

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT



IMPLEMENTING
SUSTAINABLE
URBAN TRAVEL
POLICIES

National Peer Review: Hungary



**IMPLEMENTING
SUSTAINABLE
URBAN TRAVEL
POLICIES**

National Peer Review: Hungary



EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (ECMT)

The European Conference of Ministers of Transport (ECMT) is an inter-governmental organisation established by a Protocol signed in Brussels on 17 October 1953. It is a forum in which Ministers responsible for transport, and more specifically the inland transport sector, can co-operate on policy. Within this forum, Ministers can openly discuss current problems and agree upon joint approaches aimed at improving the utilisation and at ensuring the rational development of European transport systems of international importance.

At present, the ECMT's role primarily consists of:

- helping to create an integrated transport system throughout the enlarged Europe that is economically and technically efficient, meets the highest possible safety and environmental standards and takes full account of the social dimension;
- helping also to build a bridge between the European Union and the rest of the continent at a political level.

The Council of the Conference comprises the Ministers of Transport of 43 full member countries: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, FYR Macedonia, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, the Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom. There are seven Associate member countries (Australia, Canada, Japan, Korea, Mexico, New Zealand and the United States) and one Observer country (Morocco).

A Committee of Deputies, composed of senior civil servants representing Ministers, prepares proposals for consideration by the Council of Ministers. The Committee is assisted by working groups, each of which has a specific mandate.

The issues currently being studied – on which policy decisions by Ministers will be required – include the development and implementation of a pan-European transport policy; the integration of Central and Eastern European Countries into the European transport market; specific issues relating to transport by rail, road and waterway; combined transport; transport and the environment; sustainable urban level; the social costs of transport; trends in international transport and infrastructure needs; transport for people with mobility handicaps; road safety; traffic management; road traffic information and new communications technologies.

Statistical analyses of trends in traffic and investment are published regularly by the ECMT and provide a clear indication of the situation, on a trimestrial or annual basis, in the transport sector in different European countries.

As part of its research activities, the ECMT holds regular Symposia, Seminars and Round Tables on transport economics issues. Their conclusions serve as a basis for formulating proposals for policy decisions to be submitted to Ministers.

The ECMT's Documentation Service has extensive information available concerning the transport sector. This information is accessible on the ECMT Internet site.

For administrative purposes the ECMT's Secretariat is attached to the Organisation for Economic Co-operation and Development (OECD).

Publié en français sous le titre :

Transports urbains durables : la mise en œuvre des politiques
EXAMENS NATIONAUX PAR LES PAIRS : HONGRIE

Further information about the ECMT is available on Internet at the following address:

www.oecd.org/cem

© ECMT 2004 – ECMT Publications are distributed by: OECD Publications Service,
2, rue André Pascal, 75775 PARIS CEDEX 16, France.

Foreword

A team of urban travel experts along with representatives of the European Conference of Ministers of Transport (ECMT) carried out an in-depth review of urban travel policy in Hungary involving a three-day visit to the country in June 2000.

The review was organised upon invitation of the former Ministry of Transport and Water Management (present Ministry of Economy and Transport) in the context of the project carried out by the ECMT in association with the OECD entitled “Implementing Sustainable Urban Travel Policies”. Begun in 1998, the project was designed to identify why sustainable urban travel policies are proving so difficult for countries to implement, and, more generally, how countries and cities can bridge the gap between policy recommendations and their implementation. The project was composed of three principal parts: a series of workshops on particular themes, a survey of cities, and a series of in-depth national reviews of urban travel policy.*

Three peer experts representing the governments of France, the Netherlands and the United Kingdom carried out the review. Two members of the ECMT secretariat also participated in the study.**

During the review visit, meetings were held with the Ministry of Transport and Water Management, as well as with the municipalities, local authorities, and public transport operators of the cities of Budapest, Szeged and Vác. In addition, team members met with representatives of the Hungarian State Railways (MÁV) and the Volánbusz bus company. With a key focus on public transport, the scope of the review included traffic and transport, land-use and spatial planning and environmental issues.

* This project comes as a follow-up to previous joint work carried out in the early 1990s, which resulted in a report entitled *Urban Travel and Sustainable Development*. Following the publication of this report, Ministers of Transport asked the ECMT to go back to cities in several years time to review implementation of urban travel policies in light of the recommendations of the report. The current project responds to that Ministerial mandate.

** These countries were selected by the Hungarian Ministry of Transport and Water Management based on their experience with urban transport issues of priority to the Ministry. A list of review team members is found in Annex.

A second visit to Hungary was conducted by the ECMT Secretariat in July 2003 to ascertain developments since the first review visit and verify findings of the expert team.

This study brings together a description of the policies and institutional structures related to urban travel with the analysis of the team of peer experts to provide a picture of how urban travel policy is formulated and implemented in Hungary.

Acknowledgements

ECMT would like to sincerely thank the team of experts who participated in the in-depth peer review of Hungary and contributed their experience and expertise to the analysis of the study. Members of the team included Mr. David Bayliss, Halcrow Fox, UK ; Mr Yannick Tondut, DREIF, France ; and Mr. Marcel Nollen, Ministry of Transport, Public Works and Water Management of the Netherlands. ECMT is very grateful to the Governments of the three countries represented on the team for facilitating the participation of the experts.

ECMT would like to express its gratitude to the Ministry of Economy and Transport of Hungary for their invitation to carry out an in-depth peer review. In particular, ECMT would like to thank Mr. Zoltán Kazatsay, Deputy State Secretary for EU Integration Affairs* for his support in the preparation and implementation of the study and Mr. Zsolt Denke for his assistance. ECMT is particularly grateful to Dr. Katalin Tánczos, Head of the Transport Economics Department of the Budapest University of Technology and Economics, and Dr. János Monigl, Managing Director of Transman Consulting Ltd., for their organisation of the review in Hungary and to Dr. Monigl and his staff for the preparation of the very helpful background material for the review.

* Former Deputy State Secretary for Transport.

Table of Contents

| | |
|-------------------------------------------------------------------------------------|----|
| <i>Chapter 1. Introduction</i> | 9 |
| <i>Chapter 2. Context</i> | 11 |
| 2.1. Physical and human contexts | 11 |
| 2.2. Economic context | 13 |
| 2.3. General state of and trends in transport..... | 15 |
| Notes | 20 |
| <i>Chapter 3. Key Trends and Sustainability Issues in Urban Travel</i> | 21 |
| 3.1. Urban travel | 21 |
| 3.2. Land-use..... | 25 |
| 3.3. Environment | 26 |
| 3.4. Safety | 28 |
| Notes | 29 |
| <i>Chapter 4. Institutional Context for Sustainable Urban Travel</i> | 31 |
| 4.1. General administrative structure of Hungary | 31 |
| 4.2. Institutional framework for land-use, transport and environment planning | 32 |
| Notes | 38 |
| <i>Chapter 5. Policy Context for Sustainable Urban Travel</i> | 39 |
| 5.1. Urban transport policy..... | 39 |
| 5.2. Spatial planning and land use..... | 55 |
| 5.3. Environment policy..... | 56 |
| 5.4. Traffic safety policy | 59 |
| Notes | 61 |
| <i>Chapter 6. Analysis of the Review Team</i> | 63 |
| 6.1. Context | 63 |
| 6.2. Policy context for sustainable urban travel..... | 63 |
| 6.3. Administrative structure for urban transport policy-making..... | 66 |
| 6.4. Urban public transport enhancement and development..... | 73 |
| 6.5. Land use and urban policy | 77 |
| 6.6. Environment policy..... | 78 |
| 6.7. Concluding Remarks | 79 |
| Notes | 80 |
| References | 81 |
| <i>Annex. Members of the ECMT Peer Review Team</i> | 83 |

Chapter 1

Introduction

Hungary's economic transformation of the 1990s has brought about significant changes in the way individuals travel and the means by which goods are transported. The transition period has seen a sharp increase in the private vehicle fleet – already begun in the 1980s – which has revealed an overall re-orientation of modal preferences in favour of private means of travel. Steady growth in road freight transport over the period has come in contrast to consistent declines in goods transport by rail and waterway. And years under central planning have left their mark on Hungary's transport network: its transport infrastructure – particularly that of rail – is largely in distress due to insufficient investment and maintenance over a prolonged period of time. Rolling stock has likewise suffered from inadequate financing and need for renewal.

Like many cities in Central and Eastern Europe, rising car ownership and use in urban areas has led to crowded and congested urban roads and city centres. Unabated development of large commercial outlets on the peripheries of urban areas with little access to public transport has exacerbated demand for car travel, and thereby contributed to rising air pollution and noise disturbance in a number of towns and cities. Moreover like many of their neighbours throughout the region, Hungarian cities are wrestling with how to maintain high levels of ridership on their particularly well-developed public transport systems, while faced with the financial burden of repairing and renovating ageing rolling stock and infrastructure.

Whilst the 1996 National Transport Policy for Hungary sets forth clear objectives for improving travel in cities*, its impact on actual policy-making in cities has been limited by a legal and institutional structure in Hungary which places responsibility for urban transport almost exclusively in the hands of local government. Lacking financial resources, municipalities have had difficulties assuming this responsibility. And public transport operators have been struggling with declining demand for public transport accompanied by tight budgetary

* Please see Section 5.1.

constraints and pressure to increase cost recovery through fare increases. As a result, progress in improving urban travel – though under way and particularly evident in the larger cities – has been slow.

A new 10-year transport policy – the details of which had not yet been released at the time of this report's writing – is under deliberation that will push forward the agenda for sustainable transport in Hungary and carry the transport sector through the period of EU Accession. It is in this context of policy evolution that the ECMT peer review of urban travel policies in Hungary was undertaken and this report prepared.

It should be additionally noted that in 2002 (following the visit of experts to Hungary), there were national elections and a change of government in Hungary, which led to the Ministry of Transport and Water Management being split – the transport side of the Ministry joining the Ministry of Economic Affairs thereby becoming the Ministry of Economy and Transport. Among the changes engendered by this merger was the creation of a division of the Department of Transport Policy dealing specifically with urban transport policy. Its mandate is to handle – among others – issues related to urban and suburban transport, and more specifically, to collaborate in the establishment of urban transport associations.

Though at the time of this report's writing, the new transport policy division had not had time to fully demonstrate its new role within the Ministry, the creation of this division is an encouraging sign, in that it shows recognition of a potentially helpful renewed role for the national government in urban travel policy development and implementation.

This study will examine the principal urban travel issues facing policy makers at this time, with particular attention to factors involving implementation of policies. Following a preliminary description of the general geophysical traits and economic situation of Hungary, the report will examine trends in urban travel and land use and proceed to look at the institutional context in which urban travel policies are developed and implemented, as well as the policies themselves and their implementation status. The report will then conclude with an evaluation of Hungarian urban travel policy by the ECMT team of peer experts, based on the conclusions of their study visit to Hungary in 2000.

Chapter 2

Context

2.1. Physical and human contexts

2.1.1. *Physical context*

Hungary strategically sits in the centre of Central Europe. A landlocked country of 93 030 km², Hungary shares its borders with seven countries: Slovakia to the north, Croatia and Serbia and Montenegro to the south, Romania to the east, Ukraine to the Northeast and Austria and Slovenia to the west. Crossing its territory are the main land routes linking Western Europe with the Balkan Peninsula, and the Mediterranean basin with the Ukraine.

Traversed from North to South by two rivers, the Danube and the Tisza, Hungary is divided into four geographical regions: to the east of the Danube, the Great Plain and the Northern mountains, and to the west of the Danube, the hilly Transdanubia and the Small Plain. The Danube, which flows through the capital city of Budapest dividing it into its two main parts – Buda and Pest, provides Hungary with a link to the Black Sea, as well as a passage to the North Sea via the Rhine-Main-Danube canal.

Primarily a lowland country with hills and low mountains along the Slovakian border, 84% of Hungary's territory lies less than 200 metres above sea level. Approximately 58% of total land area is arable and permanent cropland, 13% is forest, and 19% is other wooded land. With an abundance of thermal waters, Hungary also has the largest freshwater lake in Central Europe, Lake Balaton, as well as over 1 000 other natural and artificial lakes.¹

2.1.2. *Population and urbanisation*

Hungary's population totalled 10 142 million in 01.01.2003,² with approximately 60% of the population living in urban areas above 10 000 inhabitants, (30% in cities of 100 000 inhabitants or greater) and an average population density of 108 inhabitants per km². The northern part of the country is more densely populated than the South, and the only region with a population density higher than the national average is Central Hungary – including Budapest – with a density of 416 inhabitants per km².

Table 1. **Population of the principal cities of Hungary (2000)**

| City | Population |
|------------------|------------|
| Budapest | 1 838 753 |
| Debrecen | 205 032 |
| Miskolc | 173 629 |
| Szeged | 159 133 |
| Pécs | 158 607 |
| Vác ¹ | 35 000 |

1. Though not a major city in population, Vác is included here because it was one of the cities reviewed in the study.

Source: Monigl *et al.*, 2000.

Overshadowing other major Hungarian cities in terms of population, size, and economic importance, Budapest, the capital and largest urban area, accounts for almost 20% of the population with over 1.8 million inhabitants in the city itself and 2.5 million in the urban agglomeration. The second largest city, Debrecen, has a significantly smaller population with approximately 205 000 inhabitants.

The population of the urban area surrounding the city of Budapest has grown faster than the national average over the last 10 years – approximately 9% – while

Table 2. **Urbanisation of Hungarian counties (1999)**

| County | Share of total population (%) | Share of total land area (%) | Population density (inhabitants/km ²) | Degree of urbanisation ¹ |
|---------------------------|-------------------------------|------------------------------|---------------------------------------------------|-------------------------------------|
| Pest (including Budapest) | 28 | 7.4 | 413 | PU |
| Fejér | 4 | 5 | 97 | PR |
| Komarom-Esztergom | 3 | 2 | 138 | IN |
| Veszprém | 4 | 5 | 81 | IN |
| Győr-Moson-Sopron | 4 | 4 | 104 | IN |
| Vas | 3 | 4 | 80 | IN |
| Zala | 3 | 4 | 78 | PR |
| Baranya | 4 | 5 | 91 | IN |
| Somogy | 3 | 6 | 55 | PR |
| Tolna | 2 | 4 | 66 | PR |
| Borsod-Abaúj-Zemplén | 7 | 8 | 101 | IN |
| Heves | 3 | 4 | 89 | PR |
| Nograd | 2 | 3 | 86 | PR |
| Hajdu-Bihar | 5 | 7 | 88 | PR |
| Jász-Nagykún-Szolnok | 4 | 6 | 74 | PR |
| Szabolcs-Szatmár-Bereg | 6 | 6 | 96 | PR |
| Bács-Kiskun | 5 | 9 | 63 | PR |
| Békés | 4 | 6 | 70 | PR |
| Csongrad | 5 | 5 | 99 | PR |

1. Please see endnote 4 for key.

Source: OECD.

the population of the capital city itself over the same period has decreased 8.8% (181 232 inhabitants). Whereas the country's high mortality rate and low birth rate are factors in the drop in Budapest's population, the decrease is primarily due to the emigration of Budapest residents to suburban areas around the capital.³

Of Hungary's 19 counties, that of Pest (including Budapest) has the highest level of urbanisation and the largest share of the population. Twelve of the 19 counties are predominantly rural⁴ and six are of an intermediate level of urbanisation.

Figure 1. **Map of Hungary**



Source: OECD.

2.2. Economic context

Following 10 years of transition from a centrally-planned to a market-based economy, Hungary is surging into the new millennium with a strong, growing economy and a place among the first in line for EU accession.

This bright economic outlook is largely the fruit of bold macroeconomic and structural reforms implemented in 1995 and thereafter, which paved the road for

stability and economic growth following a severe contraction of the economy during the early years of transition (15% drop in GDP from 1990 to 1993) as trade relations with the former COMECON countries dropped off.

Based on devaluation of the Forint combined with fiscal restraint and a reduction in real wages, the package of reforms initially squeezed domestic demand and GDP growth. But increasing investment as of 1997 – stimulated by privatisation of industry and banking and creation of a strong corporate governance structure – led to rising income and private consumption. By 1998, GDP growth was at 5% and remained strong through 1999 and 2000, in spite of the effects of the Russian economic crisis, sharp increases in the price of oil, and the conflict in Kosovo. Preliminary GDP in 2000 was HUF 13 075 billion (euro 50 278 million) with an average per capita GDP of Euro 5 016. The transport and communications sector is responsible for approximately 6% of GDP and employs roughly 127 000 persons.

The largest regional contribution to GDP growth in the Hungarian economy over the transition period has been from Central Hungary, representing over 40% of national output, and a per capita GDP of almost 50% above the national average. The city of Budapest itself has been and continues to be the main driver of that output. Of the six other regions, those of Central and Western Transdanubia follow close behind with GDP per capita above or near the national average. Income per capita in Budapest exceeds the national average by approximately 87%.⁵

Today, over 85% of Hungary's output comes from the private sector, placing the country high not only among other Central and Eastern European countries, but among OECD countries as well. The state retains responsibility by law for a number of sectors, in particular transport, electricity, water supply, and postal service and telecommunications.

Along with its strong privatisation record, more foreign direct investment has flowed into Hungary during its transition than any other country in the region on both an absolute and per capita basis (almost twice the per capita share of the Czech Republic and nine times that of Poland).

Whilst the Government has indicated its intention to decrease overall taxation, Hungary's general tax burden is high compared to other OECD members, particularly relative to its level of economic development. Further, because of the many special allowances and exemptions, effective tax rates vary considerably among economic activities, sectors and agents. As a result many tax rates are very high, and compliance is difficult to ensure. Despite Government efforts over the last 10 years to increase tax receipts, an estimated 30% of economic activity may be escaping taxation.⁶

The overall economic outlook for Hungary remains positive. Annual inflation dropped to 11.2% in 1999 from its transition peak at 35% in 1991 and unemployment was at 6.5% in 2000, from its high of 13% in 1993 (OECD, 2000a and 2000b). In

mid-2003, the unemployment rate was 5.7%, this average varying significantly from region to region. With average yearly GDP growth of 4.7% since 1997, Hungary's economy is expected to continue to be strong in the coming years, which should help it in its next major transition – entry into the European Union.

2.3. General state of and trends in transport

The economic and political re-orientation in the early 1990s had a profound impact on the structure and activity of the transport sector. The transition period saw, among others:

- A decrease in passenger and freight transport in line with economic contraction, with an expected upturn as the economy continues to improve and with EU accession.
- A shift in commercial traffic from East to West.
- A drop in overall freight volumes resulting from the breaking up of large state-owned companies, many in Eastern Hungary, along with a decline in total freight tonne-kilometres as trade with former COMECON partners slowed.
- A re-orientation of modal preferences for transport in favour of private means of travel, as illustrated by sharp increase in car fleet, especially in recent years.
- A distressed transport infrastructure network – particularly that of rail – due to insufficient investment and maintenance over a prolonged period of time.⁷

2.3.1. Transport network and infrastructure

The 1996 Transport Policy points out that one of the principal challenges facing the Hungarian transport sector is to simultaneously modernise the railway system and develop the motorway network, both of which suffered from lack of investment under central planning and insufficient resources during the transition period of the 1990s.

Rail

Objectives outlined in the Policy for railway transport development include:

- Restructuring of railway organisation, increasing safety, improving service quality and competitiveness and capacity improvements.
- Investment in track maintenance.
- Modernisation and upgrading of lines along EU corridors to a 160 km/h limit.
- Re-organisation of the MÁV.

While, the density of Hungary's rail network, 8.2 route kms/100 km² is almost twice that of the OECD Europe average, (4.2 km/100 km²), the overall quality of the system remains low, especially as concerns the share of double tracks in the

network, electrified lines and maximum speed allowed (most rail lines are designed for speeds below 120 km/h). In addition, the technical state of the rolling stock of MÁV, the Hungarian State Railways remains inadequate for use on the international network. These problems persist in spite of efforts begun in the 1990s to restructure and reorganise the national railway system. Total length of the Hungarian railway network in 2000 was 7 897 km, 2 718 of which was electrified.

Road

With 30 267 km of public paved roads, the density of Hungary's overall road network (200 km/100 km²) again surpasses that of the OECD average, however, Hungary's 505-km motorway and expressway network is less than one-half the density of the Western European average. Public road networks remain heavily centralised with all motorways originating in Budapest. With priority for motorway development placed on linking Hungary with western Europe and neighbouring countries along Helsinki corridors, many regions in the central and eastern part of the country continue to suffer from inadequate supply lines. Moreover, the overall road network suffers from an insufficient number of bridges over the Danube and Tisza rivers, and by the lack of roads of adequate quality linking major cities and regions.⁸

The 1996 Transport Policy sets the extension of the motorway network to the country's borders as the first priority for road infrastructure development, followed by supplementing the radial road network with a system of connecting roads and constructing bypass roads to provide relief from transit traffic through large cities. During the 1990s, approximately 170 km of motorways were constructed, 114 km or roughly 70% since 1995, bring the total to 505 km as of 1999.⁹ Most of the construction occurred on four lines: the M1 to the Austrian border from Győr to Hegyeshalom, which completes the motorway connection between Budapest and Vienna, the M3 towards Miskolc and on to the Ukrainian border, the M5 from Budapest towards Szeged and on to the Serbian border, and the M7 from Budapest to Lake Balaton and on to Croatia and Slovenia.¹⁰

Inland waterway

In spite of Hungary's large number of rivers and lakes, there are only roughly 1 300 km of navigable waterways. As the 1996 Transport Policy points out, the Danube has been a major part of the transcontinental Danube-Main-Rhine system since Autumn 1992, however the Hungarian segment of this river system has been hindered by a number of problems, notably the shallow depths of the Danube just above Budapest, which do not meet the EU specifications for navigation. Moreover, port density along the country's other major rivers is below that of western Europe, and cargo ports on these rivers do not meet the loading requirements of most western European countries. Table 3 provides an overview of transport infrastructure development in Hungary over the last 30 years.

Table 3. **Transport infrastructure in Hungary**
(Length in kilometres)

| | 1970 | 1980 | 1990 | 1995 | 1999 | 2000 |
|-------------------------------------|-------|--------|--------------------|--------------------|--------|--------|
| Road network (<i>paved</i>) | – | 29 759 | 29 741 | 30 132 | 30 267 | 30 307 |
| Motorways/ motor roads | 134 | 209 | 349 | 420 | 505 | 505 |
| Trunk roads | 1 899 | 1 927 | 1 888 | 2 055 | 2 171 | 2 173 |
| Main secondary roads | 4 078 | 4 449 | 4 499 | 4 390 | 4 323 | 4 330 |
| Inland waterways | – | – | 1 276 ¹ | 1 293 | 1 293 | 1 293 |
| Rail network (<i>constructed</i>) | 9 397 | 8 033 | 8 038 | 7 873 ² | 7 873 | 7 897 |
| Double track | 1 026 | 1 103 | 1 236 | 1 292 ² | 1 292 | 1 292 |
| Electrified | 837 | 1 510 | 2 249 | 2 594 ² | 2 620 | 2 718 |

1. 1992.

2. 1998.

Source: HCSO (2000) and ECMT.

2.3.2. Car ownership

Private motor vehicle ownership has more than doubled over the last two decades in Hungary, as in most of its neighbouring countries as well, a trend which began prior to transition, but which has continued into the 1990s in spite of economic contraction and falling personal income.¹¹

Passenger cars have grown in number by more than 16% over the last 10 years: 1 944 553 cars were on the road in 1990, growing to 2 255 526 in 1999 (HCSO and Monigl, 2000). By the end of the 1990s, car ownership stood at 230 vehicles/1 000 persons, up from approximately 95 vehicles/1 000 persons in 1980. By comparison, OECD Europe averaged 370 vehicles/1 000 persons in 1999, with an overall OECD average of 440 vehicles/1 000 persons.¹²

The cost of a car has remained roughly the same relative to personal income since the late 1980s – approximately 20 times the average monthly salary.¹³

New cars have now mostly replaced older used models as the majority of car sales, thanks to tight customs regulations imposed in the mid-1990s which reduced the influx of heavily-polluting used cars from western Europe. The average age of the passenger car fleet is 12 years, with 27% of the fleet over 16 years old. Although the number of vehicles equipped with catalysts is increasing, roughly half of the fleet is made up of heavily polluting two-stroke engine and other vehicles.¹⁴

2.3.3. Passenger transport

Under central planning, most inhabitants of large urban areas relied predominantly on public transport services for their travel needs, services that were pro-

vided at a relatively low price compared to average individual income. However, the growing numbers of cars on the road coupled with declining public transport infrastructure and rolling stock have put pressure on public transport's share in the modal split. Table 4 below traces evolution in national modal split from 1980 to 2000.

Table 4. **Modal share**
(% p-km)

| | 1980 | 1990 | 1995 | 1999 | 2000 | % change 1980-2000 |
|----------------------------|------|------|------|------|------|-----------------------|
| Private cars | 47 | 57 | 59 | 56 | 55 | +17 |
| Bus and coach ¹ | 28 | 23 | 22 | 22 | 23 | -18 |
| Rail ² | 21 | 16 | 14 | 15 | 15 | -28 |
| Air | 1 | 2 | 3 | 5 | 5 | +400 |
| Other ³ | 3 | 2 | 2 | 2 | 2 | -33 |

1. Long-distance and local.

2. Including suburban rail, and metro.

3. Waterway, tram, trolleybus.

Source: HCSO and ECMT.

Private car use

Car use throughout Hungary has grown over the last two decades but at a more-moderate rate than car ownership. The period 1980 to 2000 saw a more than 20% increase in car passenger-kilometres, with a 7% drop in the 1990s during transition as the economy contracted and as the cost of using a motor vehicle rose with the introduction beginning in 1988 of fuel taxes, parking charges, local taxes and motorway tolls, which had a significant impact on private vehicle use.¹⁵ With economic recovery in the late 1990s, the overall upward trend in car use is expected to continue.

Public transport

Surpassing increases in private car traffic, air passenger travel has by far seen the most spectacular increase during the period prior to and during transition, soaring over 200% from 1980 to the end of the 1990s. Whilst air and car travel made strong gains in passenger traffic over the period, rail passenger-kilometres¹⁶ dropped 30% nation-wide from 1980 to 2000, 15% in the 1990s, though traffic improved as of 1995, registering a roughly 16% recovery in the last five years of the decade. And though never a significant part of passenger modal share, traffic on inland waterways decreased 30% over the last two decades, about 17% from 1995 to 1999, before showing a 13% increase from 1999 to 2000.

Table 5 below shows trends in private travel by mode from 1980 to 2000.¹⁷

Table 5. Trends in private mobility¹
(Millions of passenger-kilometres)

| Mode | 1980 | 1990 | 1995 | 1997 | 1998 | 1999 | 2000 ³ |
|---------------------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------|
| Private car ² | 36 000 | 47 000 | 44 100 | 43 200 | 43 520 | 44 000 | 43 540 |
| Rail | 13 714 | 11 403 | 8 336 | 8 669 | 8 884 | 9 514 | 9 693 |
| Suburban rail | 942 | 790 | 614 | 545 | 571 | 561 | 565 |
| Long-distance bus/coach | 13 505 | 10 601 | 9 556 | 10 168 | 10 622 | 11 265 | 12 115 |
| Local bus | 8 390 | 8 660 | 6 741 | 6 175 | 6 259 | 6 241 | 6 327 |
| <i>of which: Budapest</i> | 4 166 | 3 975 | 3 076 | 2 704 | 2 828 | 2 857 | 2 923 |
| Air | 1 076 | 1 695 | 2 383 | 3 049 | 3 038 | 3 513 | 3 539 |
| Inland waterway | 63 | 54 | 49 | 38 | 41 | 40 | 45 |
| Local waterway | 13 | 13 | 6 | 4 | 4 | 5 | 4 |
| Tramway and trolleybus | 2 409 | 1 816 | 1 586 | 1 457 | 1 475 | 1 484 | 1 502 |
| <i>of which: Budapest</i> | 2 009 | 1 443 | 1 266 | 1 181 | 1 215 | 1 219 | 1 243 |
| Metro | 1 617 | 1 232 | 1 299 | 1 222 | 1 303 | 1 327 | 1 358 |
| Total | 77 730 | 83 264 | 74 670 | 74 511 | 75 717 | 77 950 | 78 688 |

1. Shaded areas represent travel in urban areas.

2. Source of 2000 figures for private car and rail-ECMT. Other 2000 figures-HCSO.

3. Includes in urban areas. Approximately 30- to- 40% is accounted for by urban travel.

Source: HCSO and ECMT.

2.3.4. Freight transport

Table 6 below shows trends in freight transport from 1980 to 2000.

Table 6. Freight transport by Hungarian companies
(Million tonne-kilometres)

| | 1980 | 1990 | 1995 | 1997 | 1998 | 1999 | 2000 |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Road ¹ | 11 404 | 15 159 | 13 040 | 12 912 | 11 744 | 12 014 | 12 146 |
| Rail | 24 397 | 16 781 | 8 337 | 8 064 | 8 150 | 7 734 | 8 095 |
| Inland Waterway | 2 146 | 2 038 | 1 260 | 1 644 | 1 561 | 958 | 891 |
| Air | 28 | 15 | 36 | 50 | 42 | 56 | 60 |
| Pipeline | 4 393 | 5 287 | 4 140 | 4 610 | 4 799 | 4 457 | 4 024 |
| Total | 42 368 | 39 280 | 26 813 | 27 280 | 26 296 | 25 219 | 25 216 |

1. Includes both for hire and own account traffic.

Source: ECMT, HCSO, MTCWM.

Overall freight traffic (in tonne-kilometres) dropped 40% from 1980 to 2000, 36% in the last ten years following economic contraction and the drop in trade with former Soviet pact trading partners. Air freight transport has had the most

significant increase over the last two decades, more than doubling in the 10 years of transition during the 1990s.

The most significant decline in freight traffic has been observed in rail freight transport, which fell 67% over the two decades from 1980 to 2000, 52% during the 1990s. Rail's modal share dropped from approximately 58% in 1980, to 31% in 1995, roughly its share of modal split in 2000 as well. Inland waterway transport dropped 58% over the 20-year period.

After increasing 33% from 1980 to 1990, road freight transport fell 14% during the first five years of transition, stabilising with economic recovery from 1997-2000 at 48% of modal split, up from 39% in 1990 and 27% in 1980.

Notes

1. OECD, 2000b and Atlapedia, Web.
2. HCSO Web. With a decreasing birth rate (from 2 to 1.5) and persistent high mortality (more than 140 000 deaths annually), Hungary is the only OECD country in which population fell between 1980-1998.
3. HCSO Web, and OECD, 2001.
4. OECD evaluation methodology based on population density (inhabitants/km²): PR: Predominantly rural (more than 50%); PU: Predominantly urban (less than 15%); IN: Intermediate (between 15 and 50%).
5. OECD, 2001.
6. OECD, 2000a and 2000b.
7. Monigl *et al.*, 2000.
8. As of 2003, two bridges had been completed over the Danube River (one reconstructed between Hungary and Slovakia, having been destroyed in World War II, and the other, a newly built bridge. An additional bridge has been recently constructed over the Tisza River (see note 9).
9. The total length of motorways (including expressways) in Hungary reached 653 km in 2003, with completion of a section of the M3 (including a new Tisza bridge in 2002) and completion of a new Danube bridge with connecting motorway sections of the planned M9 motorway.
10. As of 2003, only one of four motorways from Budapest to the border had been completed, the M1.
11. This disparity between falling personal incomes and increased car ownership can be attributed to a polarisation of incomes, with the wealthiest 20% of the population accounting for a significant portion of automobile sales (Hook).
12. OECD, 2000b.
13. Hook, 1999.
14. OECD, 2000b.
15. See Section 5.1.5 for a look at pricing and fiscal policy.
16. Including suburban rail.
17. There is no systematic collection of data on cycling and walking in Hungary.

Key Trends and Sustainability Issues in Urban Travel

3.1. Urban travel

Hungary has experienced many of the same trends in urban travel observed in other cities of Central and Eastern Europe undergoing transition; they include:

- Overall rising car ownership and use.
- Declining public transport patronage.
- Increasing congestion on roads in and around city centres.
- Uncontrolled development of large commercial outlets on the peripheries of urban areas.
- Serious air pollution and noise problems.

3.1.1. Urban traffic congestion

Over the last 10 years, there has been a significant increase in the numbers of cars on urban roads in Hungary. As a result, rush-hour traffic in many cities and towns is now less distinguishable from traffic at other times of the day.

Role of urban road networks

Whilst urban road networks in Hungary are relatively extensive, (roughly 2 900 km of paved streets in Budapest), several key problems are exacerbating congestion and bottlenecks in urban areas. Radial roads are better developed than ring roads, for example, a problem in many of the larger cities. The lack of bypasses, along with an insufficient number of bridges across the Danube and Tisza rivers, is problematic for transit traffic in particular, which in a number of cities – notably Szeged – is obligated to go through the centre of the city, causing congestion.

Development of the ring road around Budapest, the M0 motorway, was designed to relieve the city of transit and some suburban traffic. Its completion, however, has been the subject of considerable political debate, particularly regarding how much through-traffic would actually be diverted from the downtown area,

and its potential impacts on public health (due to emissions from increased automobile traffic) and further commercial development on the periphery of Budapest. As of 2000, 28.7 km of the M0 had been completed, connecting in Budapest the M1 to Austria, the M7 to Lake Balaton and towards the Croatian and Slovenian border and the M5 leading South to Szeged and the Serbian border.¹

Awaiting completion of its bypass road, Szeged continues to suffer from through-traffic coming off the M5, which as yet stops roughly 60 km Northwest of the city. In 2000, 25 000 vehicles per day were transiting Szeged from the M5 to the Serbian border.

The considerably smaller Vác, which lies along the Danube in a meander Northwest of Budapest, is the site of a ferry port, an important transit point across the Danube. The port activity is a source of problematic congestion, mostly truck traffic coming through the town from the port to the M2 expressway. A bypass road exists but awaits extension of the M2 in order to divert traffic from the ferries away from the town centre.

In addition to further need for ring roads and bypasses, new bridges are badly needed in a number of Hungarian cities. In Budapest, eight road bridges cross the Danube, five of which are located in the city centre, which has contributed to traffic congestion in the inner districts. Szeged awaits the construction of a third bridge to relieve some international through-traffic currently channelled onto its older bridge.

3.1.2. Public transport network and service provision

Urban public transport is well developed in Hungary. Budapest's public transport system is composed of buses, tramways and trolleybuses, an underground metro (the first underground railway in continental Europe) and a suburban railway.

Tables 7a, 7b and 7c show evolution in urban transport networks and rolling stock over the last two decades in Hungary.

Public transport services² are provided in Budapest by:

- The Budapest Transport Company (BKV), a municipality-owned shareholder company, which operates more than 250 tramway, bus, trolleybus and metro lines within Budapest and some suburban rail lines (operated by HÉV) and bus services.
- The Hungarian State Railways (MÁV), a state-owned company.
- Volánbusz, the state-owned regional bus company, which operates in the suburban areas of Budapest.

In most other towns and cities, public transport is provided by buses, and additionally by trams and trolleybuses in the largest cities. In cities where the

²²

Table 7a. Local bus network and rolling stock

| | 1980 | 1990 | 2000 |
|----------------------------------------|-------|-------|-------|
| Length of network (km) | 3 523 | 4 675 | 4 070 |
| <i>of which: Budapest</i> | 635 | 761 | 736 |
| No. of buses in Budapest | 1 759 | 1 794 | 1 423 |
| No. of municipalities with bus network | 184 | 203 | 109 |

Source: HCSO and BKV.

Table 7b. Tramway and trolleybus network and rolling stock

| | 1980 | 1990 | 2000 |
|------------------------------|-------|-------|------|
| Length of tramway lines (km) | 215 | 196 | 191 |
| <i>of which: Budapest</i> | 173 | 157 | 158 |
| Length of trolleybus lines | 60 | 95 | 90 |
| <i>of which: Budapest</i> | 55 | 68 | 65 |
| No. of tramway cars | 1 347 | 1 043 | 898 |
| <i>of which: Budapest</i> | 1 221 | 929 | 801 |
| No. of trolleybuses | 256 | 317 | 245 |
| <i>of which: Budapest</i> | 247 | 234 | 168 |

Source: HCSO and BKV.

Table 7c. Metro and millennium underground¹

| | 1980 | 1990 | 2000 |
|-------------------------------------------|------|------|------|
| Length- metro/Underground rail lines (km) | 23.1 | 34.6 | 34.6 |
| No. – metro cars | 236 | 400 | 403 |

1. Budapest only.

Source: HCSO and BKV.

municipality does not own a local bus company, one of the state-owned Volán companies provides local bus services.

Lack of financing for public transport, however, has led to increasing deficits in public transport provision, in spite of significant increases in public transport fares. As a result, service frequency and the general quality of public transport services has decreased and numbers of passengers on public transport has continually dropped in most modes.³ Since 1990, the number of municipalities with local bus networks has decreased by 46%. Links between towns and cities are provided by inter-city railway and bus lines.

Some of the principal problems encountered in public transport include:

- Aged and poor quality vehicle fleet.
- Overcrowding of vehicles and lack of passenger information.
- Low travel speed on main lines due to poor track conditions; circulation speeds on tram, trolleybus and bus lines in Budapest have dropped an average of 5% from 1993 to 2000.
- Poor service reliability, (lack of regularity of services, frequency).
- Poor conditions for transfer among different modes.

3.1.3. Traffic trends and modal share in towns and cities

With growth in private car traffic putting pressure on public transport modes and service quality and frequency decreasing, modal share of public transport in urban travel has dropped from its once very favourable 80% public transport/20% private transport split prior to transition, to an overall 60-40 split in Budapest – still respectable nevertheless on a global scale.

Urban public transport traffic (expressed in p-km)⁴ decreased during the 1990s, with the exception of travel on the Budapest metro, which increased almost 8% in the late 1990s after falling almost 25% from 1980 to 1995. Travel on urban bus systems dropped 28% in the 1990s, recovering very slightly in 2000. Tramway and trolleybus traffic slipped 18% over the same period, also turning modestly upward in 2000.

Daily commuter traffic from the 43 settlements of the Budapest agglomeration has increased by more than 25% since 1992, according to recent surveys, in large part due to movement of people out of the city to suburbs and outlying areas around the capital. Approximately two-thirds of the commuting population of roughly 300 000 uses public transport, 22% of which use inter-city bus services provided by Volánbusz, 30% commute by train (MÁV) and 40% by BKV suburban rail (HÉV) and bus services.

The remaining one-third of the commuting population travels to Budapest by car and accesses the city via the motorways, the busiest of which is the M3 (45 000 vehicles/workday), closely followed by the M7 (15% less). Fifty per cent of all commuting trips are to and from the workplace.⁵

Table 8 below shows the evolution in the numbers of passengers carried on urban public transport systems in Hungary. All modes have experienced decreases in passenger numbers both over the transition period of the 1990s and the decade preceding transition.

Table 8. **Passengers carried on urban public transport (thousands)**

| | 1980 | 1990 | 1998 | 2000 | Evolution | |
|------------------------------------------|-------|-------|-------|-------|-----------|-----------|
| | | | | | 1980-2000 | 1990-2000 |
| Local bus | 1 702 | 2 066 | 1 505 | 1 516 | -11 | -27 |
| Budapest | 615 | 779 | 568 | 582 | -33 | -25 |
| Tram/Trolleybus | 681 | 676 | 553 | 563 | -17 | -17 |
| Budapest | 526 | 517 | 448 | 457 | -13 | -12 |
| Debrecen | 44 | 68 | 42 | 39 | -11 | -43 |
| Szeged | 57 | 59 | 31 | 31 | -46 | -47 |
| Miskolc | 53 | 31 | 32 | 35 | -34 | +13 |
| Metro/Underground rail (Budapest) | 348 | 302 | 311 | 323 | -7 | +7 |
| Suburban rail (Budapest) | 102 | 86 | 64 | 65 | -36 | -24 |

Source: HCSO and BKV.

3.2. Land-use

The transition period of the 1990s has seen profound changes in land use trends in Hungary, particularly as concerns residential and commercial location patterns.

Several important factors have driven these changes:

- The restructuring of the housing market, with a reduction in investment and development of public housing by the state – housing built under central planning in high-density housing estates well-served by public transit – more recently concentrated in up-scale single-family homes in lower-density areas poorly served by public transport.
- The privatisation of the real-estate market, leading to higher rents and property prices and the subsequent displacement of residents as residential properties have been converted for business and commercial purposes.
- The influx of direct foreign investment in real estate and the privatisation of land ownership, which opened the door to commercial retail developers.
- Weak planning guidelines and controls on a regional and local level⁶ – frequently ignored or excused with the prospect of potential corporate tax revenues.

The result has been on the one hand the emigration of city residents to suburban and rural areas surrounding cities, particularly middle-to-upper income but also more modest-income households. And on the other hand, the development – virtually unfettered in many cases – of large commercial and retail shopping centres in low-density areas within, on the peripheries and in the suburbs of urban areas.

These developments have contributed to the surge in private car use in urban areas, growth in commuter traffic – particularly in the Budapest agglomeration – and the decline in use of public transport.

With the movement of city inhabitants to the suburbs and rural areas has come growth in the smaller villages and towns of these outlying areas. Seeing potential for an increased tax base, these small settlements have in many cases imposed few restrictions on residential development to encourage the purchase of properties in their jurisdictions. In addition, a large number of former city residents, particularly in Budapest but also in Szeged and other large cities, have begun using their secondary weekend homes out of the city as their principal residences.

Most of the individuals moving out of the city to live return nevertheless to the city on a daily basis to work, attend school, etc. As noted above, public transport is not always accessible to accommodate these daily commutes, and as a result, the capacity of the connecting roads suitable for cars is regularly exceeded during peak traffic hours.

Again, recognising potential for generating local revenue and jobs, municipal authorities have encouraged commercial and retail development in their constituencies with little consideration for municipal and regional planning guidelines and sometimes to the detriment of greenfield or greenbelt preservation policy objectives. These retail and commercial outlets often locate in areas inaccessible to existing public transport lines and facilities, and have in doing so generated increases in car traffic. Budapest and Szeged as well as most other major cities have seen numerous shopping centres and other commercial outlets built in lower-density and peripheral zones during the last few years.

Prior to transition, Vác was mostly a “bedroom community” for Budapest, with a majority of its employed population commuting to the capital for work on a daily basis. In recent years, Vác has developed on its own, its location along the Danube and proximity to Budapest attracting foreign corporate and industrial investment and thereby keeping some jobs more local. Its appeal to a number of major companies has, however, put pressure on the application of planning restrictions and guidelines, possibly opening the way to uncontrolled development in and around the small city.

3.3. Environment

3.3.1. Air quality and emissions

Overall air quality in Hungary has improved significantly over the transition period of the 1990s, largely due to restructuring in economic sectors and energy switching from coal to natural gas. But increasing transport sector emissions –

notably from road transport – are putting pressure on air quality in urban areas. A decreasing trend in nitrogen oxide (NO_x) concentrations since the early 1990s, for example, slowed and reversed itself in the second half of the decade due to increasing emissions from road transport.

Despite reductions in ambient concentrations of particulates in urban areas, national air quality standards for particulates and tropospheric ozone (O₃), are frequently exceeded in urban areas – notably Budapest.

Transport is a major contributor to air emissions in Hungary. In 1997, the transport sector was responsible for 55% of national nitrogen oxide (NO_x) emissions, 61% of carbon monoxide (CO), 49% of non-methane volatile organic compounds (NMVOC) and 14% of CO₂ emissions. Road transport is the main source of transport-related air emissions, with 46% of all NO_x, 60% of all CO and 46% of NMVOCs. Trucks alone are responsible for 26% of all transport-sector CO₂ emissions⁷.

Lead emissions have dramatically decreased since the early 1990s with the phase out of leaded fuel completed in 1999, three years before the targeted phase-out date.

Transit traffic by trucks, notably in Budapest, is a major source of emissions in Hungarian cities, as lack of a sufficient number of bypass roads and bridges has forced trucks through central city areas. Szeged's main source of air pollution is heavy traffic along the main artery towards Romania and Serbia that goes through the city. And responsible for most of the growing air pollution problems in Vác is the through-traffic along the road which divides the city centre and connects traffic from the M2 motorway to the ferry port.

3.3.2. Noise disturbance

According to recent surveys, more than 80% of urban residents in Hungary consider road transport to be the greatest source of noise nuisance, with more than half of the Hungarian population living in areas exposed to noise levels greater than 65 dBA. One-third of all residential buildings in Budapest are considered to be in “noisy” areas, with noise levels along main roads in Budapest reaching 75- to- 80 dBAs.

Of growing concern is vibration damage from heavy goods vehicles transiting the city centres, which has caused structural damage to particularly old buildings in historic districts.

Noise from railway traffic is also a source of disturbance in urban areas as most railway lines cross towns and cities. The high average age of the vehicle fleet, inadequate maintenance (in particular, worn wheels) and the deteriorated condition of the rail beds and rails have led to high levels of noise from rail traffic (65 to

70 dBAs along main lines). Noise levels from rail have been decreasing in recent years; however, rather than a real improvement in conditions, the drop in rail traffic itself and slower speeds are responsible for the decrease in noise levels.⁸

3.4. Safety

Total road accidents rose a startling 46% in the decade preceding transition, with most of the increase in the latter part of the 1980s following increase in car ownership and use. Traffic fatalities soared as well during the 1980s with a 50% increase in road traffic deaths over the period, again mostly from 1987 onwards. Approximately 25% of all road accidents in 1980 took place in Budapest.

With this sharp rise in accidents and fatalities, the Government took action in 1992 to reverse the trend, instituting the National Traffic Safety Programme.⁹ As a result of the measures taken, road traffic accidents decreased 37% by the end of the 1990s and traffic deaths 50%.

Budapest's share of road traffic accidents dropped to 20% by the end of the 1990s and its share of fatalities from 17% in 1980 to below 10% in 2000.

Since 2000, however, this positive trend seems to have reversed, with increases in the number of road accidents (13%), serious injuries (9%) and fatalities (19%) through 2002, in spite of the implementation of measures to improve road safety.

Table 9 shows evolution of accidents on Hungarian roads since 1980.

Table 9. Road accidents causing personal injury

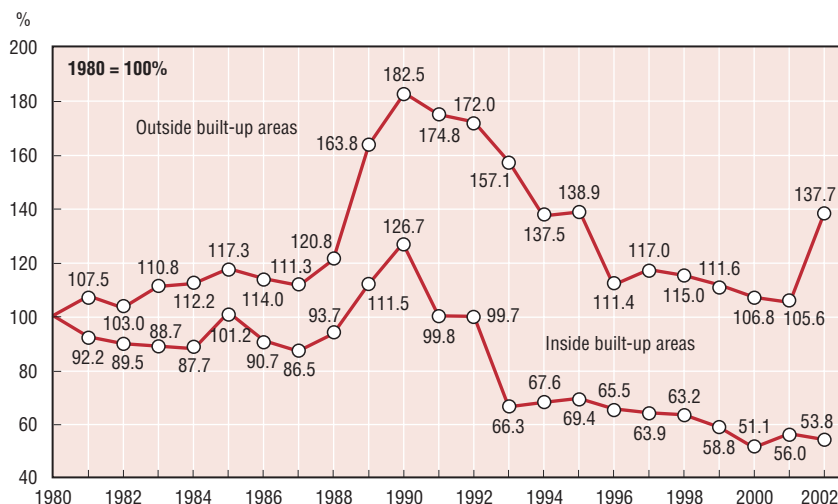
| | No of road accidents | | No of persons seriously injured ¹ | | No. of persons killed ² | |
|------|----------------------|----------------------|----------------------------------------------|----------------------|------------------------------------|----------------------|
| | Total | of which in Budapest | Total | of which in Budapest | Total | of which in Budapest |
| 1980 | 18 994 | 4 627 | 8 757 | 1 552 | 1 630 | 285 |
| 1990 | 27 801 | 5 385 | 14 316 | 2 263 | 2 432 | 315 |
| 1997 | 19 097 | 3 652 | 8 397 | 1 053 | 1 391 | 143 |
| 1998 | 20 147 | 3 876 | 8 930 | 1 184 | 1 371 | 139 |
| 1999 | 18 923 | 3 793 | 7 966 | 990 | 1 306 | 118 |
| 2000 | 17 493 | 3 643 | 7 653 | 1 032 | 1 200 | 124 |
| 2001 | 18 505 | 3 923 | 7 920 | 1 078 | 1 239 | 111 |
| 2002 | 19 686 | 4 241 | 8 358 | 1 088 | 1 428 | 108 |

1. Casualty taking longer than eight days to heal or necessitating hospital care.

2. Death within 30 days of accident.

Source: HCSO.

Figure 2. **Evolution in fatalities inside and outside built-up areas between 1980 and 2002**



Source: Dr. Habil Péter HOLLÓ, Institute for Transport Sciences Ltd (KIT), Budapest.

Notes

1. The main problem is the missing section of the M0 motorway between the M5 and M3. See Section 5.1.5 for a description of the concession and toll regimes on these motorways.
2. See Section 5.1.4 for more-detailed discussion of policy issues concerning service provision.
3. See for information on efforts within BKV to improve quality of service. (Box 1, Chapter 5)
4. See Table 5 (Chapter 2) for data reflected in p-km.
5. Tánczos, 1995 and Monigl *et al.*, 2000.
6. Section 4.2 examines institutional aspects of land-use planning and Section 5.2 land use policies.
7. (OECD, 2000b).
8. Monigl *et al.*, 2000.
9. See Section 5.4 for a description of the policy.

Institutional Context for Sustainable Urban Travel

4.1. General administrative structure of Hungary

The 20th century has seen several profound changes in the overall administrative organisation of Hungary. The Trianon Peace Treaty of 1920 following the First World War significantly reduced the size of Hungary's territory and population and defined its current borders. A communist regime assumed power in 1948 and was removed by Constitutional amendment 40 years later in October 1989 with the creation of the Republic of Hungary and a system of parliamentary democracy. Multi-party elections held in March 1990 then opened the door to economic transition in the 1990s.

Today, there are two basic levels of government administration in Hungary: the central government and the local or communal "self-governments". On a central level, Hungary is led by a President of the Republic with a Prime Minister at the helm of the government that responds to a unicameral Parliament of 386 members.

On a municipal level, the local self-governments were created in 1990 by the Act on Local Self-Government, which brought increased independence and autonomy to towns and cities after the state councils, the local organs of state authority under the Communist regime, were abolished in 1990 by modifications to the Constitution.

The 1990 Act placed *inter alia* responsibility for protection of the built and natural environment, housing policy, maintenance of local roads and public spaces and public transport in the hands of the local governments and accorded these municipal entities the rights to have independent income and levy additional taxes. In practice, however, their autonomy is somewhat limited by the reluctance of municipalities to levy local taxes (with the exception of the local business tax) and many municipalities remain dependent on central funding sources for their revenues. Indeed, overall municipal revenues come one-third from local taxes and income from capital and two-thirds from the central budget. Transfers from central to local budgets represent approximately 15% of central government expenditure.¹

The capital city Budapest holds a special status among Hungarian towns and cities. Its specific and somewhat complex administration – regulated by separate law – is comprised of a “central” municipal government, which shares authority and responsibilities with 23 district self-governments. The 89-seat municipal council of Budapest is made up of both directly elected representatives (66 seats) and delegates of the 23 district councils. The two groups enjoy equal legal status, with no subordination of one to the other. In practice, this has engendered a complex, sometimes difficult relationship between the two, with individual district interests taking precedence over the interests of the municipality as a whole. This has made co-ordinated policy-making for the agglomeration of Budapest – notably as concerns land use and transport policy – more difficult in certain cases.²

The intermediate level of administration – the 19 counties – saw their status diminished with the 1990 Act on Local Self Government, and now have only a formal status with little real authority and virtually no budget. Counties are administered by a directly elected County General Assembly. They are to take responsibility for public services and institutions that cannot be managed at the local level. However, their limited budgetary resources prevent them from taking a more prominent administrative role. Central government interests at the county level are assured by prefects, who are appointed by the President upon recommendation of the Prime Minister.

With the prospect of accession to the European Union, an Act on Regional Development and Physical Planning was adopted in 1996, which proposes the creation of administrative regions designed to bring Hungary's administrative structure into line with that of the EU regional policy and specifically the European Regional and Spatial Planning Charter. At present, seven regional entities have been created. They function primarily as Regional Development Councils (RDCs) co-ordinating development across counties (Please see Section 4.2.2 below).

4.2. Institutional framework for land-use, transport and environment planning

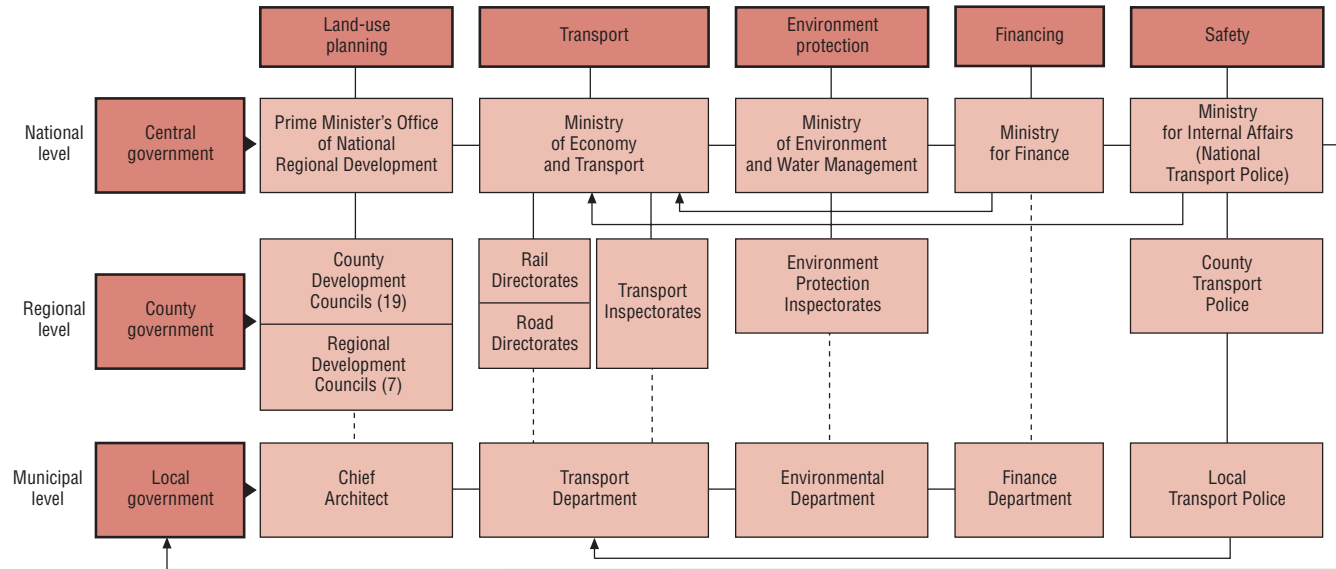
The main institutional responsibilities for land-use, transport and the environment are as shown in Figure 3.

4.2.1. Central Government

Land use/spatial planning

Regional development policy including overall land-use and spatial planning was transferred from the former Ministry of Environment and Regional Policy (from 2002 the Ministry for Environment and Water Management) in 1998 to the Ministry of Agriculture, which became the Ministry of Agriculture and Regional

Figure 3. **Institutional framework for land-use, transport and environment planning in Hungary**



Source: Dr. János Monigl.

Development at that time. In 2002 the land-use and spatial planning side of this Ministry was separated and a new National Regional Development Office was created in frame of the Prime Minister's Office.

This new Regional Development Office prepares a National Territorial Master Plan,³ based on guidelines set out in the 1996 Act on Regional Development and Physical Planning (amended in 1999), which established goals for territorial development in line with socio-economic objectives. General plans for transport infrastructure development are articulated in this document.

Transport

The Ministry of Economy and Transport, (prior to 2002, the Ministry of Transport and Water Management) is responsible for the overall definition and implementation of transport policy. In practice, the Ministry of Finance and the Ministry for Internal Affairs also have responsibilities that considerably impact transport policy-making and implementation at a local level.

Responsibilities of the Ministry of Transport include:

- Building and maintenance of national roads crossing through towns and villages.
- All issues relating to national transport infrastructure.
- Provision of interurban public transport, as set out in the three laws of Railways, Road Transport and Concessions. Inter-urban bus and coach services (as well as urban bus service in some towns – are provided via the state-owned Volán companies.
- Rail infrastructure and operations under the Hungarian State Railways (MÁV), which is a state-owned shareholder company. A formal separation of the operations and infrastructure has now been completed.

The Ministry of Finance plays an important role in transport policy – particularly as concerns urban public transport. The central government via the Ministry of Finance reimburses public transport operators for the social discounts applied to ticket fares for certain categories of the population, *e.g.*, students and pensioners. As a result of this concessionary fare compensation, the Ministry has oversight on all public transport fares on a local level as well as for interurban rail and road transport.⁴

The Ministry for Internal Affairs holds overall responsibility for the regulatory framework structure for municipalities and their functions. The Ministry also oversees the traffic police, which handles enforcement of road traffic regulations, recording of accidents and public information on road safety.

Vehicle safety and environmental inspections are carried out by the National Transport Inspectorate, which has branch offices in each county.

Environment

The Ministry for Environment and Water Management oversees strategic planning in the environment sector in the short, medium and long term. The Ministry establishes policy targets and co-ordinates national and international environmental activities. Two central government environment agencies – the Institute for Environment Management and the National Inspectorate for Environment Protection – support the Ministry on environmental and nature conservation issues.

The National Commission on Sustainable Development, established in 1993, serves as an advisory body to Government and forum for discussion on integration of environmental concerns in economic and sectoral policies. Participating in the commission are delegates from each Ministry, NGOs, as well as the scientific and business communities and the press.⁵

4.2.2. Regional level

Land-use/spatial planning

According to the 1996 Act on Regional Development and Physical Planning, the counties are responsible for preparing spatial development plans and for co-operating with the municipal self-governments that have county status⁶ in order to co-ordinate spatial plans for the city and surrounding area.

Land-use and spatial (“physical”) planning on a county level is handled by the County Development Council (CDC), which is set up and funded by the central government, and comprised of representatives of a county chamber of commerce, a county labour council, and local municipal associations. The CDC prepares and approves a long-term regional development concept and programme for the county, which is subject to approval by the County General Assembly and is binding for municipal self-governments.

The 1996 Act stipulates that CDCs may set up Regional Development Councils (RDCs) to integrate development across several counties. The RDCs are made up of delegates from County Development Councils, the central government and other interests. They are mandated to prepare a National Regional Development Concept to integrate county-regional development concepts, bid for regional development resources from the state and allocate them. A regional Chief Architect named by the central government is responsible for supervising the preparation and implementation of land-use plans on the county and local levels and for commenting on the national Regional Development Concepts. These regional physical plans are not legally binding documents, however. Moreover, the 1996 law does not specify the relationship between the RDCs and the municipal and county self-governments; consequently, some ambiguity resides at this level.⁷

Transport

Regional responsibilities in transport planning are as follows:

- Regional road and rail directorates (centrally controlled) are responsible for infrastructure operations and maintenance as well as traffic management.
- Regional transport inspectorates are responsible for approval of infrastructure plans, for review of new types of vehicles, and periodic technical vehicle inspections.
- Operation and maintenance of highways is handled in county directorates with the exception of motorways. Three tolled motorways are overseen by a national operating company (the M1 towards Austria, the M3 towards Northeast Hungary/Ukraine, and the M7 towards Southwest Hungary and the Croatian/Slovenian border). The fourth tolled motorway (M5 towards Southeast Hungary/Belgrade) is managed by private concession.
- Traffic police are under central government control but supervised by the county.

Environment

Twelve Regional Environmental Protection Inspectorates were created in 1990 with first-order jurisdiction over among others, air pollution from stationary sources, water quality, noise and vibration and waste. They monitor compliance with environmental standards and regulations, maintain a regional environmental information system in co-ordination with other bodies, and approve environmental impact assessments for land-use and infrastructure investments.

4.2.3. Municipal level

Land-use/spatial planning

Spatial planning on a municipal level is not covered under the 1996 Act on Regional Development and Physical Planning; the main regulations for local planning are embodied in the Act on Shaping and Protecting the Built Environment of 1997.⁸ Using the guidelines laid out by this 1997 Act, municipalities prepare and approve physical plans for their jurisdictions that set legal parameters for the development and use of municipal land. These plans are implemented in most local areas under the supervision of a chief architect.

In Budapest, the 23 districts enjoy a considerable amount of autonomy in decision-making – including in the area of spatial planning and land use. Decisions regarding development priorities and zoning regulations reside with the individual districts, each of which have a chief architect responsible for implementing plans and policies for their individual districts. The relationship between the municipality of Budapest and its districts as regards spatial planning and land use remains unclear.

Transport

Building and maintenance of all roads other than national roads are in the hands of the municipalities, with the exception of Budapest, where the municipal government is also responsible for the national roads within the city boundaries as well as for the roads used by public transport. The districts manage all other local roads in Budapest.

Road investments are financed by either the central or municipal budget depending on the type of road, and a tendering procedure is organised in both cases to select the contracting company. Private capital has been brought in several cases – most notably the recent motorway projects such as the M1 to Vienna and the M5 towards Belgrade.

Responsibility for public transport infrastructure and provision in urban areas resides with the municipalities, as specified in the 1990 Act on Local Self Government.⁹ Whilst education and health are required responsibilities for the municipalities under the Act, however, provision of public transport services is not obligatory, and has consequently found itself down the priority list in some cases as a recipient of municipal funding. According to the Act, local authorities are to handle questions related to transport network and operations, fare levels, and selection of operators.

Traffic management and parking policy are also determined and implemented by municipal authorities. Municipalities create limited liability companies for maintaining parking facilities and enforcing the payment and collection of fees, or tender these services competitively as is the case in central Budapest. Private construction and operation of parking facilities is becoming more frequent, with investors paying a certain percentage of revenues to local authorities.

Environment

Since 1990, municipalities have acquired a large number of responsibilities in the environment area, including: operation and maintenance of drinking water supply and sewerage system, municipal waste collection and treatment, definition and control of protected natural sites in local areas, as well as the establishment and control of local noise, vibration, and air quality regulations.

Notes

1. Sykora, Ludek, 1999; Monigl *et al.*, 2000; and OECD, 2000b.
2. *Ibid.*
3. See Chapter 5, Section 5.2 for further description of this plan.
4. See Chapter 5, Section 5.1.4 for an examination of the organisation and financing of urban public transport.
5. OECD, 2000b.
6. Municipalities are divided into two groups: towns, and towns with county status, which are county capitals or have a population of over 50 000 inhabitants. The local government in a town with county status carries out the functions normally allocated to counties in addition to municipal tasks.
7. Sykora, Ludek, 1999.
8. See Chapter 5, Section 5.2 for a description of this Act.
9. See Chapter 5, Section 5.1 for further details on organisation and financing of urban public transport.

Policy Context for Sustainable Urban Travel

5.1. Urban transport policy

5.1.1. *Urban transport in the 1996 National Transport Policy*

The 1996 Policy includes a short chapter on urban transport that presents priority actions for transport in and around cities. The first among imperatives mentioned is the need to stop contraction in public transport, notably by renewing the vehicle stock and modernising networks. The need for rationalisation of the tariff and fee structure for public transport is highlighted, with combined ticketing for parking at railway and bus stations and riding on the public transport system.

The Policy also calls for traffic calming measures, notably in zones of historical or architectural importance as well as more generally. The need for parking regulations in central districts as well as park and ride in the suburban and outlying areas is also highlighted.

The importance of pedestrian and cycling facilities and conditions are noted, as is the improvement of travel conditions for individuals with reduced mobility.

The Policy calls attention to the particular relevance of these policy priorities for Budapest, specifically in relation to the renovation and building of bridges, the need for parking regulations, for development of the ring road around Budapest and MÁV links to the metro system. The Policy also calls for improving access to Ferhegy airport via increased road capacity and in the longer term, the linking of rail lines to airport. It also makes reference to the need for re-examining the roles and responsibilities of the national and local government relative to public transport provision.

The chapter on urban travel is thus comprised of this list of priorities, but does not go further to elaborate on responsibilities, resources or a time schedule for these objectives.

5.1.2. *Prospects for urban travel under the forthcoming 10-year policy*

Although the new 10-year policy for the transport sector in Hungary had not yet been released at the time of this report, preliminary information regarding the

section on urban transport and travel shows that there is recognition of the importance of integrating policies and processes for spatial planning and land use transport planning and policies. The necessity to view the transport problems of the city in the context of the urban region as a whole is also set forth as an overall objective of urban transport.

Other more specific objectives of the policy expressed in the preliminary draft include:

- Meet sustainable levels of transport demand considering different modes and the needs of different regions.
- Internalise external costs of transport.
- Balance private and public modes of travel.
- Support a balanced regional development, improving the accessibility of certain regions.
- Promote integration of national, regional and local networks and services, increase intermodal transfers.
- Improve safety and environmental impacts of transport.
- Improve levels of quality and service (*e.g.*, physical infrastructure, vehicle fleet, reliability and speed of services).
- Provide fair market regulation of scheduled and non-scheduled services, increase competition and transparency in use of public monies.
- Apply fair pricing schemes – particularly as concerns fares, considering performance and real costs.

More specific information on the “how to” aspect of these objectives was not available, nor was information on the means by which the Government would carry out these goals.

5.1.3. Local traffic and transport plans

Budapest and other larger cities have their own local transport plans, which usually constitute a part of city development (master) plans, prepared every seven to 10 years. Budapest, for example, has prepared a transport strategy to cover the period 2000-2007, which reiterates many of the main goals of the previous transport development plan (1993-1999), including:

- Reducing demand for transport by improved land use management.
- Improving traffic management.
- Mitigating the environmental impacts of transport activity.
- Minimising costs and improving the efficiency of the transport system.

Szeged and even the much smaller city of Vác also have transport development strategies that were either in place or in completion at the time of the review. Szeged was working from a Town Development Concept prepared in 1993 and Vác was in the process of developing a plan for its development. The priorities listed for Szeged are in line with objectives for sustainable development, with focus given to improved public transport, walking and cycling conditions; better freight delivery logistics in the city and a reduction of private car travel. Vác was planning to give priority to walking and cycling over public transport in their transport development plan.

In Budapest, Vác and Szeged, transport policy priorities as articulated in town development concepts reveal adherence to the fundamental principles of sustainable development in urban transport, and in general, appear sound in scope and perspective. Problems have arisen, however, in their implementation. And the roots of the implementation difficulties, though by no means exclusive to Hungarian experience, appear to be embedded in the policy-making framework for urban travel in Hungary, which dictates how transport and travel activity is organised and financed.

5.1.4. Organisation and financing of urban public transport¹

There is no specific legal framework governing provision of urban public transport services. However, two key laws: the 1990 Act on Local Self Government and the Law of Concessions (licences) provide the legal framework for organisation of responsibilities for public service provision and operations.

Central and local responsibilities for urban public transport

As mentioned in Chapter 4, the Act on Local Self Government defines the responsibilities of municipalities in relation to provision of public transport-services. These include:

- Defining network configuration and service provision.
- Setting fares and fare discounts (subject to the approval of the Ministry of Finance).
- Issuing of operational licences.
- Covering financial losses.

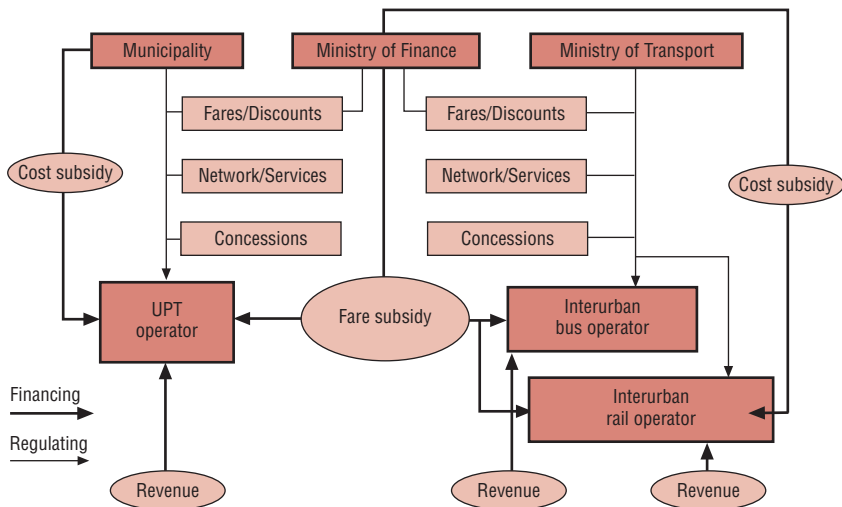
Whilst technically the municipalities are responsible for these key aspects of public transport in urban areas, as stated in the Local Self Government Act, in practice there are a number of factors that impact the way municipal authorities can actually exercise their role. Key among these factors is the ability to meet their financial obligations to public transport service provision, notably, to cover the difference between the operational costs and fare box revenues of urban

public transport and urban rail companies in the form of a cost subsidy,² as well as provide the infrastructure (*i.e.*, road network) free of charge.

Lack of a municipality's ability to meet these financial duties quite logically limits its ability to design and implement public transport system policies. This is notably the case in some of the secondary and tertiary cities with local public transport services such as Szeged. Limited ability of these municipalities to raise sufficient revenue to provide for basic local public services (including public transport) – expanded since the 1990 Act – has in some cases severely constrained the capacity of these cities to develop and implement policies to sustain and improve public transport.³

The Local Self Government Act limits the role of the central government in urban public transport to the approval of fare discounts, or fare subsidies.⁴ Under Hungarian law (the Fare Subsidy Act), all public transport companies are compensated for obligatory fare discounts by the central government, the Ministry of Finance. The Fare Subsidy Act defines the setting of fares and fare discount rates as municipal responsibility in agreement with the Ministry of Finance, which guarantees the fare discounts. This can have a significant impact on the ability of public transport companies to plan and control their operating budgets and financial results, and in turn, the municipalities that often own these companies from doing the same.⁵

Figure 4. Central and local responsibilities for urban public transport



Ownership and control of urban public transport provision

The second law of major importance in urban public transport is the Law of Concessions, which basically classifies all scheduled rail and road passenger transport as services requiring licences for operation.

According to this law, municipalities can either hold full or majority ownership of public transport services or delegate the concession rights to these services to another party by means of a contractual agreement following a tendering procedure. The Concessions Law provides special rights to current operators with no time limit on their current licences in the territory of their present operation, and a priority position for obtaining concession rights to new services. In this way, the possible evolution of a more-deregulated market for public transport provision in Hungary is somewhat hindered.

Within this regulated framework, there are two possible ownership scenarios for provision of urban public transport services in Hungary: those that are of public (municipal) initiative, and those that are of a regulated private initiative. There are no examples to date of free competition in public transport provision in Hungary.

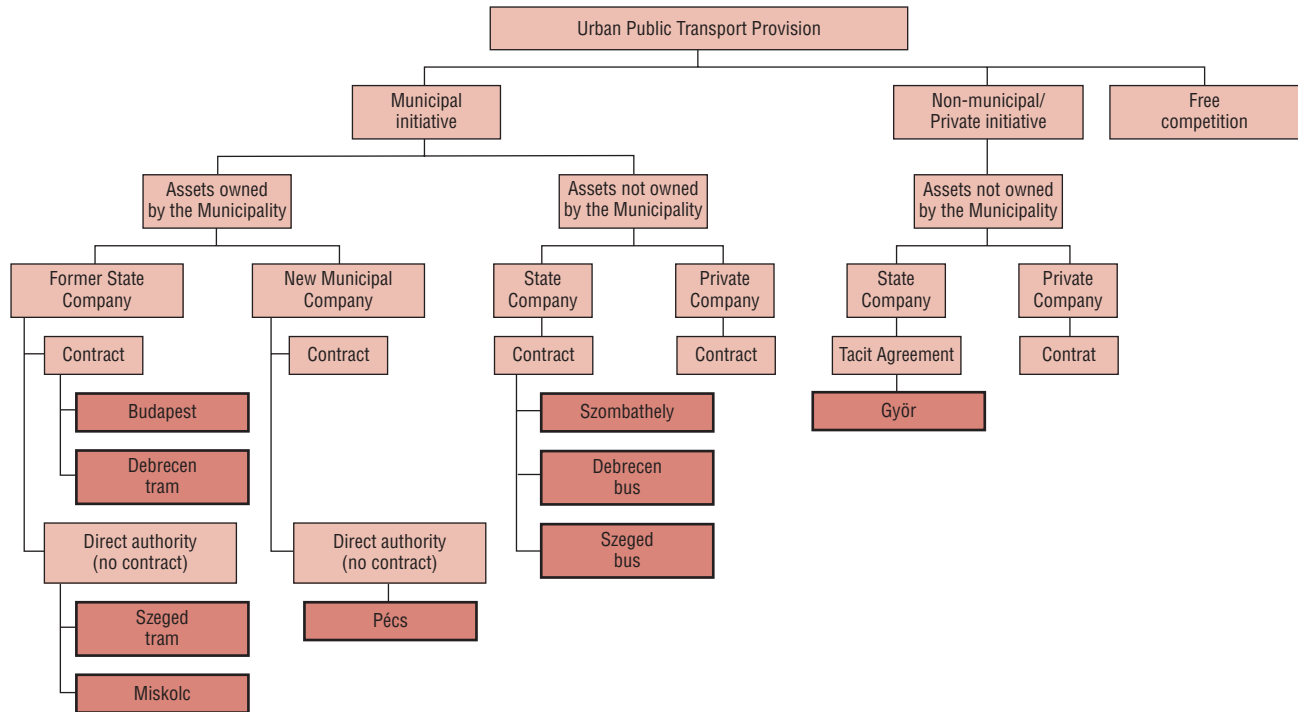
In the case of a municipal initiative with publicly owned assets: the municipality is the full owner of the public transport company or operator, with each entity bound by obligations and responsibilities – stipulated or not contractually. The municipal authority can legally control public transport services on both strategic and operational levels, leaving some margin for the operator to intervene in tactical decision-making. In practice, however, most operational decisions are based on proposals from the operators themselves.

On the one hand, the municipality – as an owner – is responsible for the financial status of the company but on the other hand, the municipality – as a competent authority – provides more or less a cost subsidy to cover the deficit the company makes. Though the amount of the cost subsidy provided to the operator by the municipality is subject to annual budgetary negotiation, the authority must in practice cover the full amount of costs not covered by farebox and other revenues. Depending on the type of the service contract, the municipality can exert pressure on the operator to reduce costs via financial incentives.

Local public transport companies other than those with municipal ownership receive a municipal subsidy depending on the willingness of the municipal assembly to support public transport in its town. In most larger cities, public transport is municipally owned, and cost coverage of these companies varies between 80 and 90%.

When the municipality takes the initiative to provide public transport services but does not own the assets of the operator company, according to the Concession Law a contract between the municipality and the service provider is obligatory. The operator can be in state or private ownership.

Figure 5. **Ownership and control of public transport services**



Source: Monigl *et al.*, 2000.

Box 1. **The case of Budapest transport company (BKV)¹**

The BKV is a 100% municipality-owned shareholder company, operating more than 250 tram, bus, trolley and subway lines within Budapest and some suburban rail and bus lines.

With the 1990 Act on Local Self Government, the Municipality of Budapest assumed ownership of local infrastructure and services. The subsequent reduction in central government contributions to public transport found Budapest, like many other municipalities, incapable of maintaining the same level of operating and capital subsidies for public transport (and other municipal) services. As a result, necessary vehicle replacement and maintenance were insufficient, which in turn led to inefficiencies in the system, higher costs, and inadequate quality of service.

New orientations in policy, at that time were placing emphasis on increased fares to cover costs of service provision and better overall cost recovery for the system. At around the same time as BKV fares began to rise, the economy contracted, real incomes dropped and unemployment rose, creating even more difficult conditions for BKV. In addition, expansion of the economy in certain dynamic areas of the private sector along with an influx of second-hand automobiles from outside the country led to higher car ownership and use, and subsequent higher street congestion. Demand for public transport fell whilst the costs of the system increased and were to be borne by a smaller number of public transport system clients.

Since that time, BKV has undergone considerable restructuring and streamlining of its activities, which has helped slow or reverse trends in public transport use. The World Bank's Budapest Urban Transport Project, begun in 1995 and closed in 2001, was designed to support the reforms undertaken by the municipality and BKV. The principal objectives of the project were to modernise and increase the commercial orientation of BKV; establish a formal contractual relationship between BKV and the municipality of Budapest, decrease subsidies to BKV; contribute to improved air quality in Budapest; and implement a parking control policy. Included among the project's goals were to progressively improve cost recovery – targeting 50% in 2000 – increase fares to help reach this target while reducing fare evasion, introduce contracting out of transport services and parking management and parking charges, separate non-core activities from core activities and establish a Budapest Transport Association, basically a fare and service union including BKV, MÁV and Volánbusz. In addition, the project had investment components including bus fleet replacement (with partial financing from tendered national environmental funds), tram track renewal; and a technical assistance and training element, comprising training seminars, conferences and study tours to improve BKV's procedures and staff knowledge and skills and to prepare investment projects among other issues.

During the course of the project, BKV's transport activities such as the funicular railway, chair lift, tourist boat and shipping were divested, as were non-core activities such as printing and telecommunications. Staff was reduced from 21 000 in 1995 to 13 000 in 2001 – a reduction of 38%. Marketing and public information

Box 1. The case of Budapest transport company (BKV)¹ (cont.)

activities have been strengthened, and service improvements made in the form of new vehicles, improved track and roads. Moreover a number of pilot experiences to test the waters for sub-contracting have led to the signature of a contract with a private operator in May 2001 to operate 8 bus lines in South Buda, despite reticence on the part of BKV due to fears of an increase in costs, and constraints of the Law on Concessions.

The cost recovery was partially met via service cuts, increased productivity and fare increases. There were seven increases in fares between 1995 and 2000 – an overall real increase of approximately 20% for the monthly pass and 13% for the average fare.² The real increase in revenue was about 10% over this period, however, due to loss of traffic. With responsibility for fare increases shared between the Budapest municipality and the Ministry of Finance (BKV has the right to propose fare increases, but decisions are taken by the municipal assembly), the municipality agreed to BKV proposals for fare increases – which reflected inflation and estimated price elasticities – every year except 1998, when municipal elections were held. The Finance Ministry, however, refused in the last years the proposed fare hikes due to inflation concerns, setting a 6% fare increase ceiling (inflation was at 8.5 to 10%).

The overall financial health of the BKV is not positive at present. This is in part due to the fact that reduction in subsidy levels has not been matched by fare revenue increases and cost savings, and this has led to a variety of financial difficulties affecting BKV's ability to maintain its fleet and network. Losses in 2002 reached almost HUF 12.5 billion, and the state assumed HUF 38 billion of BKV debt.

Despite these difficulties, 2002 saw two significant additions to the public transport fleet in the form of 27 new TW 6 000 trams and 15 new IK 412 trolley buses. In addition, work on the 4th metro line, stalled for several years, resumed following agreement on the financing responsibilities between the central government (70%) and the municipality (30%). In the longer term, overall rationalisation of financial responsibility for local services along with more general reform to local government finance among other factors should contribute to improved financial strength of BKV.

1. Information for this section has been drawn from The World Bank (2001).

2. Please refer to Table 10.

Table 10. Cost coverage ratio of BKV (1994-2000)

| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|-------------------|------|------|------|------|------|------|------|
| Cost recovery (%) | 35 | 36 | 35 | 43 | 40 | 41 | 48 |
| Target | – | 37 | 41 | 43 | 45 | 47 | 50 |

Source: The World Bank, 2001.

There is no significant example of private companies taking part in urban public transport at this time.

When public transport services are not based on municipal initiative, the assets of the operator company are owned by either the central government or by a private consortium. There is usually only a tacit agreement for service provision between the municipality and the government-owned operator (as in the case of Győr). There are, however, minor examples of small private companies with contracts to operate in specific areas, on specific lines.

In general, urban public transport companies are financed from farebox revenues, other commercial revenues, the fare subsidy paid by the Ministry of Finance and, when applicable, the cost subsidy (compensation for operating deficit) paid by the municipality. The ratio of these financing components varies for each operator company in function of ownership, type of contract (if there is any) and the municipality's intentions.

In recent years, the proportion of fare revenues in total revenues has increased from 26% to more than 40%. The fare subsidies have increased proportionally, given that the subsidy level is directly related to that of the fare.

5.1.5. Pricing urban transport

Financing of urban transport is based on budgetary subsidies as described above as well as on contributions by the users/clients of the transport system.

Resources paid by private vehicle owners/users

- Fuel tax

Vehicle fuel prices in Hungary are among the highest in the OECD, particularly relative to per capita income. Changes in fuel prices generally followed fuel prices until the mid-80s when they rose despite decline in global oil prices, 22% more than inflation in the early years of transition up to 1995. By 1995, fuel prices were double the price in the US, 86% of the German price, 61% of the French price and 116% of the Romanian price.

Differentiated excise taxes are levied on leaded and unleaded petrol and form roughly 80% of the price of fuel. Until 1997, part of the tax revenues went to a "Road Fund" (approximately HUF 6.1 billion in 1996), where they were allocated to cover the costs of infrastructure building and maintenance of roads and bicycle paths. In 1998, the Road Fund was abolished and a new tax called a "fiscal tax" was introduced replacing the road fund and a previously imposed consumption tax of 10% to 32%, which had been levied on the purchase of cars. The newer system is less transparent regarding the allocation of the tax revenue to road infrastructure.⁶

- Vehicle tax

A vehicle weight tax or annual licence fee must be paid by all car owners to the local authority. The conditions are therefore determined by the local municipalities and change from one settlement to the other. Usually, a distinction is made between cars of different sizes: the tax is paid for each 100 kg of axle weight. On cars with built-in catalytic converters, the tax is reduced by 50% on those retrofitted with catalytic converters, it is reduced by 75%.

Enforcement of the annual vehicle tax has proven to be inadequate, however, particularly in larger urban areas, with approximately 10 to 30% tax evasion depending on the settlement.

- Parking fees

Parking fees have become a substantial source of revenue to municipalities as the importance of parking management and the value of city centre parking spaces has been increasingly recognised.

Parking fees vary but are generally collected by the municipality and the district⁷ (the latter only in Budapest). In central area of Budapest the price of parking for an hour is approximately equal to the price of 1 litre of petrol. Enforcement of parking regulations and collection of fees remains a problem in many areas however.⁸

- Road tolls and access fees

Access fees in urban areas are for the moment applied in the castle district of Budapest: local residents of this district or individuals with temporary permission can enter the area with their private vehicle and leave their cars in a parking place up to 24 hours for HUF 450 per hour. Similar systems exist on the Margaret Island and in the city centre of Budapest.

Road charges (tolls) were introduced in the 1990s only on the concessioned motorways M1 M5 and not in urban areas or on any by-pass roads. Per-kilometre tolls were very high relative to local purchasing power on these interurban motorways due to pricing policies based in part on the low contribution of the central government to construction costs. The result was insufficient traffic on these concession motorways and traffic diverted to parallel (and severely congested) national highways.

In 1999, with its economic viability in question, the first privately financed motorway section (M1 between Győr and the Austrian border) was nationalised and more reasonably road charges were introduced along with the state-owned M3 concession. Since 2000, a flat fee vignette system has been in operation on the entirety of the M1 and the M3. Since early 2003, this toll system has been applied on the M7 from Budapest to Lake Balaton as well following completion of its renovation. Weekly

(HUF 1 900), monthly (HUF 3 200) and yearly (HUF 29 000) passes can now be purchased at petrol stations.⁹ In July 2003, a four-day sticker (HUF 1 000) was introduced with considerable success for the summer period on M7 to facilitate travel for week-end motorists and this four-day pass may be extended.

Although traffic has increased on the motorways since the nationalised vignette system has been in place, revenues from the system have dropped, so there remains a debt coverage problem.

On the concessioned M5 motorway from Budapest toward Szeged, a distance-based toll system is still in place. As was the case before the M1 was nationalised, traffic is sparse at present on the M5 due to the high toll rate relative to local purchasing power, and considerably less than needed for economic viability. The parallel national highway 5, however, remains severely congested with diverted traffic from both trucks and passenger vehicles – increasingly so when traffic from the M5 integrates the national highway 5 60 km north of Szeged.¹⁰ At present, 55% of road traffic along this corridor is carried on the parallel national highway, 40% of which is traffic from heavy goods vehicles and lorries.

Resources paid by public transport users

- Public transport fares

The key characteristics of Hungarian urban public transport fare systems are the following:

- The basis of the fare system for urban public transport is the price of a single ticket, which in 2002, cost HUF 106 in Budapest. In county capital cities outside of Budapest, the cost of a single ticket was HUF 77-115 when purchased in advance, HUF 96-160 when bought on board.
- There are a wide variety of season passes ranging from daily to yearly passes. The price of a monthly travel pass is derived from the price of a single ticket, usually with a multiplication factor of 24 to 30 in cities other than Budapest and 41 in case of Budapest. The adult monthly pass price in 2002 in Budapest was HUF 4 050.
- The price of a monthly student and pensioner pass is one third of the full price of a travel pass.

All Hungarian cities apply a single zone fare system – a single ticket is valid for one boarding (no interchange) within the municipal boundary. Transfer tickets exist only in Budapest. Transfer tickets and validity of tickets for one zone are not yet available. If more than one vehicle or mode is involved in a given trip, the same ticket/pass is valid for all modes, where the different modes are operated by the same company (Budapest), or because there exists fare integration between the operators (Szeged).

In general, Hungarian urban public transport fares are still relatively inexpensive compared with other European countries. However, relative to average Hungarian income, fares are becoming extremely expensive for some groups of people. This is exacerbating fare evasion and decreases in travel demand.

- Employer contributions to employee transport

Hungarian law obliges employers to reimburse a certain proportion of the costs of their employees' inter-urban travel passes: 86% for railway travel passes and 80% for bus passes. This same obligation does not hold for urban public transport, however.

- Cross-financing

Those public transport operators (mainly the state-owned Volán regional bus companies) that operate interurban *and* urban services often cross-finance their urban activities from the profit of their interurban services – this is the case when local authorities do not have a service contract and provide no operational subsidy.

5.1.6. Integration in Urban Public Transport: The Budapest Transport Association

As part of the World Bank's Budapest Urban Transport Project, described in the text box above, it was proposed that an Association co-ordinating the services of the BKV, MÁV and Volánbusz in the Budapest region be created, this in order to more effectively and efficiently use the passenger transport capacities of each of these organisations and facilitate passenger use of their services, which currently have separate networks, fare, concession and ticketing systems.

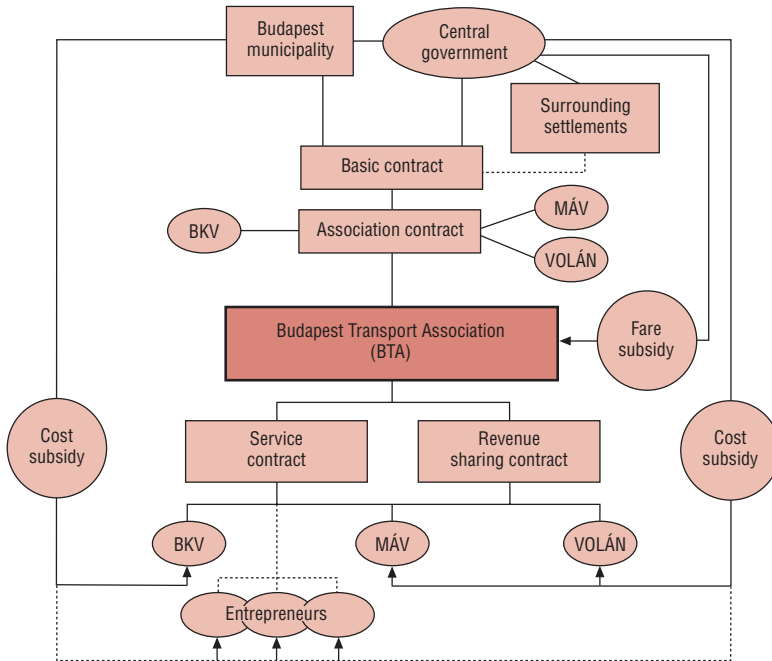
According to the World Bank, all parties involved: the Municipality of Budapest, the Ministry of Transport and the operators agreed that an association of this kind was in the interests of both the passengers, and on a more economic level to reduce costs and increase patronage of the Budapest public transport system.

The proposed structure of the system can be seen in Figure 6.

Initially, an association office was established to proceed with planning and organisation of the project; however, lack of agreement among the three operators regarding compensation for revenue losses put a halt to progress at that point. Further difficulties arose given that distribution of supplementary costs and benefits are likely to differ among the operators.

A proposal was then made in 1999 to launch the effort with an integrated tariff scheme, which would introduce season passes valid for all three operators in Budapest, and a discount for passengers entering or leaving Budapest on MÁV or Volánbusz and using BKV services while in Budapest proper. Whilst preparations have been made by all three operators to make the passes available and harmonise timetables, implementation has been once again blocked by questions of who would pay for the extra HUF 540 million compensation per year (Monigl *et al.*, 2000).

Figure 6. The proposed organisation model of the BTA



Source: Monigl et al., 2000.

5.1.7. Parking policy

Parking remains a serious problem in Budapest and other major cities in Hungary. As mentioned earlier, the influx during the transition period of the 1990s of commercial activities – banks, insurance companies, and other businesses – has been an important factor in increased parking demand in recent years. This, along with the growth in numbers of cars on urban roads, has worsened an already congested traffic situation. Overall parking capacity remains low with few parking garages and limited on-street pay parking. Weak parking controls have led to indiscriminate on-street parking, disrupting pedestrian and car traffic and increasing safety hazards.

Before the transition period, roadside parking in cities was provided free of charge. As car use increased and demand for parking grew as well, this was no longer possible – particularly in city centres. New open parking facilities were built in central areas, often by converting land space cleared from the destruction of old buildings to paid parking areas and multi-story car parks. However the increase of the number parking places alone was not sufficient to respond to the growth in demand.

Local authorities have increasingly recognised the importance of parking as a demand management tool and many cities have introduced paid parking systems on the most important public roads.

In Budapest, parking policy falls under the jurisdiction of each of the 23 districts and the Municipality of Budapest. Co-ordination on a common parking strategy for the urban area of Budapest has been problematic, as each district authority has sought to manage parking according to individual district interests. Several attempts to better co-ordinate parking have been made: a parking union is operating with the participation of the downtown area and the Municipality of Budapest. Other joint initiatives have been established with the participation of the central districts. In addition, the number of multi-story parking facilities has increased slightly in the centre, mostly privately built to serve new office and commercial development. However, inadequate public parking space, particularly in the areas outside the city centre, and insufficient park and ride facilities linked with public transport continue to exacerbate car traffic coming into the centre.

A project financed by the European Bank for Reconstruction and Development in co-ordination with the World Bank has facilitated the implementation of a parking scheme, the specific aspects of which were defined by the Municipality of Budapest, that has created 30 000 parking spaces in central Pest since 1996, not including those operated by individual districts. Under private management, the parking scheme is to expand into Buda districts as well. Fees are highest in the inner districts and diminish towards the periphery. In the context of the scheme, the Municipality of Budapest has also created five protected park-and-ride sites, with plans for an additional two or three in 2002-03. In addition, approximately 2 000 underground car spaces in the city were to become available in 2002.¹¹

In Szeged, severe parking problems in the city pushed the local authorities to pass a decree on paid parking in 1996, which led to the development of a TELPARK parking system operated by a division of the Transport Company of Szeged (SZKT). Under this scheme, the central district of the city – an area subsequently extended in 1999 – was divided into three parking zones differentiated by parking fees. By 2000, HUF 60 million in parking revenues had been collected and allocated to the development of public transport in Szeged. In 2000 and up to mid-2003, responsibility for parking was re-assumed by the municipality and revenues re-directed toward development of parking capacity. In July 2003, parking control was handed back to SZKT, though public transport was not expected to directly benefit from the revenues – already committed to ongoing capacity developments – for some time.

Parking for local residents remains relatively inexpensive in Szeged; for others it is higher. A multi-story car park was recently completed in the centre. A special parking pass around schools has also been introduced so parents can easily drop

off and pick up their children. However, plans for the establishment of a park-and-ride system have not yet materialised.

In Vác, several small parking zones have been created, the management of which is outsourced by the municipality to private entrepreneurs. The main parking concern in Vác concerns demand from commuters from neighbouring settlements travelling daily to the central area of the city.

As mentioned above, general parking minima rules are defined at the national level in the 1997 Act on Shaping and Protecting the Built Environment and adapted by local authorities to local conditions. If the minima levels can not be met by local developers, a fee can be paid to a local parking fund, which can then be used to develop new parking places.

Though technically designed to generate funding for parking capacity, this scheme has proved difficult to implement effectively because of, for example, incompatibility with local development rules restricting parking capacity in certain areas among others.

5.1.8. Walking and cycling policy

Promotion of non-motorised travel is an important part of the development plans for Hungarian cities. In smaller towns, cycling and walking carry an important share of modal split because of the relatively poor level of public transport service, lower car ownership rates and shorter distances. In the larger cities, these modes are drawing increasing attention in transport planning as a means of reducing car-based traffic.

Walking

The improvement of the conditions of pedestrian traffic is one of the key aspects of the Budapest Transport System Development Plan. In Budapest, approximately 25% of daily trips – more than one million trips – are carried out on foot. In the historical city-centre, pedestrian infrastructure has been improved and expanded in recent years, as well as along the banks of the Danube, which are classified as an UNESCO World Heritage site. A persistent problem is that pedestrian zones are often located in areas overcrowded with car traffic and parking with insufficient separation between the two, primarily in the centre.

Improvements envisaged for the pedestrian environment in Budapest include:

- Better pavement and street furniture in important pedestrian areas and physical separation of these zones from motorised traffic and parking.
- Promotion of multi-modal trips including walking via improved design of public transport stations, transfer points and park-and-ride transfer points.
- Improved accessibility to transport facilities for the disabled population.

Its relatively small size makes walking particularly appealing in Vác. A promenade extends along the Danube on the edge of the city and there are some pedestrian-only streets in the centre. However, a coherent scheme for walking has been lacking, including measures to connect different pedestrian zones. In addition, vehicles continue to park in these zones.

To address these problems, a development concept has been prepared, providing for better co-ordination between development of the pedestrian areas and land use characteristics, traffic calming and parking management. It will be primarily extended in the downtown area to connect the main destination points and ensure a better organisation of the traffic in the centre.

Cycling

There are two main bicycle user groups in Hungary: the first is comprised of individuals living mainly in small towns who use their bicycles regularly for travel to work, shopping, etc. and consider their bicycle a “vehicle”. The other group is made up of inhabitants of larger cities, who use their bicycles primarily for sport and leisure activities. In Szeged, there are 1.4 bicycles/household whilst in Budapest this figure is only 0.67.

The 1996 National Transport Policy calls for the establishment of a coherent national bicycle road network by integrating separate inner-city bicycle networks into a national bicycle road network. Vác has recently developed its bicycle network to connect the city with Budapest and nearby settlements along the Danube. This new link with Budapest is designed not only for leisure and tourist cycling but also for travel related to work, shopping and other activities. The Structural Plan of Szeged also includes the objective to develop already-existing cycle routes into a network.

The cycling network of Budapest is 112 km long, with cycling activity highest in the outlying districts of the Pest side – where quality of public transport service is not very high and the flat terrain and relatively calm traffic conditions make suitable conditions for cycling. To promote increased cycling activity in the city, the Municipality has, among others, launched a bicycle-storage programme. Within the framework of this program, bicycle storage infrastructure was built in 240 schools creating cycling storage capacity for 6 000 students. Further storage capacity for 1 500 bicycles has been created in other parts of the city.

The Budapest Transport System Development Plan calls for the extension of the cycling network to 300 km and targets a modal share of 5% for cycling by 2010. Measures planned to attain these goals include:

- Improvement of cycling facilities by developing safe bicycle storage facilities and information systems for cyclists.

- Implementation of a coherent bicycle network, by connecting already-existing cycle paths and lanes; integration of cycling paths in traffic-calmed areas, and creation of new cycling infrastructure.
- Launching a communications campaign to raise the awareness of the benefits of cycling.

5.2. Spatial planning and land use¹²

The 1996 Act on Regional Development and Physical Planning sets out the long-term territorial development objectives of Hungary, and promotes principles of subsidiarity and decentralisation, partnership and participation in detailed development plans on different levels of government. The Act describes regional socio-economic goals of key importance and provides for the harmonisation of county and regional development concepts. In addition, it calls for efforts in planning to minimise transport demand and mitigate environmental impacts of development.

The Act establishes several levels of spatial and physical planning: national, regional (via associations of counties overseen by Regional Development Councils), and counties and small regions (through voluntary associations of municipalities).¹³ On a national level, the National Territorial Master Plan, defines long-term goals over 30 years for the structural development of the country and its regions. It defines objectives for infrastructure networks – including transport – and land use and considers regional specificities and resources, as well as environmental principals. The Master Plan, the implementation of which is the responsibility of the National Regional Development Office within the Prime Minister's Office sets out a system of technical and infrastructure development plans based on the socio-economic goals of different regions of the country.

At the regional level, as noted in Section 4.2.2, National Regional Development Concepts are prepared to co-ordinate spatial planning and territorial development across counties. The guidelines set out at these levels are not legally binding documents.

In fact, spatial planning and land use in urban areas draw only to a minimum extent on territorial development concepts at these national, regional and county levels. The specific policy and legal framework for urban land use is embodied in the 1997 Act on Shaping and Protecting the Built Environment, which applies only at a municipal level. The 1997 Building Act specifies that virtually all development projects in municipal areas must conform to a local land use plan and obtain planning and building permits, issued by the municipality. It also articulates the norms regarding the minimum number of parking spaces required in connection with different types of buildings in different areas. The Act stipulates that environmental impact assessment must be carried out on large development projects,

and that preservation and conservation of historical building sites is regulated by preservation authorities independent of local governments.

Spatial and land-use plans for the city of Budapest are embodied in the city's Master Plan for Settlement Structure and Land Use. Included in the Plan are guidelines for overall development of the city, infrastructure building and operation and preservation of green areas and environmental protection.

The Master Plan forms the basis for the more-detailed district level land use plans. As noted in Section 4.2.2, the districts have considerable autonomy in decision-making regarding land use, including the capacity to define and implement development priorities and zoning regulations, under the supervision of a district chief architect, within their jurisdictions. The link, therefore, between the Master Plan for the city of Budapest and the districts is somewhat blurred.

Planning in Szeged is based on the 1993 Town Development Concept, valid for 15 years. As a pilot city for urban planning in Hungary from 1996 to 1998, Szeged developed a more-detailed "city" plan including plans for infrastructure development and transport as well as land use. This document is updated on an annual basis.

5.3. Environment policy

5.3.1. Overview

Hungary's first environmental legislation, the Forestry Act, dates to 1791 and was reinforced in the early 20th century with the Forest and Nature Conservation Act of 1935. It was then further developed in the early 1960s with the Acts on the Protection of Agricultural Land (1961) and the Water Management (1964).

In the 1970s, with growing concern about municipal and industrial pollution a Conference on Environmental Protection was held in 1973, which led to the first comprehensive environmental law, the 1976 Act on the Protection of the Human Environment.

Most of Hungary's important pieces of environmental legislation have been enacted since 1990, however, and the 1976 Act was replaced in 1995 by the Act on General Rules of Environmental Protection, which was accompanied by a series of environmental laws that were adopted in the mid-1990s. The 1995 Act provides a comprehensive legal framework for environmental protection in Hungary and introduces the principle of pollution prevention over pollution control.¹⁴

The first National Environmental Programme (NEP) covering the period 1997-2002 accounts for Hungary's actions in the context of the Environmental Action Programme for Central and Eastern Europe, the Fifth Environmental Action Programme of the EU and Agenda 21. Complete legal harmonisation of Hungarian environmental laws with EU legislation is to be completed, according to

Government plans, by 2002. Environmental policies implemented during the 1990s have led to pollution emissions reductions and improved air and water quality. However, enforcement remains a problem.¹⁵

5.3.2. Policy goals for transport and the environment

The 1996 National Transport Policy cites “the protection of human life and environment” as one of its main goals. Specific goals include:

- Enforcement of regulations ensuring the safe transport of hazardous materials.
- Improved intermodal co-operation to slow the decrease in the share of railway and waterway transport, as well as an increasing role for combined transport in both import/export and transit traffic.
- A decrease in transport-related air pollutants to reduce harmful effects on human health, notably by applying more-stringent international norms to new road vehicles, building bypass roads around residential areas, and giving priority to public transport and railways.
- A decrease in noise disturbance, in particular by encouraging the introduction of quieter vehicles to the fleet and adopting noise nuisance targets based on UN-ECE regulations.
- A reduction in soil and water pollution and waste from transport by discontinuing the use of leaded petrol, minimising use of de-icing chemicals on roads and using incentives for use of vehicles with the latest environmental technology.
- The preservation of natural landscapes and protection of the environment by developing and maintaining transport systems best adapted to the protected areas and natural heritage sites.¹⁶

The NEP also cites the following as particular objectives for the transport sector:

- Reduction of the transport sector emissions.
- Reduction of the harmful impacts of the noise and vibrations in the settlements.
- Revitalization of urban settlements – in particular – historic city centres.

The National Territorial Master Plan also refers to transport-related environmental goals, that include recognition of the links between spatial planning and development and mobility and transport demand, as well as the importance of giving priority to non-motorised modes of travel and public transport.

Environmental impact assessments are required for all transport projects with potentially significant environmental impacts. Since 1996, an average of 30 EIAs per year have been conducted for transport projects. Highway construction projects require more-detailed assessments.¹⁷

Measures for vehicles and fuels

In addition to the measures described in Section 5.1, a number of policy initiatives have been taken to improve the environmental impact of vehicles and fuels, among them:

- Emission and noise standards for gasoline and diesel vehicles have been equivalent to UN-ECE standards since 1995.
- Three-way catalytic converters are required on all imported gasoline cars since 1996. In the context of a vehicle scrapping programme aimed at reducing the number of two-stroke vehicles on the road, in effect from 1993 to 1995, 10 000 two-stroke vehicles were scrapped.
- Annual inspections of passenger cars, buses and trucks have been mandatory since 1990 with the exception of vehicles with three-way catalytic converters, for which inspections are required every three years.
- In Budapest, less-polluting and more energy-efficient buses were purchased in the mid-1990s and existing vehicles were modernised. Retrofitting of engines led to an approximate 80% reductions in emissions and fuel efficiency gains of 8 to 10%.
- Standards for fuel quality conform to EU norms. Leaded petrol was phased out in 1999 and unleaded petrol accounts for roughly 75% of vehicle fuels.¹⁸

5.3.3. Urban transport and air quality

The policy goals regarding transport-related environmental issues are usually articulated in the Master Plans or Transport Development Plans of cities. In Budapest, objectives for improved air quality are as follows:

- New infrastructure investments must contribute to improvements in air quality through reductions in congestion.
- The diminishing of green areas must be stopped.
- In the inner city by 2002, emissions reductions of 5 to 10% for SO₂; 15 to 20% for NO₂, CO, and O₃, and 20% for suspended particulates.
- On the access roads by 2002, emissions reductions of 5% for SO₂, 10-15% for NO₂, CO, and suspended particulates, and 10-15% for O₃.

5.3.4. Noise and vibration policy

The 5th Environmental Action Programme of the EU forms the basis both of the national environmental policy and local policies regarding noise. The Ministry of Health has set noise and vibration limits for road, railway, waterway and air traffic, whilst the Ministry for Environment along with the Ministry of Transport have together established noise standards for railway vehicles and aircraft among others.

The objectives set out in Budapest's transport plan for noise are as follows:

- Elimination of noise nuisance above 65 dB(A).
- Maximum noise levels of 85 dB(A) and 55 dB(A) in quiet areas.
- No further increases in the number of the inhabitants exposed to noise levels of 55-65 dB(A).

According to Budapest's transport plan, with the present environmental and economical trends, these goals could be attained during the 2000-2010 period, possibly as follows:

Table 11. **Average noise emission in Budapest until 2010**

| | 1990 | 1995 | 2000 ¹ | 2005 ¹ | 2010 ¹ |
|-------|-------|-------|-------------------|-------------------|-------------------|
| Day | 70-75 | 72-76 | 70-75 | 68-73 | 65-70 |
| Night | 63-69 | 64-70 | 63-69 | 61-67 | 58-64 |

1. Provisional data.

Source: Monigl *et al.*, 2000.

In Vác, the construction of noise protection walls and forest belts along with traffic calming in the city centre form the basis of the town's noise-policy.

5.4. Traffic safety policy

The 1996 Transport Policy states that improving transport safety is of "paramount importance". Among existing opportunities cited to reduce the number and gravity of accidents are included improvements to the road network and vehicles, stricter regulations and controls, measures to influence public attitudes and improved accident response procedures.

The Policy cites enhanced enforcement of safety regulations – particularly as concerns the safe transport of dangerous goods – as essential. It additionally points to the National Traffic Safety Programme (1993) as necessary in providing an integrated approach to accident prevention.

The 1993 Safety Programme sets forth a number of key objectives regarding improvement of safety, among them:

- Reduction of fatal accidents by 25-30% by 2000.
- Traffic safety information dissemination to the public, particularly in schools.
- More efficient police control.

- Centralised computer tracking of traffic infringements.
- Improved safety of road crossings.

A National Committee for Traffic Accident Prevention, which consists of road construction industry and traffic experts, police, and researchers, as well as non-governmental organisations, monitors traffic accidents, sets objectives for improved safety and organises public information campaigns. This national organisation has branches in each county that monitor safety activity in individual regions.

Road safety policy in Hungary has been focused on the following elements.

- General regulations of road traffic based on a highway code.
- Technical standards of vehicles.
- Local traffic engineering.
- Driver behaviour.

The first two elements are regulated on a national level according to international standards. Local traffic engineering in urban areas requires the cooperation of national (country) and local authorities when national roads are concerned. And on local roads, lack of resources often hinders city authorities from maintaining and upgrading road quality, which poses a safety hazard in some urban areas.

Several specific legislative measures have been implemented as a part of the Government's traffic safety programme:

- A penalty-point system was introduced for drivers' permits in 2000 and rendered more stringent in 2003.
- Child safety seats were made compulsory for children under 17 years of age and less than 150 cm in height.
- Rear safety belt use became obligatory as did use of headlights outside built-up areas.
- Maximum speeds within built-up areas was reduced from 60 to 50 km/h and the number of 30 to 40 km/h zones was increased.

As is shown in Section 3.4, in spite of these measures, serious traffic accidents, and fatalities both in and out of built-up areas have increased significantly, though the factors behind this remain unclear for the moment, according to national experts.

Objectives for road safety for the next ten-year period will be outlined in the forthcoming national transport policy.

Notes

1. Much of the factual background information for this section is based on Monigl *et al.* (2000).
2. No cost subsidy is paid to inter-urban bus operators in accordance with governmental priority fare policy for rail.
3. Constraints include legally prescribed minimum levels of service and maximum levels of taxation, in addition to public acceptance of tax increases (OECD, 1996).
4. In exceptional cases such as Budapest, the central government can also provide financial support to the public transport operator company for service provision within the agglomeration but outside municipal borders.
Of note, the programme of the new government (2002) envisages to allocate a “normative” subsidy from the central government to municipalities to cover the costs of urban public transport. This proposed subsidy and its possible implications are briefly described in Section 6.3.
5. See discussion of Budapest public transport below.
6. OECD 2000b, Hook (1999).
7. Please see Section 4.2.3 for further discussion of parking.
8. See Section 5.1.7 for more on parking.
9. Toll level in 2003.
10. Current government plans (2003) are to complete extension of the M5 to Szeged until 2006 and to Serbian border between 2007-2015 and the construction of M43 from Szeged to Makó (32 km) starts until 2006, and section from Makó to the Romanian border (23 km) will be completed during the period 2007-2015.
11. The World Bank, 2001.
12. This section is based on information from Monigl *et al.*, 2000, and Sykora, Ludek, 1999.
13. Please refer to Section 4.2.2 for explanation of the institutional framework and responsibilities for spatial planning and land use.
14. OECD (2000b).
15. *Ibid.*
16. MTCWM (1996).
17. OECD (2000b).
18. *Ibid.*

Analysis of the Review Team

6.1. Context

This section presents the analysis of the ECMT peer review team compiled during their visit to Hungary with additions based on the second visit of the Secretariat in 2003. In meetings with government experts and transport authorities, peer reviewers examined a wide variety of urban travel issues in Hungary – looking at both policy development and its implementation in the different relevant spheres, notably transport and traffic in urban areas, land use and spatial planning, transport-related environment and safety issues. The objective was to discern how policies impacting urban travel are made and how they are being implemented: where institutional strengths and weaknesses lie, where co-ordination among levels of government and across sectors functions well, where coordination could possibly function better.

The overall objective of this exercise was to assess where Hungary lies along the road to a sustainable urban travel system, and to provide recommendations based on the assessment of the expert team for possible avenues to get there.

This analysis chapter is organised as follows: Section 6.2 assesses overall policy-making for urban travel in Hungary; Section 6.3 covers administrative structures and procedures and how they impact urban travel policy development and implementation; Focusing in particular on public transport enhancement and development, Section 6.4 considers policies for urban travel and traffic. Section 6.5 examines land use and spatial planning policy followed by Section 6.6 that looks at environment policies. The analysis will close with Section 6.7, which proposes concluding remarks of the peer review team.

6.2. Policy context for sustainable urban travel

The development of policies for sustainable urban travel in Hungary over the last 15 years has taken place against the backdrop of growth in car use and degrading public transport. The steady growth of car ownership and use over the transition period has mirrored that of other central and eastern European countries

during the 1990s. Not surprising in many ways, this growth stems largely from the rapid economic expansion coupled with the association of owning a car with personal achievement and as a means of access to more opportunities for individual mobility.

A satisfactory though rapidly degrading modal split

Modal split of public transport relative to private cars in Hungarian cities remains high – about 60:40%, as compared to that of western European countries and even of a number of other CEE countries (*e.g.*, Poland) as well. Stagnating development of public transport, however, – coupled with the ever-increasing pressure of private vehicle use – are squeezing public transport's modal share.

Whilst the transport system seems to function relatively well in the three cities examined in the review, signs of strain are showing: overall aggregate demand for transport has risen, but programmes to expand and better manage capacity have not followed suit. This has resulted in, among others, a backlog in maintenance and renewal of the public transport fleet.

A favourable policy approach...

It is within this context of rising private vehicle use and falling public transport use that Hungarian authorities have defined what appear to be sound, sustainable principles for the development of policies for travel in cities. Priority is given to improving public transport, promoting cycling and walking, as well as to limiting the growth of car traffic, especially in cities.

Both the national policy document of reference to date – the 1996 Transport Policy¹ – and its yet un-released revised version clearly articulate sustainable objectives for the development of transport in Hungary. Partially restated here, they include: mitigating growth in motor vehicle traffic; ensuring high-quality and efficient public transport for all settlements and sound and reliable inter-urban public transport; promoting cycling and walking; and limiting the environmental impacts of transport.

At the city level in Budapest, a similar policy approach has been taken with a number of specific policies and programmes. Parking, for instance, is to be managed in the inner zone, and public transport quality improved. Repairing existing infrastructure is a priority matter and in the intermediate zone, the completion of the Hungária ring road, the development priority. Providing outer interchange stations to enable car users to switch to public transport was seen as the main way of moderating car travel into the main urban area, and work has begun on expansion of the metro system.

All this adds up to reasonably sound transport policy and it is clear that the inter-relationship between transport and town planning is understood and respected in the planning system.

... with some weaknesses

There are however a number of weaknesses in the plans for Budapest's transport system that are shared in other cities as well.

First, there appears to be an ambivalent approach to car use in a number of cities. Progress on introducing measures to moderate the growth of motor traffic in the larger towns and cities is poor. Indeed in Budapest the policy of public transport traffic priorities of the 1980s has been watered down and some facilities withdrawn in order to provide additional capacity for general traffic.

Moreover, there is on the one hand a stated commitment to moderate growth in car use, whilst on the other hand, there are concerns about insufficient capacity to meet demand, for instance in terms of off-street parking.

It would seem that there is indeed a real shortage of off-street parking in the core of Budapest, and it may be sensible to expand capacity somewhat. However, little indication was given during the review that parking capacity ceilings were given any serious consideration. Moreover the policy approach to parking was decidedly permissive (*e.g.*, national requirements are based on a minimum level of provision as part of new development rather than on a maximum related to operational needs). The danger in this approach is that the amount of off-street parking may exceed the capacity of the road system to carry the traffic it generates, and that further demand for parking will be provided by private garages, which are beyond public control.

Second, there was no evidence of a comprehensive urban freight transport policy. Given recent growth of van and lorry traffic in cities in other parts of Europe and North America, as well as the environmental objections to heavy lorries in urban areas, this may be an important omission. Greater emphasis should be given to urban freight logistics to address congestion and environmental concerns.

Third, urban travel and land use plans stop at the city boundary, whilst the effective metropolitan area extends well beyond Budapest proper. This means in effect that any spatial and transport planning will be incomplete, and the distortions resulting from competition for development near to the boundary are evident.

In Szeged, the problem of balancing the needs of local and transit traffic – a problem more generally perceived on a country-wide scale, along with an expressed ambition to become a “gateway” city was particularly clear. This aspiration to become a gateway seemed to be based on a perception that being a node on an international transit route brought some kind of (presumably economic)

benefits. What these benefits are was not evident; however the problems of heavy transit traffic were.

Szeged's transport policy seemed to be based on sound principles, featuring bypasses to detour through traffic, improving public transport for journeys to the centre and traffic limitations through traffic management and street closures.

However, as in Budapest, an ambivalent approach to parking policy revealed a mitigated commitment to car use restraint, accompanied by very ambitious targets for additional off-street parking capacity in the inner core and an absence of a regional planning and transport strategy.

The review of transport policy initiatives in Vác, much smaller than Budapest and Szeged, demonstrated that a number of relatively straightforward actions could be taken to improve travel in the city (*e.g.*, grade separating busy level crossings; relocating the ferry terminal and additional crossings of the Danube). The resources necessary to implement these measures is, however, lacking.

Whilst there are weaknesses in urban transport policy and in the institutional configuration of its management in Hungary, it is with implementation that the real problems lie. According to discussions in Szeged, only 10% of the proposals in the 1993 Town Development Concept were realised in 2000, and implementation of the more-detailed proposals of their 1996 "city plan" has also run into difficulty due to a general lack of resources.

Barriers to effective policy implementation

Translating policy principles into robust measures and seeing that these measures are implemented has proven a difficult task, in large part due to a number of key institutional and organisational factors linked in large part to the decentralisation of responsibilities for urban transport policy. Indeed, many obstacles still exist to an integrated transport policy since municipalities are deprived of control over most of the policy tools: fare increases are controlled in large part by the Ministry of Finance; the Ministry of Interior – though having no explicit responsibilities for urban transport – has oversight on the organisation of municipal structures and processes; public transport service definition is virtually left to the operators in some cases, and, in Budapest, traffic and parking are district responsibilities, with the municipality trying, often in vain, to harmonize at the city level.

6.3. Administrative structure for urban transport policy-making

Excessive and incomplete decentralisation

The transition process in Hungary has been accompanied by the decentralisation of certain competences of the central government to local authorities. In the field of transport, whilst the Hungarian state has kept the control of inter-urban

transport (rail and road), the organisation and financing of urban transport have, in principle totally and in practice largely, been transferred to municipal authorities.

As a notable consequence of this transfer, no section in the Ministry of Transport at the time of the review visit was in charge of urban transport issues.² The state has nevertheless an indirect control of these questions as the owner of some of the companies operating transport in certain cities and by having approval rights over fare levels.

Several aspects of the decentralisation of urban transport have made implementing policies to improve travel and transport in urban areas particularly difficult.

Financial aspects

Lack of the necessary financial resources to implement policies to improve urban transport was cited during the review as perhaps the most critical problem facing local authorities and transport operators: Indeed, responsibility for urban travel was transferred to municipalities beginning in 1990 with the Act on Local Self-Government, but adequate control over potential revenue sources to finance improvements to the system was not. Local public transport companies are funded entirely (fare concession compensation apart) from local funds but local tax raising powers are very limited.

These arrangements are unsatisfactory in several important respects. Firstly there is a clear mismatch between responsibilities and resources. Local government carries the responsibility for urban transport but does not have commensurate resources or freedom of action to carry out plans and policies. Fares have to be approved by the Ministry of Finance yet there is no compensation to local authorities for their being maintained at lower levels. Secondly local authorities have no real choice but to go to the state-owned monopolies for transport services they require.

Thirdly there is not a consistent basis for financing the main operators. As described earlier in the report, MÁV is a traditional para-statal rail operation, but there are plans to separate infrastructure from operations, with the former becoming a direct state responsibility and commercial and “social” services separately identified. MÁV’s (substantial) losses are funded by central government insofar as they are regarded as legitimate. There is a service contract, but no explicit performance cost subsidy contract between MÁV and the state.

The state-owned Volán companies (Volánbusz around Budapest and Tisza Volán in and around Szeged) do not receive any operating subsidy from the state but have received grants to buy new vehicles. Along with all operators, Volán receives concessionary fare compensation from the central government and some (apparently rather limited) financial support from local authorities for providing local bus services.

In this way, MÁV enjoys deficit financing, Volán has no state operating subsidy but gets capital grants on an ad hoc basis and local public transport does not receive any direct financial support from the central government other than compensation in respect of social fares concessions, although there was a period in the mid 1990s when central government helped to meet the cost of BKV's deficit. Whilst the provision of good local public transport, especially in large towns and cities, is a priority, it is not classed as "obligatory" and meriting formula grants in the same way as education and healthcare. Consequently, public transport often has difficulty being allocated the necessary funding for its development and maintenance.

In addition, the arrangements for fare concessions and support are complex and incoherent. In Budapest for example there are seven different types of discounted fares. For inter-urban commuters there is a tradition (it seems increasingly disliked by employers) to pay for a substantial proportion of employees public transport costs. This proportion differs between MÁV and Volánbusz.

The review did not examine in detail the financial aspects and implications of the overall decentralisation process in Hungary; it appears however, that in most municipalities, public money available for implementing urban policies is very scarce, whether it be for the purchase of land or the development of infrastructures. Even a relatively affluent municipality such as Vác does not have the necessary means to finance its projects of urban continuity (the railtrack divides the town in two, with only one underground passage) or promotion of walking and cycling. This holds for Szeged as well, at a larger scale, with the urgent need for a new bridge in the city as a development measure of municipality and a national by-pass road financed by the State in order to relieve the centre of through-traffic.

Similarly for roads, local authorities do not appear to have sufficient funds to embark on major capital projects, and central government priorities seem to lie mainly with long-distance and transit traffic needs. As a result of the inadequate resource base, investments in public transport have been dramatically reduced, except for projects with high political significance (such as the fourth line of the Budapest underground) or special subsidies from the state, the European Union or the World Bank (*e.g.*, for natural gas buses).

Insufficient financing of public transport operations has also led in some cases to reduced public transport services. In others, a shortfall in municipal resources has been dealt with thanks to certain *flexibilities* in the system; for example:

- In the cities in which the Volán companies operate both local buses and intercity coaches, the profits generated by the interurban lines are used to cover the losses of the urban services, or most of it, resulting in virtually no need for municipal subsidy. The state, which controls the Volán companies, seems to accept this cross-subsidy principle, while strict financial separation

between urban and interurban services has become a rule in EU countries, as well as in Hungary from the date of EU accession.

- In the case of municipality-owned public transport companies, the operator and the city negotiate the level of municipal subsidy on an annual basis – this, in the absence of a contractual agreement between the two entities and with apparently little regard for the amount and quality of the service provided. The main concern would thus appear to be preserving a balanced municipal budget. With only a portion of the operator's losses (the difference between operational costs and total revenues) covered, the municipal companies increase their deficits, which are then disguised public debt.

The following example illustrating the potentially perverse consequences of this system was reported to the review team in Szeged. In the late 1990s, the municipality considered suppressing the existing tramway lines, which were operated by the city-owned company, and replacing them with Volán bus lines, which could be partially financed via the cross-financing mechanism and thereby require less municipal subsidy.

- The possibility also exists for municipalities to raise fare levels as a means to improve cost coverage. However, proposals to this effect are often reduced by the Ministry of Finance, vigilant with respect to inflationary pressures and to limiting subsidies paid by the state to compensate for social tariffs.

Proposals have been put forward to central government to ease the financial burden on local administrations. These include rebates of fuel duty for public transport operations and a sharing of loss funding for BKV between the municipality and the government (45%/55%), which has been rejected by the government.

Two recent initiatives demonstrate efforts on the part of the central government to address the financing problem of local public transport. First, exceptional debt relief was offered to BKV in 2002, when the state assumed HUF 38 billion in BKV debt.

Secondly, in 2002, the recently elected government envisages in his programme to allocate a normative subsidy from the central government to municipalities (state budget-permitting) to cover the costs of urban public transport operations or service level improvements in six of the large cities proposing these services in Hungary. The rationale behind this subsidy is that according to the law, municipalities must provide obligatory services (such as, among others, education and health) to be financed by the State, and also provide non-obligatory services (such as public transport), support for which local budgetary resources are not sufficient. According to information provided by the Ministry of Economy and Transport the proposed amount of this subsidy – still under discussion at the time of the report's writing – is 10-15% of the total costs of local public transport (estimated at HUF 12-18 billion at 2002 price levels).

Though without a doubt welcome relief to these municipalities struggling under severe budgetary pressures, it would appear that these solutions are short-term, and do not address the fundamental problems related to responsibilities for financing public transport in urban areas.

Interestingly, running apparently counter to these somewhat encouraging initiatives by the central government for municipalities and operators is a proposed increase in the VAT for public transport services – from its 12% in 2003 to 23% in 2004. A considerable amount of consternation in terms of the impact on public transport use was expressed in both Budapest and Szeged with regard to this proposed increase.

Institutional aspects

From a more institutional point of view, the decentralisation of urban transport has resulted in something of a political vacuum in the authority over and organisation of public transport services in some areas.

By transferring virtually all decision-making power on local affairs to local authorities, the central level in essence relinquished the ability to define a co-ordinated national regulatory, legal and financial framework in which local authorities and transport operators can function. Important urban transport issues such as the nature of contractual relationships for service provision, financing of investments or privatisation of certain services require a more national context in order to function effectively and efficiently in cities. Initiatives to tap into possible sources of private funding of public transport in Hungary and efforts to further develop tendering and competition among service providers would no doubt benefit from a stronger national role.

The decentralisation process has not resulted in reinforced municipal staff to handle transport issues. Although generally well-acquainted with transport issues, the number of municipal employees dealing with local transport seems insufficient to cope with the concerns of a fully responsible public transport authority. Indeed, the Budapest municipality had only two individuals assigned to work on public transport issues during the peer visit in 2000 – hardly adequate to handle the large number of complex transport dossiers on the municipal agenda. In 2003, the staff was extended by more than 10 people, but no post allocations were given to public transport. Municipalities have in a number of cases passed responsibilities for local transport – including strategic planning and service definition – along to the operators themselves, much in the same way that the state has transferred responsibility for urban transport almost entirely to the municipalities.

Further, at the time of the review, discussions with municipality-owned public transport companies revealed a strong commitment to keeping public interest as a primary goal – much as a local transport authority would do. In future, however, these same public transport services could be provided by private, profit-oriented

companies, and in this case, a strong public authority will be indispensable in order to negotiate with the service providers on equal footing and ensure that public interest is considered.

This case seems to hold especially true for Budapest, where the imbalance between the municipality and the powerful BKV is the most striking. The BKV appears as a de facto public transport authority, making most of the strategic decisions. Enjoying a monopoly in inner Budapest transports, the BKV has organized in recent years a call for tender in order to subcontract the operation of a few bus lines and thus take advantage of the lower costs of private companies. This decision, although it will certainly contribute to the efficiency of the bus network, should normally have been taken by the municipality itself.

This confusion and lack of clarity of roles and responsibilities makes it very difficult for managers to do their jobs efficiently. Whilst there are dangers in un-elected officials taking responsibilities properly in the domain of politicians there even greater dangers in officials failing to do their job of managing the activities for which they are responsible in an effective and efficient manner.

Another reason for setting up sufficiently strong public transport authorities is the coexistence of several operators within the same agglomeration. The role of the public transport authority is vital in this case and consists of ensuring co-ordination between the different companies, organizing competition and calls for tender, preventing on-street competition, harmonizing tariffs and sharing traffic revenues and public subsidies.

The weakness or the passivity of the public authority certainly accounts in large part for the lack of coordination in tariff policy observed in Budapest (coexistence of several tariffs) and in Szeged, where the Volán company, which operates the city buses, seems to have at certain times engaged in on-street competition with the municipal company operating the tramway lines (SZKT).

It should be noted, however, that co-operation in Szeged between the two operators appeared in 2003 to have significantly improved from the time of the first peer visit. Efforts are being made to coordinate on parallel routes and services; fare and ticketing services are better aligned and there is consultation on marketing and business strategies. Moreover, a close, regular and informal coordination between the general managers of the two companies was reported to be in place.

The need to reinforce municipal authorities

Reinforcing local transport authorities will necessitate clear contractual arrangements with operators. As it stands at present, the relationships between Hungarian municipalities and public transport operators are insufficiently formalized, although some efforts in this direction have been made. One of the reasons for this situation is that the municipality owns the public transport company, which can result in confusion

between its interests as the owner of the company and its legitimate expectations as the client of the company. This is the case in both Budapest and Szeged.

The aspect of this that most requires formal agreement concerns the allocation of municipal subsidies to the transport company. Contractual arrangements should specify that subsidies from the municipality represent remuneration for services provided (and should therefore be dependent either on the volume of these services or on the number of passengers carried) as well as on the quality of this service. In this way, the municipality can re-affirm its role as public authority, while the transport company secures its revenues, making it less dependent on the hazards of municipal budget constraints. The existence of quality criteria could be an incentive for the operator to improve the services offered to passengers.

The creation of the Budapest Transport Association, initiated by the three public transport operators in the capital (BKV, MÁV and Volánbusz) with the support of the municipality, clearly aims at improving this situation by creating more solidarity between the operators. In this regard, it is an indisputable breakthrough. The prospect of setting up an integrated tariff system is good news for the users.

Yet this solution appears as a potential stopgap in the absence of municipal initiative. Indeed in some ways, it could reinforce the confusion between the roles of the public authority – which represents the public interest and should therefore promote service and tariff integration and make sure that users get the best service at the lowest cost – and that of the operators, which is to maximize the difference between their total income (fares and subsidies) and operational costs. It may later be very difficult for the municipality to recover the responsibilities assumed by the BTA and to induce such changes as the introduction of new operators, privatization of the existing ones or the promotion of an integrated transport policy, which ultimately the municipality alone has the legitimacy to oversee.

The municipal government in place in Szeged since 2002 has proposed a plan to strengthen the municipal Szeged Transport Organisation Ltd (SZKSZ) – currently something of an empty shell, as network plans and operations are decided by the operators themselves. The expressed objective of this initiative is to re-gain municipal control over revenues from ticket sales, thereby increasing the authority and the resource base of the municipality. Three options are currently under consideration for the financing and structure of public transport in Szeged, going from a “limited change status quo”, mainly involving new contractual arrangements with the Tisza Volán company, to a fully liberalised structure, whereby operations would be subject to tender by the municipal transport authority. At present, the more conservative “limited change” case is considered the most viable option in the short term, with possible moves toward a more liberalised scenario in the future.

6.4. Urban public transport enhancement and development

Organisation and financing

A number of the difficult areas concerning the organisational and financial aspects of public transport in Hungarian cities have been examined in the previous section as they relate to the incomplete and somewhat excessive decentralisation of urban transport responsibilities. This section further explores the challenge of enhancing and developing public transport – of preserving the favourable modal split in Hungary – while faced with the organisational and financial constraints described above.

Impact of financial shortage on investment and services

For many of the reasons previously cited, public transport in Hungarian cities is suffering from financial shortage, with implications for both investment and operations. In some instances, a vicious circle has set in, whereby insufficient investment has led to a degradation of performance and quality of service; and as a result, further investments – which could be considered urgent – have been postponed, thereby further deteriorating performance of the system. Lack of investment in track, for example, has led to an increase in travel time between Budapest and Szeged from 2h10' a few years ago to 2h30' today. In addition, the acquisition of new rolling stock, especially buses, for which there is no national production, has become several times more expensive because of inflation.

Whilst there is a widely shared view that public transport must be improved, services have been cut back in Budapest at least as fast as the fall in ridership. The steady run down in the public transport “capital” is a matter of particular concern. BKV has had to use its reserves to fund operating losses, Volánbusz is also eating into its reserves and the vehicle renewal rate is in the range of 3% to 5% a year compared with a desirable rate of 7% to 8%. Much of MÁV's rolling stock is 30 to 40 years old and the state of the infrastructure means that average operating speeds are now down to 40km/h.

Apart from this resulting in public transport becoming an increasingly inferior product, it is likely to lead to a series of crises when major “lumps” of equipment and infrastructure finally become inoperable. How these crises will be resolved will depend on circumstances at the time but there is a danger that substantial disinvestments will result. The closure of many tram and trolley bus systems in western European cities provide clear precedents. Even if this does not happen, the damage that can be done to the public transport market from an extended period of abysmal service can be irreparable.

Cost coverage

The difficulties associated with jurisdiction over fare policy have been described in the previous section on decentralisation. A few other aspects linked to fare policy should be addressed.

One of the reasons for the high modal share of public transport is the rather low fares, especially in Budapest. In spite of a 73% increase in public transport fares between 1991 and 2002 (in real terms) accompanied by a 30% decrease in fuel prices during the same period, it is still cheaper to use public transport than a private vehicle. Yet the quick reduction of the cost advantage of public transport as compared to the car certainly partly accounts for the reduced traffic on buses, tramways and undergrounds.

Although improving the cost coverage ratio by increasing revenues is a desirable objective, it should be noted that this ratio in Budapest is now similar or even superior to those observed in many western European cities. Continuing to raise the fares at the same pace, as a compensation for the shortage of public subsidies, could, in fact, accelerate the deterioration of the modal share of public transport.

A more co-ordinated approach to the provision of public transport – in particular as concerns fares and ticketing harmonization – is a key objective of the Budapest Transport Association. Initial efforts to establish a co-ordinated fare and ticketing policy among the three partners have, however, hit stumbling blocks so far – despite evidence of goodwill – and will almost certainly require structural changes to the organisation and funding of public transport across the country. Clearly a national lead is needed to make real progress.

Possible sources of revenue

It is clear that identifying sources of revenue for the transport system has reached critical importance in some cases. There appears to be a tendency on the part of some municipalities to regard foreign subsidies (especially from the European Union and the World Bank) as the only solution of revenue generation, and many municipalities are trying to design projects eligible for this funding. This may increasingly be the case as Hungary gains accession to the EU and access to structural funds.

The necessity to meet the criteria of the financing organisations has the advantage of encouraging structural reforms. This kind of funding also carries the drawback of favouring projects with great visibility, but not always satisfying the most urgent needs. For example, the provision of a few costly natural gas buses via international funding may not be the most cost-effective use of revenues in cities where most of the fleet is more than 20 years old and highly polluting.

A possible source of money for the transport system is employers' taxation. Hungarian firms are already supposed to reimburse a substantial part of the price of monthly passes (86% of rail and 80% of bus passes) for their employees' interurban trips. But this obligation does not seem to be applied and enforced in a systematic way in recent years. Indeed perception in some cases seems to be that employing local individuals or those who renounce their rights to the reimbursement represents a cost-saving factor. In addition to a better enforcement of this policy, the following measures could be considered:

- A special tax on turnover or salary expenses, justified by the advantages companies get from public transport and dedicated to their financing. The creation of such a tax largely contributed to the revival of public transport in France in the 1970s and 1980s. It seems, however, to contradict the principles of the Hungarian Ministry of Finance, which opposes targeted fiscal resources.
- A partial reimbursement of urban public transport passes. This is implemented in several European cities and incites employees to use public transport; this measure does not directly bring new revenues into the system but it allows a more steady raising of the fares without discouraging the use of public transport; it should besides be compared with the free provision of parking space for some of their employees by more and more companies.

Competition

In general, there appears to be a lack of initiative to introduce competition as a spur to greater efficiency and innovation. The Ministry of Transport does not see this as its role and the operators naturally prefer a process of gradual change from the status quo. In fact, apart from taxis the private sector appears to have a very limited role in the land transport sector.

As mentioned above, the city authorities seem to have left the task of arranging public transport with the operators, and consequently do not have the competencies to take the necessary lead on encouraging competition. As a condition of receiving World Bank credits, BKV has put three bus lines out to competitive tender, and a further five lines have been tendered over the last couple of years. Whilst this is a positive move, experience in other cities (*e.g.* Bangkok) shows that whilst the incumbent operator retains monopoly rights, sub contracting of this kind does not bring real competitive pressures. The "ownership" of the service rights and obligations should be separated from operations in order to put competition on a fair basis.

The one exception to this that we found was the attempt to bring in competition to local bus service provision in Vác – an attempt that proved unsuccessful due to financial roadblocks. The fact that local bus services provided by Volán can be cross-subsidised from interurban route profits allows Volán to resist competition if it

so wishes. This is a good example of how the present financial and organisational structure helps resist change. The more pragmatic approach adopted by the authorities in Vác has resulted in private funding for traffic calming schemes and help from the Dutch government with its cycle network. Although modest initiatives, these are commendable examples of making progress by resorting to innovative techniques.

The view that private capital could not be brought in to BKV developments because there were no commercial projects indicated a lack of appreciation of the innovative financing that has been employed in other European countries. Examples of such projects include:

- Operational leasing of rolling stock.
- Private provision and operation of revenue collection.
- Competitive tendering of bus services.
- Concessioning of new rail lines and extensions.

Whilst it would be wrong to claim that the engagement of private finance (and funding) through means such as these is easy and always worthwhile, there are without a doubt opportunities within the large public transport operators for private financing that enhance cost-effectiveness, efficiency and quality. Moreover, use of private funding and operation can introduce a measure of flexibility into capital programmes and allow much needed investment to go ahead earlier than would otherwise be possible.

Innovation and change

More generally, the transport sector seems particularly resistant to innovation and change. This conservatism on the part of the main actors along with the unsatisfactory financial and organisational structures has resulted in the transport sector generally lagging behind other sectors of the Hungarian economy.

Technical innovation in the sector is relatively limited: equipment is generally old and the absence of public transport features such as electronic ticketing (though this is planned), automatic vehicle location and real time passenger information give the feel of an out-of-date system. It appears that demand-responsive traffic control systems (*e.g.* SCOOT) are not yet in use, though there have been developments in recent years leading to improved signalling at intersections in Budapest, a MARABU guidance system for the M0 motorway south of the capital, and an Automatic Vehicle Monitoring system at BKV.

There is also much that could be done with telematics to improve public transport revenue collection as well as the organisation and interoperability of services of the different transport operators. This will be especially important if a Budapest Transport Association is created, notably to handle revenue allocation within an integrated fare system.

This would require investment but, given the intensive use of the existing assets, this is likely to be well worthwhile. Similarly there are a number of road infrastructure projects (from grade separation of level crossings and bypasses to new river crossings), which could bring large traffic and environmental benefits.

6.5. Land use and urban policy

Good principles, difficult implementation

The principles on which urban land-use policy in Hungary is built are sound, firmly grounded in sustainable development and consistent with land use objectives promoted in other European cities. These principles include:

- Prevention of urban sprawl.
- Preservation of the density of the centre city and renovation of its buildings.
- Re-urbanisation of industrial wastelands located near the centre and well-served by transport infrastructure, preservation of green areas, development of new centres in the suburb areas, preservation of the compact and historical character of surrounding villages.

Yet translating these good principles into sound policies and implementing them has proven difficult. First, as in many urban areas, there are strong pressures to develop available land along the fringes of the cities due to demand by both individuals in search of more space and cheaper housing and by investors looking for opportunities for industrial and commercial buildings. Given these demand pressures, and the political and financial interests at stake, city authorities are finding it difficult to resist this pressure: the shopping malls recently constructed in the outskirts of Budapest are evidence of the contrary.

One of the reasons for this situation may be that land-use laws are not yet fully stabilized, since their current state is intermediate between the rules inherited from the former system and the transposition of EU directives, which is not yet complete. This transitory legal and regulatory situation may thus be contributing to a permissive urban land development environment, in spite of the existence of sound urban policy principles, which would favour a more restrictive development approach.

It is also unclear the extent to which public authorities have the necessary tools to implement their policies. Current land use development controls seem to be based on regulation. Discussions during the review with municipal authorities revealed little consideration for the potential efficacy of “positive” policy tools such as tax incentives or public purchase of land. For example, the desire to develop certain green areas in and near the centre of Szeged is currently hindered by the multiplicity of land owners. Municipal authorities did not mention the possibility of purchasing these plots, probably for lack of the legal and financial means to do so.

The consequences of urban sprawl on transport demand

One of the consequences of insufficient control of urban land development is the transport demand that it generates. Migration of city dwellers to the rural periphery – as is the case in Hungary, for example, as many people are using their secondary homes in the surrounding rural areas as principal residences – induces heavy traffic on radial roads and the need for suburb-to-suburb infrastructure. City authorities should be aware that the profits generated today by land acquisition by private developers will be offset tomorrow by the need to provide new transport infrastructure.

The creation of commercial and retail facilities in the periphery is another factor contributing to the saturation of existing infrastructure, since shopping malls generally locate near the busiest junctions. Commercial development – a normal consequence of a fast-growing economy – does not seem to be adequately planned in terms of land-use, projected traffic generation and public transport services.

The need for a regional planning authority

A stronger regional level would without a doubt contribute to the efficiency and efficacy of Hungarian land-use and planning policy. An intermediate level would be useful between the national and the local master plans. This holds especially for Budapest, since there has lacked a strong political entity covering the greater Budapest area, which has become the relevant scale for many urban planning and transport problems. The serious decrease of the modal share of public transport for the traffic crossing the Budapest border, notably higher than its decrease within this border, might partly result from the absence of policy at the metropolitan level.

The preparation of a land-use document for the greater Budapest area is a step forward in this regard, but the legal relevance of this document and the means to enforce its implementation need clarification and reinforcement. The initiatives of the regional development agency Pro Regio, created in July 2000 for the Central Region around Budapest, have also proven positive, but mostly as concerns regional business development and promotion. They have, however, produced a Strategic Plan for the Central Region, and will play an important role in attribution of forthcoming EU structural funds.

6.6. Environment policy

Transport-related environment policy

The authorities in Hungary appear to be well aware of environmental issues relating to transport – especially air quality – and to be prepared to take positive action. Clear objectives have been defined, proving the will of the Hungarian authorities to master the environmental consequences of the country's economical

development. Rather sophisticated air quality monitoring equipment has been purchased by certain cities, including Budapest and Szeged. Incentives for scrapping of old polluting vehicles, the introduction of new cleaner fuels and financial incentives to fit tailpipe devices to clean up exhaust emissions are all being used. This replacement of old highly polluting vehicle technology with modern less polluting vehicles has had beneficial effects on air quality which, it seems, has more than outweighed the increase in the number of cars. High schools and institutes of higher education include environmental issues in their curricula.

Yet these efforts, although they should be praised, have not led to the kinds of progress sought, since pollution measurement has not been accompanied by action on traffic and parking conditions. It seems that publicizing the pollution problems is currently the main form of action taken.

Of particularly positive note was a visit in 2003 to the fleet yard at Tisza Volán in Szeged, where the impressive environmental management of the site was evident. ISO 9001-certified for technical quality (maintenance and repair), passenger service, training and environmental management, the Tisza Volán company has placed emphasis on waste separation and recycling at their site and has obtained via this certification recognition for having placed priority on the environmental impacts of their activity.

6.7. Concluding Remarks

There is much that is positive about urban transport in Hungary. Generally a sustainable philosophy has been adopted for the management and development of transport in towns and cities. The country has an extensive railway system for its size and good, if ageing, public transport systems. Road development reflects the relatively recent onset of mass motorisation but the existing road system is in reasonably good condition, if ill-suited to motorised traffic in the historic urban cores.

The present institutional, organisational and financing arrangements however mean that the country's generally sound approach to urban transport is not being adequately translated into meaningful policies, programmes and projects "on the ground".

Whilst transport is described as high priority by the government, this is not adequately reflected in resource allocation structures, with too much responsibility resting on local government and insufficient resources at a municipal level to discharge these effectively. Implementation programmes do not systematically accompany policy plans; and the absence of effective regional planning constrains transport and planning policies to fit within artificially constrained boundaries.

The existence of state monopolies for national rail and bus services and local publicly owned operators in the larger towns – each with its own remit and funding arrangements – makes co-ordination difficult and does not promote innovation or

efficiency improvements. Uncertain and inadequate funding compounds these problems along with a complex and inconsistent system of concessions discounts and employer assistance with public transport fares. The significance of these deficiencies is reflected in the lack of progress in the creation of a Public Transport Authority for Budapest and in other cities.

As in many other European countries there is significant ambivalence towards dealing with car use in cities. Yet Hungary is better placed than many of these to introduce a progressive programme of limiting car use in dense urban areas.

Despite the challenges identified above and in the body of the report, there is definite cause for optimism. Most of the problems have not reached the point at which only inordinately costly measures are needed to start tackling them effectively. There appears to be a consensus on what needs to be done, and Hungary still has a public transport system that could be developed to rival those found elsewhere around the EU. There exists evident capacity for innovation and reform of the transport sector at the local level and substantial achievements in other sectors of the economy.

Hungary is a fairly small country (10 million people in 93 000 km²), in economic transition with a strongly centralized constitution. These are circumstances in which it is incumbent on national government to take a strong and coherent lead in dealing with the country's major problems: urban transport is certainly one of these. The national government seems to be reluctant to face up to its obligations in this regard, most likely due to uncertainty about how to deal with this rapidly changing situation rather than indifference or neglect.

In looking to the future for the economy, Hungary has the capacity to do well in the tertiary and quaternary activities that thrive in cities. If this potential is to be realized then the government must take the lead in providing the policy framework, administrative arrangements and resources for urban transport problems to be taken on effectively.

Notes

1. Please see Section 5.1.1 for a description of the 1996 policy. As noted in the introduction, a new transport policy was under deliberation at the time of this report's writing.
2. As mentioned in the introduction to this report, in 2002, with the change in government and the re-organisation of the Ministry came the establishment of a small group within the Transport Policy Department of the Ministry of Economy and Transport dealing with urban transport issues.

References

- EC (1998), *Transport Development in the Central European Countries: Analysis of the trends for the years 1994 and 1995*, European Commission, Eurostat and Phare, European Communities, 1998.
- ECMT (1998), *Transport Infrastructure in ECMT Countries: Profiles and Prospects (Monographs)*, the European Conference of Ministers of Transport, 1998.
- ECMT (1997), *Issues in Sustainable Transport: The Case of Hungary*, the European Conference of Ministers of Transport, Document CEMT/CS/ENV(97)3, 1997.
- HCSO (2001), *Statistical Yearbook of Hungary 2000*, Hungarian Central Statistical Office, Budapest, 2000.
- HCSO (2000), *Statistical Yearbook of Hungary 1999*, Hungarian Central Statistical Office, Budapest, 2000.
- Hook (1999), "The political economy of post-transition transportation policy in Hungary", Walter Hook, published in *Transport Policy* 6, Pergamon Press, 1999.
- MTCWM (1996), *Transport Policy of the Government of the Republic of Hungary*, Ministry of Transport, Communication and Water Management, Budapest, 1996.
- MTCWM (1999), *Transport, Post and Telecommunication and Water Management Data 1995-1998*, Ministry of Transport, Communication and Water Management, Budapest, 1999.
- Monigl et al (2000), *Background report for the ECMT National Peer Review of Urban Travel Policy in Hungary*, Dr. János Monigl, Transman Consulting, Budapest, 2000.
- OECD (1999), *OECD Economic Surveys 1998-1999, Hungary*, OECD, Paris : 1999.
- OECD (2000a), *OECD Economic Surveys 1999-2000, Hungary*, OECD, Paris : November, 2000.
- OECD (2000b), *OECD Environmental Performance Reviews, Hungary*, OECD, Paris: 2000.
- OECD, (2001), *Territorial Review of Hungary*, OECD, Paris: 2001.
- Tánczos (1995), "Organising and Financing Urban Public Transport in Budapest", by Katalin Tánczos, Technical University of Budapest, published in *Sustainable Transport in Central and Eastern European Cities*, European Conference of Ministers of Transport and OECD, Paris: 1995.
- World Bank (1995), *Staff Appraisal Report, Republic of Hungary, Budapest Urban Transport Project*, Energy, Environment, Transport and Telecommunications Division, Central Europe Department, Europe and Central Asia Regional Office, The World Bank, May 17, 1995.

Web sites

- Atlappedia (Web), Internet site : Atlappedia, Latimer Clarke Corporation Pty Ltd. 1993-2000, www.atlappedia.com/online/countries/hungary.htm.
- HCSO (Web), Internet site : Hungarian Central Statistical Office 1996-1998, www.ksh.hu/pls/ksh/docs/index_eng.html.
- CIA (2001), *The World Factbook*, www.odci.gov/cia/publications/factbook/geos/hu.html.

Annex

Members of the ECMT Peer Review Team

Peer experts

Mr. David Bayliss
Halcrow Fox
United Kingdom

Mr Marcel Nollen
Ministry of Transport, Public Works and Water Management
Netherlands

M. Yannik Tondut
Ministère de l'Équipement, Transports et Logement
France

ECMT secretariat

Mr Jack Short
Secretary General

Ms Mary Crass
Principal Administrator

Other titles in the series



Implementing Sustainable Urban Travel Policies
National Self Reviews
(75 2003 08 1 P) ISBN 92-821-0305-6
ECMT (2003)

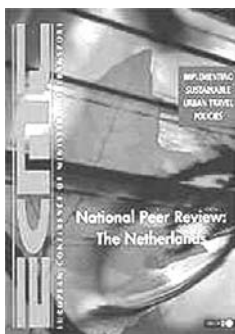


Implementing Sustainable Urban Travel Policies
Final Report
(75 2002 01 1 P) ISBN 92-821-1368-X
ECMT (2002)



Implementing Sustainable Urban Travel Policies
Key Messages for Governments
(75 2002 05 1 P) ISBN 92-821-1370-1
ECMT (2002).

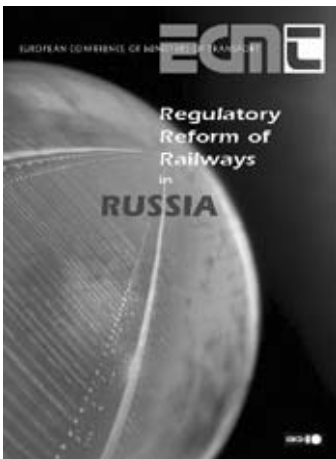
Free brochure



Implementing Sustainable Urban Travel Policies
National Peer Review: The Netherlands
(75 2001 02 1 P) ISBN 92-821-1328-0
ECMT (2001)

OTHER RECENTLY PUBLISHED ECMT PUBLICATIONS

REGULATORY REFORM OF RAILWAY IN RUSSIA



Rail transport accounts for 80% of all freight in Russia and its performance is critical to overall economic growth. Though the railways have been starved of investment they are now in the process of rapid reform, and maintaining momentum will be crucial.

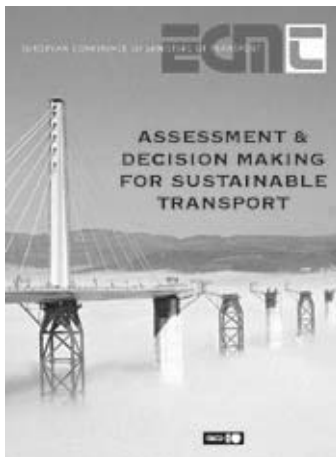
In this report, some of the world's leading experts in rail regulation examine the restructuring of the sector, focusing on tariff reform and the introduction of competition in one of the world's largest rail networks. The work builds on the experience of other ECMT member countries. Relevant aspects of regulation in Germany, Italy, the United

Kingdom and the European Union are summarised in annexes to the report.

(75 2004 04 1 P) ISBN 92-821-2309-X, May 2004.

Also available in Russian: ISBN 92-821-2313-8.

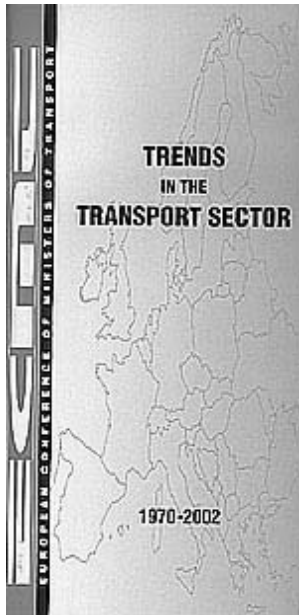
ASSESSMENT AND DECISION MAKING FOR SUSTAINABLE TRANSPORT



Achieving more sustainable development hinges on planning and decision-making procedures that are able to bring the results of economic appraisals and environmental assessments before technical and political decision-makers in ways that are clear, concise and transparent. Effective systems will highlight trade-offs, risks and impacts that are difficult or impossible to monetise, rather than trying to make decisions in place of those responsible. This report makes recommendations for good practice in the transport sector on the basis of reviews of recent experience in infrastructure planning and policy development in seven countries.

(75 2004 02 1 P) ISBN 92-821-1311-6, April 2004.

TRENDS IN THE TRANSPORT SECTOR 1970-2002



How have the passenger and freight transport sectors evolved since 1970? How is road safety faring? This publication presents the most up-to-date statistics on transport markets in Europe, together with charts highlighting the major trends.

Published earlier than comparable studies, this report provides the reader with first-hand figures on key transport trends. It analyses the transport situation in the Western and Eastern European countries, as well as the Baltic States and the CIS.

(75 2004 01 1 P) ISBN: 92 821 0323 4, April 2004.

REFORMING TRANSPORT TAXES

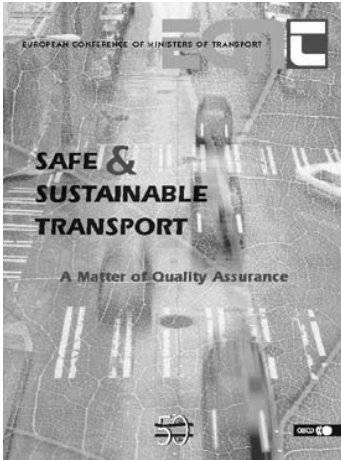


This report examines the economic principles for efficient systems of taxation and provides a framework for international comparisons of transport taxes and charges. It investigates the price and tax changes likely to result from the reform of transport charges to maximise efficiency, and their impact on motorists, hauliers and users of other transport services. The report also assesses the impact of national differences in taxation on the competitiveness of hauliers internationally.

(75 2003 10 1 P) ISBN 92-821-0317-X, December 2003.

SAFE AND SUSTAINABLE TRANSPORT

A Matter of Quality Assurance



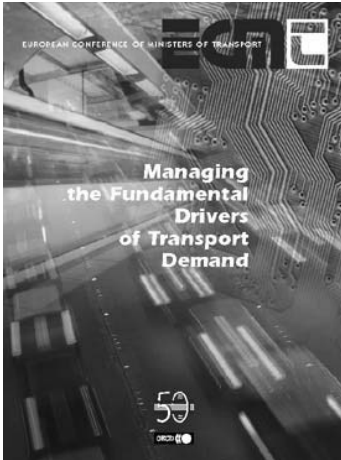
Road safety is generally a mixture of three components, namely, the road, the vehicle and the driver, or, as also referred to by the ECMT, the infrastructure, the vehicle and human behaviour. Promotion of road safety is more and more possible only through a larger scope of interest -- environment, sustainability, and quality of life. In the future, an efficient road transport system should provide a safe and sustainable accessibility.

The idea of organising a seminar came from a presentation by a Swedish representative of the “Vision Zero” programme, adopted by the Swedish Parliament in autumn 1997. The basic idea of “Vision Zero” is that no person should be

killed or seriously and permanently impaired in a road traffic accident.

(75 2003 03 1 P) ISBN 92-821-1303-5, March 2003.

MANAGING THE FUNDAMENTAL DRIVERS OF TRANSPORT DEMAND



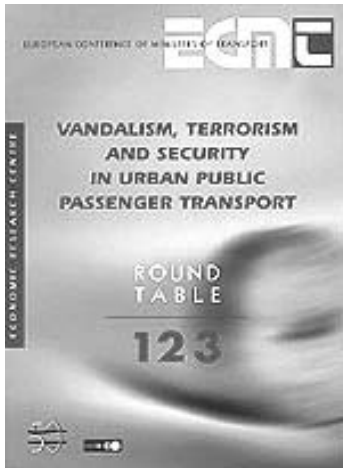
The aim of the seminar was to review the key determinants of transport demand, both inside and outside the field of traditional transport Ministry responsibilities, and to identify measures for influencing these key factors. Debate at the seminar between stakeholders in the transport and environment communities revealed a large measure of agreement on the importance of demand management and on the instruments that should be employed. A small number of cases of good practice were identified in integrated transport, land use planning and charging for the use of infrastructure. The seminar concluded that the

time is ripe for implementation of demand management policies on a much wider scale.

(75 2003 05 1 P) ISBN 92-821-1376-0, March 2003.

ROUND TABLE 123

Vandalism, Terrorism and Security in Urban Public Passenger Transport



Beyond the immediate effect of reducing passengers' insecurity, safer public transport also means higher patronage during off-peak hours, less money spent on repairing damage, lower staff absenteeism and less disruption to services. Governments therefore cannot afford to disregard the problem of vandalism in public transport.

The reader will find in this publication the recommendations which the Round Table made on ways to combat vandalism, namely: the creation of local partnerships between all actors involved in crime prevention, policing and law enforcement; exchanges of experience; the issuing of guidelines on crime prevention and

infrastructure design; and publication of case studies of successes and failures. Classifying individual measures is therefore one of the tasks that national and international authorities faced with this growing problem urgently need to address.

Terrorism, because of its distinctive nature and change in nature since the attacks of 11 September 2001, needs to be tackled on a much larger scale and therefore requires a different type of approach. Here, too, there is clearly a need for international co-operation and the Round Table identified a number of possible avenues to explore, which the reader can learn more about from this publication.

(75 2003 07 1 P) ISBN 92-821-0301-3, June 2003.

ROUND TABLE 122

Transport and Exceptional Public Events



Large-scale sporting, cultural and festive events are increasing in number; however, no two such events are quite the same. This is obvious when one compares an event like the World Cup with the Tour de France cycling competition. Each event has its own distinctive characteristics.

Looking at such events globally from the standpoint of their transport implications is something new. Exceptional events generate major flows of visitors and often require material back-up on a very large scale. They also involve very specific transport and logistics requirements. Security is another major

consideration that must be taken into account when studying transportation for such events.

The Round Table examined such events in Europe and the rest of the world, and noted that setting ambitious targets contributes to the quality of the event.

Almost every experience is unique and one of the main conclusions of the Round Table is that a record should be kept of each event with regard to its organisation and staging requirements. In this way, an event “memory” could be built up and made available to any would-be event organiser. The Round Table is the first stage in this process.

(75 2003 04 1 P) ISBN 92-821-1305-1, March 2003.

ROUND TABLE 121

Managing Commuters' Behaviour



Encouraging wage earners to use public transport has a vital role to play in meeting environmental objectives, particularly the challenge of reducing greenhouse gas emissions. Changing people's behaviour calls for action in the workplace and one option open to employers is to recruit mobility managers whose task is to help reduce employees' dependence on private car use. Governments can support such initiatives by running information campaigns, by publishing practical guides to incentive schemes and by harmonising regulatory and fiscal frameworks.

Round Table 121 was devoted to this innovative topic and opened with a discussion of the provision of free parking facilities to company employees in the United States, a practice that has many knock-on effects and ramifications. One solution is for companies to replace free parking with cash-out schemes under which financial benefits are given to employees who choose not to make use of their free parking space. The Round Table then proceeded to consider several examples of employee mobility schemes in Europe, and ended by drawing conclusions of interest to local, regional and national authorities.

This Round Table makes a key contribution to continuing efforts to chart a course of action directed towards achieving the goal of sustainable transport.

(75 2002 11 1P) ISBN 92-821-1299-3, November 2002.

15th International Symposium on Theory and Practice in Transport Economics:

Key Issues for Transport Beyond 2000



A clear dichotomy exists between an European economy centred on international trade and the environmental damage to which this focus gives rise. There is a need for a novel approach based on a shift away from the goal of ever-faster travel and ever-greater time savings, and the adoption of a different concept of accessibility. Will the 2000s see the emergence of a new way of thinking?

These and other topical issues were the subject of the ECMT's 15th International Symposium. Are we likely to see a decoupling of economic growth from transport growth? In designing future transport systems, will the pendulum swing away from the criterion of efficiency towards greater concern for equity and the environment?

This book reproduces the 17 introductory reports presented at the Symposium, together with a summary of the discussions on the three main topics: scenarios and forecasts; transforming structures and trends in technology; peripherality and pan-European integration. It highlights the key ideas to emerge from the final Round Table on "Efficiency, Equity and the Environment in Transport: Experience and Prospects", reviews the issues facing the transport sector in the coming years and sets out policy recommendations for meeting the challenges of the 2000s.

(75 2002 02 1 P) ISBN 92-821-1360-4, May 2002.

ROUND TABLE 120

What Role for the Railways in Eastern Europe?



Facing the collapse of their business and stiff competition from road transport, Eastern European railways are in a critical financial situation. Railway restructuring is a must, but where circumstances in each country are so different there can be no “one size fits all” solution. Nevertheless, some guidelines for restructuring are emerging. The strategies to be implemented will involve both governments and the railway companies themselves.

Separating infrastructure from operations, for instance, could be a good model provided infrastructure usage is priced efficiently. Concessions should be granted for local and regional passenger services. Freight transport

issues have to be addressed at a European level - and open access should be the fundamental rule along with encouraging new market entrants.

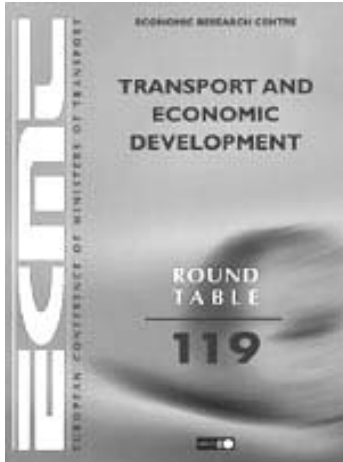
Privatising the railways is probably not a prerequisite; their independence, however, is essential. Their management should be exactly the same as that of any other commercial company on the market and they should have appropriate management tools. Railways should focus their investment on new technologies and automation, difficult problems with reducing overstaffing can be resolved only with government co-operation.

Based on a review of the strengths and weaknesses of the railways in the Countries of Central and Eastern Europe and in the Commonwealth of Independent States, the Round Table came to a series of inescapable conclusions for anyone wishing to address these issues.

(75 2002 04 1P) ISBN 92-821-1371-X, March 2002.

ROUND TABLE 119

Transport and Economic Development



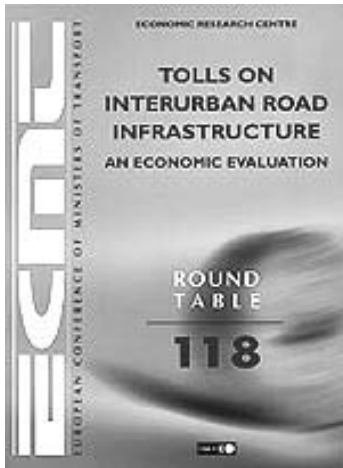
The linkage between transport and economic development is a highly contentious issue which has generated considerable debate and an abundant literature. There is a firmly-held belief among politicians that investment in transport infrastructure promotes economic development and, by extension, employment. However, this belief is not borne out by scientific analysis, which would seem to indicate that the impact of this type of investment on employment and economic development remains limited, at least in developed countries, and at the purely regional level can even prove negative.

(75 2002 10 1 P) ISBN 92-821-1298-5, October 2002.

ROUND TABLE 118

Tolls on Interurban Road Infrastructure

An economic evaluation



Strictly speaking, tolls are not a modern invention. Tolling is, in fact, an ancient tradition, with its origins rooted in history.

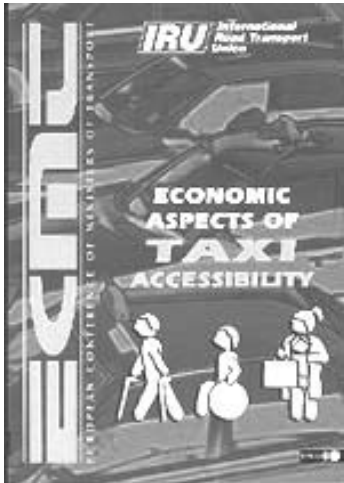
Tolling has served numerous and wide-ranging purposes across the ages. While initially providing right of way, tolls were later used to finance the building and maintenance of infrastructure, before becoming a means of internalising external costs and managing demand. Nowadays, two main arguments are put forward for the introduction of tolls: to meet funding requirements and to respond to society's desire for efficient use of infrastructure. However, as this Round Table shows, tolls are not a universal panacea and the introduction of

road tolls is a politically delicate issue.

The Round Table provides a broad view of both the theoretical aspects of tolling and the practical problems posed by its introduction. It takes a scientific look at what is a burning issue, at a time when a number of countries are envisaging the widespread adoption of electronic tolls.

(75 2002 08 1 P) ISBN 92-821-1374-4, July 2002.

Economic Aspects of Taxi Accessibility



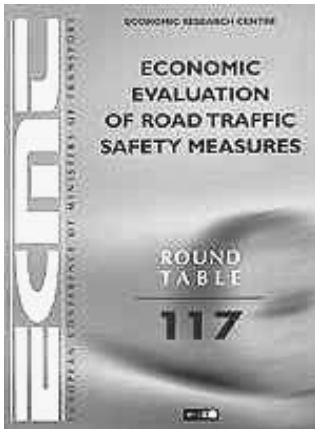
Taxi transport is a vital part of the modern transport system providing door-to-door services around the clock. In line with trends in other forms of transport, taxis too need to improve their accessibility for older and disabled people. This report is a result of dialogue between governments and the taxi profession and includes data from 14 countries on national taxi services, looking at the structure of the taxi trade, the use of taxis by disabled and older people and cost implications of accessible taxis.

This report sets out a range of actions to be taken by governments and the taxi profession so that this mode of transport can, in a profitable way, provide accessible affordable transport for all.

(75 2001 151 P) ISBN 92-821-1366 3, November 2001, 72 pages.

ROUND TABLE 117

Economic Evaluation of Road Traffic Safety Measures



In economic appraisals of road safety measures, determining which method to use for valuation is critical. Of the two main methods open to us, one accurately measures a non-relevant concept (the human capital method), while the other measures the correct parameter, but not very accurately (the willingness-to-pay method). The Round Table examined the many complementary aspects of the two and found that what is needed, above all, are practical guides for each method.

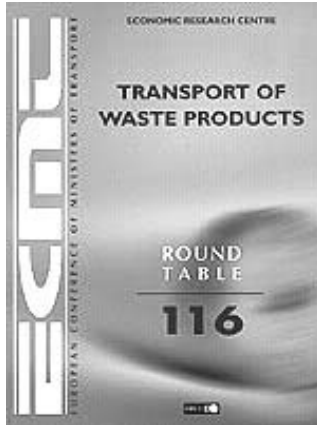
The Round Table noted that governments should take charge of safety with the same forcefulness whatever the mode of transport. It also found that spending on road safety was generally adequate, but that the money was often not ‘wisely’ spent. One of the more unconventional proposals put forward by this Round Table was that difficulties in producing major changes in driver behaviour signalled that more attention should be paid to educational measures and infrastructure investment.

This publication reviews road safety policies and their economic evaluation. At a time when the authorities in many countries are beginning to set still more ambitious targets for those policies, the Round Table highlights the need for measures that are effective over the long term and economically efficient.

(75 2001 141 P) ISBN 92-821-1365-5, December 2001, 176 pages.

ROUND TABLE 116

Transport of Waste Products



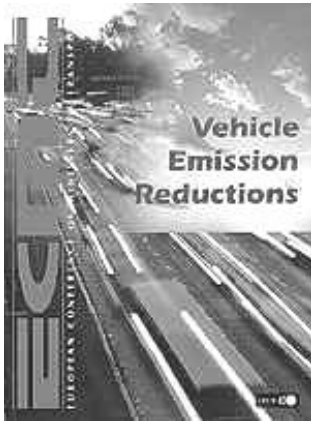
With the treatment of waste set to increase -- since the volume of waste is closely related to economic growth -- waste transport will be a major challenge in the future. This raises several issues. Should transport regulations be made more stringent and their implementation reviewed? Should the proximity principle -- incorporated in the regulations in the interests of environmental protection -- be questioned, since it prevents the consolidation of flows in sufficient volume to make the most environmentally-friendly modes of transport viable?

The environmental performance of waste transport can be established only within the framework of an overall approach which incorporates all waste treatment routes. We must indeed be wary of seemingly good ideas such as “waste transport must be restricted” or “recycling is the best solution”. The closure of landfills or reprocessing could well lead to a large increase in waste transport.

The Round Table picks up on these issues and uses the cases of different countries to examine, in turn, developments in the waste transport sector and the statistical problems encountered in trying to understand them, the regulations applicable to the modes of transport used and their environmental performance, focusing closely on the difficulties created by the current modal split in this sector.

(75 2001 131 P) ISBN 92-821-1364-7, November 2001, 188 pages.

Vehicle Emission Reductions



This report reviews vehicle emissions standards in Europe, Japan and the United States, providing the reader with valuable comparisons. It also examines incentives for sulphur free fuels - which can contribute to reducing both conventional air emissions and carbon dioxide. It describes emissions control technologies and the impact of emissions on health and the environment and assesses the adequacy of emissions limits for new passenger cars and heavy duty diesel engines.

(75 2001 101 P) ISBN 92-821-1363-9, August 2001, 128 pages.

ROUND TABLE 115

Road Freight Transport for Own Account in Europe

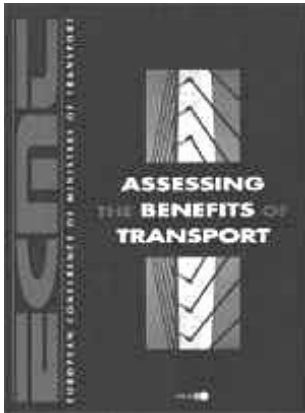


Road freight transport for own account represents a major share of inland transport in Europe and, depending on the country concerned, accounts for two to five times the tonnage carried by rail. Despite its importance, however, own account transport tends to be overlooked since it is not regarded as a logistics activity, whereas it is, in fact, a vital transport function that is changing radically as firms increasingly outsource their distribution activities to commercial hauliers.

The scale of road freight transport for own account, the impact of regulatory changes and the future of the sector are the themes addressed in the introductory reports and the experts' discussions outlined in this publication.

(75 2001 081 P) ISBN 92-821-1361-2, May 2001, 136 pages.

Assessing the Benefits of Transport



This book discusses the full economic benefits - and costs - of transport infrastructure and explores ways to make good estimates of the full impact of planned investments on regional and national economies. It argues for proper account to be taken of all relevant economic weaknesses -- those the project is designed to address such as local monopoly pricing, those associated with use of the infrastructure such as environmental externalities, and possible unintended consequences such as impacts on local labour markets. Care must also be taken to verify that net benefits are likely to accrue to those that the project was intended to benefit.

Building on recent groundbreaking work in the United Kingdom this publication suggests ways to improve traditional cost-benefit assessments, overcoming reservations that have inhibited the use of CBA in many countries.

The main report is completed with examinations of transport project assessment approaches in France, Germany, the United Kingdom and across Europe together with a discussion of an approach to determining optimal levels of investment in transport infrastructure for maximising socio-economic welfare.

(75 2001 091 P) ISBN 92-821-1362-0, April 2001, 216 pages.

ROUND TABLE 114

Regular Interurban Coach Services in Europe



Although deregulation is well under way in the transport sector, regular coach services are still largely regulated. Governments see them as potentially competing with rail transport services. However, in countries that have had some experience with deregulation the outcome has clearly been positive (except for local short-distance services).

The Round Table began with a review of regular interurban coach services based on case studies in countries which had adopted an original approach. This report shows the industry in a totally new light. One of its main findings is that there is a specific market for customers that have no other means of transport. Opening up this market would benefit the most economically disadvantaged sectors of the population. But that is not the only lesson to be learned from this Round Table.

(75 2001 031 P) ISBN 92-821-1262-4, March 2001, 152 pages.

Short Sea Shipping in Europe



For some years now, short sea shipping (SSS) has benefited from a number of government initiatives aimed at promoting its development. The aim has been to promote a more balanced modal split in transport in Europe while also reducing the impact of transport on the environment, ensuring greater European cohesion and promoting a sustainable transport system.

Up to now, SSS has aroused interest at policy level mainly as an alternative to road transport, the predominant mode in Europe. Yet, is SSS only an alternative to road transport? Can it be seen as a separate component of an integrated transport network in its own right? This book shows what role SSS can play in the context of modal complementarity and what challenges European policy makers will be presented with.

(75 2001 051 P) ISBN 92-821-1269-1, February 2001, 76 pages.

Railway Reform

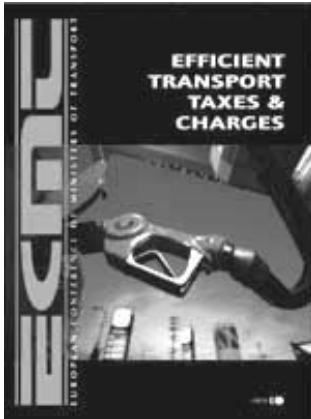


This report examines the form regulation should take in rail freight markets to promote efficiency in railways and the wider economy. It analyses issues of monopoly, scale economies, competition, mergers, ownership and the structure of the rail industry. Experience in North America, Australia, Japan, the European Union and countries from eastern and western Europe is reviewed.

The need for regulation differs by market and, together with political constraints, this means that regulatory models can not be transferred wholesale from one continent to another. However, each region provides important lessons for reforms currently under consideration in all ECMT and OECD countries.

(75 2001 011 P) ISBN 92-821-1272-1, January 2001, 144 pages.

Efficient Transport Taxes & Charges



How do taxes and charges for transport in, for example, France compare with those in Germany? Do hauliers in one country pay more than in the other, and what impact does this have on the profitability of haulage in each country? Is the impact of an increase in tax on diesel the same in each country or are differences in the taxation of labour more significant? Do these differences distort the international haulage market?

This book provides a framework for international comparisons and discusses the economic principles for efficient systems of taxation. The work provides a basis for addressing the questions “what is the right level for transport taxes” and “what kinds of charges should be used”.

(75 2000 181 P) ISBN 92-821-1270-5, January 2001, 90 pages.

Orders and Information

Customers in North America

OECD Distribution Center

Extenza-Turpin
56 Industrial Park Drive
Pembroke
MA 02359
USA

Toll free: +1 (800) 456-6323

Fax: +1 (781) 829-9052

E-mail: oecdna@extenza-turpin.com

Customers in the rest of the world

OECD c/o Turpin Distribution Services Ltd.

Stratton Business Park, Pegasus Drive
Biggleswade,
Bedfordshire, SG18 8QB
Royaume Uni

Tel.: +44 (0)1767 604960

Fax: +44 (0)1767 601640

E-mail: oecdrow@extenza-turpin.com

Web site: www.extenza-turpin.com

OECD Publishing

Organisation for Economic Co-operation and Development

2 rue André-Pascal

75775 Paris Cedex 16

France

Tel: +33-1 45 24 81 67

Fax: +33-1 45 24 19 50

E-mail: sales@oecd.org

Internet: www.oecd.org

Internet: www.oecd.org/bookshop

E-mail: sales@oecd.org



Want to be the first to know of the latest transport publications? Then sign up for our free e-mail alerting service, OECDdirect, at www.oecd.org/oeaddedirect

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(75 2004 03 1 P) ISBN 92-821-1315-9 – No. 53517 2004