares were increased and service levels were maintained, the rates of traveling without a ticket, measured after the peak of the crisis, were about 17% for street buses and trolley-buses, and 11% for metro lines.

Stimulated by the difficulties of the municipal public transport companies in maintaining service levels, and seizing the opportunity created by the liberalization of economic activities, informal private operators appeared on the market. These typically served busy routes in the peak periods, taking only cash payments and recognizing no social discounts or exemptions. Their vehicles were most often minibuses bought on second-hand markets in the Western Europe or new minibuses made in Turkey or the Far East. Aged, standard-size buses bought from local companies were also used. Their impact on and the relationship with the hitherto monopoly operators varied from city to city. In Katowice (Poland), informal operators were not licensed by the local government and were in fact frowned at because of the cream-skimming practices. In Riga and Yerevan, the municipalities were issuing licenses to minibuses in evident competition to under-used vehicles of municipally owned operators (including the already under-used Yerevan metro). In Tbilisi, private buses were contracted to run services to make up for

the metro being immobilized due to power blackouts. In Olsztyn (Poland), a private company signed a service contract with the municipality to provide higher-quality services and even accepted the municipality as part owner.

Box 2.1 The chain of events leading to a public transport crisis in post-socialist cities

on the government side
fall in the output of the national economy
crisis in local public-sector enterprises
reduction of national and local tax revenue
decentralization multiplies fiscal pressure on municipal governments
decentralization makes cities solely responsible for local services
reduced local government ability to subsidize public services
pressure to raise prices of public infrastructure and services
pressure to reduce service levels

on the household side
reduction of real wages for most people
loss of employment
slide into poverty
reduced ability/willingness to pay for public services
simultaneity of pressure on all fronts to pay more for poorer services

on the service provider side
increase in non-payment of fares by passengers
reduced subsidies
financial losses
reduction of investments
reduction of maintenance expenditures
progressive decay in the fleet, infrastructure and equipment
pressure to increase fares
downward pressure on services
increased competition by informal transport operators
loss of patronage due to mode shifts or lack of capacity
pressure to downsize
reduced job security
reduced interest by top employees to remain or new ones to be hired

In the large cities of Eastern Europe and Russia, notably Moscow, Budapest and Warsaw, the problems of urban public transport were both accompanied and deepened by an increase in the ownership and use of motor vehicles. The rise of motorization was driven by the wealth generated in the emerging private sector of these countries, and was given an additional demand push through a drop in service quality of public transport modes (Box 2.2). Road freight traffic increased markedly, both between cities and on intra-urban networks. Increased motorization meant an increase in street use by motor vehicles, whether for movement or parking. Given the relatively low developmental level of urban road networks, especially the absence of primary urban roads, the surge in traffic brought increased congestion, accidents and pollution. Even cities like Warsaw, with wide arterial roads, a good record in traffic management, and continuing attention to road maintenance, faced stop-and-go traffic on daily basis. Poorer cities, e.g. Bucharest, fared much worse, having had few funds for road maintenance and not ready for hands-on traffic management. Public transport modes, which operate in mixed traffic, including most bus and trolley-bus lines, were harder hit by traffic congestion than the rest of the traffic, pushing services even lower and operating costs even higher. Increased

motorization also meant a loss of public transport passengers, typically those who could afford to pay higher fares but only for higher-quality services.

Box 2.2 Impact of polarization of incomes on urban transport

Private sector growth leads economic recovery
Emergence of higher-earning population segments
Changes in urban land use, both on the residential, and retail/wholesale business side
New travel patterns, especially new spatial linkages
Increase in motor vehicle ownership and use
Street congestion, for both moving and parked vehicles
Increase in pollution, accidents
Pressure to enlarge roads and/or construct new ones
Street congestion increases operating costs of street-based public transport modes
Street congestion decreases service levels of street-based public transport modes
Pressure to construct underground public transport lines (metros)
Modal shift from public transport to individual vehicles

In addition to changes within the transport sector, there were also immediate changes in land uses, with downstream impacts on the travel patterns and the choice of mode. Some old economic activities went out of business and new economic activities located in "unplanned" locations. Typically, the land use changes worked against transport by the conventional public carriers, and in favor of individual motor vehicles and/or informal public carriers. The wealthier residents started moving out of inner cities to suburbs. Shopping centers mushroomed near the exits of the ring road in Warsaw and Budapest, somewhat later in Moscow. Both of these changes were predicated on the use of the motorcar and exerted strong pressure on the road networks, creating bottlenecks in outlying locations (e.g. Buda hills in Budapest). Likewise, suburban locations of new businesses generated tangential and circular desire lines, away from the traditional radial orientation of the existing public transport networks. Especially hard hit by demand shifts were transport modes based on rail infrastructure, i.e. tramways, metros, and suburban railways. A striking example of the reduction in demand was the closing down of industrial enterprises in the northern Yerevan, resulting in a 50% drop in the patronage of a metro line which had just opened a few years before.

3. A REVIEW OF BANK ACTIVITIES IN THE SECTOR

3.1 Projects

In response to the acute transport problems faced by some of the client cities in the early 1990s, the Bank's Board has approved 8 urban transport loans in the Europe and Central Asia Region (see Box 3.1 for a brief listing, and Annex 1 for individual project briefs). Seven of these are exclusively urban transport projects, and one (in Latvia) also includes an urban water component. The aggregate amount lent is $572m, of which $93m was cancelled. Not included in this list are several smaller urban transport investments attached to other transport and urban projects approved in the last decade, for example road improvements in Riga, and repairs and maintenance of the Tbilisi Metro.

Box 3.1 Free-standing Urban Transport Projects in ECA:

KAZAKHSTAN Urban Transport Project: $40m loan approved in 1994, closed in 1998 after disbursing $39m

RUSSIA Urban Transport Project: $329m loan approved in 1995, scheduled to close in 2001; subsequently reduced to $249m and, extended to end-December 2002;

HUNGARY Budapest Urban Transport Project: $38m loan approved in 1995, closed in June 2001 after disbursing $37.7m

LATVIA Environment and Municipal Development Project: $27.3m loan, of which $20.1 for urban transport, approved in 1995; closed in March 2002; fully disbursed.

TURKMENISTAN Urban Transport Project: $34.2m loan approved in 1997, closed (without completion) in June 2001 after disbursing $21m

UZBEKISTAN Urban Transport Project: $29m loan approved in 2000, scheduled to close in 2004

KYRGYZ REPUBLIC Urban Transport Project: $22m loan approved in 2000, scheduled to close in 2004

RUSSIA Moscow Urban Transport Project: $60m loan approved in 2001, scheduled to close in 2005

TOTAL LENDING APPROVED: $572m (of which $93 cancelled subsequently)

Two additional projects, one in Ukraine (for multiple cities) and the other in Bursa, Turkey, were prepared and appraised in the late 1990s, but were stopped in the final stages. In the Ukraine project, which focused on public transport services, the government accepted at the negotiations stage the policy conditionality with regard to reducing fare exemptions, increasing cost recovery from fares, setting debt limits to public-owned transport operators, transferring fare making authority to cities, and opening the sector to private operators. In the post-negotiations stage, however, strong political opposition arose to some of the agreed moves, especially regarding fare exemptions. As a result, the Board presentation conditions were not met fully at the end of the maximum allowable period after negotiations, and the work on the loan stopped.

In Bursa, the proposed urban transport project was to involve investments and capacity building for roads, traffic management and parking control, including an advanced program for the central area. There were no policy disagreements with regard to urban transport, but the borrowing capacity of the Municipality of Bursa became an issue. In parallel with a Bank-funded project, the Municipality was pursuing a large-scale investment in a light-rail based, semi-rapid transit line, with GTZ funding. Having both projects would have exceeded by far Bursa's nominal capacity to repay the loans. This problem was not one-of-a-kind but reflected structural faults in the intergovernmental financial relations in Turkey, which could not be resolved within a project focused on a single city.

The pattern of investment operations is clear: the first batch of 5 projects (1994-97) focused exclusively on urban public transport services. The second batch of 3 projects (2000-2001) retained interest in public transport services, but the focus shifted to urban roads and traffic management. All but one project (Budapest Urban Transport)

were in the countries from the former Soviet Union. Russia is the only country where there have been two projects.

On the investment side, the main development objective of all 6 public transport projects is to hold back the downward slide in the quantity and quality of public transport services. Consequently, all involve bus and/or trolley-bus vehicle replacement and some include vehicle rehabilitation, spare parts workshop and workshop equipment, and communication and information processing equipment. In five out of six projects, the beneficiary is a city-owned (public sector) operator. The sixth project (Uzbekistan) introduced a variant of having a bus-leasing agency as the intermediary, also public-owned. The loan in Budapest is the only one with a single operator (Budapest Transport Company) as the project beneficiary; the Riga project has three companies in the same city, whereas other projects involve multiple companies and cities. In the Russia Urban Transport Project, there were as many as 14 client cities, with some cities having more than one transport company. The projects in Russia and Central Asia are in cities of medium size, between 250,000 and 1 million population. Public transport operators use mostly street-based buses and trolley-buses, with trams appearing as the city size reached 1 million. Investments in new vehicles involved mostly buses, except in the Russia project where some new trolley-buses were bought. Vehicle rehabilitation included all three vehicle types. In Budapest and Riga, the public transport systems include bus lines, tramways, metros and suburban railways, so the project investments therein in addition to bus replacement also include tramway track reconstruction (in Budapest) and tramway/line equipment (Budapest and Riga).

The two road-oriented projects are quite different from each other. Cities in the Kyrgyz Republic are medium-to-small-size, and the project invests in road maintenance and rehabilitation to complement a road funding reform and market creation in road maintenance.[7] Moscow is a mega-city which has tended to over-emphasize large road investments and neglect traffic management. The project assists in shifting the focus of investments towards traffic control and other lower-cost investments, together with capacity building for traffic management.

On the policy side, the overwhelming objectives of the first batch of projects were to increase cost recovery of public transport operators. All loan agreements included dated covenants citing specific cost recovery targets. In the Russia and Kazakhstan projects, the starting position had been quite low (cost recovery of 6-12%) and the targets aimed for 50-60% by the end of the project, with an intermediate threshold of 25%. In Turkmenistan, the starting position was about 20%, and the target was 100% within a year. In Budapest, with a multi-modal operator, the initial position was 35% and the objective was 50% by the end of the project. Improved cost recovery was to be achieved by actions primarily on the demand (revenue) side, and somewhat less through cost reduction. On the revenue side, the actions envisaged were increases in general fares, reductions (even elimination) in discounts and exemptions, better fare collection (to reduce cheating by passenger or staff), fare system restructuring and attracting new passengers. On the supply side, costs were to be reduced (apart from the new investments in vehicles, equipment and information systems) by changing route networks and service parameters, internal reorganization, staff reduction, divestiture followed by contracting out of non-core activities, and even contracting out of the core activity -- transport

[7] The term "market creation" refers to introducing any contractual arrangement for service delivery by the private sector, following a competitive tender.

services. On the whole, an unspoken priority of this cohort was to improve the revenue of operators by shifting the burden of financing services from the public budget to passengers.

Apart from improved cost recovery, several projects pursued specifically the overall financial health of the client enterprises, by having the governments commit to pay the full amount of requisite subsidies and improve the subsidy calculation (Budapest, Riga, Turkmen cities). The intention was to eliminate uncompensated losses of public transport operators, which were preventing the company managers to do their jobs properly. At another level, the intention was to bring out into the open the inconsistency in financing public services, which had been masked by quiet asset stripping. The rigor with which this was specified in the loan agreements varied from one project to another, including a verbal declaration (Turkmenistan), an operating ratio target (Budapest), and a full set of financial indicators (Riga).

All projects aimed to secure greater independence of operators from their municipal owners. This was to be done in two steps. First, the legal status of operators would be changed from that of municipal departments or state/municipal public enterprises into companies operating under the commercial law. The ownership would initially still remain in the hands of the municipal governments, but with a prospect of expanding the ownership structure in the future as the private sector became stronger. In the Russia and Turkmenistan projects, the status change involved also some unbundling, separating urban transport from freight and regional/intercity passenger operations. Second, the projects aimed to establish a contractual relation between the owners and the operators, through the signature of performance (or service) agreements, modeled after public service obligation (PSO) agreements common in the European Union (EU).[8] These would spell out in detail the agreed service parameters, quality norms, internal performance indicators, fares, remuneration (subsidies), and performance incentives.

In parallel with improvements to the finances, efficiency and independence of public-owned operators, all projects except in Riga pursued the objective of increasing the use of market mechanisms in the sector. The scope and depth of this initiative, at the design stage as well as during implementation, varied greatly between projects, in fact between the sub-regions. In the Budapest project, pro-market actions included contracting out to replace the divested non-core services, and using competitive tendering to sub-contract transport services on a small test segment of the route network. This last was included as a dated loan covenant with quantitative targets. In the Russian project, the agreement took a very general form of cities taking "all the necessary measures to support the provision of transport services by private individuals or companies, to encourage wider provision."

In Kazakhstan and Turkmenistan, the approach towards a market-driven urban public transport system was by far the broadest, asking for a new policy which would de-monopolize public-owned operators and introduce competitive bidding for service contracts. In Kazakhstan, deregulation even included the freedom for operators to set fares. Also, a legal covenant required the government of Kazakhstan to abolish the passenger transport tax levied on local industrial enterprises, but permit cities to create

[8] In the Kazakhstan project, it was not agreed to make formal performance agreements, but to improve the traditional budgeting approach, adding productivity targets and explicit subsidy calculations to the existing operating and capital budgets.

alternative local sources for funding public transport. The abolition of the enterprise tax was meant to provide incentives for shifting the financial burden towards passengers as well as for seeking regulatory arrangements, which would reduce the costs of service provision (i.e. the competition).

In Uzbekistan, a second batch operation, the concept of competitive franchise caught on quickly and was already being applied during the preparation of the Bank-financed project. The latter apparently served as a catalyst for this process. By the time the project was negotiated, there was no need to set the introduction of the competitive system as one of the objectives, merely a further evolution of the budding regulatory system. The innovative aspect of the Uzbekistan project has been in its setting up of a bus leasing agency, which would use project funds to procure buses then in turn lease them to operators.

The policy objectives of the two road projects are a study in contrast. As noted above, the Moscow loan aims for implanting and nurturing a traffic management function into the city government hitherto focused entirely on road building as a response to increased motorization.[9] The Kyrgyz project aims for a stable financing of road maintenance for its cities, requiring both a reform of the national Road Fund and changes in the municipal financing system. It also aims to improve the allocation of urban road budgets, and to create a market for road maintenance and other road works, currently done by force account. The Kyrgyz project also contains important policy objectives in the domain of public transport services – an increase in the cost recovery of public-sector operators and the introduction of a competitively awarded franchises for the supply of public transport services. These public transport objectives were agreed early in the preparation of this project, when the project design included fleet investments benefiting public transport operators. The fleet investments were dropped when the government decided to de-emphasize public-sector ownership in transport services, but the policy objectives were retained since the government asked for and received Bank assistance in the reform process.

Only two of the loans, in Budapest and Riga, have local governments as the borrowers, with a sovereign guarantee by the state. The funds were passed to the beneficiary companies after signing subsidiary loan agreements. In other projects, the state government is the borrower, with a variety of passing or on-lending arrangements. In the Russian project, for example, the state passed the loan proceeds to individual cities through sub-loan agreements guaranteed by the regional (oblast) governments. In Kazakhstan, the initial arrangement was for the government to pass the loan funds to regional governments on grant basis, thence to local governments and beneficiary companies. Subsequently, the government reneged on this and insisted on signing sub-loan agreements with cities.

[9] To readers used to projects laden with regulatory reforms, the Moscow project may appear as having a light-weight development objective. The long Bank experience with traffic management projects, however, indicates otherwise. Being a mid-wife of this low-capital-cost but essential activity is quite a challenge, even if the partner is a mature and well-financed municipal road/transport department. Introducing traffic management involves new technical orientations and skills, an intense and continuous involvement with on-street happenings, changes in the role distribution and extensive cooperation between different local institutions (especially the traffic police), and strong public relations. It follows that introducing traffic management also involves a significant increase in the current (operating) costs of the municipal transport department.

3.2 Assessment of Project Achievements

As of December 2001, three projects (Kazakhstan, Turkmenistan and Hungary/Budapest) have been completed and evaluated. The Riga project closed in June 2002 and is being evaluated. The Russia Urban Transport project was extended twice, with the final closing date of December 31, 2002. The investment phase of this project was essentially over in 2001, but the developments in Russia in the last two years called for a continuing and intensive involvement with policy reforms, not just in urban public transport services but in railways and national roads as well. Formal evaluations of these two projects have not yet been fully completed, but the main outcomes are known. The second-batch projects, i.e. the bus leasing operation in Uzbekistan, and the two urban roads projects in Moscow and the Kyrgyz cities, are still at too early a stage of implementation to make a meaningful assessment.

Of the three fully completed projects, two (Kazakhstan and Budapest) have been rated successful in the Implementation Completion Reports. Both projects disbursed almost 100% of the original loan. The only major departure from the initial project design took place under the Kazakhstan project, with the cancellation of the bus/trolley-bus rehabilitation component and using the funds for additional new bus vehicles. The third project, in Turkmenistan, was rated unsuccessful and closed down early, with about $13m cancelled of the $34.2m original loan amount. All the planned purchases of buses and trolley-buses were made, and some spare parts as well, but the rehabilitation components were cancelled. Contrary to the original design, only the three transport companies from Ashgabat benefited from the loan; the participation of the other two cities was cancelled.

The project in Riga disbursed the loan in its entirety, without major changes in the investment program. The Russia Urban Transport Project implemented most of the agreed bus replacement and vehicle rehabilitation components, but dropped the national program for bus spare parts because the market for these had developed quicker than anticipated. A major contract for 234 trolley-buses had to be cancelled in 2000 after the supplier developed financial problems and eventually went bankrupt. Also, the Russian fiscal crisis in 1998-99, resulting in a drastic ruble devaluation (60% loss of value), made it difficult for cities to make sub-loan payments. Six out of 14 cities dropped out of the project for this reason in 2000, which led to a cancellation of all purchases remaining in the procurement plan for these cities. The Bank declined to re-program the loan amounts corresponding to the cancelled components in favor of the remaining cities, or entirely new cities. Accordingly, about $80m was cancelled from the loan. All remaining procurement of goods and services was completed in 2001, but the project was extended because the recovery of the Russian economy after the 1998-99 shock led to an unprecedented interest in pursuing transport sector reforms at the national level. Initially, this took place in the urban passenger transport sector, as charted in the Loan Agreement, but has gone well beyond city borders into national roads and railways. In its second stage, this project therefore became a vehicle to assist the budding reform processes through technical assistance, in the form of studies and well-visited regional and national workshops.

On the whole, Turkmenistan included, the investment-related development objectives have been reached in the completed projects, in that the quantity and quality of public transport services for passengers was improved, or at least maintained. The exact

form and the extent of impacts differ from project to project. In Budapest, the difference has been in quality rather than quantity: the project introduced 66 low-emission, low-floor city buses, and improved comfort and efficiency on some 35 km of tramway lines, both to strong public acclaim. The downward trend in patronage was slowed down and eventually reversed, which at least in part is due to the service level. In Russia and Central Asian countries, the results have been more in terms of the number of bus and trolley-bus vehicles placed in daily service, with the largest positive difference recorded in Karaganda and Shymkent (in Kazakhstan) and in Ashgabat (Turkmenistan). The most difficult part of making investments proved to be bus procurement, specifically the writing of bus specifications and specifying the evaluation criteria so as to meet the Bank's procurement guidelines for International Competitive Bidding. Having practiced a very different approach to buying new vehicles in the central planning era, the borrowers uniformly felt that the Bank procedures were too rigid. Once the buses and trolley-buses were purchased and placed in service, and showed good results, the experience took on a positive hue in most cities. Only in Kazakhstan did the borrower comments at the project's end state that the specifications and the use of international competitive bidding resulted in buses too expensive in terms of both purchase price and maintenance cost. This view may have been colored by the fact that the cost efficiency of the new buses depends crucially on the quality of the maintenance provided, which turned out not easy to achieve in Kazakhstan in spite of the arrangements for training. On the whole, in the absence of better data on life cycle costs, it is difficult to come to a firm conclusion on the relative economy of various vehicle types and makes. The tendency is to make partial cost comparisons, and to neglect the benefit side. While it has been documented that the private operators in Kazakhstan use second hand or new vehicles bought in the Far East at substantially lower purchase prices, no data have been brought forward on their full life cycle costs, not to mention their comfort or safety features.

On the policy side, the push for higher cost recovery has been moderately successful. The best results were achieved in Kazak and Russian cities with bus and trolley-bus based systems. In Kazakhstan, the cost recovery range in the final year of the project was 75-123%.In Russian cities, the passenger participation in the revenue of bus and trolley-bus companies increased from around 10% or less in the early 1990s to an average of 78% in 2001, exceeding both formal and informal targets by large margins.[10] Had the problem of exemptions been resolved, either through elimination or fair compensation, most Russian companies would have achieved a break-even position. In Budapest, for a multi-modal system with massive infrastructure, hence large depreciation amounts, cost recovery moved significantly from 34% in 1994 to 48% in 2000, though falling short of the 50% target. [11] The target would have been reached had the Ministry of Finance not prevented prudent fare increases proposed by both Budapest Transport Company and the Municipality of Budapest, which implied the soundness of proposals on financial and political economy grounds. The Ministry's reasons were not based on the concern for the affordability of fares to low-income travelers, but on the fear of stoking inflationary fires. Inflation was a problem more visible and far-reaching than the decay of Budapest Transport Company to which inadequate fare increases have contributed, and which the state did nothing to prevent. In Riga, neither specific fare

[10] The range in 2001 was 49-105%.

[11] The results are not comparable. In bus-based cities, cost recovery referred only to direct operating costs, i.e. depreciation was not included among costs. In Budapest, however, the definition of cost recovery includes all operating costs except the interest on long-term loans. The result of 48% cost recovery in 2000 in Budapest misrepresents the year to year variations. The central tendency is closer to 44-45%.

increases nor cost recovery targets were agreed under the loan, opting instead for overall measures of the companies' financial health (see below). Still, fare increases remained an essential part of the action program. The City of Riga initially did not move on this front, which made the later increases very large for passengers (150% in one step) and yet insufficient to catch up. In Turkmen cities, the cost recovery initiative failed (as did all other non-investment aspects of this project), the government reverting to its traditional policy of keeping the passengers' contribution symbolic. This was made possible by the improved terms of trade for Turkmenistan, but is hardly sustainable over the longer term.

Cost savings proved as difficult to achieve in those cities (Budapest and Riga) where this was a priority action under the project, both in terms of service rationalization and company-internal reforms. The most successful was Budapest, where the transport company carried out a major restructuring and streamlining program, with assistance from international consultants. Its achievements included the divestiture of several service departments, followed by contracting out, selling of some profitable side activities (tourist boat services, chair lifts, river shipping). Maintenance departments for bus and tramway vehicles and track were set up as subsidiaries, on the way to privatization. Bus depots were combined and some were closed, and route network adjustments were made. The permanent staff was reduced by 38%, from 21,000 in 1995 to 13,000 in 2001.

The objective of having public transport enterprises break even was not reached in any project city where it was a loan condition.[12] In Budapest, the operating ratio stayed at 115-120 level, instead of falling to 100.[13] The City of Budapest has been sufficiently well off to close the financial gap, as has been the state government (which tot this day retains a veto over fare increases). The failure to do so has been the result of policy disagreements between the two levels of government, and a desire by the city government to maintain control over investment programs of the transport company. In Riga, the original financial covenants were not limited to the operating income, but emulated comprehensive financial criteria for commercially operated business firms. The covenants included a positive net income, a debt service ratio of 1.3 (ceiling), and 10% return on assets. In practice, these targets proved not relevant to companies with still shaky depreciation practices and complicated financial relations with the City of Riga. The Bank accepted to have the target parameters replaced by an operating margin of 30%, which all three companies were expected to reach in 2001. In the CIS countries, the difficulty of breaking even has been due to a persistent gap between what it cost to produce the most basic services and what a combination of passengers and government agencies were willing or capable of paying. It turned out especially difficult to collect compensation payments from the branch of the government responsible for granting the fare discounts or exemptions, even with an adequate legislation passed (e.g. regional governments in Kazakhstan). In Russia, the federal government has until now resisted all attempts either to give up its power to impose exemptions or to pay fair compensation. In

[12] Breaking even refers to having the sum of business revenues, compensation and subsidy payments at least equal to total operating costs.

[13] The indicator chosen to monitor the achievement of this objective -- the operating ratio -- was not sufficient on its own to show the overall financial health of the company in question. The City of Budapest opted to help the Budapest Transport Company through capital grants in preference to increasing operational subsidies. This showed up as an improvement in the balance sheet, but did nothing for the operating ratio.

spite of this, the 2001 data for companies in the 14 client cities show 3 cities with operating ratios under 100.

The objective of increasing the role of the private sector has seen some unusual developments. In the Budapest project, the objective was achieved but the target was modest. The Budapest Transport Company subcontracted the provision of service on some of its routes to private operators, while retaining the revenue risk. The initial tender was successful and subsequent performance by the private operator has been good. The program is now continued beyond the requirements of the Loan Agreement, since this experience has demonstrated effectively to the mother company the advantages from partnership with the private sector in the situation of harsh constraints on its own investment budget.

The majority of the 14 Russian cities have permitted and/or encouraged private operators, with varying levels of regulation, thus meeting the spirit of the Loan Agreement and demonstrating that the project which funded public-sector operators was not a barrier to private sector involvement. The same is true of many other cities in Russia. The opening to the private sector appears to have been driven mainly by the realization of city governments that no other source of capital was in sight, and also by the desire to bypass the Federal laws and regulations concerning fare discounts and exemptions. This has sometimes had the perverse result of driving the surviving public sector companies deeper into financial difficulties, e.g. in Rostov-on-Don, a pioneer of deregulation, since they were left only with "social" passengers. The proliferation of regulatory arrangements and the unresolved problem of fare levels and discounts await the evolution of a comprehensive and consistent national legislation in this matter. The prospects for this happening in the near future are high, given the rapid pace of the policy developments cited above.

The project in Kazakhstan turned into a success well beyond the letter of the Loan Agreement. In 1996, the country passed legislation breaking up public-owned monopoly operators, turning them into multiple joint-stock companies in a mixture of municipal, staff and private ownership. Competitive tendering for route-based service franchises, open to all qualified operators, was implemented starting in 1997. The first tenders drew a weak response and the incumbents won, but over the next 2 years, the for-market competition process gathered up speed, with an average of 3 bidders in Almaty (10 on some routes) and private operators gaining edge. There exist, however, legal but informal private operators, who engage in an un-regulated in-market competition with the formal sector companies, both public and private owned. It remains to be seen in the future tendering cycles and regulatory developments what future lies ahead for these three groups of operators.

3.3 Sector Studies

A list of Bank's sector studies that have address urban transport is shown in Box 3.2. Of the three free-standing studies, the first was done for Warsaw (Warsaw Urban Transport Review, 1992). It focused on the question of what to do with a metro line then in the eighth year of construction, the tunneling works just being completed on a section of 12 km from the southern suburbs to nearly the city center. The study found that the metro siphoned funds from the existing public transport system of Warsaw. A strong case was made for exploring in detail alternatives other than completing and extending the

line, notably an option to use light-rail instead of metro vehicles, permitting that it be connected seamlessly to the existing surface system. The study also put forward a strategy for urban transport in Warsaw. In the second study (Poland – Urban Transport Review, 1995), the strategy developed for Warsaw was expanded and generalized for other Polish cities, following a major data collection effort. The principal policy recommendations were to introduce competition in the supply of public transport services, and to move towards economic pricing in both public transport and urban roads. The latter would link the two processes to avoid placing an unfair pressure on public transport modes while permitting motorists to pay less than the full social costs of their mode. The study also analyzed the impact of sharply increased fares on lower-income strata and found them potentially onerous. It was proposed to use a targeted assistance for low-income passengers, leaving the general fare policy to be set with reference to road use prices and standard commercial objectives.

Box 3.2 Urban Transport Sector Studies in ECA

Free-standing studies

POLAND – Warsaw Urban Transport Review, Report No. 10624-POL, June 1992.

POLAND – Urban Transport Review, Report No. 12962-POL, September 1995.

KYRGYZ REPUBLIC – Urban Transport Sector Review, Report No. 18310-KG, June 1998.

Transport sector studies which addressed urban transport as a secondary subject

RUSSIA - Transport Strategies for the Russian Federation, IBRD SET report No. 9, September 1993

GEORGIA – Transport Sector Memorandum (2 volumes), Report No. 13978-GA, Jan 16, 1996

BELARUS – Transport Sector Review (3 volumes), Report No. 13808-BE, December 19, 1995

ARMENIA – Transport Sector Review (3 volumes), Report No. 16625-AM, May 30, 1997

UKRAINE – Transport Sector Review (3 volumes), Report No. 18636-UA, November 30, 1998

POLAND – Strategic Priorities for the Transport Sector, Report No. 19450-POL, June 1999

It is even more difficult to evaluate the impact these two studies had on the actual policies and investments than was the case with project impacts. Neither of the two studies was followed by a lending operation, which would have permitted the leveraging of their recommendations. The Government of Poland had decided to disengage from those activities, which the new decentralization laws placed under the sole jurisdiction of local governments. The disengagement included a refusal to provide sovereign guarantees for long-term loans to cities for infrastructure investments, and the Bank's charter did not permit sub-sovereign lending without such guarantees, even to cities with apparently good credit position (e.g. Krakow, Wroclaw, and Poznan).

In contrast, these sector studies had an active role as free-standing vehicles for the wide diffusion of ideas and discussions in Poland. The Warsaw study was followed by intense discussions with the officials of the City of Warsaw and members of the professional and academic community. The City of Warsaw took time for a serious consideration of what the Bank team recommended regarding the metro project, but

opted to stick with the metro technology in the north-south corridor. It did commission a further detailed study of options, but options were limited to routes and construction schedules. With some financial assistance by the Government, Warsaw completed the first line of the metro from the city's southern fringe to the center.[14] In subsequent years, the construction has continued northwards. Interestingly, other cities (Poznan, Krakow, Lodge) turned out to be more receptive to the recommendations made in the second study to re-visit the large-scale projects or plans inherited from the central planning era, and possibly to replace them with more cost-effective options. The results of the second study were presented and discussed in an open forum in Krakow in January 1995, gathering public transport operators, road administrators, urban planners, city/state officials and academics.[15] Because the Bank's team included reputable local consultants, and its findings interested professional associations of urban and urban transport planners and public transport operators, the dissemination and discussion of the study continued over the next two years entirely in local organization and with only occasional participation by Bank staff. The study's arguments became well known in Poland and even in near-by countries. This said, the study's tangible impacts were not large. Generally, Polish cities have not moved far towards a for-market competitive framework as recommended. Most large cities settled for turning the public enterprises into corporate entities and introducing some form of contracting relations with city authorities. Sub-contracting with private operators is practiced in large cities, but is low-scale and does not threaten the dominance of the large operators. There have also been some attempts to "twin" with West European operators. Some smaller cities, with bus-based systems only, have actually made bolder strides in involving private operators under contract to municipalities. No move has been made regarding key ideas from the Bank's study, namely the targeting of public transport subsidies for the poor, and linked, progressive increase in cost recovery of both public transport services and urban road infrastructure. The cities did intensify urban traffic/demand management, including parking charges and use restraints. Overall, however, in Poland as in Hungary and most of Western Europe, the double-subsidy approach to the main motorized modes continues.

The newest urban transport sector study (Kyrgyz Republic - Urban Transport Sector Review, 1998) has been the most successful one as regards application. It focused on public transport regulation and financing, as well as road maintenance organization and funding. The field work for the study was done by international consultants, but with steady presence and advice by top Bank staff during and after the study. Following the completion, the Government decided to pursue the recommended reform in the urban public transport sector, very much in line with what was done in Kazakhstan and Uzbekistan. When the lending operation took shape, as noted above, the project investments were limited to road rehabilitation in major cities. Still, the Government wished to include the public transport reform among project objectives in addition to those related to road sector organization and funding. This permitted for a valuable dialogue to continue between the government policy makers and the Bank's specialist staff, which is likely to have been of major import for getting the decision through and for designing the new regulatory arrangements. It is too early to assess the actual changes on the ground, but the process of studying the subject, having a steady follow-up by the

[14] The system is in operation and considered a functional success. Unfortunately, neither passenger volume data nor the line's operating costs and revenues are available to evaluate its financial results and test the statements made in the Bank's study.

[15] This was to be the only such event in the urban transport sector in ECA countries until the regional consultation regarding Cities on the Move study in February 2001 in Budapest.

Bank at the highest professional level, and seeing results achieved by neighbors appear to have had catalytic effects for the reforms.

3.4 Summing Up the Experience

The Bank lent about $500 million for 8 urban transport projects and carried out 3 in-house sector studies. The loans helped purchase about 2,000 buses and 100 trolley-buses, rehabilitate another 1,400 vehicles and 35 km of tramway track, and upgrade workshops and equipment. The program's investments reached about 20-25 cities, 14 of which in Russia, but its technical assistance reached many more. Altogether, this has been a small lending program and an even smaller studies program.

Out of the first batch of projects, those in the Russian and Central Asian cities were quite successful in the two strategic aims - resolving a crisis in the supply of public transport services in the client cities and (except in Turkmenistan) increasing the cost recovery of public-sector operators. The combination of projects and sector studies has been instrumental in "inciting" a pro-market public transport regulatory reform in Central Asia. A late bloom in the Russian project supported a new national drive to reform the urban public transport sector, piloted by Ministries of Transport and Finance with wide participation by cities, and has expanded to the major domains of public expenditures for national roads and railways. These are major achievements in the sub-region, which throughout 1990s has generally lagged behind in success stories.

Under quite different circumstances, in Budapest and Riga, Bank lending was also instrumental in another strategic aim: helping public transport operators retain their competitive edge relative to motor vehicles, and achieve increases in cost recovery. These were lower than in the CIS projects, but still significant, especially since they involved rail-based systems in addition to bus-on-street ones. The additional and quite ambitious strategic aim under these projects, involving a full operational and financial independence of the client companies, a step towards a market-based regulatory regime, was not achieved. This remains a major strategic objective for the future. Both projects were instrumental in assisting the beneficiary companies in carrying out internal reforms. The Budapest company was especially successful in carrying out a major restructuring and downsizing program, and opening towards the local and international markets to buy diverse services and products, and to sub-contract its core transport operations. Uniquely, public transport improvements in Budapest acted as a catalyst to carry out a highly effective parking and traffic management program for the central city. The parking aspect was conceived under a parallel, EBRD-financed lending operation, but the traffic management aspect was conceived, financed and implemented by the Municipality of Budapest alone.

The experience with the first batch of projects gives rise to an issue with mixed strategic and tactical elements. Several projects of these projects contained large policy agendas and – matching this – numerous loan covenants. The project for Turkmen cities had 23 covenants, and the Budapest project had 12 covenants. These ranged from specific policy actions and reaching cost recovery and other financial targets, all related to the agreed development objectives, to various staffing, reporting and auditing actions. Some loans also included covenants of the do-not type, setting the Bank as the arbiter of what investments the client cities would make in the urban transport sector. This was not unusual in an earlier era, but flies in the face of the current development thinking. Studies

of the effectiveness of Bank loans as means of leveraging policy reforms, carried out by the Operations Evaluation Department (OED) concluded repeatedly that "policy change has turned out to be a complex social and political phenomenon, so that one must think more deeply than simply making assistance conditional on detailed policy measures. Success of some World Bank supported reform programs has depended more on underlying political economy factors, than on the efforts of the Bank." OED recommends to move "away from very detailed conditionality on a large range of policies (broadly, the current practice), and instead condition the level of aid on a few key policies for which there is a clear evidence of effectiveness."

The record of the projects reviewed above is in broad agreement with OED findings and recommendations, suggesting a negative relation between the number of policy conditions and success. Among the most successful project-leveraged changes was the increase in the cost recovery of bus companies and a massive policy development effort under the Russian project, though the Loan Agreement had a very short "contractual" reform agenda. This project also used an up-front, self-selection mechanism for the participation of candidate cities in the project (threshold cost recovery targets as a negotiation condition), which should be emulated. A different example is that of the Kazakhstan Project, which was a catalyst for sweeping regulatory changes, which the government introduced with a major Bank presence but without the coercion of detailed, time-bound loan conditions. Per contra, the covenant-laden Turkmenistan project turned into a pure "gap financing" without any significant policy and institutional impacts.

The second batch of projects, while still at an early stage of implementation, shows a shift in strategy (see Box 3.3). In public transport services, there has been a turning away from funding bus replacement and pressing for cost recovery of public-sector companies, and (necessarily so) a turning away from trying to make these companies more efficient. The focus has moved towards facilitating the creation of a regulated, competitive market for this mode, pinning hopes on the private sector. In addition, the scope of projects has been widened to start dealing with urban roads, and impacts of motorization. Unfortunately, the size of the portfolio (3 projects) indicates that urban transport has lost the priority rating it enjoyed (within the Bank) in the early-to-mid 1990s. The situation with non-lending operations is even more indicative of the loss of priority, the Kyrgyz study being the only site-specific, in-house study by the Bank in this sector in ECA in the second half of the decade. This trend is in striking contrast to the corporate policy to pursue knowledge as a global good, not to mention the pragmatic importance of local knowledge for lending and advisory assistance.

Box 3.3 Strategy under past/current projects

First period (1990-97):
Stimulus: public transport service crisis in ECA cities
Responses: increase cost recovery and efficiency, and invest in vehicles for public sector companies;
increase private sector participation;
invest in learning (diagnosis of local problems, strategy development) and dissemination

Second period (2000-2001):
Stimulus: inefficient and poorly financed public provision of transport services; neglected roads/traffic
Responses: market creation in the public transport services, without lending to the public sector;
investments in road maintenance, traffic improvements, plus institution building;
less attention to learning and dissemination

4. FACTORS AFFECTING THE FUTURE URBAN TRANSPORT ACTIVITIES BY THE WORLD BANK IN THE EUROPE AND CENTRAL ASIA REGION

Many developments have taken place since the Bank started its program of assistance for urban transport in ECA cities. Both the Bank and its client countries in ECA have gone through an unprecedented decade of change, as have the diverse government and non-government institutions in the European Union.

4.1 Changes in the Bank's Development Philosophy

Starting from the overall orientation of the institution, it is difficult to find any level or facet of Bank operations which has not changed over the last decade, or where important changes are not being discussed. In the mid-1990s, it was realized that the benefits of globalization and technological advances were not reaching many of its client countries, which not only remained poor and low-growth, but actually were losing ground. The effectiveness of development assistance as it had been pursued was questioned. In response, since 1997 the Bank has put forward a revised approach to development, called Comprehensive Development Framework (CDF), strongly focused on poverty alleviation.

The new framework is based on four major principles: (1) institutional, structural, and social underpinnings of a robust market economy are as important as macro-economic fundamentals, implying a need for all-encompassing and longer-term analysis as a basis for assistance strategies and programs; (2) the ownership and management of reform programs by client countries, including their governments, the private sector and the civil society, is a *conditio sine qua non* of success; (3) strong partnerships between the client countries, international financial institutions, donors and other development actors are needed to make coherent programs and profit from comparative advantages of each partner; and (4) the results on the ground are the ultimate measure of success (The World Bank, 1999b). The Poverty Reduction Strategies, produced by countries themselves, and matching country assistance strategies adopted by the Bank, became the embodiment of the CDF principles.

Since its introduction, the CDF has evolved further in that the Bank has formulated a list of priority subjects for its activities, bifurcated into global public goods (environmental commons; knowledge economy; trade and integration; international financial architecture; and communicable diseases) and the corporate advocacy areas (investment climate; public sector governance; empowerment, security and social inclusion; education; and health).

4.2 Changes in ECA Countries

Ten years since the move away from the central planning system began, the stage reached and the results for the population vary widely between countries. The most successful ones, e.g. Slovenia, Poland, Hungary, and the Czech Republic, have reached and/or exceeded the level of economic output they had in 1990, and have attracted the bulk of direct foreign investment in the region. They have by and large become functioning market economies, and are approaching membership in the European Union. The standard of living has accordingly risen. This is not to say that all negative side impacts of transition in these countries have been dealt with, or that the process of

developing strong institutions in both market and political spheres is finished. For example, the level of poverty in Poland is still higher at present than in 1990, and unemployment at 15% is high.

At the other end of the scale are the low-income countries of the South Caucasus and the Central Asia, plus Moldova in Eastern Europe. These countries never recovered from the break-up of the Soviet Union, which meant the cessation of favorable trade arrangements and subsidies. They remain deep in recession, debt and poverty, due to a combination of incomplete economic and political reforms, weak institutions, ethnic strife, difficult location and other barriers to trade, and a lack of exportable natural resources.

Several countries have unique features as regards economic and/or political development. Russia, due to its size and resource endowment, is in a class of its own. Its recession was among the deepest and longest-lasting in the region, and the reforms most controversial, due to their impact on the patterns of wealth and poverty. This is best illustrated by the privatization of its energy sector, which involved a passage of control from the hands of an inefficient state bureaucracy in the central planning period to an oligarchy. Efficiency of the energy sector was increased in the process, but the resulting concentration of wealth and power now acts as a barrier to both market and political evolution in the country. Overall, Russia's economy has moved fitfully, with a particularly deep recession in 1998. Many firms went bankrupt and many households lost their savings. These shocks foster disappointment and "reform fatigue" making it difficult for the population to accept further changes. Russia's GDP in 2000 was 66% of its value in 1990, and 20% of its population was under the poverty line, but it has been growing steadily ever since, and the pace of restructuring in different sectors is picking up tempo. In contrast, Turkmenistan, another resource-rich country, made minimal steps towards a market-based economy, conserving as many of the old ways as could be financed by commodity exports. The population was not subjected to shocks and losses, but neither has its welfare changed much for the better. This is particularly felt in the countryside, which is mired in poverty. Belarus also has opted for minimal changes, but without the exportable resource base it depends heavily on energy subsidies from Russia and cannot move forward. Ukraine has moved slowly with reforms, which are now starting to have a cumulative positive effect. Turkey is the only country in the region whose economy and political system had not been based on central planning and single-party domination. It is a middle-income country with a long history of a functioning market economy. Still, it has seen sharp falls in its economic output, and has persistent problems with unemployment, poverty and corruption.

4.3 ECA Strategy

Combining the new institution-wide approaches and priorities with the specifics of its countries, the Bank's strategy for ECA has a motto "growth with equity" to signify a strong concern for balancing efficiency-oriented reforms with the interests of those hitherto on the losing side of the transition experience. The importance of the political economy of reform, as opposed to technically sound policies, is now better recognized. The key growth-oriented actions address private and financial sector development, labor markets, agriculture and infrastructure sectors, and the knowledge domain. The equity-oriented actions address basic services, social safety nets, participation and inclusion, disaster prevention and mitigation, and urban/rural development. Cutting across both

growth and equity actions is the development of a sound public sector at all levels of government, including legal/judicial systems, taxation, regulation, budget management, administration, inter-government relations, transparency and citizen participation. Environmental commons are also attracting more attention, as the respite from lower industrial production and low motorization is coming to end in many countries. Yet another dimension of ECA strategy is regional cooperation, touching as diverse subjects as the stability in Southeast Europe, EU-accession, regional seas management, and trade facilitation. The wide scope of these concerns, taken together with staff and budget constraints, points at the need for utmost selectivity as regards investment projects and analytic activities, and a need to consider the role of the Bank relative to that of other actors and partners. Among the consequences of higher selectivity is that lending activities will focus heavily on the low-income CIS countries, hoping to reverse poverty and achieve steady growth. In the infrastructure sectors, reforming the utilities will be an area of priority in ECA, given the size of the remaining inefficiencies, price distortions and benefit leakages.

4.4 Developments in ECA Cities

Cities as physical structures change slowly. ECA cities still show distinct marks of the last 50 years – relatively low density in central cities, high-rise housing estates towards the periphery, and large tracts of industrial land uses inside urban areas (including large "brown" fields left behind by failed industries). The privatization of land and housing has moved fast in some countries, and not at all in others, hampered both by unresolved ownership and deficiencies in record keeping and transaction processing. This is a major barrier to private sector investment in new housing and business ventures. Population growth is still low, and in some cities (e.g. Moscow) central areas are losing population in favor of the suburbs, now more accessible by automobiles. What is new, apart from an intensification of commercial activities in central cores, in more successful cities, are industrial and commercial developments around the new ring roads and along outward sections of major radial roads.

In economic terms, ECA cities have depended on the interplay between the macro processes of recession and recovery on the one hand and the decentralization on the other. The most successful cities, e.g. Budapest, Prague, Warsaw, and Krakow, are in the countries that recovered, kept growing, and decentralized political and fiscal power. Without minimizing the remaining aspects of central planning, be it in their administrative systems, investment criteria for projects, or the mind-sets of civil servants, these cities have turned the corner and are moving on. They have managed to convert inherited land and residential real estate into cash, set up competent administrative and financial systems, and tapped some local revenue sources (including increased user charges for local infrastructure and services). They have also made major steps in divesting and/or transforming diverse enterprises that they inherited through the decentralization. By and large in these cities, municipal utilities have become corporate entities, with varying degrees of freedom in price setting. The interaction of these utilities with the private sector has been pursued in a differentiated manner, depending on the structural characteristics on the supply side and the strength of the public interest in the outcome on the demand side.

This said, the problems of financing municipal infrastructure and services persist. Central governments may have given up formally the patronage over municipal services,

but they retain influence over decisions such as fares, fare discounts and exemptions in public transport services, without acknowledging fully a responsibility for paying compensation to operators for the lost revenue. The situation as regards capital investments is even more problematic. Most cities cannot provide sufficient capital funds from their own budget, domestic capital markets are still weak, and cities do not have the credit-worthiness to borrow from international markets. Only the most successful cities have gained access to long-term credit secured without sovereign guarantees by the state from either the commercial banks or the European Investment Bank (EIB)and the European Bank for Reconstruction and Development (EBRD). Some have made successful private-public partnerships to operate and expand municipal utilities, but none among large cities has done so in urban transport. For the majority of cities in the region, municipal finance in general, and capital investment in particular, will remain a soft spot until intergovernmental financial issues have been sorted out fully and cities build credit standing independent from national governments.

The situation is quite different in cities from the countries whose economies have not recovered. Whatever degree of decentralization has taken place, it is in the frame of a tug-of-war between poor local governments and poor local populations. Resources are low, institutions are weak, and the services are poor. Some reforms of municipal services have been carried out, but since average wages have not grown much these cities have had difficulties raising cost recovery and have not been able to tap sufficient tax sources to make up the difference. They face a backlog in infrastructure maintenance and investment. Cities in Russia show characteristics of both successful and poor cities, depending on the strength of local industries, the activism of local governments, and the vagaries of their relations with the central government (De Melo and Ofer, 1999).

4.5 Developments in Urban Public Transport

How far the changes in the urban transport sector have reached in the last years is related in any given country to combined impacts of the initial economic conditions, the reforms undertaken, the depth and duration of recession, the pattern of recovery in the economic output and wages, and the progress with regard to the decentralization. By and large, the crisis in the provision of urban public transport services, actual or impending in the early 1990s, has been overcome or prevented. The most serious underlying structural problem –imbalance between fare/subsidy policies on the one hand and the capacity to pay subsidies-- remains and awaits resolution in all major cities, even in the most successful reformers. No new financial mechanism has been found to replace the pre-1990 arrangement – a combination of subsidies from the state, municipalities or local enterprises. Nor have there been instances of major restructuring of fares, subsidies and service parameters in recognition of the weak financial base. To make problems on the revenue side even worse, there has been a loss of passengers due to increased prices, reduced services and motorization-induced modal shifts. Poland, the leading reformer for most of the last decade, offers a striking example of this: the aggregate loss of passengers between 1986 and 1998 has been 44%, from 9.1 billion to 5.1 billion (Suchorzewski, 1999).

How have the cities adapted to the loss of subsidies and fare revenues? Box 4.1 provides a taxonomy of the coping strategies, based on the relative roles of the public and private sector as they have emerged at the end of the last decade.

Box 4.1 City responses to problems of financing public transport services

Private sector dominant but weakly regulated; public sector surviving in weak form: Tirana

Private sector dominant, sometimes with a "for-market" competitive framework in place; public sector still present and sometimes participates in competition: cities in Central Asia and many secondary cities in Russia

Public and private sector both present, regulatory framework absent or in flux: Belgrade, Riga, Yerevan

Public sector dominant and weak; minor role of the private sector: Ashgabat, Bishkek, Moscow, Minsk

Public sector dominant and strong, minor role of the private sector: Budapest, Prague

Public sector dominant and strong, minor role of the private sector, regulatory framework for in-market competition set up: Warsaw

At one end of the list is the scenario in which the private sector emerged as the savior of the sector and has become the dominant provider of urban passenger services. This has been the case with many smaller and medium-size cities (under 1 million population) in Southeastern Europe, Russia, Central Asia and the Caucasus, i.e. in countries, which have remained in recession for the longest time. The governments therein have not had enough resources to maintain the conventional (scheduled) public transport services provided by the heavily subsidized public-owned operators. The private sector acted to supply services, typically using mini- and mid-size buses, and sometimes the local industry starting to manufacture these minibuses (e.g. Gazelles in Russia).

Two distinct regulatory modes have emerged in this scenario. In some cities, private operators function alongside the surviving public-sector operator(s), with little or no licensing, and with little or no regulation and monitoring of performance other than regarding fares. Family ownership and operation of 1-2 vehicles is common. Services in this arrangement are plentiful, but unscheduled. Their regularity and punctuality, as well as vehicle standards and safety, leave much to be desired. Among the keys to the financial well-being of these informal operators, as indicated by their proliferation, has been that they accept only passengers paying full fares (in cash), they do a good job of collecting (and keeping) fare revenue, and they tend not to serve city quarters and time periods in which they are likely to lose money. The compliance with tax, labor, safety and environmental regulations by informal operators has not been researched in ECA, but judging from experience in other parts of the world, it is probably on the light side. Tirana provides a good illustration of this situation, with private operators carrying just over 50% of the public transport market in about 300 9-seat, licensed minibuses, and an unknown number of illegal mini and micro-buses, both charging 20 Leke ($0.13) per trip. The rest is carried by the municipal operator in about 50 standard-size buses, at 15 Leke ($0.10) per trip. These have been described in a recent study as slow, infrequent and crowded. The surviving public operator is not always in such a weak state. For example, many Turkish cities have for long had a similar mixture of many small-size, private – owned, weakly regulated operators and city-owned and subsidized public transport operators. Unlike their ex-socialist counterparts, however, these Turkish cities have had the capacity to pay subsidies in full.

The second mode of the private sector entry, rare in the World Bank client countries, has been through a formal "door" involving competitive tendering for routes or group of routes. As cited in the retrospective chapter of this report, Kazakhstan has offered the first successful example of having harnessed much of the private sector and the restructured but still majority-public-owned sector into a for-market competitive framework. The success is credited in part to having broken large state-owned operators into many smaller joint-stock companies, thus creating a kernel of the market. Cities in Uzbekistan and the Kyrgyz Republic (excluding Bishkek) have also introduced for-market competition, and so have many secondary cities in Russia. Private operators in these cities account for half or more of the urban passenger market (Gwilliam, 2000). It goes without saying that the reform design and practice still fall short of being system-wide and fully satisfactory. For example, in many of these cities, a large cohort of non-franchised but legal operators happily continues on the same route network, without having to satisfy the service parameters present in the franchise agreements.

At the other end of the range of coping strategies, public sector companies in some cities have retained their dominance of the urban passenger market, stopped the erosion in the number of passengers, restructured their service networks, maintained or improved their quality of service, increased cost efficiency, and improved their financial position by raising fares and receiving regular subsidy payments from the authorities. Modal share of public transport hovers still at high levels, 60-70% of motorized trips. This is primarily the case in Budapest, Prague, Warsaw, the most successful cities of Central and Eastern Europe, the capitals of the most successful reform countries. The common thread in nearly all these cases was described in the retrospective chapter of this report: a change in the legal status of operators, which became joint-stock companies with majority public ownership, and signed explicit service agreements with city authorities, both of which increased the scope of managerial authority as regards operations. Without minimizing the efforts these companies made to improve their operations, or the effect of increasing their independence from city governments, what helped them most has been the growth in the national and local economies. This has had salutary impacts both in the resources available to city governments (read: operational and capital subsidies to local utilities) and people's wages (read: acceptance of fare increases). Paradoxically, then, the problems in the urban public transport sector in Poland, the Czech Republic or Hungary were never serious enough to induce difficult and far-reaching changes, as appears to have happened in some less successful countries.

The cited success of these companies is by no means sustainable, especially in view of the pace of motorization (addressed in the next section). Large efficiency reserves remain in spite of some drastic downsizing. The levels of cost recovery from fare revenue (50-60%), while much higher than those at the start of the last decade, are comparable to those in West European cities, i.e. still far from the break-even levels and onerous for their cities. None of the major operators has succeeded in reaching full financial health and/or full managerial independence. The gap between the collected fare revenue plus subsidies on the one hand, and operating costs on the other hand persists in most cities, likely to require further painful interventions on both sides of the cost-revenue equation: overhaul of the fare/subsidy system, improved fare collection, and efficiency gains through internal changes and increased competition.

In these cities, the role of the private sector has been modest, mainly limited to small-scale sub-contracting of transport services to private operators. Some smaller cities

allowed full-fledged private operators in, typically for seat-only services. In an atypical case, the city of Vologda (Russia) retained ownership of its tramway and trolley-bus system, but leased the vehicles to a joint-stock operating company formed by the former staff of the municipal transport department. Elsewhere, there have been cases of twinning between local public-sector operators and private foreign operators (e.g. Krakow), but there has not been a single case of a management contract with an external entity. Also, cities have sought private sector participation to restart some large-scale urban public transport projects, which had stalled during the worst years of the changeover in various stages of the project cycle, e.g. the first metro line in Warsaw, rapid tramways in Poznan and Krakow, and the fourth metro line in Budapest. These were revived and (sometimes) redesigned, and external funding was sought for them. The results have been less than impressive. The Warsaw Metro and the Poznan tram projects were completed in the traditional pattern of budget-based investment, only the major financial load shifted from the state to the city treasury. Major EIB participation was secured for the new metro line in Budapest, but the start of the project has been delayed for years because the city and the state could not agree on their relative shares in the rest of the US$1 billion funding package. On the whole, private/public partnerships in financing large urban public transport projects have yet to take off.

The low-scale of private participation in urban public transport services and generally the near-absence of competition Budapest, Prague and Warsaw may pose a problem in their countries' drive towards EU accession. It has been a long-standing EU policy (introduced in Article 71 of the Treaty of Rome, later modified by the Treaty of Amsterdam) to permit non-resident operators to perform national (i.e. intercity) transport operations in all member states. Urban transport, however, was for a long time considered a purely domestic and local activity. This has changed as a result of a growing interest of large operators to offer services in cities of other states, be this through competitive tenders or simple permits, or taking over local companies with acquired operating rights. The new rules address licensing (based on qualitative criteria for market access) and public service obligations, including compensation mechanisms. All EU accession countries must harmonize their legislation and practice with the Community legislation, making it certain that local operators will soon face out-of-state competition for the provision of urban public transport services in their home town.

If the above-described outcomes seem to follow a divide between countries, another division line is between cities, which are served predominantly by street-based buses and those, which have transport modes operating on partially- or fully-reserved infrastructure. The reforms, especially as regards the private sector participation, have gone much deeper in the former cities. By and large, for good and for the bad, cities like Moscow, Minsk and Zagreb, but also Budapest, Warsaw and Prague, have tended to protect the latter modes.[16] Because of a cognitive confusion between the vehicle technology and reserved track, some cities have protected even low-volume tramway lines operating in mixed traffic, instead of converting them to the bus technology, which is both more effective and less expensive under these circumstances. Reflecting the same bias, heavy-volume bus lines are rarely if ever given a protected right-of-way, this privilege being reserved only for rail-based lines. This practice appears likely to continue and presents both a challenge and opportunity for Bank involvement. Needless to say,

[16] Yerevan is an exception in this regard: minibuses are licensed by the municipality to operate along the same itinerary as the metro, the latter claiming but a fraction of passengers it carried in the opening year.

what was listed above as the unfinished reform agenda for the successful cities holds even more for less successful cities and operators.

4.6 Developments in Road Traffic

In much of the ECA region, vehicle ownership increased at unprecedented rates, in spite of the recession (Annex 2). The average growth in automobile ownership in EU-accession countries in the 1990-99 period was 8% p.a. while the aggregate annual average change in the GDP was 0%. The ownership rates vary between a low of 139 autos per 1,000 population in Romania and 424 in Slovenia, with most countries in the 200-350 range. In Russia, the auto growth was 10% p.a., reaching 139 vehicles per 1,000 population in 1999, while the GDP decreased on the average by 6% p.a. This pattern is highly unusual and reflects a combination of pent-up demand, the size of the grey economy and the scale of income inequality in these countries. In the same period, auto ownership increased by 12% p.a. in Turkey and Albania, while the respective change in GDP was 4% and 3% p.a., but the end-period ownership levels are still low, 63 vehicles per 1,000 population in Russia and 34 in Albania. The growth of motorization was significantly lower in the Central Asian countries, and negative in Georgia and Armenia.

Data for individual cities are sparse, but confirm the experience that cities drive motorization. In the 1990-98 period the increase in auto ownership was 106% in Warsaw, 85% in Prague, but only 33% in Budapest (Box 4.2). Many of these cities essentially have caught up with ownership levels prevalent in Western Europe. Reflecting the low base, growth rates have been much higher in Moscow (196%) and St. Petersburg (207%), but the resulting levels of ownership (207 and 175 per 1,000 population) are still low by European standards. The phenomenon of rising motorization in spite of poor aggregate growth in Russia reflects just how many households and firms became "gainers" from the transition process. Similarly, data from 10 smaller Russian cities indicate large variations in auto ownership rates, depending on the cities' economic success. Starting from the rates of 50-70 vehicles per 1,000 population in 1990, 6 years later these increased as little as 33% in Volgograd and as much as 107% in Tver (de Melo and Ofer, 1999).[17]

Box 4.2 Passenger cars per thousand inhabitants 1980-98 in selected ECA Cities

	1980	1990	1998	1990-98
Prague	235	276	511	85%
Warsaw	157	190	392	106%
Budapest	130	235	313	33%
Moscow	n.a.	70	207	196%
St. Petersburg	n.a.	57	175	207%
Bucharest	46	100	140	40%

Source: Willoughby (2000)

Vehicle ownership alone is of course not a reliable indicator of traffic growth. Unfortunately, reliable and representative data on urban traffic volumes in ECA cities are not readily available. From casual observation and sporadic data, the growth appears to have been nothing short of explosive: between 1990 and 2000, daily car trips increased

[17] Motorization data by city are difficult to come by, and are not quite comparable because of different vehicle classification systems.

from 0.40-1.20 per person in Poznan, and from 0.71 to 1.92 in Talinn. This compares to an average increase in mobility from 1.51 to 1.66 trips per person in the EU over the same period. Traffic congestion, including lengthy periods of stop-and-go operation, is evident in Moscow, Warsaw, Bucharest and other large cities. In smaller cities throughout the region, or large cities without rapid motorization (e.g. Minsk), road problems are of a different order of magnitude, revolving around road maintenance and traffic management.

The rise of motorization in ECA has had a very disturbing accompanying effect on traffic safety. There were 60,000 fatalities in the region in 1999, excluding Central Asia countries, and a significant portion of these (35-70%) took place in urban areas. The majority of accidents does not take place at intersections, but on road links. Pedestrians are most frequent victims in fatal accidents, and school children are especially at risk during the summer months. Overall, victims tend come from lower income strata. Behind these events has been a combination of contributing factors: traffic stream is still composed of both very new and very old motor vehicles, drivers are poorly trained, and both traffic laws and law enforcement efforts are weak, especially regarding the speed control. Several cities and countries have been successful in bringing down the accident rates mainly by improving traffic law enforcement by the police, e.g. Poland and Hungary. The progress has been much slower in Russia and elsewhere, both because of inherited problems with the police, and because traffic law enforcement is rarely in the forefront of institutional change.

Where impacts of increased motorization have become an important factor in the day-to-day functioning of an urban area, cities have responded in different ways. Among the large cities, where this problem is the most severe, Moscow has gone into large-scale construction of major ring and radial arteries, some in the densely built-up central areas. They feature a wide right-of-way (as many as 10 lanes in some sections) but with many intersections at grade where a conventional urban freeway would have multi-grade interchanges. These roads absorb all longer trips, but they back up easily, produce perverse routings and impose severe barrier effects on the community. Since there is a limited number of pedestrian underpasses, it is not unusual to wait 15-20 minutes to cross a primary ring road, whether on foot or by car. Moscow has also invested heavily in bridge rehabilitation (assisted by a component in the Bank-funded Russia Bridge Rehabilitation Project). Per contra, traffic management in Moscow is still in its infancy, as seen in low level of traffic (signal) control and no attempt to manage parking. Automobile is the undisputed master of Moscow streets, to the detriment of public transport vehicles and pedestrians. The latter pay the price in terms of long walks to find a crossing, long waits, and little protection from turning vehicles.[18] Budapest also has invested in a partial ring road to lead the transit traffic away from city streets and a new bridge over the Danube. In a sharp contrast to Moscow, however, Budapest is using a comprehensive approach combining first and foremost an extensive and high-quality public transport system with traffic management/restraint, parking control and parking charges, and pedestrian and bicycle amenities. The importance of traffic restraint will be tested in the decision on whether to increase traffic capacity of the four existing bridges across the Danube in the course of their forthcoming rehabilitation. This example will have to be emulated by others to avoid traffic congestion reaching unmanageable levels, especially those like Belgrade and Tirana, where the capacity of the road network is

[18] Anecdotal evidence indicates that in Moscow school-age children account for an unusually high number of victims in vehicle-pedestrian accidents during each vacation season.

already reached, the technical and financial feasibility of road construction is low, and local institutions are not up to speed.

Since motorization and traffic have increased in ECA during a period of prolonged economic decay followed by (at best) low growth, it has been very difficult for countries to provide for proper maintenance and rehabilitation roads, much less their expansion. Even in the EU-accession countries, which have the best record in economic recovery, road conditions are described as "fair-to-poor." The situation is much worse in the remaining part of the region. The underlying problems include funding and fund allocation mechanisms, the scale of budgets, and the road/traffic institutions. Within the road hierarchy, national roads tend to get the best attention, to the detriment of others. Urban roads present a particular problem because of mixed ownership: some belong to the designated national network and are owned by the state, while others are municipal or even regional. Funds therefore come from different sources, allocated using different sets of criteria and priorities.

In the presence of difficult macro-economic problems, funding a growth sector like roads in line with its internal economic criteria can only be secured by instituting explicit road user charges and ear-marking the proceeds.[19] Otherwise, if funding comes from the general budget, roads compete with other very pressing needs on the basis of different criteria. The result can be that the growth sector is starved for funds, which by and large is the case in ECA. Fuel and vehicle taxation are common in the region: fuel taxes generate 60-80% of road-based revenues and vehicle taxes add another 10-30%. Fuel tax rates are generally lower than in the EU, but the difference disappears when the purchasing power parity is used for conversion. Variations within the region are high. On the average, fuel price in EU-accession countries was about 2/3 of the EU minimum, in absolute terms. The Czech Republic, Hungary and Slovenia charged more than the EU minimum, while Romania's fuel and vehicle taxes were the lowest for this group of countries. Prices and taxes are lower in the rest of the region. The lowest fuel price is charged in Turkmenistan, $0.02 per liter.

Relatively few countries in the region ear-mark the proceeds of fuel and vehicle taxes. Older-style road funds were based on taxing local companies, but these are disappearing, sometimes giving birth to new funds based on fuel and vehicle taxes. Of the 10 EU-accession countries, 8 ear-mark (partially or fully) the proceeds, and 4 have explicit road funds. The Latvia Road Fund, of fresh vintage, is based on 50% of the fuel tax revenue and 100% of the vehicle tax, features a transparent and fair allocation between road classes, and has resulted in stable and predictable funding of road maintenance, including that for urban roads. Still, this does not mean that road funding in Latvia has been sufficient; it being difficult to eliminate the backlog generated in the 1990s and upgrade the roads to what is required for EU-accession. The situation is much worse in the rest of the region. In Azerbaijan, where the roads are currently funded from the budget, it is estimated that user charges would have to increase four-fold for the road network to be maintained properly, and six-fold to eliminate the maintenance backlog. Russia has low fuel prices and has eliminated its older-generation road fund based on taxing local companies. Since no replacement road funding mechanism has been created, roads are subject to vagaries of the general budget, intensified in the case of urban roads by highly variable relations between the state, the regions and the cities.

[19] This discussion is based largely on data collected by Axel Metschies for a study of road finance in ECA (in progress).

4.7 City-Based Transport Institutions and Practices

Given the scale of upheavals in urban transport in the region, institutional changes have been minimal. Handling urban transport matters through municipal departments is ubiquitous, with municipal road departments separate from public works departments present in most large cities. It is rare to find departments dedicated specifically to public transport and traffic management. Some cities have had well-developed transport institutions but have let them decay (e.g. Belgrade), while other have never developed them since urban transport had not been a problem (e.g. Tirana). Others, like Moscow, placed their faith in road construction and have only recently made ginger attempts to make place for traffic management among the powerful road institutions. In line with has been said in the preceding section about the trends in public transport regulation, budding public transport authorities are to be found in Central Asia, but not in Russia and the western part of the region. Warsaw is alone among large cities in EU-accession countries to have set up a public transport authority, which regulates the relations between the city government and various pubic and private operators, though the private sector is still minuscule.[20] The unsuccessful attempt to create a Budapest Transport Association, supported through the Bank-funded Budapest Urban Transport Project, with the power of defining services and fares for all public transport systems in the agglomeration can be seen as step towards a public transport authority. Wroclaw, Poland was the first city in the region to set up a multi-modal transport authority in the mid-1990s, but this example has not been emulated by any large city. Not having multi-modal transport authorities may not be a serious problem in urban areas with a single urban government, but it becomes crucial in urban areas and conurbations with multiple jurisdictions, and for systems, which cross these boundaries. Some urban clusters, e.g. that in Upper Silesia in Poland, centered on Katowice, even lack an overall urban government, which hampers the management, regulation and development of all regional systems, including urban transport modes.

Urban transport planning practices and instruments habitual in the central planning era have survived in much of the region, though new techniques of computer-based design, record keeping, cartography and information processing have been adopted. Static master planning is still present, as focused as ever on large infrastructure networks, but weak on regulation and policy, and separate from current and capital budgeting. In-house design and planning institutes have been transformed into independent consultants in EU-accession countries, but this process is still in its infancy in the rest of the region.

4.8 From the ECA regional strategy to an ECA urban transport strategy

The bread-and-butter aspects of urban transport, such as accessibility to opportunities and the quality and efficiency of supply, affect urban economy and household welfare and must be the base of any urban transport strategy. Seen against the backdrop of the ECA strategy, as summarized earlier in this chapter, the urban transport agenda cuts across multiple growth and equity concerns (Box 4.3). Each of these intersections must be addressed in the proposed strategy. Two of these, involving

[20] Such an authority is being set up in Belgrade.

poverty and environment-related aspects of the strategy are of special importance, and require an elaboration.

Box 4.3 Intersections between corporate/regional priorities and urban transport agenda in ECA

Growth: accessibility of desired destinations for passengers and freight, level of service, cost efficiency of urban transport systems (impact on urban economy, welfare of households, general investment climate, location decisions of firms).

Equity: differential accessibility (including financial affordability) and transport security and safety for various social groups, defined by location, income, age, gender, mobility handicaps; special focus on poverty.

Environmental commons: traffic-related noise and pollution of air, water and ground, dependent on modal split and urban growth patterns.

Public sector governance: relative roles of public and private sectors in the provision of public transport services, and road maintenance and construction; inter-government relations as regards pricing and funding of urban transport systems.

Competitive markets and private sector development: regulation of urban public transport supply to install competitive arrangements and mobilize private capital.

Utility sector: regulation and management of public transport services remaining in public ownership.

Poverty in ECA has unusual, even historically unique aspects in terms of its recent vintage, its causes and its extent (World Bank, 2000b). In the urban transport context, poverty in ECA is non-locational, since people of various incomes tend to inhabit the same apartment complexes. In urban transport, the key poverty-related issue in ECA is not the access to services but the continuation or diminution of high levels of spatial and temporal access to public transport services, and their (traditionally low) price. This also holds for suburban and regional travel in the hinterland of large cities, with services provided by railways and bus companies. At low income levels, people whose lives are especially sensitive to these factors include employees and job seekers who, due to low residential mobility, must travel long distances; retirees, many of whom look for jobs to supplement meager pensions; the school children and students; and the handicapped of all ages. It is important to note that middle classes have lost ground in most countries, and consider themselves poor, which complicates the political economy of service levels and price reforms. The heritage of dependence on motorized transport is not limited to employment but also, due to land use patterns of socialist cities, apply to access to education, medical assistance and other basic services. This is a constraint that applies to most citizens, but is especially heavy at low incomes.

All early Bank projects addressing urban transport in ECA stressed a substantially higher cost recovery from passengers and the rationalization (read: reduction) of services. Though some projects in Central Asia did carry out pioneering social assessment studies, most projects did not pay sufficient attention to social protection. The project documents made references to passengers at average wages, but not to those under the poverty threshold, in different poverty categories, or in different vulnerable categories (e.g. the handicapped). The narrow, sub-sector approach meant that price changes were looked at in isolation from price changes for other municipal services, introduced by other Bank operations. Finally, the exclusive focus on public transport prices, without a parallel

concern for charging for the use of roads, may also have been inequitable. This practice may have been unavoidable in the crisis management stage of Bank involvement, but it is not appropriate in a "growth with equity" stage. The new crop of projects and the associated policies must have a more refined approach to poverty-related information on the demand side, target its interventions at poor and otherwise vulnerable beneficiaries, and be able to estimate the intended or side impacts of policy changes on these beneficiaries (Box 4.4). Also, an eye must be kept on charging for the use of the urban roads, in the absence of which the use of individual motor vehicles is favored to the detriment of the remaining public transport passengers, poor and less poor alike. What goes for projects, of course, goes for the strategy as well.

Box 4.4 Links between equity concerns and urban transport in ECA:

Past: high degree of equality in terms of incomes and income substitutes, including extensive, good quality, and low-priced public transport services.

Present: increased inequality, especially in the Russian Federation and some other CIS countries; inability of local governments to continue providing good services at universally low prices.

Past Bank interventions: pressure to improve revenue collection, increase prices and reduce costs of all municipal utilities in order to achieve their sustainability.

Future orientation: pursuit of sustainability subject to an explicit concern for poverty impacts, with a household-based as opposed to service suppliers' point of view. Attention to charging for the use of urban roads to reduce inequities due to modal shifts.

The link between environmental quality and urban transport is in five dimensions (Box 4.5). First, there is a question of fuel standards and prices; and vehicle emission standards and testing institutions. For any given level of travel rates and modal split, the emissions will depend on fuel and engine factors. Setting these standards, prices and institutions tends to be a national endeavor, and is typically not addressed through city-based projects, at least not on a strategic level. Second, for any given project, be it public transport or road related, there are narrowly defined environmental impacts. For example, on the positive side – a project may involve the substitution of clean engines and/or new higher-standard vehicles for those with aged and polluting engines. This is dealt with in the project preparation process as an integral part of design and evaluation of project components. On the negative side – noise and other nuisance from construction and/or re-routing of traffic, disposal of hazardous construction materials, and the impact on wetlands. These are routinely handled through Bank-wide safeguards, and constitute a "given" for both projects and strategies. Third, given the correlation between congestion delays and emissions, there is a valid interest in traffic and parking management, be it to speed up the traffic or to restrain it. Fourth, road expansion projects are undertaken to reduce delays to reduce the delays and cut emissions, but this is likely to be only a short term impact (at best). In the long term, however, new roads facilitate new land use developments and draw forth more traffic, which increases emissions (independently of the level of vehicle and fuel technology). Fifth, there are environmental impacts of transport pricing policies and investments on modal split, i.e. choices people make between walking, bicycling, taking public transport, or taking a car, or choices shippers make for the transport of goods. It is these last three categories which are the proper subject matter for urban transport strategies, in the sense that the decision making power is largely in the hands of city authorities. These aspects are of special importance in ECA cities, where the initial and still prevalent conditions are that of a high share of travel

going by public transport modes, fighting against the tide of individual motor vehicles, the capacity for and practice of traffic and parking management is still low, and the pressure for building new roads is ascendant. The road expansion is a particularly sensitive issue, since owning and using a motor vehicle has been for long a cherished symbol of wealth and freedom for citizens of ECA countries.

Box 4.5 Links between environmental concerns and urban transport in ECA:

Vehicle emissions related to fuel standards and prices, vehicle standards and compliance institutions: handled at the national level through energy, transport and environmental projects, thus not tackled within an urban transport strategy.

Environmental micro-impacts of individual projects, positive or negative: handled through routine project design and evaluation processes, and/or through Bank-wide safeguards, thus not a part of an urban transport strategy.

Environmental impact of traffic and parking management activities: speeding up the traffic (reducing delays) or traffic restraints (entry prohibition, traffic calming); the net impacts depend on short and longer-term elasticity of demand.

Environmental impacts of road expansion: reduced emissions in the short term, increased emissions in the longer term (through "induced" traffic growth): a strategic issue for individual cities, hence must be addressed in urban transport strategy.

Environmental impacts related to modal shifts between public transport services and individual motor vehicles: a strategic issue for individual cities, depends on relative prices, service quality, restraints, etc; addressed in urban transport strategy through modal split policies.

5. THE PROPOSED URBAN TRANSPORT STRATEGY

5.1 Problem Framing and the Long-Term Vision

Solutions follow from the way problems are framed. The initial problem formulation used for planning the majority of the Bank's urban transport activities in the ECA region early in the past decade was that of a crisis in public transport supply, which was threatening to "stop the cities" in some of the ECA countries, especially in the CIS. This was countered by fleet investments, increase in cost recovery from fares, and by making public-sector companies more efficient. Later in the decade, the structural inefficiency of public-owned transport monopolies became the problem to be solved. The strategy was to help the client cities introduce competitive markets, with the added advantage of mobilizing private capital. Both of these problem frames were appropriate at the time, but need to be corrected to include a more comprehensive array of sector and social variables and to be enlarged to accommodate the phenomenon of rising traffic growth in the presence of large income inequalities and poverty.

Accordingly, the problem frame proposed to guide the future Bank activities in this sector, shown in Box 5.1, is multi-layered in that it absorbs and extends the previous approach. The main difference between the past frames and the proposed one is that the latter gives primacy to the problem of motorization, its impacts on the split of the urban passenger market between the collective and individual urban transport modes, and downstream consequences regarding urban efficiency, environment quality, poverty, social development, municipal finance and other important social and institutional

dimensions. In line with this expanded problem formulation, the list of the strategic variables for the city decision makers, which in the previous strategies consisted of pricing, funding and regulation of public transport services, is now expanded to include pricing and funding for urban roads as well.

Box 5.1 Framing a new transport strategy for ECA cities:

Inherited issues: the relative contributions of passengers and governments to funding urban public transport services (in the presence of inequality and poverty); inefficiency of public-sector monopoly operators; and relative roles of the public and private sector on the supply side of urban public transport.

(New) catalytic event: accelerated motorization (ownership and use of motor vehicles), unconstrained by direct pricing, with downstream impacts on mobility of diverse social groups, congestion, safety of users and non-users, demand for other modes, urban economy and land use, and social and natural environment.

Problem formulation: competition between public transport modes on the one hand and privately-owned motor vehicles on the other, in the presence of large income inequalities and poverty

Outcome of primary interest: the modal split in the urban transport passenger market between the individual motor vehicles and public transport modes, and its downstream impacts on city efficiency, livability, household budgets and public expenditures.

Key decision variables for city governments: (i) pricing policies and funding sources for urban roads and public transport modes with downstream impacts for municipal and household finance; (ii) regulation of private/public roles in the provision of transport infrastructure and services; (iii) inter-governmental relations as regards jurisdiction over and funding of transport systems; (iv) allocation of available street space between automobiles and public transport modes; (v) allocation of investment funds for expanding roads and public transport systems.

Responding to this new problem framing, a long-term vision for urban transport in ECA cities (Box 5.2) has been drawn from the data, analyses and conclusions elaborated in the already cited publication **Cities on the Move: World Bank Urban Transport Strategy Review** (World Bank, 2002), produced by the in-house Urban Transport Thematic Group. Though the contents of **Cities on the Move** are essential for the propositions put forward in this paper, they are easily accessible and will not be summarized in this text.[21] For convenience only, a listing of recommended practices the most relevant for ECA cities is in Annex 3. The policy, capacity building and investment "building blocks" for strategies are in Annexes 4 and 5.

The essence of the proposed vision is not to "hold the line" against motorization, for example by calling for a moratorium on new road construction. Nor does the vision call for accommodating the motor vehicle. The approach starts by recognizing that prices in the urban transport markets in ECA are distorted. The preceding chapters discussed this situation as it applies to public transport modes. The fact that the use of urban roads by motor vehicles is also under-priced is not dependent on the existence of fuel taxation or the scale of taxes. It stems from the fact that vehicle users are not charged the economic costs of driving (delays imposed on others, damage to environment, and accident) nor are they charged at the point of service. This crucial inequity between modes holds not only in ECA but almost everywhere else in the world, and with well-known results.

[21] The full document can be found on http://wbln0018.worldbank.org/transport/utsr.nsf

Box 5.2 Long-term strategic vision

Unrestrained modal choices to individuals, households and enterprises, assuming undistorted prices.

Fair competition between modes, based on charging economic prices for the use of both urban roads and public transport services, with a gradual and linked transition from current prices, plus correctives for social impacts.

Urban transport system to generate its own finance sufficient to cover operations, maintenance and expansion.

Operations and maintenance activities, for both public transport services and road infrastructure, to be awarded on the basis of competitive processes, permitting a variety of ownership types, risk allocation arrangements and profit/loss positions.

Local governments' roles: guardians of public service obligations and other aspects of public interests, and regulators of contract-based operations and maintenance of urban transport systems.

A desired institutional structure for regulating transport in large cities: a multi-modal transport authority with revenue and expenditure powers.

Participatory approach to policy making, including pricing and service policies, and investment planning.

Sensitivity to the social dimension of transport system performance, especially during large changes

National government's role: setting up of a legal framework, procedures and instruments for organization and regulation of transport services and infrastructure, road pricing and funding; and traffic safety; emission standards and testing. Monitoring of activities. Data collection and diffusion, nationally and internationally. Research and development.

In response, it is proposed to adopt a "market correction" as a long-term strategic objective. The vision is that individuals, households and enterprises would enjoy a maximum freedom of choice among transport modes, but the modes would compete on equal footing. The essential condition for equal footing is that the currently distorted prices in the urban transport sector would evolve gradually towards their economic levels. This applies equally to removing the subsidy from public transport fares, and correcting fiscal and factor price distortions in the cost structure of public transport operators, as to making motorists face the full social costs of driving, including congestion, accidents and pollution. The last but not the least, the achievement of economic pricing should make possible for urban transport systems to be self-financing. Over the longer term, economic pricing in transport will contribute to land development decisions also being made on market-like criteria.

The proposed orientation regarding prices is a complement and a corrective to what has already been the Bank's strategy in the late 1990s, i.e. push for higher cost recovery and the creation of competitive markets on the supply side of public transport services. It also involves a re-definition in the role of local governments, already present in past projects. Local governments would give up the provision of services, specializing instead in the regulation and oversight of the urban transport sector. The objective is to maintain the control of outputs (in road maintenance), and service parameters and prices (in public transport) in public hands, while using the private sector and competition to get as efficient production of services as possible.

5.2 The Proposed Strategy Framework

The vision presented above is near utopian, in that it has not been achieved anywhere in full, though its major elements have all seen successful applications, including locally-based road use pricing. The importance of this particular vision, with its stress on economic pricing for both major urban transport modes is that it has a much higher claim to sustainability than the competing vision of permanent under-pricing of urban roads and a permanent subsidy to urban public transport services. This latter approach has held sway in the wealthy countries of Western Europe, and is reaching its limits in the face of continuing motorization. This same double-subsidy approach is apparently being pursued by leading reformer countries in ECA.

The vision has to be corrected for realism, to suit the starting conditions in ECA's cities and countries, with their still large distortions of all prices and investment criteria, and severe constraints on both public and private purses. Also, indications of a path from these starting conditions towards the proposed destination have to be indicated. This has been done, and the resulting urban transport strategy for ECA is shown in Box 5.3 below.

The proposed strategy has five pillars. Three of these match the standard structure of Bank projects, i.e. the policies, investments, and institution-building activities. The remaining two pillars deal with knowledge-oriented activities, and partnerships. These will be elaborated on in the following sections.

5.3 The Policy Pillar

The main new aspect of the policy agenda is no doubt the focus on road use pricing, with its traffic management, modal split and revenue-earning implications. The strategy acknowledges the reality that time- and place-specific economic charges for using urban roads represents a huge change. It is out of reach in most; perhaps all ECA countries at present, for a combination of technical, institutional and political reasons. The strategy therefore accepts that for the time being a second-best approach to both pricing and funding will be pursued. For urban roads, this entails multiple legislative and policy actions on both national and city levels.

First, on the national level, the strategy is to pursue the adoption and implementation of a well-designed road charging system, and the allocation of some of its proceeds to the budgets of urban road (and possibly transport) authorities. Second, the on-going legislative reforms addressing decentralization should be used to give cities the control over major urban roads, the authority to allocate on-street space between public transport vehicles and the general traffic, and the authority to levy parking and road use charges, even if the latter is a dormant one for the time being. Third, on the city level it will be necessary to place priority on short-to-medium term substitutes for locally-based road use pricing, i.e. a judicious blend of traffic and demand management; parking management, including time controls, charges and parking standards for buildings; and assigning street priority to public transport vehicles, pedestrians and bicycles. Related actions concerning the capacity of local institutions are described in the next section.

The above-cited road funding initiatives at national level cannot be promoted by city-focused projects, with municipalities as borrowers. The implication is that these reforms, crucial to urban transport, may have to be pursued with national governments as

borrowers, and through lending instruments different from the city-based urban transport projects of the kind undertaken by the Bank in ECA throughout the 1990s.

Box 5.3 The proposed urban transport strategy framework

Policy priorities:

- Pricing and funding of urban roads: urban aspects of national fuel taxation and proceeds allocation (in the short/medium term), locally-based (congestion) pricing in the longer term (links: national legislation for fuel taxation and funding arrangements; municipal finance)
- Substitutes for locally-based road use pricing: traffic restraints, parking charges and standards, street priority for public transport vehicles
- Pricing, revenue collection and funding for public transport services (links: similar actions for other urban utilities, municipal finance)
- Public transport subsidy reform: targeting of social assistance, transfer of assistance administration away from public transport operators (links: other urban utilities)
- Social dimension of urban transport: impacts and corrective measures relative to low-income, handicapped and other vulnerable populations
- Market creation: expansion of competitive award of operations and maintenance for both roads and public transport services (links: other urban utilities, private sector development)
- Reform "paths" for public transport enterprises remaining in public ownership (especially those with dedicated infrastructure)

Institution building priorities:

- Capacity building at city level to support the competitive approach to service delivery, specifically the creation of transport authorities
- Capacity building at the city level for traffic/parking management
- Capacity building at national and city levels for traffic safety activities
- Capacity building at city level for investment planning
- Capacity building at national and city level for social protection aspects of designing, pricing and funding urban transport systems
- Legislative reform of the intergovernmental roles and relations relative to ownership, regulation, pricing and funding of urban transport systems
- Participation in the global knowledge creation and dissemination systems

Funding agenda:

- Costs of "negative concessions" in awards for public transport services
- Equipment for public transport authorities (fare and information systems)
- Vehicle and infrastructure investments for public transport systems remaining in public ownership (tramways, trolley-buses, metros, suburban rail, busways)
- Projects involving the conversion of street space to public transport use
- Traffic control systems, traffic/parking management improvements
- Equipment and training for traffic safety
- Maintenance and rehabilitation of road infrastructure
- Large-scale (road and public transport) expansion projects
- Investments linked across sectors under a common theme, e.g. "green" investments in engine and vehicle replacement
- Knowledge agenda
- City-specific urban transport reviews and/or participation in city development studies;
- Thematic studies: poverty and urban transport, social costs of urban traffic; progress in market creation; and urban rail systems in ECA cities

Links and partnerships:

- for joint work on all aspects of the strategy: with transport, urban, social protection, environment, private sector development, and IFC
- for joint/complementary investments, with kin institutions (EBRD, EIB)
- for policy consultations, capacity-building and knowledge activities, with government organizations (ECMT, OECD, EU) and professional and client-based groups (City Alliance, UITP)

For public transport services, a second-best approach to economic pricing would involve a staged increase in cost recovery from fares, subject to price/subsidy reforms to improve fare structures, targeting and delivery of social assistance. We are talking about general fares, since the preferential ones will be treated (in this strategy) through the

reform of subsidies, assistance delivery mechanisms and compensation (more on this in the subsequent paragraph). How quickly can general fares increased and how quickly should it be done? The matter is truly complex. Assuming that the utmost is done on the supply side to reduce unit operating costs and have reasonable network and service standards, the progress on increasing general fares will depend on the wages of the population, but also keeping an eye on the degree that urban road users cover the social costs of traffic. In truth, increasing public transport fares is much easier than increasing the road use charges to motor vehicles to their economic levels. This is in part due to the analytic difficulties with defining social costs of traffic on congested urban networks, whereas costing is comparatively straightforward for public transport modes.[22] It is even more due to the politics of pricing for the two networks. Political strength of road user interest groups tends to be stronger than that of public transport users. Having public transport prices reach their economic levels while letting cars "have a free ride" would not only be inequitable, but would act as an incentive for "choice" riders to give up using public transport in favor of their automobiles. How serious this tension may be depends very much on local circumstances. It will not be serious in smaller cities, with street-based bus operations and low motorization rates. It will be critical in larger cities, where the congestion is already at high levels, and public transport systems include off-street modes. The resolution is to link the progress on the two pricing reforms, and ensure that the pressure on public transport prices does not "get ahead." The first-generation Bank projects set higher cost recovery rates for public transport companies without any regard for cost recovery on urban roads. This sin of omission elicited accusations of pro-automobile bias (Hook, 1996). The approach may have been justified at the time, given the very low initial levels of cost recovery in the public transport sector, facing a threat of bankruptcy of companies, and at budding levels of motorization prevalent in the early 1990s. In the next batch of projects, the approach will have to be modified, as the prevailing cost recovery levels in public transport approach full coverage of variable costs.

For any given urban pattern, a given level of development of the automotive and fuel technology, and a given institutional capacity for imposing and enforcing emission controls, reducing the modal share of automobiles should also reduce air and noise pollution, and other forms of environmental degradation. This implies that urban public transport services should have a level of quality high enough to retain and attract "choice" riders. On the other hand, a poverty-conscious approach would be to adopt modest standards for public transport services. This dilemma represents a serious tension in the proposed strategy, especially at the relatively low levels of cost recovery still prevalent in many ECA cities. As described above, low cost recovery and high levels of service could not be sustained in most cities of the region, even after the initial shock of transition processes was over. Apart from introducing differentiated services, the resolution of this tension is to remove poverty as a factor in fare making in the public

[22] While cost accounting for urban public transport operations is straightforward, the application of the principle of full cost recovery from users (travelers) is less so for metros and other modes, which use specialized track and power infrastructure. Should fares for these modes cover their full costs? In principle, the full costs of urban infrastructure, with its multiplier effects on urban development, may be recovered from two kinds of beneficiaries: passengers (through fares) and property owners, the latter through property taxes. In practice, the dynamic of increasing cost recovery for these systems should go through milestones defined by cost categories: first, direct operating costs (including short-term financial costs) should be covered, then equipment depreciation, then infrastructure depreciation. The division of the cost load between passengers and property owners will likely be somewhere at the line dividing the first two cost categories from the line item representing infrastructure depreciation.

transport sector. Three groups of actions are envisaged to achieve this, all requiring a delicate re-balancing of national and local powers and responsibilities.

First, it is necessary to resolve who has the authority to determine general fares, fare discounts and fare exemptions in public transport. Fare/subsidy policies are still in mixed state/city jurisdiction, even in advanced reformer countries, e.g. Hungary, with some of these powers being nominal (by law) and others involving the use of discrete methods. Legislative reforms may be needed, especially to add payment responsibility to the power of introducing fare privileges.

Second, it is necessary to simplify and otherwise improve fare structures, and overhaul the fare/subsidy policy to improve targeting. This is especially critical in Russian cities with their numerous and category-based fare exemptions, ill matched with capacity to pay compensation, and weak efforts regarding inspection and fining.

Third, the entire process of ticketing, revenue collection and inspection in public transport services needs to be improved, in analytical, technological and human dimensions. Based on (rare) studies of travelers without tickets, done under the Budapest project, and experiences with re-introduction of conductors, this is an area where large revenue reserves still exist.

Fourth, service providers (i.e. public transport operators) should be relieved from the concern with administering social subsidies of any and all types, as decided by governments. In the short term, this function should be given to the proposed urban transport regulatory authorities. Here, a strict discipline must be imposed on the process of calculating compensation and making payments to operators. This has been reasonably successful in Western Europe (and is a recommended EU policy) but has not worked very well in ECA in the crisis years, and needs much development and discipline. Subsidy administration is a subject on which the urban transport profession should learn from what other municipal service sectors, e.g. water and electricity, have done in the ECA region and elsewhere (Lovei et al, 2000). In this regard, having a contract-based, competitively awarded service provision, with a recourse to legal remedies, should be much superior to the force-account style of the past.

Fifth, the obligation to administer the social subsidies should be gradually transferred from the transport regulator to the safety net institutions, be they within the local or national government administration. The unification of subsidies would provide a much needed consistence between assistance criteria and the funding capacity, improve targeting and delivery methods, and reduce the costs of administration. Moving transport fare discounts and exemptions to the social assistance system would not be an easy task and it can only be done gradually. It is difficult to address the interaction between setting fares and the social assistance process on a sub-sector and project basis. It may be best to pursue this strategic initiative in tandem with or within the Bank's programs for other municipal utilities, and/or with programs and projects specialized for poverty alleviation and social development. For example, Russia is currently debating the transfer of the housing allowances from housing offices to social assistance offices, and the same is being done with energy allowances. This may provide an opportunity to do the same for public transport fares.

Another approach to resolving the problem of fare discounts and exemptions is underway in the Central Asia and some other ECA cities where informal private operators have proliferated. These operators do not honor fare discounts, which in fact is one component of their success. Moreover, honoring fare discounts and exemptions is not in the franchise agreements for the private operators who were awarded service rights through competitive bidding. At the same time, the surviving public-sector operator is stuck with excessive numbers of low-fare or exempted passengers, and remains insufficiently compensated. This is exactly the wrong way to go about dealing with exemptions, since it leads to the destruction of public sector operators without resolving the problem of service for low incomes and other forms of vulnerability.

In spite of benefits expected from the revenue-side reforms and those to be derived from creating competitive markets in the delivery of services, a financial gap between costs and revenues in public transport operations is likely to continue in many cities in the short term, and even in the long term in cities where public transport modes use dedicated infrastructure. This requires a renewed attention to municipal finance in general and transport funding in particular. The urban transport funding problem has persisted for decades in rich and poor countries alike, with relatively few options emerging. Most countries use funds from general (city and national) budgets, often with multiple levels of government making direct investments or entering as co-financiers. The US uses a combination of budget sources, capital grants and has in recent years permitted that some of the proceeds of the fuel tax paid by road users be spent for public transport purposes as well. France uses a dedicated public transport tax levied on local enterprises plus investment grants from the national government (for major projects only). Given the recent history in ECA of eliminating local enterprise taxes dedicated to infrastructure, the US approach may be the most promising for the short-to-medium term. The recent World Bank urban transport strategy review came out in support of the creation of urban transport funds, fed by the proceeds of fuel taxes, and open for operating and capital expenditures across all modes. The proposed strategy for ECA is to focus on this subject as a policy priority, leaving the door open for a variety of approaches to be developed and evaluated under local circumstances.

Competitive tendering for public transport services implies public regulation and a market of privately-owned operators. This begs the question on what the cities will do with the incumbent public-sector operators. Or, the question can be framed as a strategic issue for the Bank: should it continue to lend to public-sector companies? The preceding account of the state of public transport supply markets in some cities showed a continuing vitality and nearly undisturbed monopoly by public-owned operators in all the front line reformer countries/cities. This trend was the strongest in the largest cities, which were also those where in addition to street-buses there were also modes with dedicated infrastructure, such as metros, tramways and suburban rail systems. There the private sector has participated as a low-scale sub-contractor for services, and as supplier of non-core services to transport companies. Per contra, in countries with the lower rate of economic recovery, where the transport crisis went deeper, the participation of private operators is on a much larger scale and threatens to overwhelm the public-owned service providers, or has already done so.

A differentiated approach is called for. In the former group of countries, and especially in cities with modes using dedicated infrastructure, the continued existence of the public-owned operators should be accepted. The reform should focus on increasing

the operational independence of these operators, on increasing their cost efficiency, and strengthening the contractual relationship between the companies and their public owners. The Budapest model of private sector involvement should be extended through pilot management contracts and concessions for the rail-based modes. The investments should focus on the rehabilitation, upgrading and expanding modes with dedicated infrastructure (further details in the investment section below). Whether or not these projects would also include Bank funds for bus replacement in companies, which also operate these vehicles in mixed traffic is best left to individual circumstances, not decided at the level of strategy.

In the second group of countries, in cities whose systems use mainly street-based buses, and where private operators have already achieved dominance, the approach should be a gradual absorption of public-owned companies into the formal, privately owned industry, regulated in line with the for-market competitive model. In this city type, lending to public-owned bus companies should only be done where a strong case for this can be made, e.g. to advance the market creation process through corporatization and service contracts as an intermediate stage leading to divestiture, or where crisis management requires it as it did in the early Bank-financed projects.

In many cities, there is tension between the informal private operators on the one hand, and private and public participants in the regulated process of market allocation on the other. Informal operators exist also in situations of a formal public-sector monopoly (Riga, Yerevan), with the blessing of the municipal authorities. While these operators may have played an important role at the time of crisis in the 1990s, their continued presence is likely to damage the regulative arrangement recommended in this strategy because they tend not to serve low-volume areas and time periods (often used by the most vulnerable urban populations), do not honor social policy, and take away traffic from those who do – a damaging act in the presence of economies of density. For all these reasons, and in line with the best-practice recommendations of the Bank-wide urban transport strategy review, steps should be taken to absorb informal private operators into the for-market competitive system.

5.4 The Capacity-Building Pillar

The proposed strategy highlights the need to intensify capacity building in three major categories.

First, the institutional capacity (and political support) for traffic regulation and traffic and parking management is too low in most ECA cities and will need to be strengthened. In the largest cities, these budding institutions find themselves squeezed in between strong road directorates, with a well-known investment bias, and strong traffic police. The experience under the current Moscow project illustrates how difficult it is to insert a traffic management function into an already developed city administration. traffic management

Second, the cities lack both the institutional structure and capacity for multi-modal regulation of the transport system, the new role proposed in this strategy. This is especially true in regard to pricing, funding and market-creation functions. The strategy proposes the establishment of Urban Transport Authorities to whom the regulatory powers over the transport system will be passed by city governments. To get there, work

will have to be done not only on the city level, but on the national one as well. A comprehensive, longer-term capacity building initiative will be needed, using the standard tools of technical assistance and training, but possibly including also an academic dimension. Technical assistance should include the "twinning" with successful cities, especially as concerns locally-based road pricing (e.g. Oslo, Bergen). Participation in the European and global knowledge networks, including distance learning holds much promise in this subject. In addition, a program of field studies will be needed to estimate country-specific, even city-specific economic costs of road traffic and public transport operations, on which the new pricing policies will be based. It is relatively straightforward to estimate economic costs (and prices) of public transport modes, but it is much more difficult, even controversial to estimate the social costs of road traffic. An initial study focusing on the empirical estimation of costs is included in the knowledge pillar of the strategy (see below).

Third, institutions for planning at the city level still survive in the organizational form and with instruments and technical approaches surviving from the central planning era. Cities like Budapest and Warsaw have made considerable changes in all these categories, but elsewhere things have been at a standstill. Weaknesses are especially significant in investment evaluation methods, the financial planning, and the interaction between the formal institutions and the civil society. Technical assistance, training and the facilitation of access to knowledge networks will be needed.

5.5 The Investment Pillar

In the form presented in the box above, the proposed strategic vision makes no reference to preferred investment projects. Without doubt, the selection of specific development objectives, investments, loan instruments, and cities will be made within the assistance strategy for each country on the basis of criteria transcending those related to urban transport. It would therefore be inappropriate to propose strategy-driven investment priorities in a regional strategy. On the other hand, accepting the rationale of making investment loans to leverage reforms, certain investment types are especially well suited to match the policy agenda in the proposed strategy. An obvious example is that road rehabilitation and upgrading investments should be linked to advancing the causes such as road maintenance markets, road maintenance planning and road finance. Investing in traffic control systems, intersection and corridor improvements goes hand in hand with capacity building for traffic management. Similarly, a major road expansion investment, e.g. an expressway, could be a good match for introducing traffic and parking restraints, perhaps even a locally based road pricing scheme.

On the public transport part of the ledger, all cities in Central Asian countries, many cities in Russia, and practically all medium and small-size cities in ECA have only street-bus systems and are experimenting with the competitive market creation. The position put forward in section 5.3 above is that bus replacement investments for public-sector operators should not be pursued, since this would contradict the effort for market creation in this transport mode. Taken far forward, this discourages any lending for public-owned bus operators. If so, what would the loan funds be used for in bus-based cities? One possible answer is to fund technical assistance to the policy reform process and capacity building, but the modest level of investments needed for this does not appear to have enough weight to leverage the market creation reforms. Another answer is to fund urban road and traffic improvements in these cities, as was done under the

Kyrgyz project. This approach might works under some circumstances, but generally it is easier to leverage reforms in one sphere of activity if the investment funds also go to that same sphere. In other words, a major investment in public transport systems is well-suited to leverage major public transport reforms.

Two investment types hold some promise for leveraging public transport reforms in bus-based cities. The first is invest in road improvements so that public transport vehicles would benefit in some identifiable and major way from these investments. In its weakest form, this would consist of paving public transport routes or providing special public transport lanes or overpasses at intersections.. In its strongest form, the street space currently used by the general traffic in entire corridors or sub-networks would be re-allocated to exclusive use of public transport vehicles, be these buses, trolley-buses or tram vehicles. In ECA, the technological bias against the use of buses on a dedicated right-of-way is especially well entrenched, and the use of Bank funds to leverage a change in this attitude is very much warranted. More importantly, an increased use of dedicated right-of-way at the surface level would contribute towards the creation of relatively inexpensive semi-rapid-transit networks, which can hold their own as competitors to the automobile.

The second option for leveraging public transport reforms in bus-based cities may be to finance subsidies. In the presence of poverty and generally stagnating real incomes, the imperatives of social safety net and the political economy of reforms suggest that public transport fares can only be increased slowly. In other words, subsidies will have to continue in the foreseeable future if for no other reason but the need to proceed incrementally. But there is more to it. The problem with public transport finance in many ECA cities is sometimes erroneously stated solely in terms of poor performance of public-owned operators, with a for-market competition between private operators being the solution. This is only a part of the picture. Not only are the public-owned operators inefficient, which leads to poor services and high subsidies, but that the subsidies are not paid fully, or paid but at a magnitude which underestimates actual costs. This in turn leads to constrained spending, poorer services and lower efficiency, hence even higher subsidies. The proposed move towards competitive award of services, if all goes well, will not only bring efficient operations and equity capital, but also impose a contractual discipline on the size and timing of subsidy payments. It may well be that the resulting subsidy loads (and the actual costs which underlie them) will be higher than they have been in recent years, efficiency gains from competition notwithstanding. Many cities may be willing to adopt the for-market approach, but they may lack the capacity to pay the contractual subsidies. They will eventually correct this by restructuring fare systems and tightening up fare collection, but in the first years of implementing the new approach the payment gap may be too large. This would of course have a damaging impact for the functioning and the ultimate success of the entire regulative arrangement. The role of Bank projects, under these circumstances, may well be to fund the subsidy gap on a decreasing scale, with the local regulatory authority as a client.

In cities where there are metros and other modes with dedicated infrastructure, public ownership is likely to continue in the foreseeable future. Still, such cities may wish to introduce for-market competition for their street-based services and advance the market orientation in the infrastructure-based part of the network through private-public partnerships. Investments in such companies would be well matched with the proposed strategic vision, and the opportunities are plentiful in all ECA countries. This does not

apply only to metros and tramway-based systems but also to suburban railways, these last holding potentially precious reserves of off-road capacity in many large cities. Plans are afoot to take various suburban railway networks out of the national railway company and create new, city-based operating companies, potentially available for concessions and other forms of private sector involvement. There is advanced thinking of setting up separate suburban rail companies in Warsaw and Gdansk, and the process is beginning in Moscow and Belgrade.

The case of large-scale, "expansion" investments, such as urban expressways, metros and suburban rail lines, deserves a special mention. The proposed strategy relies on economic pricing to validate the demand "signals" for expansion, but what is to be done in the meanwhile, before such pricing is implemented? Should expansion-type investments be eschewed in Bank assistance programs, as they were in the past decade? The answer is in the negative. Investing in large-scale projects holds several advantages and opportunities over rehabilitation or small-scale investments. The first is that if these risky projects are done in partnership with the Bank, the quality of preparation, including engineering designs, economic and financial evaluation, and safeguards will be much higher than if they are done without the Bank. This is a very strong argument, given the critical scarcity of investment funds, and a demonstrated willingness of client cities to undertake large projects without sufficient preparation. It applies not only to new urban roads and metros, but to upgrading of suburban railways lines, given the likely scale of investments that may be needed. The second positive feature is that large-scale investments require stricter Bank tests than the usual economic/financial ones. Specifically, to lend to a city for a large-scale project, the Bank would require (beyond standard conditions of lending to a city government) that a sound transport development strategy is already in place in that city, where "sound" refers to having taken steps to pursue policies outlined above. It would make little sense to invest in an expansion project in a city where the existing system was being starved for funds because of a policy block. This pre-condition may act as an incentive for cities to put their house in order before undertaking large expansion projects. The third feature of large-scale investments is that they may provide sufficient leverage for an important, one-time (Big Bang) policy shift or innovation. For example, a loan for a metro could leverage a concession, and (as mentioned above) investing in an urban radial or ring expressway could leverage the use of local road-use pricing or at least road tolls, and either could be used to leverage major traffic restraints. In conclusion, a strategic "tilt" towards such projects is desirable.

5.6 The Knowledge Pillar

The explosion of knowledge management activity in the Bank over the past ten years has by-passed the urban transport field in ECA, except for its hardware and networking aspects. As noted above, the region carried out only three in-house sector studies focusing on urban transport, and then for only two countries (Poland and the Kyrgyz Republic). There have also been some policy studies included in investment projects, such as the recent public transport reform study for Russia, but these are few and far between, no doubt because there have been very few urban transport projects. Bringing the knowledge from outside to client countries, without becoming expert on the situation in these countries, limits the appropriateness and usefulness of the outside knowledge. Besides, it is necessary to learn about the client countries in depth so as to bring that information into the exchange networks. The process must be two-way.

Furthermore, no cross-regional, thematically based study has been done for this sub-sector, indicating no formal attempt to create new knowledge to suit the changes in the new paradigm introduced by the CDF. Coupled with a reduction in the budgets available for project supervision, this lacuna in knowledge creation may have undermined the Bank's potential role as the agent of change in ECA, and may have kept this sector out of tune with new institutional priorities. Having a new strategy is an opportune moment to develop a program of economic and sector work in support of the strategy, followed by various means of communicating the findings to the client countries and other partners.

It is recommended to proceed in two directions. The first is to increase the number of city/country specific urban transport reviews, involving significant data collection on both demand and supply sides. The second direction is to initiate a series of cross-regional thematic studies on urban transport. The propositions are summarized in Box 5.6, and are elaborated below.

Box 5.4 The learning priorities

- city/country specific urban transport reviews, including major data collection on motorization and traffic, environmental impacts, public transport operations, modal split, …
- in-depth study of urban transport in a successful transition country (Prague?)
- poverty, vulnerability and urban transport in ECA cities: demand, service and fare aspects
- regional experience with the regulation of bus-based private sector operators
- the performance and prospects of rail-based urban transport modes in ECA
- urban transport funding for both roads and public transport modes

City-based and country-based urban transport studies will normally be requested by client governments. Some of these will be done to provide policy and investment advice and/or in tandem with a Bank investment project, in line with well-established practices. Apart from these, it would be of special interest to study an ECA capital of a country approaching EU accession, e.g. the Czech Republic or Slovenia, where no lending operations are likely. The task would be to compare the apparently successful macro-economic, industrial and infrastructure reforms with the changes implemented in urban transport. Has the overall success of these economies been translated into the urban transport sector, be it relative to the regulation of public transport services or the handling of the pressure of motorization? Are new roads being constructed in Prague and Ljubljana? How are they financed? Has the private sector taken over the delivery of public transport services and road maintenance? What is the level of service, price/subsidy arrangement, cost-efficiency and cost recovery of the metro of Prague? What are the expansion plans?

The scope of site-specific studies, as established in those few done in the region in the 1990s, should be enlarged to include the neglected and newly emerging subjects. In addition to subjects listed in succeeding paragraphs, urban freight, traffic safety and traffic law enforcement should be included on a routine basis. Traffic safety and law enforcement are of paramount importance in ECA given its apparently dismal accident record, where data are especially weak, and the problem of creating professional traffic police is daunting in many countries.

City-based urban transport reviews could be done as free-standing studies, but thought should be given to either link these to larger efforts on making city assistance strategies, or to develop a stream-lined approach when urban transport is one of several

sub-sectors included in city assistance activities. The benefits of a coordinated or integrated approach range from added richness and depth to those related to scarce budgets.

Four thematic, cross-regional sector studies are recommended. This type of analytic work acquires a special importance if the prospects are limited for in-depth sector work, linked to lending operations in individual countries and cities. Thematic studies may be the main vehicle through which the Bank would maintain and enhance its region-specific expertise in this sector.

Among the broader regional themes, which also reflect Bank-wide and regional priorities, the relation of poverty and environment to urban transport policies lead the list. Poverty assessments, as pursued by the social development specialists are not location- and subject-specific enough to provide information useful to urban transport policy making. In our own past work, poverty has so far been dealt only in the form of limited-scope, project-related social assessments in several Central Asian cities, and in an even more limited form (affordability analysis based on average wages) for several urban transport projects in Russia and Eastern Europe. This is very little to provide a basis for a poverty-driven strategy. A study focused on travel demand characteristics of urban residents at the low end of the income range, and the instruments for developing a targeted approach to social assistance, is warranted. A standard methodology for such studies is not available, so resources will have to be used to develop it and carry out one or more pilots before proceeding on full-scale site-specific studies for a combination of cities and countries. A related theme is the overlap between poverty and the presence vulnerabilities, e.g. physical handicaps, as these relate to problems of access and mobility at low incomes.

Yet another regional theme is the progress of the market creation efforts in public transport services. As reviewed above, there have been considerable and diverse experiences in the region, but no comprehensive survey and evaluation. The hard data on the private sector operation of bus companies in Russia and Central Asia have not been collected, nor have the consequences of informal private operators for passengers and the road traffic been measured and analyzed. An important aspect of this study may be regarding the implications of EU accession on the approach to private sector involvement. This has been analyzed in the national road and railway sectors (under EU funding), but very little attention has been given so far to the impact of legal harmonization and eventual accession on the urban transport market.

The region's cities also have a large number of metro, suburban rail and tramway lines, and some cities are constructing new ones (at least as regards metros). Since rail-based operations are the most likely to remain in public-sector ownership for the time being, their legal status, cost-efficiency and funding are of much interest. So far, however, they have been neglected, the focus of the work by the Bank and other international organizations being on the bus systems, where the private sector entry is the easiest. Given that the proposed strategy singles out electrically-driven systems, a study is warranted to survey the existing organizations, both on the supply and service sides, with operating cost estimation and benchmarking of their performance. The study would develop a model action program for reform, including the forms of private sector involvement for these modes.

The fifth study would support the longer-term "heart" of the proposed strategy – urban transport funding. On the public transport side, the study would survey the world experience and assess the suitability of various approaches to instruments, policies and institutional arrangements to the countries in the region. On the road side, the study would have two distinct elements: (i) a survey of urban road funding arrangements and trends across the region, thus serving as a complement to the on-going regional study of national-level road funding, and (ii) a first-cut estimation of social costs of urban traffic in selected ECA environments, and the demonstration of the degree of social subsidy to motor vehicles in cities. It will be of double interest to survey data on accidents and accident costs, an essential element of economic costs of road traffic, but also needed for traffic safety management. The first volume of the road funding study would help with the development of second-best road pricing and funding methods for the near future, and the second volume would start to lay foundations for the city-based road use charging for the longer term.

5.7 Links and Partnerships

The nature of urban transport activities is such that cross-sector linkages are imperative. The closest linkages are thematic – with the transport sector, and geographical – with the urban sector. In fact, urban transport activities in the Bank, too small to form a unit of their own, historically were fused with one or other of these kin groups depending on the nature and extent of regional programs. The linkages have taken the form of joint or parallel investment projects, or joint economic and sector studies. There have been urban transport components under several urban development projects in ECA (e.g. in Georgia and Latvia) and transport projects (Latvia, Hungary, Armenia). Linkages are also strong with: (i) other utility sectors like water and energy, with regard to pricing, poverty and development of competitive markets; (ii) environment-related activities, with Bank work combating pollution in Mexico City the most visible example of joint project making on a large scale; (iii) the private sector development activities, in the Bank and the IFC; and (iii) with social development activities, specifically on poverty impacts. This last has seen the least development in ECA, as illustrated in preceding sections of this report.

In listing these linkages, the proposed strategy goes beyond convenience due to kinship, and the continuation of links on *ad hoc* basis. It actually recognizes that in addition to free-standing urban transport projects with cities as clients multi-sector urban development programs, as well as urban transport sensitive national transport programs, are needed in order to be more effective in promoting the policy agenda - the staged approach to road use pricing, urban transport funding, and transfer of poverty concerns to the social assistance system. In other words, the content of the strategy makes joint work imperative. If there is a national roads project whose policy objective is to develop a road pricing and funding system, this may be a unique occasion to build a bridge from national road finance to city-based road finance. A structural adjustment loan with policy conditionality focusing on social protection may be the right vehicle to get targeted fare assistance program in a national framework.

The linkage with the urban work in ECA has multiple aspects. As before, any urban project aiming for improving municipal organization, finance and the delivery of services should be a candidate for including an urban transport policy or investment component. In the sector work dimension, the emerging instrument of city assistance

strategy appears especially well-suited for promoting institutional and policy changes at the city level which transcend individual service or infrastructure sectors. Finally, bringing urban transport closer to urban work may hold a possible clue to resolving a tension between decentralization and the prospects for Bank lending for urban transport. As the cities proceed on the path of greater independence from the national governments and seek credit-worthiness, the latter become reluctant to borrow on behalf of cities or even issue sovereign guarantees for loans whose beneficiaries are city governments and their service providers. The Bank cannot emulate the approach used by EBRD, which assists the client cities in becoming credit-worthy and dispenses with sovereign guarantees, this last being in violation of the Bank's Charter. A possible easing if not resolution of this problem may be to create projects of enough "weight" to merit and attract the national backing. In the past, this has involved making multi-city urban transport projects through the national government, as was done in the Russia Urban Transport Project. This approach can still work in larger countries. Urban finance projects, for single cities however, with multi-sector content, should be a parallel avenue we also pursue.

The closer linkage with the national transport policy reform agenda has again several aspects. Subsidies to passenger transport as a rule have a legal basis, usually in the form of a law. This legislation is to identify the categories of privileged passengers (still too high in many ECA countries) and give the foundation for the public service obligation contracts between the Ministry of Transport, the municipalities and the operators. Setting the prices is also usually the responsibility of the government, as decentralization in this field in ECA is rather slow. The progress with the restructuring of the railway sector involves the separation of regional and sub-urban rail services and bringing them under the regional or the municipal government. Funding for urban roads is highly dependent on the national road financing system, which is still to go through major changes in most if not all ECA countries. Solving the funding for maintenance of urban roads is not feasible without the more complex national reforms. Therefore, a more pro-active support through structural adjustment loans and national transport projects is advocated in favor of the urban transport mode.

Linkages with outside institutions are essential. They make data sharing possible, enrich policy discussions, provide opportunities to meet and exchange views with clients and potential clients from ECA countries, and allow for joint endeavors where action by Bank alone would not suffice. These linkages fall into two large groups. The <u>first group</u> consists of other international finance institutions, primarily the EBRD and the EIB. The form of these linkages starts with exchange of information and consultations on policies and projects, moving to parallel loans, co-financing and co-guaranteeing loans. With the EBRD, the most important field of interaction will be the creation of competitive markets for urban public transport services.[23] With the EIB, a promising area of cooperation will

[23] In fact, the single cooperative experience with EBRD over the last 10 years has been in the form of parallel loans in Budapest in 1995, with EBRD financing park-meters, "green" bus engines and the rehabilitation of the Millenium Metro line. Since that time, EBRD have tilted in the direction of IFC-like activities, seeking to participate in public-private partnerships, such as long-term concessions and leases. This tilt notwithstanding, they still work with public-sector urban transport operators. By charter, they are allowed to lend to sub-national governments and public-owned companies, without a sovereign guarantee. This places the emphasis of their lending operations on risk assessment of the investment itself, as well as the creditworth of the borrowing city/company. EBRD also recognize that urban public transport is not a financially self-supporting activity, but do <u>not</u> use policy conditionality as regards the cost recovery from fares. Instead, they work on the "creation of credit-worth" of the beneficiary public companies through (for

be on financing large-scale urban roads and public transport systems, to which the Bank could usefully add a policy dimension.[24] Other potential partners in both policy and investment domains of urban transport is with the Global Environmental Facility, emulating the approach pursued in other regions of the Bank (East Asia, Latin America and the Caribbean).

The second group consists of inter-government, professional and non-government organizations active in the field of urban transport. These partnerships would not involve investments, but policies, capacity-building, knowledge activities. They may include joint field-based or policy studies, research oriented to produce management and planning software and other tools, workshops and symposia, training, and knowledge networks. In the past, such partners have included the City Alliance, ECMT, UITP, IRF, ACTIM and CODATU. In the future, given that EU-related institutions are showing more interest in urban transport and other city-based subjects, additional linkages will need to be established. Finally, in recognition that a sector with a small portfolio has limited opportunities to communicate with colleagues and clients from other ECA countries, new linkages will need to be established with groups gathering various institutions from the client countries, or the assistance to create such new groups will need to be provided.

5.8 Adapting the Strategy Framework to Country Specifics

The proposed strategy framework is an expression of prevalent thematic concerns for the ECA Region. It would have to be reshaped for each individual case, depending on local circumstances and problems, the clients' ideas and demands, and the overall country strategy. Even at this stage of generality, however, different parts of the strategy are more useful for different country groups, and other elements are more applicable to different city sizes.

At one extreme are large cities of EU-accession countries. It is to these that the full scope of the policy agenda applies, because the motorization impacts are or will be felt there first. This will be especially so in cities which have historic central areas to protect (e.g. Prague, Bratislava, Budapest, Wroclaw), and it is there where city governments will move the quickest from traffic restraints and parking charges toward locally-based road use pricing. On the public transport side, though these cities have overcome many of the problems of the 1990s, the fact that they have preserved public sector monopoly means that market creation policies will attract renewed attention as the

---

example) legally binding service contracts between the client company and a credit-worthy city government. Also like EIB, EBRD do not use their loans to leverage policy reforms.

[24] EIB focuses on large, long-lived public transport projects, such as metros and tramway-based systems. In the 1990-2001 period, they approved 5 metro projects in ECA (outside the EU), with a total project cost of EUR 1.5bn, and 4 tramway projects with a total cost of EUR 0.5bn. This is fourfold more than the World Bank's input. Their position as regards urban transport is that the public authorities are hampered by a bureaucratic approach, lack of implementation experience and a lack of funds, whereas the private sector can offer all these things but has to be placed within a firm framework lest its profit seeking leads it away from the public interest. Hence, they will accept to lend for public sector projects (e.g. the new metro line in Budapest and light rail vehicles for Budapest Transport Company), but they seek as a matter of preference to participate in public-private partnerships. While EIB uses standard project acceptance criteria (technical appropriateness, fit with a long term development strategy, economic/financial attractiveness, environmental gains), it is accepted that urban transport projects are rarely self-supporting financially, but must be financially sustainable. Other than that, EIB loans do not have policy conditionality. It is considered that it is difficult enough to achieve a clear framework of the private-public agreement, an efficient division of responsibilities and a fair risk sharing arrangement without adding extra conditions.

date of accession comes closer. Likewise, given the strength of local and national governments and other institutions in EU-accession countries, and an advanced policy environment, the reform of the subsidy system may be doable there sooner than elsewhere in the region. ECA strategy is to invest less in these cities, but doors should be kept open to having investment operations in those amongst them who are keen to introduce a major policy change in road pricing, market creation, and/or transport subsidy reform. High awareness of environmental issues may advance the cause of drastic motorization restraints there sooner than appears from this point in time. In the meanwhile, it is recommended to use intensely both internal and external links and partnerships to work on capacity building and knowledge creation/exchange regarding these difficult subjects.

At the other extreme are medium-size cities of low-income CIS countries, with few motorization-related problems and bus-only public transport system. The strategy for these cities remains similar to that already used in the second-batch project like the one in the Kyrgyz Republic, though more ambitious. (National) road charging, urban road funding, traffic management and the creation of competitive markets in maintenance are priority areas on the roadside. On the public transport side, the focus will be on fares and subsidies, and fine tuning the franchising system, especially as regards the inclusion of those outside it – public sector and informal operators. An opportunity should be sought to undertake a pilot operation in which the Bank would finance expenditures of a city transport authority, while promoting a subsidy and fare reform, and an all-inclusive regulatory umbrella.

Somewhere in-between are large cities of second- and third-tier EU candidates in the Southeast Europe, many of them with weakly funded bus- and rail-based systems, and with motorization advancing. On the road side, the policy agenda will be dominated by methods to reduce traffic friction, especially the friction between public transport vehicles and the rest of traffic, i.e. law enforcement, traffic management, parking control and charges. On the public transport side, the major policy issue will be the future of public-sector operators whose status is weak but whose position is still dominant. Bucharest, Kiev, Sofia and Zagreb are examples of this category of cities. Some of the countries involved are close to making a break in terms of economic growth, which made Poland and Hungary most interesting to work in the preceding decade. Both Bucharest and Sofia are pursuing extensions of their metro systems, a situation where Bank presence and assistance may have potentially high returns. Both have large-scale public transport operators still in public ownership, and both have experimented with private sector involvement. Traffic congestion in both is said to be high, as are its environmental consequences. This makes them prime candidates for future Bank activities in both urban roads and public transport systems. Unfortunately, no sector work has been done in these cities. In contrast, there is ongoing sector work on city assistance strategies in each, as well as other sector and project work on railways and roads, which would facilitate all subsequent work in any municipal service sector therein. It is recommended to assign high priority to data collection and other learning activities about these countries, thus providing a missing element in an otherwise well-rounded program of Bank assistance.

In large cities of low-income CIS and Southeast European countries, the situation is still a near-crisis (Baku, Belgrade, Tbilisi, Yerevan). Poor economic performance of these countries in the 1990s has left their urban public transport operators in a very weak state, especially public-owned bus companies. Both Tbilisi and Yerevan have metros,

which is an especially challenging situation to deal with in times of the funding and demand crisis. Tbilisi Metro has maintained its patronage and role, while Yerevan Metro has seen its patronage collapse. Public-owned bus companies in both cities are at the point of extinction, whereas private bus operators grow stronger but with little regulation to protect the passengers' interest. Past Bank operations have assisted the Tbilisi Metro with some emergency-type investments and small-scale technical assistance to prepare policy reforms and future investment programs. In Yerevan, there has been no investment, but an urban transport strategy study is included in the recently started Transport project. A larger-profile Bank involvement in the urban transport sector may be catalytic in helping the countries organize street-based public transport along the lines of the for-market competitive model, while preserving in some form the ownership of infrastructure and equipment in off-street systems, like metros and suburban railways. On the roadside, the situation is as chaotic as in the preceding group of cities. Traffic management and parking control are priorities, as are the (national) road funding mechanisms.

Turkey is in a class of its own, because it has not gone recently through a cataclysmic process of changing its political and economic fundamentals. Its wealth is well above most other countries in the region, and its motorization has a longer history. Still, public transport services in its cities are much more important than in EU countries and offer much potential for change, because of unresolved relation between the public-owned and private-owned transport services. These co-exist in an uneasy partnership. The former receive subsidies whose rationale is not at all obvious, at least as regards the street-based bus mode. The latter, typically small companies operating minibuses, are weakly regulated, following an "in-market" competitive approach, and abundant. This produces frequent and profit-making services, but in high-demand corridors, the multitude of small, owner-operated vehicles poses a barrier to introducing at-grade busways, a mode for which Istanbul and Ankara have had pioneering experiences. The Bank should recommend a strategic re-orientation towards a for-market competition, coupled with a reformed fares policy, and an investment focus on at-grade public transport systems. On the road side, neither Istanbul, one of the two mega-cities in ECA, nor other large cities (Ankara, Bursa, Izmir) have adapted successfully to motorization, in great part because the national road funding system did not focus sufficiently on urban networks. Road use pricing and funding are therefore topical concerns in the policy domain, and opportunities for urban road investments abound. These urban transport activities could also be linked to renewed attempts by the Bank to assist in reforming the municipal finance in Turkey in the direction of greater decentralization.

If one were to select a single country in the ECA region as the best-suited to test the proposed strategy in its full complexity, it would be Russia. This is first due to its size, which amplifies all other reasons. Second, the rapid pace of Russia's motorization and changes in the modal split in and outside urban areas will have large consequences for efficiency, environmental quality, and economic growth of its cities, the country as a whole, even the world. The concurrence of poverty and motorization in Russia, marks it also as a place where the strategic tension between poverty and environmental objectives will be the highest. On the other hand, its existing efforts to develop targeted social assistance programs may create the right conditions for the economic pricing policies proposed herein. On the roadside, the funding mechanisms are in infancy, offering an excellent opportunity to anticipate urban road pricing in the new legislation. In the public transport sphere, the pro-market reform is at a crucial stage, its success depending on the

ability of cities to close the funding gap; this will need support and deserves to be supported. Finally, many cities have public transport modes with dedicated infrastructure, mostly metros and suburban railway systems, offering numerous investment opportunities, also useful to assist the regulatory reform.

Russia has already benefited from two Bank-funded urban transport projects, more than any other country in the region, but this is very little in comparison to what the Bank has been doing in another large, ex-socialist country –China. The two Russian projects have covered thematically and geographically different domains. The early project was designed for a crisis management in urban public transport services in specific cities. The second project focused on building the institutional capacity for traffic management in Moscow rather than on policy reforms. It is actually the first project that provides a bridge for future work in Russia. In its second phase, since 2000, this project has become a vehicle for designing national reforms in the organization and regulation of the public transport sector. A new project supporting these reforms appears the most mature option. The reforms are likely to consist of clarifying the role of the federal government in the sector, especially as regards fare discounts and exemptions, and providing a robust regulatory framework for cities based on the idea of for-market competition. This approach to regulation, already tested in different forms in many Russian cities, may succeed to get the much needed private capital to cities and should bring greater production efficiency, but will not fully resolve the problem of funding subsidies, even if the problem of exemptions is resolved. Another remaining "soft spot" will be the transformation of companies, which in the near term will remain in public ownership, notably rail-based lines (tramway, metro and suburban railways). As noted above, both of these are potentially suitable for the Bank's financial assistance with several delivery options. A possible project design is to assist in the development of a concession/franchise system in specific cities and build up the local capacity for implementing and running such a system, while financing the funding gap likely to remain in the transitional stage. Another project design would consist of investments in rail-based systems, or in any project, which turns the street space to exclusive use of public transport modes, with the development objective being to introduce management contracting or some other public/private partnerships for the operator. To complete this list of project options for Russia, investments in urban roads could be made in support of market creation in road maintenance, and –ultimately, towards the end of the decade, pricing/funding schemes for urban roads.

5.9 Closure

The strategy framework proposed in this report is now ready for the next stage: interactive blending with other thematic propositions in the process of making Bank assistance strategies and business plans for individual countries. To close, three key ideas contained in the preceding text will be repeated. First, the aggregate demand for investment capital in ECA countries, for urban transport and for all other sectors, is enormous, going into billions of dollars. Since Bank lending can only contribute a small fraction of what is demanded, the strategy is policy-driven, the investment agenda must be highly selective, the knowledge transfer is as important as the transfer of capital, and linkages with diverse internal and external partners must be nurtured. Second, the depth of involvement made possible by free-standing urban transport projects must be complemented with the policy reach of municipal projects, in one dimension, and national transport projects in another. Third, the past ten years have seen a Bank approach

whereby urban transport interventions were weakly connected to country-level policy dialogue and its key instruments – structural adjustment loans. Behind this has been a view that the distance between the micro-problems of urban transport from the macro aspects of transition was so large as to require only the shared principles and broadest alignment. Hitherto, with the progress of transition and structural reforms, country-level policy dialogues are expected to "descend" much closer to sector and sub-sector concerns, and individual sectors such as urban transport must "rise" to engage in a joint policy discourse.

Bibliography and References

Alain Bertaud (1999), *Cracow in the Twenty First Century: Princes or Merchants?*, Working Paper No. 8, Infrastructure Unit, Europe and Central Asia Department, The World Bank, Washington, D.C., July

Alain Bertaud and Betrand Renaud (1994), *Cities without Land Markets - Lessons of the Failed Socialist Experiment*, World Bank Discussion Paper #227, The World Bank, Washington, D.C.

Robert Buckley and Federico Mini (2000), *From Commissars to Mayors – Cities in the Transition Economies*, Infrastructure Sector Unit, Europe and Central Asia Region, The World Bank, Washington, D.C.

Paul Collier, David Dollar, and Nicholas Stern (2000), "Fifty Years of Development," paper presented at the ABCDE Europe conference, June

Martha de Melo and Gur Ofer (1999), *The Russian City in Transition: The First Six Years in 10 Volga Capitals*, Policy Research Working Paper # 2165, Development Research Group, The World Bank, Washington, D.C. August

Ken Gwilliam (2000), "Private Participation in Public Transport in the Former Soviet Union." Discussion Paper TWU-40, Transport, Water and Urban Development Department, The World Bank, Washington, D.C.

Walter Hook (1996), *Wheels Out of Balance: Suggested Guidelines for Intermodal Transport Sector Lending at the World Bank – A Case Study of Hungary*, Institute for Transportation and Development Policy, New York

Walter Hook (1999), "The political economy of post-transition policy in Hungary, *Transport Policy*, Vol. 6, pp.207-224

Laszlo Lovei et al (2000), *Maintaining Utility Services for the Poor – Policies and Practices in Central and Eastern Europe and the Former Soviet Union*, The World Bank, Washington, D.C., September

Slobodan Mitric (1993), "Urban Public Transport Policies and Strategies in Eastern Europe with Reference to North Africa", in *Urban Transport in Developing Countries*, Proceedings of CODATU VI Conference, Tunis: 15-19 February

Slobodan Mitric (1999), *Price and Subsidy Policies For Urban Public Transport and Water Utilities in Transition Economies*, Discussion Paper, Infrastructure Unit, Europe and Central Asia Department, The World Bank, Washington, D.C., March

John Pucher and Christian Lefèvre (1996), *The Urban Transport Crisis in Europe and North America*, Macmillan, Houndmills and London

Donald Schon and Marin Rein (1994), *Frame Reflection: Towards the Resolution of Intractable Policy Controversies*, New York: Basic Books

Wojciech Suchorzewski (1999), "The Funding of Urban Transport Investment in Central Europe", presented at the UITP/ECMT Seminar, Paris, October 13-14.

Vukan Vuchic (1999), *Transportation for Livable Cities*, Center for Urban Policy Research, Rutgers, The State University of New Jersey, New Brunswick, N.J.

Christopher Willoughby (2000), *The Economic Transition in Urban Transport: No Easy Solutions*, mimeo, Transport, Water and Urban Development Department, The World Bank

The World Bank (1992). *Warsaw Urban Transport Review*. Report No. 10624-POL. Transport Division and the Technical Department, Europe and Central Asia Region, June

The World Bank (1995). *Poland Urban Transport Review*. Report No. 12962-POL. Energy, Environment, Transportation and Telecommunications Division, Europe and Central Asia Region, and Transport Division, Transport, Water and Urban Development Department, September 8.

The World Bank (1998). *Kyrgyz Republic Urban Transport Sector Review*. Report No. 18310-KG. Infrastructure Unit, Europe and Central Asia Region, June

The World Bank (1998), *Infrastructure Sector Strategy: Living by Serving – New Directions for the Transition Economies*, Infrastructure Unit, Europe and Central Asia Department, September

The World Bank (1999), *POLAND – Strategic Priorities for the Transport Sector*, Report No. 19450-POL, Infrastructure Unit, Europe and Central Asia Department, June

The World Bank (1999b), *Toward a Comprehensive Development Strategy*, Operations Evaluation Department, Précis # 197, Autumn

The World Bank (2000a), *Cities in Transition: Urban and Local Government Strategy*, Washington, D.C.

The World Bank (2000b), *Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia*, Washington, D.C.

The World Bank (2002), *Transition – the First Ten Years: Analysis and Lessons for Eastern Europe and the Former Soviet Union*, Europe and Central Asia Regional Department, Washington, D.C.

The World Bank (2002), *Cities on the Move: Urban Transport Strategy Review*, Transport, Urban and Water Development Department, Washington, D.C.

---------- (2000), *Intelligent Mobility: Towards Sustainable Urban Development*, Discussion Papers submitted at the Urban 21 - Global Conference on the Urban Futures by the Municipalities of Berlin, Budapest, Ljubljana, Prague, Vienna and Zagreb, Berlin: July 4-6

ANNEXES

ANNEX 1

URBAN TRANSPORT PROJECT BRIEFS

RUSSIA – Urban Transport Project

Borrower: Government of Russia
Beneficiaries: Public transport companies in 14 cities, reduced to 8 cities, after the fiscal meltdown in Russia in 1998, for non-payment of loan installments
Loan: $329m (revised to $251m)
Board approval: 5/1995
Effectiveness: 3/1996
Closing date: 12/31/2002 (amended)
Project cost estimate: $329m at approval, revised to $249m
Main investments: Bus and trolley-bus vehicle replacement; rehabilitation of bus, trolley-bus and tram vehicles; spare parts; workshop equipment
Main development objectives: (i) arrest decline & preserve public transport capacity; (ii) improve the financial sustainability of the sector (through higher cost recovery); and (iii) strengthen local urban transport institutions; (iv) assist in developing a new national regulatory strategy for passenger transport
Status: About 1,400 new buses and 38 trolley-buses were purchased by the client cities, and another 1,400 vehicles were rehabilitated. The (national) spare parts component was dropped at mid-term. The closing date extended to December 2002 to include major policy development work (see below). The total disbursed through November 2002 has been $249m.
Results: Project investments succeeded in meeting the service objectives of the Project. The cost recovery target of 40% in 1996 was exceeded by 11 cities; by year 2001, the range was 49-105%, with a 78% average. Following the 1998-99 financial crisis in Russia, 6 cities were unable to repay sub-loans and dropped out of the Project in 2000, leading to a reduction in loan size. Uncompensated fare exemptions (applicable up to 75% of passengers) and non-payment by passengers are still the biggest remaining block to financial sustainability of public-sector companies. Privately operated services allowed in most cities under a variety of arrangements, but typically do not accept fare discounts and exemptions. An accelerated reform is required to regulate competition and set responsibilities of public and private operators on one side, and local, regional and national governments on the other. Technical assistance under the Project was instrumental in developing specifications for new vehicles and for vehicle rehabilitation, and successful in assembling and disseminating the international experience with urban transport regulation. A major urban transport policy study, done by local specialists with Bank participation, was completed in 2002, resulting in a full-scale proposal to the Russian Government for reforming urban passenger transport regulation. A Reform Center was formed in the Ministry of Transport, as was a distance-learning program for urban passenger transport, with grant funding secured under the Project. Also in 2002, the Project funded two major studies of public expenditures in the transport sector, one for national roads, the other for Russian railways, laying the foundation for major policy changes in those sub-sectors.

KAZAKHSTAN - Urban Transport Project

Borrower: Government of Kazakhstan
Beneficiaries: The Government (Ministry of Transport and Communications), local governments and public transport operators in Almaty, Karaganda and Shimkent (eventually extended to Astana). Initially, loan funds were to be passed downwards as grants, later transformed into sub-loans (signed only with Almaty and Astana).
Loan: $40m ($39m disbursed)
Board approval: 4/1994
Effectiveness: 2/1995
Closing date: 9/1998
Project cost estimate: $42.4m ($39.6m actual)
Investment program: 300 new buses ($28.5m), rehabilitation of 550 buses and 400 trolley-buses ($9m); workshop and office equipment ($0.3m); technical assistance and training ($2.8m). In the course of the project, the bus purchase was first reduced to 240 in the first batch (in view of the higher-than-expected bid prices). The rehabilitation component was dropped as no longer necessary, due to rapid deterioration of the owned fleet and the possibility of buying $4m worth of spare parts under another Bank loan (Rehabilitation). Trolley-bus rehabilitation was dropped because of procurement difficulties. These changes allowed for further purchases of 49 bus vehicles, so the total number bought was 289.
Main development objectives: (i) restore public transport services, which had been threatened by physical and financial collapse; (ii) adopt new regulatory structure, featuring competitive tendering for service franchises.
Status: Project was completed and the loan was closed. It disbursed $39.0m
Results: The project objectives were achieved. At the end of project , the supply of bus services in client cities was 2-3 times higher than at the start (in terms of vehicles placed in daily service), also throughout the country. Regulatory reform was successfully carried out, in the whole country, involving corporatization of state-owned operators, de-monopolization and competitive tendering for services featuring private operators. Most free travel privileges have been abolished or replaced by compensation agreements. In 1998, cost recovery was high at 86, 75 and 123 percent in the three cities, compared to 20-30 percent at the project's start. Subsidies from the local government amounted to 3, 8 and 6 percent of total revenue. However, the financial health of corporatized transport companies has not fully recovered from the shock of the cancellation of the ear-marked tax on the turnover of local enterprises (IMF/Bank macro-conditionality) and local governments' financial capacity is still weak. Re-payment of sub-loans remains a problem, as does further capital investment. New buses, at $127,000 including parts, may be expensive relative to flexible options available to private operators. Friction with non-licensed private operators remains, even after the 1998 Transport Law proclaimed route monopoly for winners of for-market tenders.

HUNGARY - Budapest Urban Transport Project

Borrower: Municipality of Budapest
Beneficiaries: Budapest Transport Company (BKV) Ltd.
Loan: $38m
Appraisal: October 1993
Board approval/effectiveness: June 15,1995/December 28, 1995
Original closing date: June 30, 2000 (original); June 30, 2001 (actual)
Project cost estimate: $67.1m
Main investments: tramway track reconstruction; bus vehicle replacement; maintenance equipment; vehicle monitoring system;
Main development objectives: keeping public transport services in Budapest at a high level, reforming BKV to become an efficient, financially healthy and more commercially-oriented company, increasing cost recovery, introducing a contractual relationship between BKV and Municipality of Budapest; introducing privately provided public transport services; and expanding a parking charge program set up by the Municipality under a parallel loan financed by the EBRD.
Status: The project was completed and the loan was closed on June 30, 2001. It disbursed about $37.8m
Results: All investments were implemented with success, including the procurement of 66 low-floor, low-emission "city buses" (16 more than in the original project design). BKV purchased another 50 buses under the same specification, but with own funds. The reconstruction of 34.5km of tramway track reconstruction was coupled with street improvements, financed by the Municipality, so that a number of major street corridors have become thoroughly modernized. A parallel project, financed by the EBRD, assisted in the purchase of low-emission bus engines and a complete overhaul of the historic Millennium Line of the metro. Public transport services were successfully maintained at a high level, and a downward trend in patronage has been stopped and reversed. Cost recovery has shifted to passengers, though at 44% this fell short of the agreed 50%, the main reason being the refusal of the Ministry of Finance to permit fare increases exceeding or even matching the general inflation. BKV's operating ratio varies between 110-120, instead of the agreed 100 or less, owing to the lack of agreement between the Municipality of Budapest and the state government as to the fair distribution of subsidy responsibility. The Municipality preferred to assist BKV through capital grants, which do not show in the operating ratio but do improve the balance sheet of the company. On the institutional side, BKV was turned into a joint-stock company, working under a service contract with the Municipality, and has carried out a restructuring process focussed on re-organization and reduction of departments and depots, staff reduction (from 19,000 to under 13,000), and the divestiture of auxiliary functions, such as construction, maintenance, information systems, and other. The agreed pilot program to put to tender services on 2 routes was implemented with success, and more such tenders are in the making as the BKV management realized the benefits of private investment capital. The pay-parking program has been a major success, having increased to encompass the entire central area on the Pest side of the river, with about 30,000 places, and is expanding into the Buda side, as one district after another joins the program.

LATVIA – Environment and Municipal Development Project

Borrower: Republic of Latvia (through Ministry of Finance). The transport part of the loan is on-lent to the City of Riga and on-lent to the beneficiary companies. The water part is on-lent by MoF to the water company, with a guarantee by the City of Daugavpils.
Beneficiaries: Three public transport companies in Riga, the water company in Daugavpils, and the Municipal Development Fund
Loan: $27.3m, of which $20.1 for urban public transport in Riga, $20.3 for water supply in Daugavpils; and $5m for the Municipal Development Fund
Board approval: December 14, 1995
Effectiveness: May 28, 1996
Closing date: March 31, 2002 (actual)
Project cost estimate: $45.4m, of which $20.1 for the urban transport component
Main investments (transport only): the purchase of 36 articulated buses, 30 trolley-buses, thyristor chopper traction control systems for 60 tramways, rehabilitation of 60 buses, spare parts purchases, bus workshop and equipment.
Main development objectives: (i) improve efficiency and quality of urban public transport in Riga; (ii) improve financial condition of the three public transport companies; and (iii) promote further corporatization of these companies.
Status: All transport components have been implemented. Total disbursements were $27.2m.
Results: The investments financed under the project, especially the new vehicles, helped raise the level of public transport services in Riga. The technical assistance helped the companies prepare business plans and generally raised the quality of operational and financial planning of the beneficiary companies. The level of revenue collection increased after the re-introduction of conductors. Overall, the financial condition of the three companies improved under the project, but they are still short of breaking even, due to a combination of sporadic subsidy payments, less than regular fare increases, and the failure to reduce operating costs. All three companies remain dependent on the municipal politics. Unusually, the tramway and trolley-bus company (TTP) has achieved the best results, in part because of its efficient network and stronger political support. Private operators active in the city under weak regulation. No major reforms in urban transport have taken place, and private/public relations remain unresolved. The project implementation unit carried out its project management functions successfully, but has not grown into a policy making and/or regulatory group within the municipal structure.

TURKMENISTAN - Urban Transport Project

Borrower: The Government of Turkmenistan, through Ministry of Auto-Transport
Beneficiaries: Public transport companies in Ashgabat, Mary and Turkmenabad
Loan: $34.2m
Board approval: May 27,1997
Effectivenes: August 29, 1997
Closing date: December 31, 2001 (orig.), June 30, 2001 (actual)
Project cost estimate: $38.3m
Main investments: 80 standard-size buses and 40 trolley-buses, rehabilitation of 81 buses, 34 trolley-buses and 33 minibuses; spare parts for buses, mini-buses and trolley-buses.
Main development objectives: improve on sustainable basis the efficiency and cost effectiveness of urban public transport in cities of Ashgabat, Mary and Chardjou. Specific objectives include: (i) reform the regulatory and organizational structure of the public transport sector, including the establishment of a passenger transport authority to manage the new contractual relations between cities and companies; (ii) increase cost recovery of operators; (iii) augment and preserve the supply of public transport services; (iv) enhance private sector participation; and (v) establish a continuing process of public consultation.
History: The loan had barely been declared effective, and the procurement of bus vehicles was at the bid evaluation stage, when the entire lending program for Turkmenistan was suspended in March 1998. The project was re-activated in mid-1999. Major contracts for buses and trolley-buses did get finalized in the fall of 1999, the former with some difficulties as regards bid evaluation. All the vehicles were delivered successfully and on time. Various spare parts contracts were also implemented. A major technical assistance contract, interrupted by suspension in the first phase of its planned activities, was not re-activated. A review of policy actions by the Government during and immediately after suspension, revealed that the agreed reform program initiated at the project's start had stalled. Attempts to re-start the process failed and the project was suspended in December 2000 and terminated in June 2001. Vehicle rehabilitation was not implemented. About $21m was disbursed and $13m was cancelled.
Results: Investments under the project contributed to a major improvement in the quantity and quality of services in Ashgabat, and there were also some gains in internal performance of Ashgabat-based companies. The participation of the other two cities was cancelled. None of the policy objectives were reached. The level of cost recovery from fares went down by half from its level at loan effectiveness, and hovers at 18-20% level. The concept of autonomous, financially healthy public transport companies did not "take." Urban passenger operations are still subsidized, at near-starvation levels, from profits of intercity freight operators. The service agreements signed between operators and cities remained dead letters on paper, the overall decentralization of power having lost steam in the country. Some private services remain in operation, treated with benign neglect, but the moves towards evolving an urban transport market never materialized.

UZBEKISTAN – Urban Transport Project

Borrower: Republic of Uzbekistan, with Uzavtotrans as the implementing agency (changed to Uztranssanoat in 2001)
Beneficiaries: Cities of Samarkand, Bukhara, Namangan, Nukus and Almalik
Loan: $29m
Board approval: 5/2000
Effectiveness: 09/22/2000 (check again)
Closing date: 12/31/2004
Project cost estimate: $31.45m
Main investments: Bus vehicles for a leasing company ($23.4m) and vehicle rehabilitation ($4.8m)
Main development objectives: Efficient and financially sustainable urban public transport services in the participating cities; specifically: (i) increased supply of services; (ii) improved operations and management by transport companies; (iii) fine tuning of the bus route franchise system already adopted by the government; and (iv) 100% cost recovery in the sector.
Status: Bidding documents for buses to be procured under the project ($23.4m) have been agreed and issued to bidders; the first contract for spare parts was signed, but further purchases of parts and rehabilitation of vehicles is being re-examined in the light of new condition. The contracts for technical assistance to the bus leasing unit and for assistance to cities with institutional, regulatory and financial matters have been awarded.
Results: Too early for evaluation.

KYRGYZ REPUBLIC - Urban Transport Project

Borrower: Kyrgyz Republic (Ministry of Transport and Communications)
Beneficiaries: Local governments in Bishkek, Osh and Jalal-Abad
Loan: $22m.
Board approval: 2000
Effectiveness: 09/15/2000
Closing date: 05/31/2004
Project cost estimate: $24.22m
Main investments: urban road rehabilitation in Bishkek ($16.27m), Osh ($3.43m) and Jalal-Abad ($2.01m)
Main development objectives: (i) establishing reliable and sustainable source of financing for road maintenance and rehabilitation, and efficient allocation of proceeds, by reforming the existing through Road Fund; (ii) increased efficiency of road maintenance and construction (through privatization plus institution building); (iii) greater cost recovery and cost efficiency in urban public transport (through national reforms addressing fares and competition between private and public-sector operators for service franchises.
Status: Some 93% of the funds for road works have been committed. The privatization of road construction is lagging. The pavement management system is at the stage of purchasing the equipment. Disbursements through the end of April 2002 amounted to $5m. On the policy side, the results are remarkable: Bishkek has introduced competitively awarded franchises for public transport services, and Osh and Jalal-Abad are to follow suit.
Results: Too early to assess the results.

RUSSIA – Moscow Urban Transport Project

Borrower: Russian federation
Beneficiaries: City of Moscow
Loan: $60m
Board approval: February 6, 2001
Effectiveness: September 24, 2001
Closing date: 12/31/2005
Project cost estimate: $123m
Main investments: traffic control systems, urban road rehabilitation, bridge rehabilitation
Main development objectives: Improve the institutional capacity of the City of Moscow to use traffic management methods
Status: The Traffic Management Unit is in place, supported by an expatriate technical assistance team. Bridge investments are proceeding well, while the small-scale traffic and parking management programs suffer from the absence of support by related departments.
Results: Too early for results to show.

ANNEX 2

GROWTH OF VEHICLE FLEET AND GDP IN ECA DURING THE PERIOD 1990-2000

	Car Ownership	**GDP - Growth**	**Car - Growth**	**Truck Growth**
	Car per 1000 Inhabitants in the year 2000	Average Growth % p.a. 1990-99	Average Growth % p.a. 1990-00	Average Growth % p.a. 1990-00
I. Accession Countries				
Bulgaria	233	-3	5	12
Czech Republic	334	1	6	4
Estonia	331	-1	9	1
Hungary	238 [3]	1	3 [8]	5 [8]
Latvia	232	-5	10	6
Lithuania	317	-4	14	-1
Poland	258	5	9	7
Romania	139	-1	14	2
Slovak Republic	236	2	2	5
Slovenia	424	2	5	15
Simple Average		0	8	6
II. Turkey & Mediterranean Islands				
Turkey	63	4	12	5
Malta	473	4	7 [4]	8 [4]
Cyprus	335	3	5	5
Simple Average		4	8	6
III. Russia, Ukraine & Belarus				
Russia	139	-6	10 [4]	8 [4]
Belarus	145	-3	11 [4]	
Ukraine	105	-11	4 [4]	
Simple Average		-7	8	3
IV. Caucasus				
Armenia	26 [2]	-3	-11 [7]	-12 [7]
Azerbaijan	42	-10	3 [4]	0 [4]
Georgia	45		-8 [4]	-1 [4]
Simple Average		-6	-5	-4
V. Central Asia				
Kazakhstan	67	-6	0 [4]	-6 [4]
Kyrgyzstan	38 [3]	-5	6 [5]	
Tajikistan	26 [2]		0 [6]	-7 [6]
Turkmenistan	47 [2]	-7		
Uzbekistan	40 [1]	-1		
Simple Average		-5	2	-6
VI. Southeast Europe				
Albania	34	3	12 [4]	0 [4]
Bosnia and Herzegovina	25 [2]	35	76 [6]	76 [6]
Croatia	250	0	4	15
Macedonia	138 [2]	-1	2 [6]	15 [6]
Moldova	54	-11	2	-3
Yugoslavia	150 [3]		0 [5]	1 [5]
Simple Average		5	16	17

[1] Data from 1994; [2] Data from 1996; [3] Data from 1999; [4] Years 1994-2000; [5] Years 1994-1999; [6] Years 1994-1996; [7] Years 1990-1996; [8] Years 1990-1999

Sources: IRF World Road Statistics 2002, 1996, 1992; World Development Indicators 2001, UN Transport Statistics 2000, UN Statistics of Road Traffic Accidents 2001. Compiled by Axel Metschies for the study of Road Finance in ECA countries (work in progress)

ANNEX 3

SUMMARY OF RECOMMENDED PRACTICES IN URBAN TRANSPORT

Routine Activities Related to Urban Roads

Traffic/parking management policy, institutions, and budgets for a continuous operational attention to the efficiency of use of the existing road network, and its allocation between pedestrians and the competing vehicle streams.

Introduction of on-street priority for public transport vehicles based on specific criteria (e.g. peak hour volume of passengers).

Fostering walking and the use of non-motorized vehicles through assignment of reserved on-street spaces.

System of charges for on-street parking as a step-up method to ration the scarce space and/or allocate parking spaces among short-to-long term users.

Private operation of off-street parking structures.

Road maintenance organization, with a stable and sufficient budget to maintain road surfaces in good state and/or rehabilitate them back to a good state.

Practice of using quantitative methods to allocate the maintenance budget to projects, and the use of competitive tendering to select the maintenance contractor.

Traffic law enforcement by a trained police force.

Accident recording and investigation by the police, linked through joint committees to the traffic management agency for corrective action.

Vehicle inspection for safety and emissions, following nationally adopted standards.

A municipal traffic committee as a policy making body.

Regulation of Urban Public Transport Services

Establishment of a public authority, be it a specialized agency or a committee of the urban government, with jurisdiction to define route network, service standards, on-street priority for public transport vehicles, and system-wide fare structure and levels, and to manage the service contracting process, and monitor the performance.

A market of operators, or operator associations, competing for service contracts ("for market" competition). Fair treatment of private and public-owned operators. In the short term, intermediate stages of performance contracts with public-sector operators, moving towards sub-contracting and management contracts, then full service contracting. In the longer term, concessions for sub-networks or entire networks. Differential treatment of street-based (bus) operators and operators using specialized infrastructure (e.g. tramways,

exclusive busways, metros, suburban/regional railways). Initially, all revenue risk to be taken by the public authority, with a gradual move towards passing all risk to operators.

Adoption of information technology based fares to permit complex pricing and revenue sharing

Fares evolving towards economic fares. The change from the currently prevalent low fares to be done in stages: first covering the direct operating costs, then depreciation of the rolling stock and equipment. The last stage, full cost recovery, to be done in tandem with locally based, road use pricing.

A parallel system of targeted subsidies for eligible travelers, administered through the social assistance or school system, and subject to the financial capacity checks of the subsidizing authority.

The use of preference and social impact studies to seek detailed knowledge of the traveling population, and ensure equity in gain/loss accounts.

Organization, pricing and funding for roads

Organization: an urban road authority, or a wing of an urban transport authority, with operational jurisdiction (if not ownership) over all roads in the urban perimeter.

Initial stages: unified (national) system of road finance, based on the damage to roads by various class vehicles (through fuel taxation and other means), with an agreed, stable formula for allocation to different sub-networks, including urban networks

Tolling all new primary roads

Move in the longer term towards area-based system of road use charges (from entry charges to electronic road pricing), as an instrument of traffic management and revenue generation, complementary with and gradually in lieu of the national fuel tax based approach.

System expansion through projects involving specialized infrastructure (major roads, rapid and semi-rapid transit modes)

Economic and financial tests for projects, as necessary but insufficient tests of acceptance

A broader, multi-criteria evaluation framework to reflect concerns difficult to express in money terms or even to quantify, risks associated with different options, distribution of impacts, …

Project and program planning grounded in the financial capacity of the urban government (and travelers)

Adherence to nationally adopted norms for the project cycle and corresponding depth of detail in designs and cost estimation

Public participation in planning and decision making

Competitive tendering for projects

ANNEX 4

BUILDING BLOCKS FOR AN URBAN TRANSPORT STRATEGY:

POLICIES AND CAPACITY BUILDING[25]

A.1 Introduce and implement a traffic management policy aiming to optimize the use of the existing infrastructure
A.2 Create/strengthen institutions for traffic management
A.3 Introduce /intensify traffic law enforcement activities
A.4 Adopt a policy to give priority to public transport vehicles in major street corridors (separate track, priority of passage at intersections)
A.5 Introduce non-price parking management as a means of traffic restraint
A.6 Introduce parking charges, inclusive of contracting out program management
B.1 Introduce standards and institutions for vehicle-generated emissions, inspection and incentives
C.1 Maximize impact of a road maintenance budget (through selection of projects, selection of low-cost contractors)
C.2 Ensure availability of sufficient funds for road maintenance (create a sustainable and equitable mechanism for funding road maintenance)
C.3 Create/strengthen institutions for road maintenance management
D.1 Make public sector transport operators more efficient and better off, by restructuring services; changing fare structure; restructuring organization and staffing; introducing new operational methods
D.2 Improve accounting systems, MI systems and other internal functions
D.3 Improve revenue collection (ticket inspection, fines, staff discipline)
D.4 Assist public sector transport operators to break even, all income included (introduce a contractual relation between public transport operator and authorities, with an in-built performance specification)
D.5 Shift cost burden from the public budget to passengers (improve cost recovery from fares)
D.5 Introduce capacity for investment evaluation into client enterprises
D.6 Improve targeting of public transport subsidies (may involve multi-sector approach)
D.7 Introduce contracting out with private sector operators, with or without breaking nominal monopoly (whether or not they are already present as informal sector)
D.8 Introduce management contracting
D.9 Establish locally-based regulatory institutions for public transport
D.10 Introduce competition for the market (service contracting, franchises, concessions) between eligible operators
E.1 Introduce new methods and instruments for urban transport planning to replace the static master planning method (feasibility studies, expenditure reviews, resource mobilization studies, action plans, city strategies)
E.2 Introduce new urban transport institutions (e.g. multi-modal authority)
F.1 Introduce a stable and systematic method for pricing and funding urban roads, linked to the national system of pricing and funding roads;
F.2 Introduce locally-based road use pricing
G.1 Reform municipal organization, user charging and municipal funding

[25] To suggest good matches between categories of building blocks for policies and investments (next annex), they are given the same letter

ANNEX 5

BUILDING BLOCKS FOR AN URBAN TRANSPORT STRATEGY:

INVESTMENTS

A.1 Traffic control equipment and software
A.2 Street and intersection improvements (typically at-grade)
A.3 Parking control equipment
A.4 Traffic police equipment
A.5 Construction of exclusive lanes for public transport vehicles

B.1 Vehicle registration systems
B.2 Emission testing equipment

C.1 Road maintenance
C.2 Road rehabilitation
C.3 Bridge rehabilitation

D.1 Overhaul of public transport vehicles
D.2 Spare parts
D.3 Depots & maintenance equipment
D.4 Replacement engines
D.5 New vehicles
D.6 Track reconstruction
D.7 Power supply reconstruction
D.8 Information and communication systems
D.9 Signaling systems
D.10 Ticketing hardware and software
D.12 Rehabilitation or new construction of passenger terminals

E.1 Staff severance packages
E. 2 Subsidy payments to public transport and/or social assistance authority

F.1 New secondary and tertiary roads
F.2 New major roads, including interchanges
F.3 New bridges

G.1 New public transport terminals and interchanges
G.2 New and/or substantially upgraded public transport lines (metros, semi-rapid transit, suburban rail)