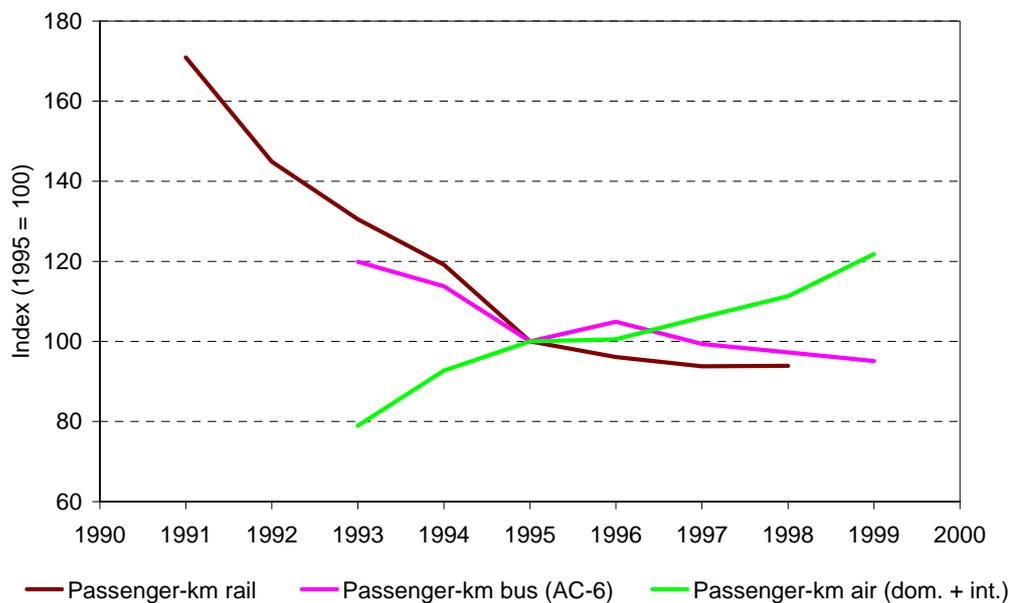


Indicator fact sheet

TERM 2003 12a AC+CC — Passenger transport demand by mode and purpose

⊗ **Statistics on passenger car transport volume are lacking, but trends in public transport demand, car ownership levels and (road) transport energy consumption indicate that passenger transport demand (in terms of passenger-kilometres) increased in the acceding countries between 1990 and 1999. Air transport and private car transport were contributing most significant to this growth. Bus and rail transport fell substantially.**

Figure 1: Evolution of passenger-kilometres by rail and bus/coach and air in AC-10 countries between 1990 and 1999



NB: Passenger-kilometres by bus/coach are based on data from the AC-6: Czech Republic, Latvia, Lithuania, Poland, Slovakia and Slovenia and are only available from 1993 onwards.

Source: UNECE, 2003; UNSD, 2003

Results and assessment

Policy relevance

The European Commission has set itself the objective to reduce the link between economic growth and passenger transport demand ('decoupling') in order to achieve sustainable transport.

The primary transport policy objective in the context of enlargement is to improve current infrastructure and to benefit from the extensive and dense rail network available in the ACs, in particular in the regions bordering to the EU (European Commission, 2001b).

Policy context

The objective of decoupling was first formalized in the Transport and Environment (T&E) integration strategy (European Council, 1999) that was adopted by the Council of ministers in Helsinki. Also in the sustainable development strategy (European Commission, 2001a), that

was adopted by the European Council in Gothenburg, the objective of decoupling is mentioned in order to reduce congestion and other negative side-effects of transport.

In the review of the T&E integration strategy in 2001 and 2002 (European Council 2001; European Council, 2002a), the objective of decoupling was reaffirmed by the Council.

In the Sixth Community Environmental Action Programme (European Council, 2002b), decoupling of economic growth and transport demand is mentioned as a key action in order to deal with climate change and to alleviate health impacts from transport in urban areas.

In the White Paper on Common Transport Policy (CTP) 'European transport policy for 2010: Time to decide' (European Commission, 2001b), the Commission subsequently proposes 60 or so measures to reach this objective.

The expected increase for passenger transport demand as a result of the enlargement of the European Union is facilitated by the construction of TEN-T networks on important transport routes between countries at the border of the EU and AC region.

Environmental context

Transport is one of the main sources of greenhouse gases and also gives rise to significant air pollution, which can seriously damage man's health and ecosystems. Passenger transport (in terms of passenger-km) and freight transport (in terms of tonne-km; see TERM 2002 13a AC — Freight transport demand by mode and group of goods) is an indication for total transport volumes.

The indicator helps to understand developments in the passenger transport sector (transport's 'magnitude'), which in turn explains observed trends in transport's impact on the environment. For a complete picture of transport demand and the environmental problems that arise from it, it would be valuable to complement the data on the number passenger kilometres by mode with vehicle-kilometres by mode. However, only limited and low-quality data is available for the number of vehicle-kilometres. Data availability of the number of passenger kilometres by foot and bicycle is also limited. Such data would further complement the information presented here, in particular when such data can be combined with passenger transport statistics at the urban level, where the non-motorised modes play a significant role in every day transport.

Assessment

Overall picture

Overall transport demand in the 10 acceding (ACs) and candidate countries (CCs) cannot be assessed due to missing transport statistics for passenger car transport. Transport demand for bus/coach and rail transport seriously declined during the 1993–99 period, and the few statistics available on passenger car transport suggest that the demand for private car transport increased over the same period (see Table 1). The growth in road energy consumption, GDP and car ownership in the ten acceding countries underpins this expectation. Also air transport shows a high increase during the last decade (54 % between 1993 and 1999) and becomes more and more important in travelling.

From the above, one can conclude that passenger transport patterns are changing quickly towards transport patterns in the European Union. Private car and air transport are growing and getting more and more important in passenger transport.

Private car transport

The car ownership level is strongly correlated with passenger car transport demand (see also TERM 2002 32 — Size of the vehicle fleet). Statistics on passenger-kilometres by private cars in the Czech Republic show a 30 % increase between 1993 and 2000, while in the same period car ownership increased by 21 %. Hungarian data show a 2 % increase in passenger-kilometres by a stable car ownership level in the 1996–99 period. Table 1 shows an overview of the available data on private car transport.

Road energy consumption (including both passenger and freight transport), which is also a proxy indicator for transport demand, increased by 25 % between 1990 and 2000 in the ACs. It is therefore plausible to conclude that passenger transport by private car has also increased. However, there are countries that report a drop in private car demand in recent

years (e.g. Slovakia ⁽¹⁾). Reasons for a drop in private car transport are: introduction of import fees, increase in tax on hydrocarbon fuels, repeated increases in fuel prices and an increase in road tax.

Countries bordering the EU, which are the richer ACs, show increased passenger transport demand. The southeastern States are amongst the group of poorer ACs. In these countries, transport energy consumption decreased, indicating decreasing passenger transport demand.

Rail

Rail transport demand decreased in almost all ACs/CCs during the 1990s. However, the rate of decline differs greatly over the region. In the ACs region, rail lost 44 % of its passenger kilometres between 1991 and 1999, though the rate of decline is slowing down since 1995. In Hungary, Poland and Slovenia, passenger-kilometres by rail tend to increase slightly since 1995.

The Baltic States show the highest decrease in passenger transport by rail (around 80 % between 1990 and 2000). This decline in public transport demand corresponds with the high increases in car ownership.

Bus/coach

Available statistics show that bus/coach transport reduced its market share. Based on six acceding countries ⁽²⁾, passenger kilometres by bus/coach decreased by 21 % between 1993 and 1999. The highest decline can be observed in the Baltic States, which can be attributed to a lack of investments in public transport that has resulted in a degraded public transport system, and the very high increases in car ownership levels (40 to 80 % in these countries).

Air

Passenger air transport (national and international) has grown considerably by 54 % from the 1993 to 1999 in the ACs. The greatest increase in air transport passenger kilometres can be observed in the Baltic States (83 %), Hungary (93 %), Turkey (78 %) and Slovenia. However, the demand per capita is still only one-sixth of the demand per capita in the European Union. The demand for air transport declined in the Bulgaria (– 33 %) and Romania (– 3 %), reflecting their continued bad economic situation.

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⁽¹⁾ From personnel communication with Adrián Fabricius, the PCP for Slovakia.

⁽²⁾ the Czech Republic, Latvia, Lithuania, Poland, Slovakia and Slovenia.

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Data

Table 1: Private car transport demand in AC countries

Unit:	million passenger-km		
	Czech Republic	Turkey	Hungary
1990		34 325	
1991			
1992		36 889	
1993	49 000	41 848	
1994	51 700	45 736	
1995	54 500		
1996	57 900		45 800
1997	59 000		46 000
1998	60 800		46 500
1999	62 250		46 550
2000	63 840		
2001	65 523		

Source: UNECE, 2003.

Metadata

Technical information

1. Data sources:

Rail, bus/coach and cars: UNECE, 2003.

Additional data source used for car, rail and bus/coach: ECMT 'Trends in the transport sector 1970–2001'.

For comparison with EU-15, the *Eurostat statistical compendium* has been used (Eurostat, 2003).

2. Description of data: Passenger transport demand for various modes (private car, bus/coach, rail). Air and inland waterways are not included due to lack of data.

File: TERM 2003 12 AC Passenger transport.xls

Original measure units: Passenger-kilometres.

3. Geographical coverage:

Acceding Countries (ACs): Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia. Candidate countries (CCs): Turkey, Romania and Bulgaria

4. Temporal coverage: 1990–99 (maximum, for many tables only limited temporal coverage available).

5. Methodology and frequency of data collection:

Data from UNECE is collected by a common questionnaire developed jointly by Eurostat, UNECE and ECMT. Data is collected annually.

6. Methodology of data manipulation, including making 'early estimates':

Passenger-kilometres by rail: Czech Republic 1991 and 1992 calculated by fitting a straight line between known values.

Quality information

7. Strength and weakness (at data level):

Data from UNECE and ECMT do not correspond and can not be used for gap-filling, except for rail.

8. Reliability, accuracy, robustness, uncertainty (at data level): The passenger transport statistics are not very reliable, except for rail. In particular, the large differences between the various sources (UNECE and ECMT) make it clear that all data should be interpreted with care.

9. Overall scoring (give 1 to 3 points: 1 = no major problems, 3 = major reservations): 3
Relevancy: 2 (vehicle-kilometres data should be available to complement the passenger-kilometre data in order to reveal developments of occupancy rates and create better links between transport activity and environmental problems)
Accuracy: 3 (passenger-kilometre figures are estimated rather than measured — more uncertainty for cars than for bus/trains, etc. — and vary by source (ECMT, UNECE, etc))
Comparability over time: 3 (many gaps in the data, but trends still come out rather clearly, except for passenger transport by car: this (nowadays most important) mode is completely lacking.)
Comparability over space: 3 (some gaps in the data, especially for private car transport.)

Further work required

Data exchanges and verification systems in place for delivery of transport demand statistics to various international organisations are not fully operational, as can be seen from the limited statistics available. International bodies like Eurostat, UN/ECE and ECMT are addressing the issue and working on better coverage of passenger (and freight) transport demand in their databases. Such data is needed in order to improve the assessment made in this fact sheet. Efforts should also be made to improve timeliness of transport statistics, as 1999 data is now the most recent data available, which is already four years old now.

Work is needed to ensure harmonisation of statistics on passenger transport from UN/ECE, ECMT and Eurostat. Transposition of the EU transport *acquis* should ensure that a large part of the transport statistics are collected regularly and harmonised across the ACs.

Further work is needed to develop reliable and comparable statistics on vehicle-km used for passenger transport, since such data is closer connected to the environmental consequences of transport and might reveal evolution of occupancy rates.