9

Transport



Transport plays a crucial role in an economy, bringing goods and services to customers, as well as transporting passengers for work or pleasure. However, key problems of congestion, quality of services (such as punctuality and connectivity), affordability and pollution put at risk economic development. Measures to address these concerns, among others, whilst maintaining the EU's economic competitiveness, were at the heart of the EU transport policy White paper titled 'European transport policy for 2010: time to decide' (66), which was adopted in 2001. This policy document remains the bedrock of the current EU sustainable transport policy but was supplemented in June 2006 by the mid-term review communication (67), 'Keep Europe moving – sustainable mobility for our continent'. Some of the key conclusions of this communication were that each transport mode must be optimised to help ensure the competitiveness of European business and the prosperity of EU societies; all modes must become more environmentally friendly, safe and energy efficient; each mode should be used efficiently on its own and in combination to achieve an optimal and sustainable utilisation of resources. The communication proposed a wide range of implementing measures that were largely driven by evolving issues:

- environmental commitments — such as those under the Kyoto Protocol, as well as air quality, noise pollution, and land use;
- a greater focus on technology — this included the encouragement of further research and development into areas such as intelligent transport systems (such as Galileo, SESAR, ERTMS) involving communication, navigation and automation, engine technology that could improve fuel efficiency, and the promotion of alternative fuels. Other activities cited included the modernisation of air traffic systems, improvements in safety and security, urban mobility and the decongesting of transport corridors, as well as the efficient use of different modes on their own and in combination;
- consolidation within the transport sector — especially in aviation and maritime transport, but also with the creation of large logistics enterprises with worldwide operations;
- enlargement — allowing the possibility to expand trans-European networks to corridors that are particularly suitable for rail and waterborne transport;
- changes in the international context — such as the threat of terrorism, or globalisation that has affected trade flows and increased demand for international transport services.

(66) COM(2001) 370 final; for more information: http://ec.europa.eu/transport/white_paper/index_en.htm.

(67) Communication from the European Commission to the Council and the European Parliament, 'Keep Europe moving — Sustainable mobility for our continent', mid-term review of the European Commission's 2001 Transport White Paper, 22 June 2006, COM(2006) 314 final; for more information: http://ec.europa.eu/transport/transport_policy_review/index_en.htm.

The European Commission has already started the launch of a range of action plans on key transport policy issues, such as the Green paper on urban transport [68] and the new road charging Directive [69] and will continue with plans for logistics, green propulsion and a common European maritime space.

(68) COM(2007) 551 final; for more information: http://ec.europa.eu/transport/clean/green_paper_urban_transport/doc/2007_09_25_gp_urban_mobility_en.pdf.

(69) Directive 2006/38/EC; for more information: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_157/l_15720060609en00080023.pdf.

Eurostat's transport statistics describe the most important features of transport, not only in terms of the quantities of freight and passengers that are moved each year, or the number of vehicles and infrastructure that are used, but also the contribution of transport services to the economy as a whole. Data collection is supported by several legal acts obliging the Member States to report statistical data, as well as voluntary agreements to supply additional data.

EUROSTAT DATA IN THIS DOMAIN:
Transport

Transport – horizontal view
Railway transport
Road transport
Inland waterways transport
Oil pipeline transport
Maritime transport
Air transport

9.1 MODAL BREAKDOWN

INTRODUCTION

The demand for increased mobility from individuals and increased flexibility and timeliness of delivery from enterprises has led to road transport becoming the dominant mode of transport in the EU. The growth in road transport has had a significant impact on road congestion, road safety and pollution.

One of the main challenges identified by the 2001 White Paper was to address this imbalance in the development of the different modes of transport. Specific actions looking to boost rail and maritime connections were foreseen and then established (the Marco Polo programmes).

The Commission's Intermodal Freight Transport policy was established to support the efficient 'door to door' movement of goods, using two or more modes of transport, in an integrated transport chain. This policy recognises that each mode of transport has its own advantages either in terms of potential capacity, levels of safety, flexibility, energy consumption, or environmental impact and, as such intermodal transport allows each mode to play its role in building transport chains which overall are more efficient, cost effective and sustainable.

The White Paper also proposed the development of Motorways of the Sea as a real competitive alternative to land transport and a legal framework for funding this work was secured in 2004.

DEFINITIONS AND DATA AVAILABILITY

Definitions used in some transport statistics are available in the 'Glossary for Transport statistics – Third Edition'. Road freight data are based on Council Regulation 1172/98.

- a passenger-kilometre is the unit of measure representing the transport of one passenger by a given mode of transport over one kilometre;
- a tonne-kilometre is the unit of measure representing the transport of one tonne of goods by a given mode of transport over one kilometre;
- inland freight transport corresponds to road, rail, inland waterways and pipeline transport, thus excluding air and sea transport;
- rail and inland waterways movements are recorded in each reporting country on national territory ('territoriality principle'), regardless of the nationality of the vehicle or vessel, road statistics are based on all movements, in the registration country or abroad, of the vehicles registered in the reporting country ('nationality principle');
- road/rail/inland waterways share of inland freight transport is the share of road/rail/inland waterways in total inland freight transport in tonne-kilometres.

As statistics on road and other inland modes are based on different principles, the figures of the smallest reporting countries (for example, Luxembourg and Slovenia) may be misleading. Data on the relative shares of inland freight transport are annual and generally available for every year since the early 1990s.

MAIN FINDINGS

A little over three quarters (76.5 %) of inland freight transport in the EU-25 was accounted for by road transport in 2005. Less than one fifth (17.6 %) of inland freight transport was by rail, with the rest (5.9 %) accounted for by inland waterways. The dominance of freight transport by road was reflected in the majority of Member States, the exceptions being in Estonia and Latvia where around two thirds of inland freight was transported by rail in 2005. Inland waterways transport accounted for less than one third (30.6 %) of inland freight transport in the Netherlands in 2005 and between 10 % and 15 % in Belgium, Germany and Romania.

The main measure of the volume of passenger transport is the number of passenger-kilometres by residents within the national territory, which can be analysed by mode of transport. Some caution must be applied in making comparisons, particularly of absolute figures, because of the different sizes of countries and the coverage of national data. Nonetheless, car transport accounted for a sizable majority of inland passenger transport among all the Member States for which data are available [70]. The reliance on the car for inland passenger transport was particularly strong in Slovenia, the United Kingdom, Lithuania, Luxembourg and France, where it accounted for upwards of 85 % of all inland passenger-kilometres. In Cyprus, Malta, Hungary, Greece and Slovakia around one quarter of inland passenger-kilometres were by bus, while Hungary (16.3 %), the Czech Republic (15.6 %), Austria (11.0 %) and France (10.0 %) reported the highest modal shares for railways, trams and metros.

(70) Bulgaria, Estonia, Cyprus, Malta and Romania, not available.

It should be noted that this analysis only refers to inland freight and passenger travel. Significant proportions of international freight and passenger travel are accounted for by maritime and aviation transport.

Road fatalities in the EU-25 fell sharply between 1990 and 2005, from 70 628 deaths to 41 274 deaths. Although this downward trend was reflected in almost all the Member States, stark differences in road fatality rates remain between countries. The highest rates of road fatalities per million inhabitants among EU Member States were in Lithuania (223 road fatalities per million inhabitants in 2005) and Latvia (192). This contrasted, for example, with rates of 49 per million inhabitants in Sweden (a Member State with similar weather and light conditions), 46 per million inhabitants in the Netherlands, and 42 per million inhabitants in Malta. In all of the countries for which an age breakdown of those that have died in road accidents is available for 2002, the rate of road fatalities among young drivers (those aged under 30 years) was very much higher than among older drivers (30 years and older). The difference in rates was widest in France, where the road fatality rate among young drivers was (at 259 per million inhabitants) a little more than double the rate of older drivers (127 per million inhabitants).

SOURCES

Pocketbooks

Energy, transport and environment indicators pocketbook

Statistical books

Panorama of transport

Methodologies and working papers

Glossary for Transport statistics – third edition (PDF)

Website data

Transport – horizontal view

- Regional transport statistics
  - Road, rail and navigable inland waterways networks at regional level
  - Stock of vehicles by category at regional level
  - Victims in road accidents at regional level
- Ad hoc tables used in Eurostat yearbook

Table 9.1: Modal split of inland passenger and freight transport

	(% of total inland passenger-km), 2004 (1)			(% of total inland freight transport in tonne-km), 2005		
	Passenger cars	Buses	Railways, trams and metros	Railways	Roads	Inland waterways
EU-27 (2)	82.8	9.3	7.9	*17.6*	*76.5*	*5.9*
Belgium	80.8	12.3	7.0	13.4	72.4	14.1
Bulgaria	:	:	:	25.4	70.8	3.7
Czech Republic	68.9	15.5	15.6	25.4	74.5	0.1
Denmark	81.8	9.9	8.2	7.8	92.2	-
Germany	84.8	6.6	8.6	20.3	66.0	13.6
Estonia	77.7	20.0	2.4	64.6	35.4	0.0
Ireland	75.3	19.7	5.0	1.7	98.3	-
Greece	73.3	23.3	3.4	2.6	97.4	-
Spain	81.7	12.3	6.0	4.8	95.2	-
France	85.1	4.9	10.0	16.0	80.5	3.5
Italy	82.5	11.5	6.0	*9.7*	*90.3*	*0.0*
Cyprus	73.8	26.2	-	-	100.0	-
Latvia	72.9	19.1	8.0	70.2	29.8	0.0
Lithuania	86.3	12.3	1.5	43.9	56.1	0.0
Luxembourg	85.6	10.8	3.6	4.1	92.5	3.6
Hungary	60.1	23.6	16.3	25.0	69.2	5.8
Malta	75.6	24.4	-	-	100.0	-
Netherlands	84.3	6.7	9.0	3.6	65.8	30.6
Austria	75.1	13.8	11.0	32.6	64.4	3.0
Poland	77.4	12.8	9.8	30.8	69.0	0.2
Portugal	81.4	13.1	5.5	5.3	94.7	-
Romania	:	:	:	21.7	67.3	11.0
Slovenia	90.2	5.5	4.3	22.7	77.3	-
Slovakia	70.0	22.7	7.3	29.5	70.3	0.3
Finland	84.1	10.5	5.3	23.3	76.5	0.2
Sweden	83.0	7.6	9.3	36.0	64.0	-
United Kingdom	87.2	6.2	6.6	*11.9*	*88.0*	*0.1*
Croatia	:	:	:	23.1	76.0	1.0
FYR of Macedonia	:	:	:	11.2	88.8	-
Turkey	:	:	:	5.6	94.4	-
Iceland (3)	88.8	11.2	-	-	100.0	-
Norway (3)	88.2	7.4	4.5	14.7	85.3	-

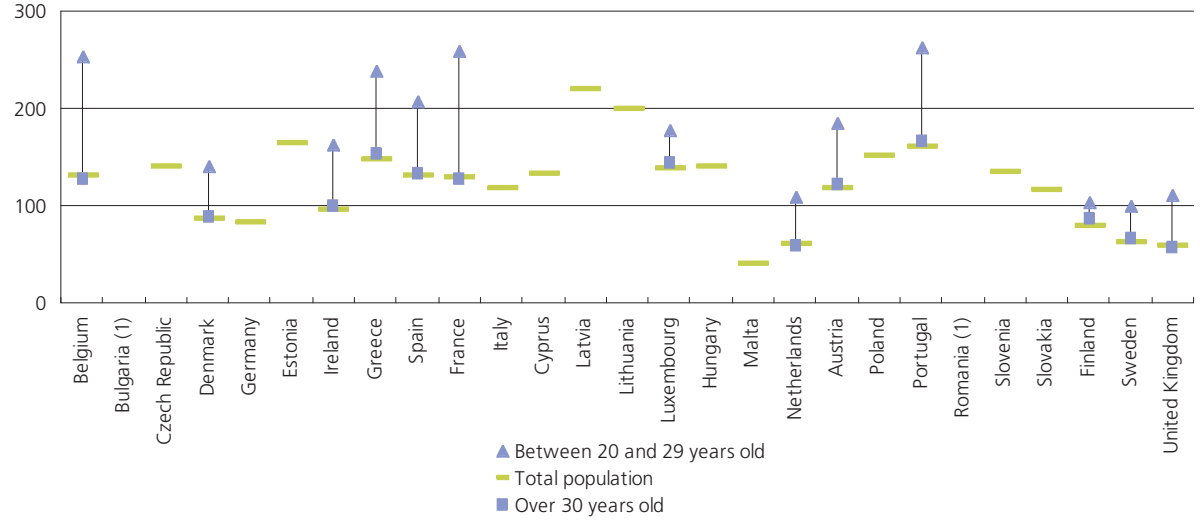
(1) Excluding powered two-wheelers; if powered two-wheelers are included they would account for 2.6 % of the resulting modal split.
(2) EU-25 for inland passenger transport.
(3) Inland passenger transport, 2002.

Source: Eurostat (tsdtr210 and tsdtr220) and Directorate-General for Energy and Transport (EU energy and transport in figures)

This indicator is defined as the percentage share of each mode of transport in total inland transport, expressed in passenger-kilometres (pkm). It is based on transport by passenger cars, buses and coaches, and trains. All data should be based on movements on national territory, regardless of the nationality of the vehicle. However, the data collection methodology is not harmonised at the EU level. This indicator is defined as the percentage share of each mode of transport in total inland transport expressed in tonne-kilometres (tkm). It includes transport by road, rail and inland waterways. Road transport is based on all movements of vehicles registered in the reporting country. Rail and inland waterways transport is generally based on movements on national territory, regardless of the nationality of the vehicle or vessel, but there are some variations in definitions from country to country.

Figure 9.1: People killed in road accidents, 2002

(persons killed per million inhabitants)



(1) Not available.

Source: Eurostat (tsdtr420) and European Commission CARE database (Community Database on Road Accidents)

Fatalities caused by road accidents include drivers and passengers of motorised vehicles and pedal cycles as well as pedestrians, killed within 30 days from the day of the accident. For Member States not using this definition, corrective factors were applied.

9.2 PASSENGER TRANSPORT

INTRODUCTION

EU transport policies have been designed with its citizens, urban and rural, as well as its enterprises in mind. The recent mid-term review of the 2001 White Paper shed a spotlight on urban travel, reflecting the fact that 'eighty per cent of Europeans live in an urban environment'. The review points to picking up on the best-practice initiatives used by a number of cities regarding 'transport infrastructure, norm-setting, congestion and traffic management, public transport services, infrastructure charging, urban planning, safety, security and cooperation with the surrounding region'. Building on the experience gained in the Civitas initiative [(71)] and on its thematic strategy on urban transport [(72)], the Commission published a Green Paper [(73)] on a new culture for urban mobility in September 2007 that looks to pick up on these best practices. To underline the importance of these urban transport reflections for economic prosperity and cohesion, the Green Paper states that 'just less than 85 % of the EU's gross domestic products is created in urban areas'.

Intra-urban transport is only one element of passenger transport policy. Enlargement of the EU has opened up further opportunities for inter-urban passenger travel by rail, car or airplane, which has been and continues to be strengthened by improvements to the infrastructure (such as extensions of the high-speed rail links or raising of airport capacity), by more competition and greater co-ordination (such as the single sky policy). The strengthening of passenger rights has also made passengers more secure to enjoy the freedom to travel and work throughout the EU. The recent mid-term review underlines the point that rail and sea passengers will benefit from similar rights in forthcoming legislation.

DEFINITIONS AND DATA AVAILABILITY

Definitions used in transport statistics are available in the 'Glossary for Transport statistics – Third Edition', of which:

- a rail passenger is any person, excluding members of the train crew, who makes a journey by rail;
- a rail passenger-kilometre is a unit of measure representing the transport of one rail passenger by rail over a distance of one kilometre;

(71) The Civitas initiative was established to help cities to achieve a more sustainable, clean and energy efficient urban transport system by implementing and evaluating an ambitious, integrated set of technology and policy based measures.

(72) Also note the Communication on the thematic strategy on the urban environment – COM(2005) 718; for more information: http://ec.europa.eu/environment/urban/pdf/com_2005_0718_en.pdf.

(73) COM(2007) 551 final; for more information: http://ec.europa.eu/transport/clean/green_paper_urban_transport/doc/2007_09_25_gp_urban_mobility_en.pdf.

- a merchant ship is a ship designed for the carriage of goods, transport of passengers or specially fitted out for a specific commercial duty;
- a sea passenger is any person that makes a sea journey on a merchant ship. Service staff assigned to merchant ships are not regarded as passengers. Non-fare paying crew members travelling but not assigned and infants in arms are excluded;
- air passengers carried relate to all passengers on a particular flight (with one flight number) counted once only and not repeatedly on each individual stage of that flight. This includes all revenue and non-revenue passengers whose journey begins or terminates at the reporting airport and transfer passengers joining or leaving the flight at the reporting airport; but excludes direct transit passengers.

Rail transport statistics are reported on the basis of the 'territoriality principle'. This means that each reporting country reports the loading/embarkation, unloading/disembarkation and movements of goods and passengers that take place in their national territory. For this reason, 'tonne-kilometre' and 'passenger-kilometre' are the best measures for the comparisons between transport modes and countries, because the use of tonnes or passengers entails a high risk of double counting, particularly in international transport.

Annual passenger data of all railway enterprises and rail accidents are available for all Member States, except Malta and Cyprus that do not have railways.

Maritime transport data are transmitted to Eurostat by 22 Member States of the EU (the Czech Republic, Luxembourg, Hungary, Austria and Slovakia having no maritime traffic). Annual data are available for the remaining EU-27 Member States for most of the period between 2001 and 2005 (as of June 2007), although some Member States have sent annual and quarterly data for the period since 1997.

The air transport domain contains national and international intra and extra-EU data. In the tables from the sub-domain 'Transport measurement – passengers', data are broken down by passengers on board (arrivals, departures and total), passengers carried (arrivals, departures and total) and passenger commercial air flights (arrivals, departures and total). The tables within the collection 'Detailed air transport by reporting country and routes' provides information on seats available (arrivals, departures and total). The data are presented with monthly, quarterly and annual frequencies. Annual data are available for the EU-27 Member States for most of the period between 2001 and 2006.

MAIN FINDINGS

In the vast majority of Member States, GDP growth since 1995 has outstripped changes in the volume of inland passenger transport. Among the exceptions were Spain and Italy, where the rate of growth in GDP was very similar to the rate of growth in the volume of inland passenger transport, and Portugal and Greece, where the growth in the volume of inland passenger transport and particularly personal car use was stronger than GDP growth on a sustained basis during the years through to 2004.

The average distance per inhabitant travelled on railways (national and international travel) in a year, was higher in France, Denmark and Austria than elsewhere in the EU-27; the average distance travelled by rail in these Member States ranged between 1 000 and 1 200 passenger-kilometres in 2004/2005. In terms of international travel within the EU-27 Member States, the average distance travelled on railways was highest in Austria (195 passenger-kilometres per inhabitant), Luxembourg (141 km per inhabitant) and France (125 km per inhabitant) in 2005 (74), reflecting variously the number of international borders, the importance of international commuters within the workforce, the relative proximity of their capitals or other cities to international borders, the access to high-speed network rail links, and their position on major international transport corridors.

(74) France, 2004.

Some 3 136 people were either killed or seriously injured in railway accidents in the EU-25 in 2005, of which a little more than one quarter (28 %) were either train passengers or railway employees. Approximately two thirds (68 %) of the losses of life in rail accidents were from incidents involving rolling stock in motion, with just over a quarter (28 %) from incidents at level-crossings. Of the 1 487 people that lost their lives in rail accidents, 62 were passengers and of these 19 people died in rail collisions (excluding level-crossing accidents).

The highest numbers of rail fatalities within the EU-27 (excluding Bulgaria) in 2005 occurred in Poland and the Czech Republic. In the case of the Czech Republic, however, statistics include suicides that should, in principle, be excluded.

Air transport in the EU-25 exceeded 700 million passengers in 2005. In 2006, London's Heathrow airport remained the busiest in terms of passenger numbers (about 67 million), accounting for only a little less than one tenth of all air passengers in the EU. Paris' Charles de Gaulle airport (56 million) and Frankfurt's Main airport (52 million) were the second and third busiest airports. The vast majority (about 90 % or more) of passengers in these three airports were international passengers. The busiest airports in the Member States for domestic flights were Madrid's Barajas airport, Paris' Orly airport, Barcelona airport and Roma's Fiumicino airport [75].

(75) For more information, see Eurostat, Statistics in Focus 8/2007 on 'Air transport in Europe in 2005'.

Ports in the EU-25 handled 387 million [76] maritime passengers in 2005, representing a decline of almost 5 % on numbers passing through in 2004. Greek and Italian ports handled more passengers (86 million and 79 million respectively) than the ports in any other Member State, although in both of these countries there were significant numbers of passengers who were double counted, through national ferry connections such as Perama-Paloukia and Reggio Calabria-Messina.

The opening of new bridges and tunnels between islands and countries can have a significant impact on the number of passengers passing through ports. For example, the strong decline (16 %) in the number of passengers through Greek ports between 2003 and 2005 is largely explained by the opening of the bridge between the Peloponnese and mainland Greece in 2004 which resulted in a downturn in sea passengers on the Rio-Antirio route. The discontinuation of the 'duty-free' traffic between Polish and German ports in May 2004 also largely explains the near halving of maritime passengers through Polish ports between 2003 and 2005 passengers [77].

(76) The total number of maritime passengers may include some passengers who have been double-counted, for example, those that embarked or disembarked in ports of the same country. There is no significant difference between the number of passengers embarking and disembarking as most transport corresponds to main ferry connections.

(77) For more details, see Eurostat, Statistics in Focus 94/2007 on 'Maritime transport of goods and passengers, 1997-2005'.

SOURCES

Methodologies and working papers

Common Questionnaire of the United Nations Economic Commission for Europe (UNECE), Eurostat and the European Conference of Ministers of Transport (ECMT; more recently the International Transport Forum – ITF) on rail transport statistics;
Manual on air transport statistics methodology
Glossary on air transport statistics
Methodological notes on maritime transport statistics are published in the annual CD-Rom on transport by sea

Website data

Railway transport

- Railway transport measurement – passengers
  - Railway transport – quarterly passengers transported
  - Railway passenger transport by type of transport (national/international)
  - International railway passenger transport from the reporting country to the country of disembarkation (in 1 000 passengers)
  - International railway passenger transport from the country of embarkation to the reporting country (in 1 000 passengers)

Maritime transport

- Maritime transport – passengers
  - Maritime transport – passengers – annual data – all ports – by direction
  - Maritime transport – passengers – quarterly data – main ports – by direction and type of traffic (national and international)

Air transport

- Air transport measurement – passengers
  - Overview of the air passenger transport by country and airports
  - National air passenger transport by country and airports
  - International intra-EU air passenger transport by country and airports
  - International extra-EU air passenger transport by country and airports
  - Detailed air passenger transport by reporting country and routes

Table 9.2: Volume of inland passenger transport (1)

(index of inland passenger transport volume relative to GDP (1995=100))

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Belgium	100.0	*99.5*	97.3	98.9	*97.4*	94.9	95.9	96.4	97.0	96.3
Bulgaria	100.0	:	:	:	:	:	:	:	:	:
Czech Republic	100.0	*106.9*	*107.4*	*109.3*	*109.9*	*109.4*	107.9	105.9	103.1	98.0
Denmark	100.0	99.0	97.7	96.6	95.4	91.6	89.7	89.5	89.8	90.0
Germany	100.0	99.2	97.5	96.7	96.9	92.5	93.4	93.8	93.5	93.6
Estonia	100.0	:	:	:	:	:	:	:	:	:
Ireland	100.0	*97.2*	*93.8*	*90.7*	*85.8*	*81.7*	*80.7*	*79.2*	*78.7*	*77.8*
Greece	100.0	*98.4*	*100.3*	*102.0*	*105.1*	*110.0*	*110.0*	*111.6*	*109.9*	*109.6*
Spain	100.0	*101.9*	*101.0*	101.1	101.8	99.5	97.9	102.0	101.2	101.4
France	100.0	100.8	100.2	99.6	99.2	96.0	97.4	97.5	96.9	94.9
Italy	100.0	101.3	100.9	102.4	101.0	105.8	103.1	102.1	102.0	101.8
Cyprus	100.0	:	:	:	:	:	:	:	:	:
Latvia	100.0	:	:	:	:	:	:	:	:	:
Lithuania	100.0	:	:	:	:	:	:	*90.6*	*96.3*	117.0
Luxembourg	100.0	*100.4*	*96.8*	*92.7*	*85.8*	*88.0*	*89.2*	*88.1*	*87.2*	*85.6*
Hungary	100.0	101.4	96.7	92.3	90.1	84.7	81.5	78.9	75.8	72.1
Malta	100.0	:	:	:	:	:	:	:	:	:
Netherlands	100.0	97.5	96.6	93.6	91.6	88.3	87.0	88.1	*88.0*	*86.6*
Austria	100.0	99.1	97.0	94.7	93.6	91.9	92.1	92.6	92.4	91.4
Poland	100.0	96.3	94.9	95.6	92.4	92.2	93.7	95.1	93.6	92.1
Portugal	100.0	*100.8*	*102.9*	*103.2*	*104.8*	*105.3*	*105.0*	*107.5*	*111.2*	*113.7*
Romania	100.0	:	:	:	:	:	:	:	:	:
Slovenia	100.0	104.0	104.9	98.8	99.1	94.5	93.0	91.6	89.8	87.6
Slovakia	100.0	91.1	82.9	79.0	81.6	88.2	85.2	83.6	79.0	73.1
Finland	100.0	97.2	94.0	91.1	89.6	86.5	85.8	86.0	86.1	84.7
Sweden	100.0	99.3	97.4	94.8	93.4	90.9	90.6	90.9	91.2	88.0
United Kingdom	100.0	98.2	97.0	94.7	93.1	89.5	89.3	90.2	88.2	85.8
Iceland	100.0	*99.9*	*101.0*	*101.2*	*101.2*	109.3	113.2	116.6	117.5	112.3
Norway	100.0	98.8	93.8	93.1	92.2	90.6	89.9	90.7	91.3	90.0
Japan	100.0	100.3	99.8	102.5	103.1	100.6	101.2	100.8	99.4	:
United States	100.0	98.9	97.5	96.1	94.3	92.8	96.7	96.4	95.1	:

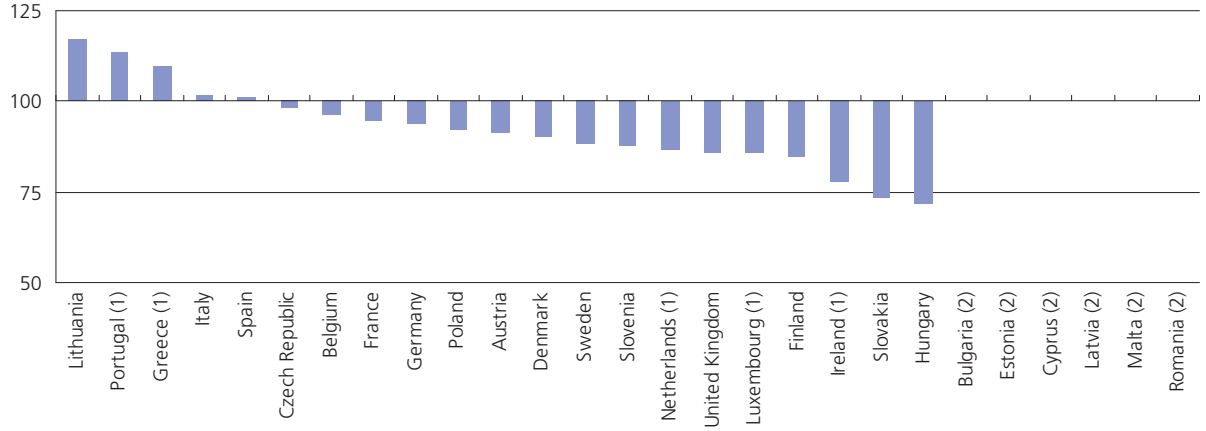
(1) Break in series: Hungary and the United Kingdom, 1996; Italy, 2000.

Source: Eurostat (tsien032)

This indicator is defined as the ratio between passenger-km (inland modes) and GDP (gross domestic product in constant 1995 EUR). It is indexed on 1995. It is based on transport by passenger cars, buses and coaches, and trains. All data was asked to be based on movements on national territory, regardless of the nationality of the vehicle. However, data collection methodology is not harmonised at the EU level.

Figure 9.2: Volume of inland passenger transport, 2004

(index of inland passenger transport volume relative to GDP (1995=100))



(1) Estimate.
(2) Not available.

Source: Eurostat (tsien032)

Table 9.3: Rail passenger transport

	Rail passenger transport (1 000 million passenger-km)				Rail passenger transport (passenger-km per inhabitant)				Rail accidents (number of persons)			
	National		International		National		International		Killed		Seriously injured	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
Belgium	8 675	7 771	:	535	834	744	:	51	19	24	23	26
Bulgaria	:	:	:	:	:	:	:	:	:	:	:	:
Czech Republic	6 212	6 285	368	381	608	615	36	37	232	249	111	100
Denmark	5 384	5 421	332	330	997	1 002	62	61	17	23	13	13
Germany	71 592	74 944	1 287	3 300	867	908	16	40	167	157	215	209
Estonia	170	224	23	25	126	166	17	19	20	21	17	24
Ireland	1 582	1 654	:	127	393	403	:	31	1	0	2	1
Greece	1 636	1 804	33	50	148	163	3	5	32	26	82	60
Spain	18 278	19 075	738	734	432	443	17	17	110	65	54	32
France	66 582	:	7 777	:	1 072	:	125	:	93	79	40	42
Italy	43 576	43 889	2 002	2 255	753	751	35	39	59	99	87	121
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	722	800	88	94	311	347	38	41	32	32	42	34
Lithuania	262	259	21	21	76	76	6	6	31	33	28	16
Luxembourg	191	203	62	64	423	446	137	141	0	0	0	1
Hungary	10 028	9 340	:	374	991	925	:	37	94	91	357	322
Malta	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	:	14 730	:	230	:	903	:	14	24	25	21	19
Austria	6 759	7 046	1 500	1 600	830	859	184	195	47	44	72	65
Poland	17 862	17 331	567	552	468	454	15	14	276	291	413	403
Portugal	3 633	3 753	60	57	347	356	6	5	101	99	157	70
Romania	8 475	7 816	158	144	390	361	7	7	40	36	1	15
Slovenia	648	666	47	50	325	333	24	25	12	5	42	18
Slovakia	2 099	2 039	129	143	390	379	24	27	10	7	9	20
Finland	3 280	3 402	72	76	628	650	14	15	24	22	7	13
Sweden	8 013	8 339	621	571	893	925	69	63	26	21	21	19
United Kingdom	41 952	42 981	1 396	1 434	703	716	23	24	88	74	30	21
Croatia	1 100	1 161	69	66	248	261	16	15	36	35	34	44
Turkey	5 172	4 977	65	59	73	70	1	1	219	154	471	283

Source: Eurostat (rail_pa_typepkm, rail_ac_catvict and tps00001)

Table 9.4: Rail accidents by type of victim and accident, EU-25, 2005

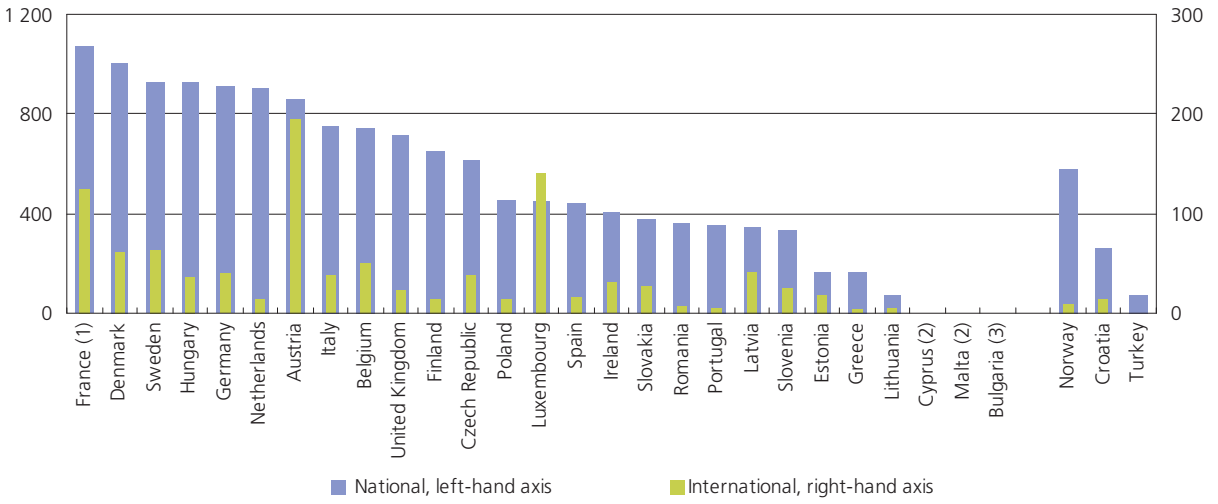
(number of persons)

	Total		Passengers		Railway employees		Others	
	Killed	Seriously injured	Killed	Seriously injured	Killed	Seriously injured	Killed	Seriously injured
Total	1 487	1 649	62	608	43	151	1 382	890
Collisions (excluding level-crossing accidents)	38	152	19	93	10	44	9	15
Derailments	1	51	0	35	0	15	1	1
Accidents involving level-crossings	412	476	6	17	2	20	404	439
Accidents to persons caused by rolling stock in motion	1 007	547	28	122	31	44	948	381
Fire in rolling stock	0	6	0	3	0	3	0	0
Others	29	417	9	338	0	25	20	54

Source: Eurostat (rail_ac_catvict)

Figure 9.3: Rail passenger transport, 2005

(passenger-km per inhabitant)

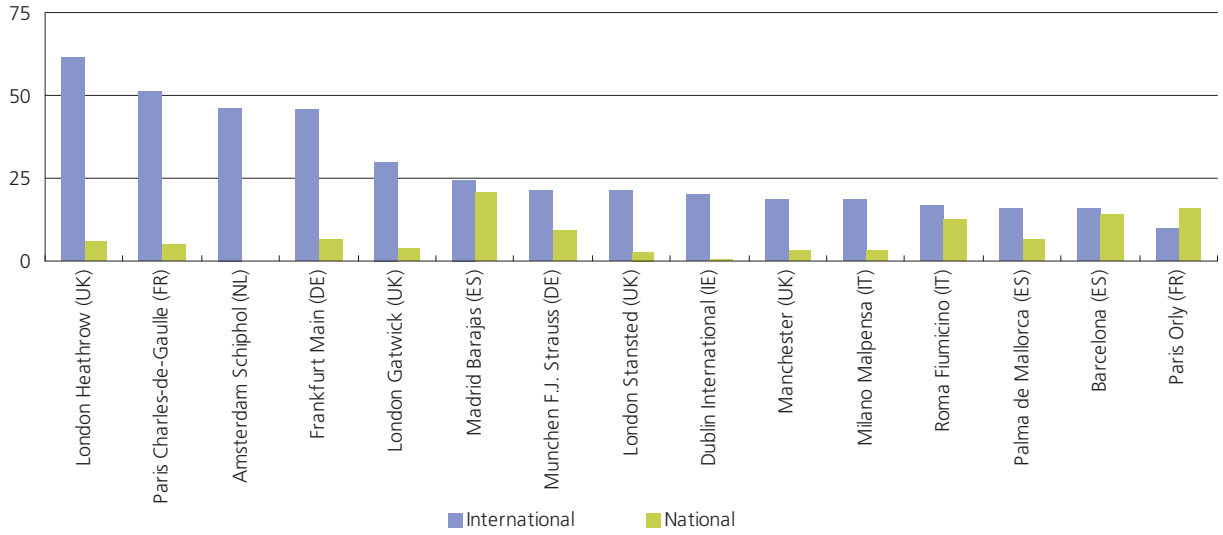


(1) 2004.
(2) Not applicable.
(3) Not available.

Source: Eurostat (rail_pa_typepkm and tps00001)

Figure 9.4: Top 15 airports, passengers carried (embarked and disembarked), EU-27, 2006

(million passengers)



Source: Eurostat (avia_paoa)

Table 9.5: Air and sea passenger transport

(1 000 passengers)

	Air passengers (1)	Maritime passengers		
	2005	2003	2004	2005
EU-25 (2)	704 569	412 607	406 427	386 608
Euro area	:	288 432	282 486	266 646
Belgium	17 814	739	787	922
Bulgaria	5 023	4	6	13
Czech Republic	11 266	-	-	-
Denmark	22 173	48 653	48 555	47 924
Germany	145 977	32 146	29 815	29 490
Estonia	1 393	5 172	6 452	6 885
Ireland	24 254	3 747	3 550	3 275
Greece	30 798	102 760	96 744	86 068
Spain	143 680	20 041	21 694	22 410
France	107 955	27 405	27 068	25 804
Italy	87 906	82 576	83 316	78 753
Cyprus	6 782	287	247	194
Latvia	1 872	118	130	144
Lithuania	1 434	135	146	166
Luxembourg	1 538	-	-	-
Hungary	8 049	-	-	-
Malta	2 762	166	225	178
Netherlands	46 433	2 015	2 012	2 116
Austria	19 685	-	-	-
Poland	7 080	3 188	2 031	1 647
Portugal	20 272	616	650	662
Romania	3 916	:	:	:
Slovenia	1 217	47	42	35
Slovakia	1 583	-	-	-
Finland	12 348	16 341	16 806	17 112
Sweden	22 899	32 748	33 318	32 617
United Kingdom	204 013	33 708	32 837	30 207
Croatia	3 494	19 483	21 519	22 182
Iceland	2 951	407	404	422
Norway	18 579	4 656	5 787	6 663

(1) Total passengers carried (arrivals and departures for national and international).
(2) For air: aggregates exclude the double-counting impact of passengers flying between countries belonging to the same aggregate.

Source: Eurostat (ttr00012 and mar_pa_aa) and Directorate-General for Energy and Transport

9.3 FREIGHT TRANSPORT

INTRODUCTION

The ability to move goods safely, quickly and cost-efficiently to market is important for trade and economic development. Strains on infrastructure, demonstrated by congestion and pollution, as well as the constraints of disparate standards, technical barriers, poor interoperability and governance all impact on economic development.

The EU has already taken a number of steps to improve freight transport throughout the EU, but the mid-term review of the 2001 White Paper specified further actions. The package of measures being proposed by the European Commission concern:

- a freight transport logistics action plan: the trend towards integrated logistics enterprises needs to be matched by public policies enabling the optimal use and combination (co-modality) of different modes of transport. The action plan proposed covers, among other ideas, e-freight and intelligent transport systems, the promotion of interoperability across modes, single transport documents and the removal of regulatory obstacles;
- a rail network giving priority to freight [78]: ideas being proposed by the European Commission include the creation of freight corridor structures [79] to measure service quality, improvement of the infrastructure of existing freight corridors, the introduction of harmonised rules for the allocation of train paths, the development of priority rules in the case of traffic disturbance, and the improvement of terminal and marshalling yard capacities;
- a ports policy: ideas being proposed include several that might be grouped under 'modernisation', such as the simplification of procedures for short-sea shipping, an e-maritime approach to administration, and improved performance (such as the use of automated stacking cranes, automated container terminals, and twin and tandem lifting equipment), as well as the expansion of capacity whilst respecting the environment;
- a maritime and short-sea shipping policy [80]: challenges faced include reducing bureaucracy, improving promotion and marketing, port capacity, accessibility and efficiency, ensuring the availability of suitable vessels, providing adequate training, the availability of good and non-congested hinterland connections, and establishing integrated information systems.

(78) COM(2007) 608; for more information: http://eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0608en01.pdf.

(79) Building on the intent to establish six European Rail Traffic Management System (ERTMS) corridors: A (Rotterdam – Genoa), B (Stockholm – Naples), C (Antwerp – Basle – Lyon), D (Valencia – Lyon – Ljubljana – Budapest), E (Dresden – Prague – Budapest), F (Duisberg – Berlin – Warsaw).

(80) Commission Staff Working Document SEC(2007) 1367; for more information: http://eur-lex.europa.eu/LexUriServ/site/en/com/

DEFINITIONS AND DATA AVAILABILITY

Definitions used in transport statistics are available in the 'Glossary for Transport statistics – Third Edition', of which:

- weight by road/rail is the gross-gross weight of goods. This includes the total weight of the goods, all packaging, and tare-weight of the container, swap-body and pallets containing goods. In the case of rail, it also includes road goods vehicles carried by rail. When the tare-weight is excluded, the weight is the gross weight. The tare-weight is the weight of a transport unit before any cargo is loaded; weight by sea is the gross weight;
- goods loaded are those goods placed on a road vehicle/railway vehicle/merchant ship and dispatched by road/rail/sea. Unlike in road and inland waterway transport, transhipments from one railway vehicle directly to another and change of tractive vehicle are not regarded as unloading/loading. However, if the goods are unloaded from one railway vehicle to another railway vehicle, this is considered as a break of the journey;
- goods unloaded are those goods taken off a road vehicle/railway vehicle/merchant ship.

Road freight transport statistics are reported by Member States for vehicles registered in their country. On the basis of variables contained in the micro-data (reporting country, country of loading and country of unloading of a journey) five types of operations are derived:

- National transport;
- International transport – goods loaded in the reporting country;
- International transport – goods unloaded in the reporting country;
- International transport – cross-trade;
- International transport – cabotage.

Quarterly and annual rail freight data are collected for EU-25 Member States, except Malta and Cyprus that do not have railways, in line with Regulation 91/2003. Whereas the quarterly data concern big railway undertakings, annual data cover all undertakings. The new Regulation has been implemented from 2004 onwards.

Maritime transport data are transmitted to Eurostat by 22 Member States of the EU (the Czech Republic, Luxembourg, Hungary, Austria and Slovakia having no maritime traffic). Annual data are available for the remaining EU-27 Member States for most of the period between 2001 and 2005 (as of June 2007), although some Member States have sent annual and quarterly data for the period since 1997.

In the tables of the sub-domain 'Transport measurement – Freight and mail', data are broken down by freight and mail on board (arrivals, departures and total), freight and mail loaded/unloaded (loaded, unloaded and total) and all-freight and mail commercial air flights (arrivals, departures and total). The data are presented with monthly, quarterly and annual frequencies. Annual data are available for most of the EU-27 Member States for the period between 2003 and 2006, with a majority also providing data for 2001 and 2002. Some Member States have provided data back to 1993.

MAIN FINDINGS

The rates of change in the GDP of the EU-25 since 1995 were broadly matched by rates of change in the volume of inland freight transport through until 2003, since when the rate of freight volume growth has been notably stronger. In about half of the EU-27 Member States, the rate of growth in GDP in the decade through to 2005 was outstripped by the growth in inland freight volumes. In the majority of Member States, the amount of freight transported by road exceeded that of railways and inland waterways.

The vast majority (94 % in 2005) of air freight and mail transport is international (intra- and extra-EU combined). More freight was carried through German airports (a little more than 3 million tonnes) than airports in any other Member State in 2005, representing a sharp rise of nearly one quarter since 2003. The United Kingdom and then the Netherlands were the next largest air freight carriers among the Member States. It is interesting to note, however, the importance of air freight within some of the smaller Member States; for example, freight transported through Luxembourg's only commercial airport in 2005 was more than that passing through all the airports of Spain and equal to about one fifth of the total amount passing through German airports.

In 2005, 3 718 million tonnes of goods were handled in EU-27 maritime ports (4.2 % higher than in 2004). With 586 million tonnes, the United Kingdom had the highest share (16 %) of EU-27 goods handled in ports, followed by Italy (14 %), the Netherlands (12 %) and Spain (11 %). Tonnes of goods handled in maritime ports per inhabitant give some indication of the relative importance of maritime ports in each Member State, ranging from 34.6 tonnes in Estonia to 1.4 tonnes in Poland (the EU-27 average being 7.6 tonnes).

At the EU-27 level, liquid bulk represented 41 % of the total cargo handled in ports in 2005, followed by dry bulk (26 %) and large containers (16 %). Just over 60 % of the seaborne transport of goods made by the 27 Member States concerned extra-EU-27 partner (origin/destination) ports, while international intra-EU-27 transport represented 28 % of the total, and national maritime transport the remaining 11 %.

Rotterdam, Antwerp and Hamburg maintained their positions as the three largest ports in terms of both the gross weight of goods handled and the volume of containers handled.

SOURCES

Methodologies and working papers

Road freight transport methodology – volume 1: reference manual for the implementation of Council Regulation No 1172/98/EC on statistics on the carriage of goods by road

Road freight transport methodology – volume 2: methodologies used in surveys of road freight transport in Member States and Candidate Countries

Website data

Road transport

Road freight transport measurement

Total road freight transport

National road freight transport

International road freight transport

Road cabotage transport

Railway transport

Railway transport measurement – goods

(detailed data based on Directive 80/1177/EC or Regulation (EC) 91/2003)

Railway transport – goods transported, by type of transport

Railway transport – goods transported, by group of goods

Railway transport – quarterly goods transported

International annual railway transport from the loading country to the reporting country (1 000 t, million tkm)

International annual railway transport from the reporting country to the unloading country (1 000 t, million tkm)

National monthly railway transport (1 000 t)

Maritime transport

Maritime transport – goods

Maritime transport – goods (gross weight) – annual data – all ports – by direction

Maritime transport – goods (gross weight) – quarterly data – main ports – by direction and type of traffic (national and international)

Air transport

Air transport measurement – freight and mail

Overview of the freight and mail air transport by country and airports

National freight and mail air transport by country and airports

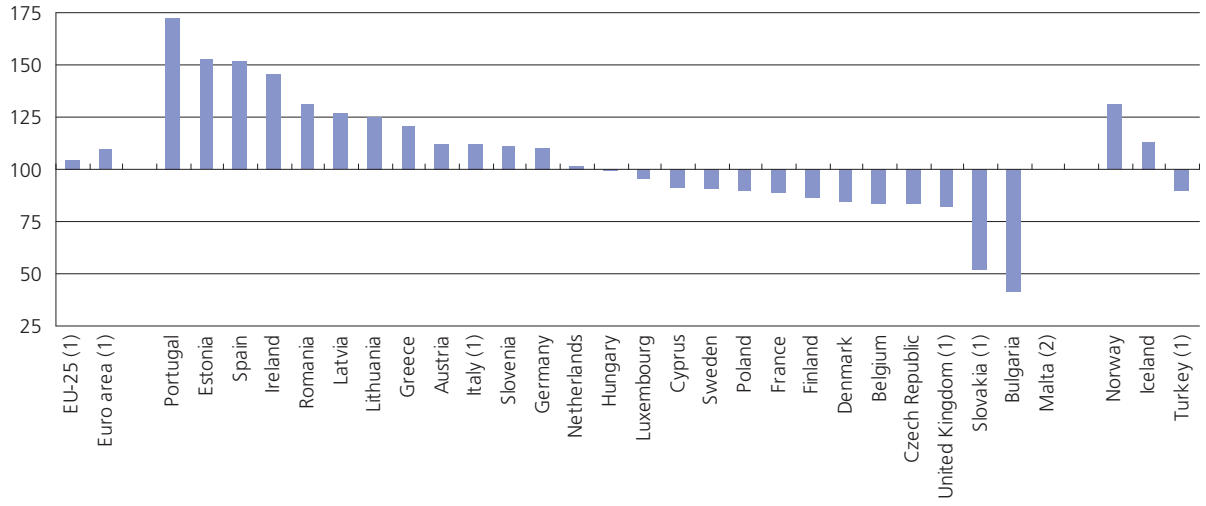
International intra-EU freight and mail air transport by country and airports

International extra-EU freight and mail air transport by country and airports

Detailed freight and mail air transport by reporting country and routes

Figure 9.5: Volume of inland freight transport, 2005

(index of inland freight transport volume relative to GDP, 1995=100))



(1) Estimate.
(2) Not available.

Source: Eurostat (tsien031)

Table 9.6: Volume of inland freight transport (1)

(index of inland freight transport volume relative to GDP, 1995=100)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EU-25	*100.0*	*99.2*	*101.0*	*101.4*	*100.5*	*100.1*	*98.9*	*99.7*	*98.9*	*104.0*	*104.6*
Euro area	100.0	*99.8*	*101.3*	*103.4*	*103.9*	*104.2*	*103.9*	*104.6*	*102.9*	*109.4*	*109.9*
Belgium	100.0	91.8	92.3	87.2	78.6	98.0	100.1	99.1	95.0	89.3	83.7
Bulgaria	100.0	:	:	:	:	31.8	33.3	33.2	35.0	38.5	41.4
Czech Republic	100.0	93.1	110.1	94.7	95.3	93.9	93.5	97.5	98.7	92.8	83.4
Denmark	100.0	92.1	90.9	88.9	93.1	93.0	85.5	86.2	87.6	87.4	84.4
Germany	100.0	97.8	99.8	101.4	103.7	103.3	103.3	102.3	103.2	109.2	110.6
Estonia	100.0	108.2	117.1	138.1	164.4	177.9	159.0	164.7	150.8	159.5	152.5
Ireland	100.0	104.4	102.1	108.4	121.2	131.8	125.3	135.3	141.6	148.4	146.0
Greece	100.0	*117.3*	128.6	*141.0*	*141.7*	:	:	:	108.0	:	120.8
Spain	100.0	*98.1*	*101.9*	*108.9*	111.2	116.4	121.0	133.8	135.3	149.2	151.7
France	100.0	100.0	100.7	100.8	103.7	100.4	97.5	95.4	92.9	93.3	88.5
Italy	100.0	105.6	*103.7*	*107.7*	101.5	102.2	*100.9*	*102.7*	*93.7*	*104.5*	*111.9*
Cyprus	100.0	*101.0*	*100.5*	*99.1*	*96.2*	*94.6*	*93.9*	95.7	99.5	76.5	91.7
Latvia	100.0	121.4	132.8	125.2	116.0	120.0	119.9	122.3	133.1	128.6	126.4
Lithuania	100.0	94.4	97.5	91.4	104.2	107.1	96.4	115.3	116.9	113.7	125.4
Luxembourg	100.0	67.8	78.1	*81.5*	92.3	100.8	110.0	109.5	113.0	109.5	95.4
Hungary	100.0	*97.4*	*97.5*	107.9	99.6	94.9	89.2	85.0	82.9	89.1	99.3
Malta	100.0	:	:	:	:	:	:	:	:	:	:
Netherlands	100.0	99.0	101.0	103.9	104.1	97.4	94.9	93.1	93.7	102.7	101.3
Austria	100.0	*100.9*	102.9	*104.5*	109.8	112.3	117.1	119.2	118.3	117.5	112.2
Poland	100.0	97.7	96.7	91.6	84.2	81.8	79.9	80.5	81.9	88.7	89.6
Portugal	100.0	*116.2*	120.5	116.2	115.6	114.2	123.8	122.2	114.2	164.9	172.6
Romania	100.0	:	:	:	71.5	75.3	80.0	90.0	95.6	104.3	131.2
Slovenia	100.0	*93.5*	*93.1*	*92.8*	*89.0*	*87.6*	88.5	84.0	87.2	98.3	111.0
Slovakia	100.0	65.4	61.4	62.7	60.7	54.1	50.0	47.3	48.3	48.1	*51.5*
Finland	100.0	96.5	*95.8*	97.3	97.1	98.7	92.2	93.6	90.5	90.5	86.1
Sweden	100.0	100.9	*102.6*	*95.8*	*91.2*	93.2	88.9	90.6	90.6	88.9	90.2
United Kingdom	100.0	100.9	100.5	99.0	93.6	89.8	87.3	85.5	84.7	*84.1*	*82.3*
Turkey	100.0	111.7	107.3	111.9	116.4	116.6	117.0	107.8	103.6	98.3	*89.9*
Iceland	100.0	100.1	101.1	101.3	103.1	99.2	104.9	108.2	108.4	109.3	112.7
Norway	100.0	117.3	124.6	125.6	124.1	122.8	119.2	118.2	123.9	127.0	130.9
Japan	100.0	100.8	99.5	99.1	101.1	99.9	99.5	99.1	100.4	99.7	:
United States	100.0	99.2	97.1	96.0	95.0	93.4	94.4	94.1	91.4	:	:

(1) Break in series: Sweden, 1996; Estonia, 1997; Hungary and Slovakia, 2000; Bulgaria, 2001; Greece, 2003; Spain, Italy, Austria, Poland, Portugal and Romania, 2004.

Source: Eurostat (tsien031)

This indicator is defined as the ratio between tonne-kilometres (inland modes) and GDP (in constant 1995 EUR). It is indexed on 1995. It includes transport by road, rail and inland waterways. Rail and inland waterways transport are based on movements on national territory, regardless of the nationality of the vehicle or vessel. Road transport is based on all movements of vehicles registered in the reporting country.

Table 9.7: Inland freight transport, 2006

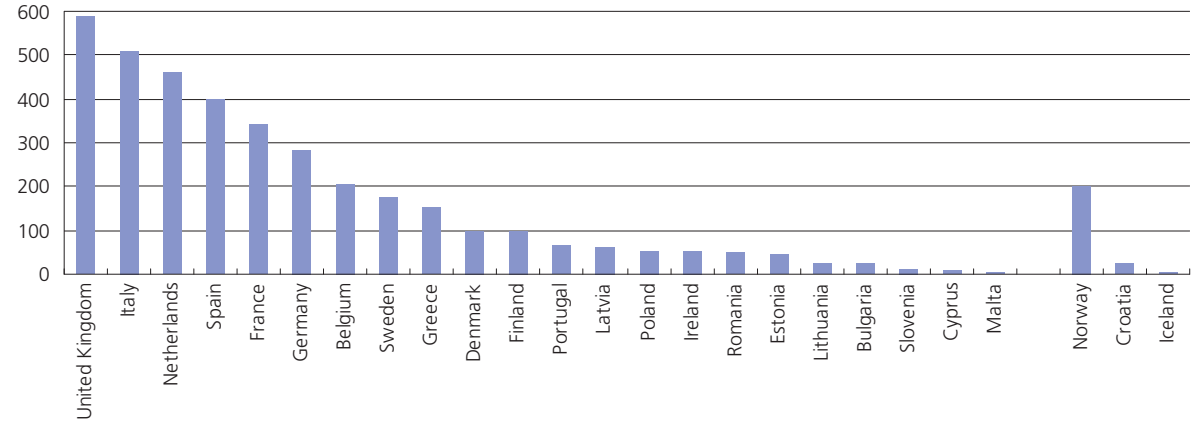
	Road (1)	Rail (2)	Inland water-ways (3)	Road (1)	Rail (2)	Inland water-ways (3)	National air freight and mail transport (4)
	(million t-km)			(t-km per inhabitant)			(tonnes)
Belgium	47 868	:	3 393	4 554	:	325	509
Bulgaria	13 763	5 396	622	1 783	699	81	:
Czech Republic	50 374	15 748	11	4 914	1 536	1	2 320
Denmark	21 255	1 892	-	3 916	349	-	1 650
Germany	321 434	107 007	23 758	3 899	1 298	288	118 780
Estonia	5 674	10 418	-	4 220	7 748	:	0
Ireland	:	205	-	:	49	-	16 383
Greece	33 998	662	-	3 056	60	-	16 466
Spain	241 782	11 634	-	5 525	266	-	116 192
France	211 464	40 924	1 580	3 357	650	25	170 116
Italy	176 292	24 165	-	3 001	411	:	72 761
Cyprus	1 165	-	-	1 520	-	-	656
Latvia	10 765	19 779	-	4 691	8 576	:	1
Lithuania	18 122	12 896	-	5 325	3 789	:	8
Luxembourg	8 803	392	4	19 158	862	44	84
Hungary	:	10 167	264	:	1 009	26	0
Malta	:	-	-	:	-	-	0
Netherlands	83 297	5 025	8 595	5 100	308	526	2
Austria	37 455	20 980	902	4 531	2 538	109	955
Poland	128 315	53 622	16	3 363	1 405	0	6 773
Portugal	44 995	2 422	-	4 257	230	-	22 013
Romania	57 262	15 791	2 198	2 650	731	102	484
Slovenia	12 090	3 373	-	6 035	1 684	-	32
Slovakia	22 163	9 988	23	4 112	1 853	4	5
Finland	29 716	11 060	-	5 654	2 104	:	5 619
Sweden	36 206	21 675	-	4 002	2 405	-	13 543
United Kingdom	168 289	22 322	-	2 787	372	:	135 847

(1) Road transport is based on movements all over the world of vehicles registered in the reporting country; Italy, 2005.
(2) Latvia, Luxembourg, the Netherlands, Portugal, Sweden and the United Kingdom, 2005.
(3) Belgium and Hungary, 2005.
(4) Sweden, 2004; Denmark does not include data for Copenhagen/Kastrup airport; France underestimated as freight transport at Paris Charles-de-Gaulle and Paris Orly is incomplete.

Source: Eurostat (road_go_to_tcrg, rail_go_typeall, iww_go_ildg, avia_gonc and tps00001)

Figure 9.6: Gross weight of seaborne goods handled in ports, 2005 (1)

(million tonnes)

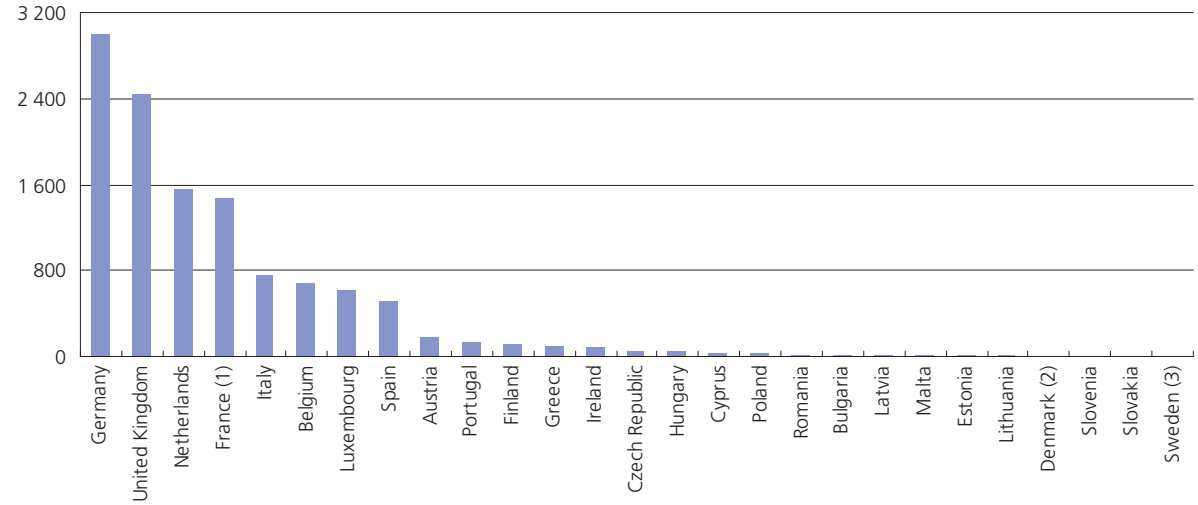


(1) Czech Republic, Luxembourg, Hungary, Austria and Slovakia, not applicable.

Source: Eurostat (mar_go_aa)

Figure 9.7: Air freight transport, 2005

(1 000 tonnes)



(1) Underestimated: freight transport at Paris Charles-de-Gaulle and Paris Orly is incomplete.
(2) Excluding freight transport at Copenhagen/Kastrup airport.
(3) Not available.

Source: Eurostat (ttr00011) and Directorate-General for Energy and Transport