

EU TRANSPORT IN FIGURES

STATISTICAL POCKETBOOK

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COMMISSION



1999

EU

TRANSPORT IN FIGURES

STATISTICAL POCKET BOOK

1999

European Commission

Directorate General for Transport (DG VII)

in cooperation with Eurostat

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (<http://europa.eu.int>).

Cataloguing data can be found at the end of this publication.

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Preface

The main aim of this pocket book is to provide transport statistics for the EU Member States in a user-friendly way. Most of the data cover the period 1970-97.

The pocket book is based on Eurostat statistics (<http://europa.eu.int/eurostat.html>) and on data from other international organisations, national statistics, studies and, where no data was available, estimates.

The tables of this book may also be found on the Europa internet site which is updated every quarter at the following URL :

<<http://europa.eu.int/en/comm/dg07/tif>>

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SYMBOLS AND ABBREVIATIONS

12	<i>Estimates are printed in italic</i>
<hr style="width: 20px; margin-left: 0;"/>	break in time series
%	per cent
-	nil
:	data not available
0	figure less than half of unit used
1970=100	reference year for an index
€	euro
ECU	European Currency Units
ca.	circa = approximately
dwt	deadweight ton
GDP	Gross Domestic Product
grt	gross registered tonnage
mio p	1 million persons
pkm	passenger-kilometre : unit of measure
PPS	Purchasing Power Standard
tkm	tonne-kilometre : unit of measure
VOCs	Volatile Organic Compounds
ACEA	European Automobile Manufacturer's Association
ACI	Airports Council International
AEA	Association of European Airlines
ASECAP	Ass. Europ. Compagnies d'Autoroutes Payantes
CEC	Central and Eastern European Countries
DG VII	European Commission : Directorate-General for Transport
ECF	European Cyclists' Federation
ECIS	European Centre for Infrastructure Studies
ECMT	European Conference of Ministers of Transport
EFIP	European Federation of Inland Ports
EU	European Union
EU15	European Union of 15 Member States
EUROSTAT	Statistical Office of the European Communities
GVF	Dienst für Gesamtverkehrsfragen (Switzerland)
IACA	International Air Charter Association
IATA	International Air Transport Association
IMF	International Monetary Fund
IRF	International Road Federation
ISL	Institute of Shipping Economics and Logistics
MS	Member States
UIC	Union Internationale des Chemins de fer
UN	United Nations
UIRR	Union Internationale des Societes de Transport Combiné Rail-Route
UITP	International Union of Public Transport

COUNTRY ABBREVIATIONS

EU Countries Member State since :

A	Austria	1995
B	Belgium	1958
D	Germany	1958
D-E	Germany-East	Unification 3.10.1990
DK	Denmark	1973
E	Spain	1986
EL	Greece	1981
F	France	1958
FIN	Finland	1995
I	Italy	1958
IRL	Ireland	1973
L	Luxembourg	1958
NL	The Netherlands	1958
P	Portugal	1986
S	Sweden	1995
UK	United Kingdom	1973

Other Countries

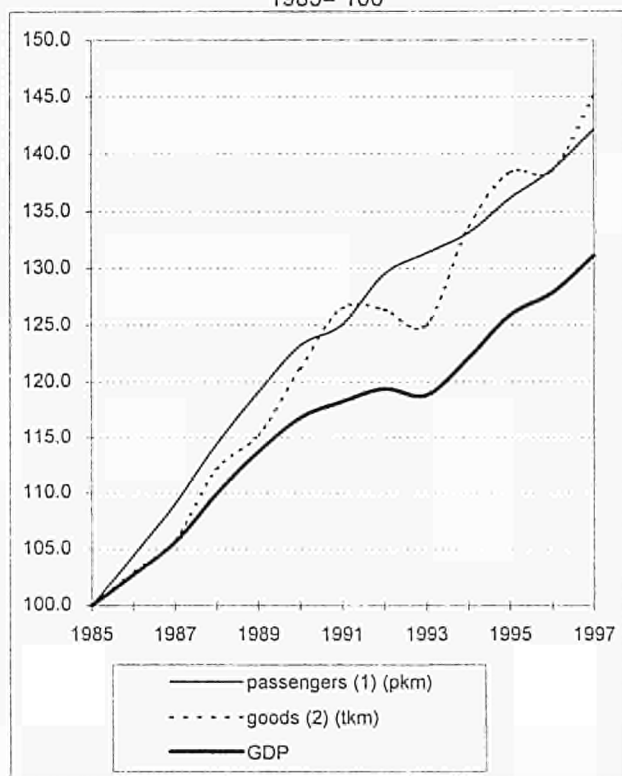
CH	Switzerland
ISL	Iceland
N	Norway
BG	Bulgaria
CS	Czechoslovakia
CZ	Czech Republic
EST	Estonia
H	Hungary
LT	Lithuania
LV	Latvia
PL	Poland
RO	Romania
SLO	Slovenia
SK	Slovak Republic
USA	United States of America
J	Japan

Chapter 1

General Data

Transport Growth EU 15

1985= 100



Source : EUROSTAT, ECMT, DG II

(1) : passenger cars, buses+coaches, tram+metro, railways, air

(2) : road, rail, inland waterways, pipelines, sea (intra-EU)

Annual Growth Rates EU 15

in %	1980-90	1990-96	1997	1998
GDP	2.4	1.8	2.5	2.9
Industrial production	1.8	0.2	3.4	3.4
Passenger transport pkm (5 modes)	3.2	2.0	2.5	
Freight transport tkm (5 modes)	1.9	2.4	4.9	

Statistical Overview EU Transport

data for 1997, otherwise indicated

Value created	<p>Total GDP is ECU 7160 billion or <i>ECU 19 200 per person</i></p> <p>- of which value created by the transport services sector was 4% = ECU 290 billion</p> <p>- in addition value created in own account transport was 1% = ECU 70 billion</p>
Employment	<p>6 million persons are employed in the transport services sector = 4 % of all persons employed</p> <p>In addition, 2 million persons are employed in the transport equipment industry, and over 6 million in transport related industries</p>
Investment in transport infrastructure	<p>Investment in transport infrastructure is ca. ECU 70 billion or 1% of GDP - of which 65% road, 25% rail and 10% other modes</p>
Household expenditure	<p>Private households in the EU spend ECU 600 billion per year or 14% of their income for transport</p> <p>- of which about ECU 500 billion for private transport (mainly cars) and ECU 90 billion for purchased passenger transport services.</p>
Goods transport	<p>Transport demand is 2770 billion tkm or 7400 tkm per person (<i>20 tkm per person and day</i>)</p> <p>- of which road 43%, sea 41%, rail 9%, inland waterways 4%, pipelines 3%</p>
Passenger transport	<p>Transport demand is ca. 4 830 billion pkm or 13000 pkm per person (<i>35 pkm per person and day</i>) - of which car 79%, bus & coach 8%, air 7%, railway 6%, tram & metro 1%</p>
Transport growth	<p><u>Goods transport</u> :ca. 3 % per year (1990-97) over 100% growth since 1970)</p> <p><u>Passenger transport</u>: ca. 2% per year (1990-97) over 120 % growth since 1970)</p>
Safety	<p><u>Road</u>: ca. 44 000 persons killed in 1996 (fatalities within 30 days)</p> <p><u>Rail</u>: ca. 90 passengers killed in 1996</p>
Environment	<p>Share of emissions (man made) originating from transport :</p> <p>CO₂ : 26% (29% if maritime bunkers are included)</p> <p>NO_x : 64%</p>

General Economic Data

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
GDP (nominal) 1997, ECU billion	214	150	1845	106	469	1231	68	1011	14	321	182	90	106	201	1158	7164
GDP per head in PPP (EU=100),1981-90	104	109	116	61	71	111	66	103	140	102	106	56	102	112	100	100
GDP per head in PPP (EU=100), 1991	107	109	106	61	79	113	76	107	151	102	108	63	94	104	97	100
GDP per head in PPP (EU=100), 1997	113	116	109	68	78	104	101	103	165	105	112	71	99	97	99	100
GDP growth 1996, %	1.3	3.4	1.3	2.6	2.3	1.6	8.3	0.7	3.0	3.1	2.0	3.2	3.6	1.3	2.6	1.8
GDP growth 1997, %	3.0	3.3	2.2	3.2	3.5	2.3	10.6	1.5	4.8	3.6	2.5	3.7	6.0	1.8	3.5	2.5
Indust. production growth 1996, %	0.9	1.1	-0.3	1.1	-1.3	0.3	8.0	-2.9	-1.9	2.7	0.7	1.4	3.3	2.3	1.0	0.0
Indust. production growth 1997, %	4.3	4.3	2.5	1.3	6.9	3.9	15.3	2.8	7.1	2.0	5.7	2.5	8.9	7.4	0.8	3.4
Unemployment rate 1996	9.7	6.8	8.9	9.6	22.2	12.4	11.6	12.0	3.0	6.3	4.3	7.3	15.3	9.6	8.2	10.9
Unemployment rate 1997	9.2	5.5	10.0	9.6	20.8	12.4	10.1	12.1	2.6	5.2	4.4	6.8	13.1	9.9	7.0	10.7

Source : DG II, Eurostat

PPP= Purchasing Power Parities

External Trade by Member State and Partner

1.4

1997

in billion ECU

	EXPORTS to								IMPORTS from									
	Total Exports	EU 15 (sendings)		CEC		Mediterr. Countries		USA		Total Imports	EU 15 (arrivals)		CEC		Mediterr. Countries		USA	
B+L	152.3	113.2	74%	3.2	2%	5.8	4%	7.6	5%	140.6	99.6	71%	1.9	1%	3.3	2%	11.1	8%
DK	43.4	28.8	66%	1.6	4%	0.6	1%	2.0	5%	39.6	27.8	70%	1.2	3%	0.3	1%	1.9	5%
D	452.3	251.2	56%	32.8	7%	14.3	3%	39.0	9%	393.0	232.6	59%	26.6	7%	8.6	2%	23.3	6%
EL	10.0	5.1	51%	0.7	7%	1.3	13%	0.4	4%	23.6	15.4	65%	0.8	4%	0.9	4%	0.8	3%
E	88.7	60.7	68%	1.8	2%	4.1	5%	4.1	5%	101.9	67.3	66%	1.1	1%	3.3	3%	5.9	6%
F	266.4	165.3	62%	6.1	2%	13.0	5%	18.0	7%	251.3	165.7	66%	3.6	1%	8.6	3%	19.3	8%
IRL	47.0	32.4	69%	0.5	1%	0.6	1%	5.2	11%	33.3	21.3	64%	0.2	1%	0.3	1%	4.7	14%
I	212.0	116.5	55%	10.6	5%	11.6	5%	16.7	8%	185.3	113.1	61%	7.0	4%	7.5	4%	9.0	5%
NL	183.3	144.9	79%	3.9	2%	3.3	2%	6.5	4%	168.2	98.5	59%	3.1	2%	2.9	2%	16.3	10%
A	52.5	32.7	62%	7.1	14%	0.9	2%	1.9	4%	58.0	42.6	73%	5.1	9%	0.7	1%	2.1	4%
P	21.1	17.1	81%	0.2	1%	0.4	2%	1.0	5%	30.9	23.6	76%	0.1	0%	0.4	1%	1.0	3%
FIN	36.6	19.5	53%	2.8	8%	0.8	2%	2.6	7%	27.9	17.9	64%	1.0	3%	0.1	1%	1.7	6%
S	72.9	40.5	56%	2.8	4%	1.6	2%	6.1	8%	57.8	39.1	68%	1.7	3%	0.3	1%	3.7	6%
UK	248.0	138.0	56%	4.7	2%	7.0	3%	30.3	12%	271.2	145.7	54%	3.5	1%	4.2	2%	37.1	14%
EU15	1 886.5	1 165.8	62%	78.6	4%	65.2	3%	141.3	7%	1 782.5	1 110.2	62%	56.9	3%	41.3	2%	137.8	8%

For the list of CEC and Mediterranean countries, see table 8.11

External Trade by Mode of Transport

1.5

1997

	Value (billion ECU)								Weight (million tonnes)							
	Extra-EU15				Intra-EU15				Extra-EU15				Intra-EU15			
	Export		Import		Export + Import		Import		Export		Import		Export + Import		Import	
	%		%		%		%		%		%		%		%	
Sea	305	42.6	280	42.1	585	42.4	256	23.1	266	69.0	879	70.0	1 145	69.8	291	29.7
Road	179	25.0	127	19.1	306	22.2	667	60.1	70	18.1	69	5.5	139	8.4	412	42.1
Rail	18	2.5	12	1.8	30	2.2	46	4.2	21	5.3	52	4.1	72	4.4	50	5.1
Inland waterway	6	0.8	6	0.9	12	0.9	13	1.1	15	3.8	33	2.6	48	2.9	126	12.9
Pipeline	2	0.3	22	3.3	24	1.7	12	1.1	5	1.3	170	13.5	175	10.7	91	9.3
Air	175	24.5	147	22.1	322	23.3	44	4.0	3	0.9	2	0.2	6	0.3	1	0.1
Other/unknown	31	4.3	71	10.6	102	7.4	72	6.5	6	1.5	51	4.1	57	3.5	8	0.8
Total	715	100.0	665	100.0	1 380	100.0	1 110	100.0	385	100.0	1 255	100.0	1 640	100.0	979	100.0

Source : Eurostat

Value density of goods transported (Intra-EU 15 imports ECU/tonne) :					
Sea	881		Road	1618	
Inland waterway	100		Pipeline	134	
			Rail	930	
			Air	44648	

Population																1.6
million																average for the year
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
1970	9.6	4.9	77.7	8.8	33.8	50.8	3.0	53.8	0.3	13.0	7.5	8.7	4.6	8.0	55.6	340.2
1980	9.8	5.1	78.3	9.6	37.4	53.9	3.4	56.4	0.4	14.2	7.5	9.8	4.8	8.3	56.3	355.2
1990	10.0	5.1	79.4	10.1	39.0	56.7	3.5	56.7	0.4	15.0	7.7	9.9	5.0	8.6	57.4	364.4
1991	10.0	5.2	80.0	10.3	39.0	57.1	3.5	56.8	0.4	15.1	7.8	9.9	5.0	8.6	57.8	366.4
1992	10.0	5.2	80.6	10.3	39.1	57.4	3.5	56.9	0.4	15.2	7.9	9.9	5.0	8.7	58.0	368.0
1993	10.1	5.2	81.1	10.4	39.1	57.7	3.6	57.1	0.4	15.3	8.0	9.9	5.1	8.7	58.0	369.6
1994	10.1	5.2	81.4	10.4	39.1	57.9	3.6	57.2	0.4	15.4	8.0	9.9	5.1	8.8	58.4	371.0
1995	10.1	5.2	81.7	10.5	39.2	58.1	3.6	57.3	0.4	15.5	8.0	9.9	5.1	8.8	58.6	372.1
1996	10.2	5.3	81.9	10.5	39.3	58.4	3.6	57.4	0.4	15.5	8.1	9.9	5.1	8.8	58.8	373.2
1997	10.2	5.3	82.0	10.5	39.3	58.6	3.7	57.5	0.4	15.6	8.1	9.9	5.1	8.8	59.0	373.9
Area																1000 km2
1997	30.5	43.1	357.0	132.0	506.0	544.0	70.3	301.3	2.6	41.5	83.9	91.9	338.1	450.0	244.1	3236.2
Density																persons/km2
1997	333	122	230	79	78	108	53	191	160	376	96	108	15	20	242	116
Source : Eurostat																D: population : includes D-E : 1970=17.1, 1980=16.7, 1990=16.1

Sociodemographic Data

1.7

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
Population 1997, million	10	5.3	82	11	39	59	3.7	58	0.4	16	8.1	10	5.1	8.8	59	374.6
% urban 1980	95	84	83	58	73	73	55	67	85	88	65	29	60	83	89	76
% urban 1997	97	85	87	60	77	75	58	67	88	89	64	37	64	83	89	78
% 0-14 years old (1997)	18	18	16	16	16	19	23	15	19	18	17	17	19	19	19	17
% 15-64 years old (1997)	66	67	68	68	68	66	66	68	67	69	68	68	67	64	65	67
% 65+ years old (1997)	16	15	16	16	16	15	11	17	14	13	15	15	14	17	16	16
average n° of persons per household, 1997	2.5	2.0	2.2	2.6	3.1	2.4	3.0	2.7	2.6	2.3	2.5	2.9	2.1	2.1	2.4	2.6
% of households having a car, 1994	76	58	74	55	68	78	66	78	83	58	65	55	na	na	70	72*
% of households without a car, 1994	24	42	26	45	32	22	34	22	17	42	35	45	na	na	30	28*
of which % who cannot afford a car, 1994	7	16	5	24	16	7	18	4	4	7	na	28	na	na	11	9*
Average time spent commuting to and from work, minutes per day, 1996 (1)	39	38	45	40	33	36	40	23	40	44	36	33	41	40	46	38

Source : Eurostat, urban population: World Bank

* : EU12 Note : average n° of persons per household : S=1990; DK=1995
(1) average time spent by all persons in employment

Household Expenditure for Transport

Final consumption of households on the territory

		B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU 15
Final consumption in transport, % of total consumption	1980	11.8	13.3	11.8	10.8	12.6	15.0	12.8	11.3	16.6	9.4	14.6	13.3	15.6	13.6	15.0	13.0
	1985	11.5	16.0	12.3	12.3	12.7	15.0	11.8	11.3	16.9	11.3	14.1	13.7	15.7	14.1	15.2	13.3
	1990	12.0	13.6	13.9	12.4	14.3	15.4	11.6	11.2	17.5	11.3	13.8	14.1	15.7	15.5	16.0	13.9
	1995	11.3	15.5	13.8	9.2	14.4	14.7	11.5	10.7	19.9	11.4	13.4	14.8	13.5	14.4	15.0	13.5
	1996	11.7	15.8	14.1	9.3	14.8	15.0	11.6	10.9	19.9	11.4	14.4	14.8	13.8	14.6	15.1	13.7
Total consumption in transport, billion ECU 1996		15.3	11.5	162.7	6.9	44.7	110.3	3.5	64.9	1.1	20.9	14.7	8.1	7.1	14.6	85.3	571.4
of which :																	
personal transport equipment		5.7	4.2	59.9	1.5	12.2	27.3	1.2	20.0	0.4	6.4	5.2	2.5	1.6	3.1	28.2	179.2
operation of pers. transp. equip. purchased transport		8.4	5.2	84.3	3.2	27.2	67.6	1.4	33.8	0.6	10.5	7.3	4.3	4.2	8.3	37.5	303.8
consumption per capita (1000 ECU)		1.3	2.1	18.5	2.2	5.4	15.4	0.9	11.2	0.1	3.9	2.2	1.3	1.3	3.2	19.6	88.4
consumption per capita (1000 ECU)		1.5	2.2	2.0	0.7	1.1	1.9	1.0	1.1	2.6	1.3	1.8	0.8	1.4	1.7	1.5	1.5
Source: Eurostat																	

Transport Infrastructure Investment																1.9	
	ECU million															index 1985 =100	
	1994 prices																
	B	DK	D(-W)	EL*	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	
1985	2195	571	13772		2141	9519	246	7210	88	1876	1941	304	806	941	4727	46 337	100
1986	2085	534	14293		2091	9835	240	7475	87	1693	1926	373	851	889	4704	47 076	102
1987	1718	538	14079		2532	9956	200	9115	108	1849	1588	437	923	961	5308	49 312	106
1988	1807	657	13755		3709	10903	201	9873	114	1796	1638	538	879	1068	6175	53 113	115
1989	1427	790	13819		4517	10972	249	9752	122	1932	1673	629	951	1257	7339	55 429	120
1990	1369	768	14014		5938	12321	308	10087	113	2150	1977	871	1030	1389	8544	60 879	131
1991	1559	823	20397		6271	13490	343	9931	161	2179	1795	1005	1044	1160	8186	68 344	147
1992	1826	1088	21186		5631	13591	368	10232	182	2194	1675	854	1007	1416	8372	69 622	150
1993	2063	923	20489		5651	13428	465	8938	177	2309	1766	975	880	1787	8027	67 878	146
1994	1970	800	20958		5552	12812	500	8500	158	2400	1591	1203	887	2125	7511	66 967	145
Investments as a % of GDP:																	
1994	1.0	0.7	1.2		1.4	1.1	1.1	1.0	1.3	0.9	1.0	1.7	1.1	1.3	0.9	1.1	

Source : European Centre for Infrastructure Studies - 1996 report
 Estimates in italic * no data available for Greece and Eastern Germany

Employment by Mode of Transport							1.10
1995							1000 persons
	Railways	Other land transport incl. pipelines	Water transport (sea+ incl. water)	Air transport	Auxiliary transport activities	Transport total	% of total employment
B	41.9	68.6	3.5	12.4	40.6	167.0	4.5%
DK	15.7	59.7	11.8	13.3	36.0	136.5	5.4%
D	311.0	435.3	43.1	66.8	420.9	1 277.1	3.7%
EL	11.9	110.1	44.7	5.7	54.6	227.0	5.9%
E	41.9	548.9	9.7	32.8	121.9	755.2	5.9%
F	181.1	439.8	13.5	59.3	201.3	895.0	4.0%
IRL	11.1	16.2	1.8	5.9	5.3	40.3	3.0%
I	146.5	403.6	25.8	20.5	207.3	803.7	3.6%
L	3.3	5.7	0.1	2.9	1.6	13.6	6.4%
NL	26.6	163.3	22.5	32.4	74.2	319.0	5.9%
A	62.8	70.6	0.5	6.3	28.7	168.9	5.0%
P	13.1	64.3	2.6	9.2	22.2	111.4	2.5%
FIN	15.2	44.7	8.3	7.4	18.1	93.7	4.8%
S	21.6	79.1	13.4	10.1	33.6	157.8	3.9%
UK	113.0	357.0	23.5	58.0	278.3	829.8	3.2%
EU15	1 016.7	2 866.9	224.8	343.0	1 544.7	5 996.1	4.1%

Source : EUROSTAT (employment according to NACE classification), national statistics, DG VII

Employment in Railways

Company		Main railways					
		staff in 1000					
		1970	1980	1990	1995	1996	1997
B	SNCB	56.7	65.7	45.2	41.9	41.1	40.2
DK	DSB	24.0	22.1	20.4	15.7	15.6	11.1
D-W	DB AG	392.7	329.0	236.0	294.9	256.7	233.5
D-E	DR	252.6	237.9	246.3	(DB)	(DB)	(DB)
EL	CH	12.6	12.1	13.3	12.5	11.7	11.8
E	RENFE	85.1	71.5	49.7	39.0	37.4	36.4
F	SNCF	303.0	254.4	202.1	181.1	177.9	175.0
IRL	CIE	22.3	18.1	11.8	11.1	11.0	10.7
I	FS	197.6	220.7	200.4	129.8	123.4	121.8
L	CFL	4.4	4.2	3.5	3.2	3.2	3.1
NL	NS	26.8	26.9	26.2	26.6	25.9	25.9
A	ÖBB	73.9	72.5	66.9	61.3	57.0	55.1
P	CP	25.6	24.7	22.1	13.1	13.0	12.8
FIN	VR	27.7	28.7	20.2	15.2	14.9	14.3
S	SJ+MTAB	45.3	37.5	20.8	14.2	13.7	12.1
UK	BR	274.3	241.9	135.3	90.2		
Total		1824.6	1667.9	1320.2	949.8	802.5	763.8

D: 1994 creation of DB AG out of former DB and DR

Company		Infrastructure companies			
		staff in 1000			
		1995	1996	1997	
DK	Banestyrelsen	founded 1.1.97	-	-	n.a.
FIN	RHK	founded 1.1.95	0.1	0.1	0.1
F	RFF	founded 1997	-	-	0.06
NL	Railinfrabeheer	founded 1.1.95	n.a.	n.a.	n.a.
P	REFER	founded 1.7.97	-	-	0.4
UK	Railtrack	founded 1.4.94	11.5	n.a.	n.a.
S	Banverket	founded 1.1.88	7.4	8.3	7.4

Company		Other railway companies		
		staff in 1000		
		1995	1996	1997
D	NE-Bahnen	16.0	16.0	16.0
E	FEVE	2.0	2.0	2.0
E	FGC	1.3	1.3	1.3
UK	EWS	-	n.a.	6.8
UK	Eurotunnel	n.a.	3.0	3.0
UK	NIR	0.8	0.8	0.7
S	BK	0.0	0.0	0.0

USA	AAR (freight)	566.3	459.0	216.4	188.2	181.2	178
J	JR	459.7	413.6	193.8	192.5	190.2	181
CEC	(11 railways)	1001	1048	1086	723.2	695.4	668.2

Source: UIC

Note: CEC railways 1998: 569.8

Employment in Airlines and Ferries

Main Airlines

staff in 1000

Company	1980	1990	1995	1996	1997
<i>B</i> Sabena	10.1	7.5	9.9	9.3	9.7
<i>DK/S</i> SAS	16.4	19.6	18.7	21.3	22.5
<i>D</i> Lufthansa	30.7	47.6	38.0	34.2	34.0
<i>EL</i> Olympic	8.8	11.9	9.1	7.8	8.2
<i>E</i> Iberia	24.2	28.8	23.6	19.7	21.5
<i>F</i> Air France	33.2	39.8	37.3	36.5	46.0
<i>IRL</i> Air Lingus	6.9	7.1	5.4	5.6	6.0
<i>I</i> Alitalia	18.2	19.7	18.4	17.9	17.6
<i>L</i> Luxair	0.7	1.1	1.2	1.3	1.4
<i>NL</i> KLM	19.0	26.4	25.3	25.5	26.0
<i>A</i> Austrian Airlines	2.6	4.2	3.9	4.1	4.2
<i>P</i> TAP	10.0	10.5	8.2	7.4	8.0
<i>FIN</i> Finnair	5.4	7.3	7.9	8.2	8.6
<i>UK</i> British Airways	52.0	53.6	53.1	55.3	54.7
Total	238.2	285.1	260.0	254.2	268.4

Source: for railways : UIC; for airlines : AEA, IATA

Major European Ferry Operators

Number of employees

Company	1997
<i>I</i> Finmare	4600
<i>S</i> Gotlandsbolaget	83
<i>IRL</i> Irish Ferries	115
<i>DK</i> Scandinavian Seeways	1875
<i>S</i> Scandlines AB	1150
<i>DK</i> Scnadlines A/S	4549
<i>FIN</i> Silja Line	4000
<i>S</i> Stena Line	8400
<i>EL</i> Superfast Ferries	515
<i>S</i> TT Line	900
Total	26187

Source: ShipPax

Number of Enterprises by Mode of Transport

1.13

1995

	Railways	Other land transport incl. pipelines	Water transport (sea+ inland waterways)	Air transport	Auxiliary transport activities	Transport total	Persons employed per enterprise
B	11	12 322	2 415	197	4 344	19 289	8.7
DK	14	11 887	876	169	2 894	15 840	8.6
D	99	89 317	2 413	408	33 511	125 748	10.2
EL	1	20 000	175	57	5 157	25 390	8.9
E	49	185 332	379	194	16 833	202 787	3.7
F	27	81 662	2 010	575	11 620	95 894	9.3
IRL	2	2 252	43	38	752	3 087	13.1
I	29	102 165	565	164	19 201	122 124	6.6
L	1	505	39	6	136	687	19.9
NL	1	10 949	4 870	65	4 740	20 625	15.5
A	21	11 255	110	112	2 419	13 917	12.1
P	1	13 566	70	15	1 552	15 204	7.3
FIN	2	19 286	290	78	1 287	20 943	4.5
S	11	22 918	318	91	2 210	25 548	6.2
UK	114	48 078	1 194	1 083	10 581	61 050	13.6
EU15	383	631 494	15 767	3 252	117 237	768 133	7.8

Source : EUROSTAT - result of a pilot study; national sources

NACE classification (strong difference between statistical sources)

figures in italic: 1994 results

figures for IRL, NL are provisional

EL, L: Eurostat estimates

Turnover by Mode of Transport							1.14
1995							ECU billion
	Main railways	Other land transport incl. pipelines	Water transport (sea + inland waterways)	Air transport	Auxiliary transport activities	Transport total	Turnover per person employed (ECU 1000)
B	1.54	8.49	1.60	2.46	12.59	26.68	159.8
DK	1.05	2.98	4.42	1.37	3.71	13.53	99.1
D	10.20	35.80	3.78	7.78	49.42	106.98	83.8
EL	0.10	4.41	4.15	1.53	3.13	13.32	58.7
E	2.40	14.00	2.00	6.00	13.00	37.40	49.5
F	8.00	30.30	3.24	9.96	24.22	75.72	84.6
IRL	0.50	1.50	0.20	0.40	0.32	2.92	72.5
I	6.40	22.70	3.46	9.27	23.48	65.31	81.3
L	0.08	0.40	0.00	0.50	0.25	1.23	90.1
NL	2.36	8.91	4.05	5.04	7.67	28.03	87.9
A	1.52	6.02	0.22	1.41	8.15	17.32	102.5
P	0.29	2.37	1.30	1.63	4.93	10.52	94.4
FIN	0.54	3.30	1.69	1.15	3.00	9.68	103.3
S	1.30	7.56	2.72	2.04	9.59	23.21	147.1
UK	9.07	24.57	4.44	15.06	32.09	85.23	102.7
EU15	45.35	173.31	37.27	65.60	195.55	517.08	86.2

Source : Eurostat - result of a pilot study

Road transport : 1999 Limits and Fuel Prices

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK
Speed limit, cars (in general), km/h :															
Urban roads	50	50	50	50	50	50	48	50	50	50	50	50	50	50	48
National roads	90	80	100	110	90	90	96	90	90	80	100	100	80	90	96
Motorways	120	110		120	120	130	112	130	120	120	130	120	120	110	112
Maximum gross vehicle weight :															
General, tonnes	44	48	40	40	40	40	40	44	44	50	40	40	56	60	40
Combined transport, tonnes	44	48	44	44	44	44	44	44	44	50	44	44	56	60	44
Blood alcohol limit, mg/ml	0.5	0.5	0.5	0.5	0.8	0.5	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.2	0.8
Fuel prices,															
Petrol, 95 lead free, April 1999	0.88	0.84	0.82	0.66	0.67	0.92	0.71	0.92	0.65	0.96	0.78	0.77	0.93	0.94	1.00
of which, tax	75%	73%	74%	66%	68%	81%	72%	74%	64%	74%	69%	75%	78%	74%	81%
Diesel, April 1999	0.61	0.64	0.60	0.50	0.56	0.65	0.67	0.72	0.53	0.67	0.60	0.54	0.64	0.73	1.01
of which, tax	64%	68%	66%	64%	61%	73%	67%	70%	61%	65%	64%	66%	65%	62%	82%

Note : UK and IRL drive on the left hand side of the road, other Member States on the right hand side.

: D : Motorways : No general speed limit, recommended speed limit is 130 km/h, UK: change to 40 t general weight limit in 1999

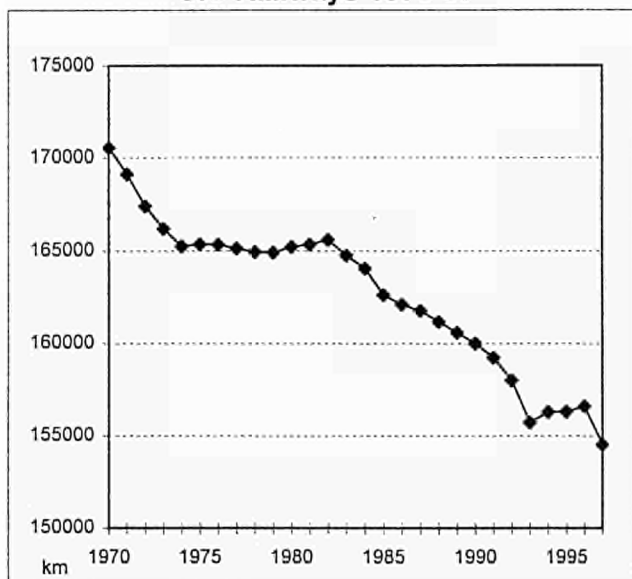
Source : European Commission, national sources

Chapter 2

Infrastructure

Railways : Length of Lines

UIC Railways 1970-97



High Speed Rail Network

km

	B	DK	D	E	F	I	UK	EU15
1981	-	-	-	-	301	150	-	451
1983	-	-	-	-	417	150	-	567
1988	-	-	90	-	417	224	-	731
1990	-	-	90	-	699	224	-	1 013
1991	-	-	427	-	699	224	-	1 350
1992	-	-	427	471	737	248	-	1 883
1993	-	-	427	471	1057	248	-	2 203
1994	-	-	427	471	1185	248	25	2 356
1995	-	-	427	471	1185	248	25	2 356
1996	14	-	427	471	1272	248	25	2 457
1997	85	20	427	471	1272	248	25	2 548

Source : UIC, data for UIC member railways

Railways : Length of Lines																km	2.2
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	4232	2352	43777	2571	13668	36117	2189	16069	271	3148	5907	3591	5870	11550	19330	170 642	100
1980	3971	2015	42765	2461	13542	34382	1987	16133	270	2760	5847	3588	6096	11382	18030	165 229	97
1990	3479	2344	40981	2484	12560	34260	1944	16086	271	2798	5624	3592	5867	10801	16914	160 005	94
1995	3368	2349	41719	2474	12280	31939	1947	15998	275	2739	5672	2850	5880	9782	16999	156 271	91
1996	3380	2349	40826	2474	12284	31852	1945	16014	274	2739	5672	2850	5881	10923	17001	156 464	91
1997	3422	2232	38450	2503	12294	31754	1945	16030	274	2805	5672	2856	5865	11168	16991	154 261	90
1998	3410	2232	38450	2503	12303	31727	1945	16041	274	2805	5643	2856	5867	11156	16847	154 059	
D: includes D-E : 1970=14250, 1980=14248, 1990=14031																	
of which, % electrified :																	
1998	74%	28%	48%	0%	56%	45%	2%	65%	95%	73%	60%	30%	35%	68%	30%	48%	
Main railway gauge and electric current used :																	
mm	1435	1435	1435	1435	1668	1435	1600	1435	1435	1435	1435	1668	1524	1435	1435		
dc volts	3000	3000			3000	1500	1500	3000		1500							Contact rail
ac volts		25000	15000			25000			25000		15000	25000	25000	15000	25000		
		50Hz	16.7Hz			50Hz			50Hz		16.7Hz	50Hz	50Hz	16.7Hz	50Hz		
Source : UIC, data for UIC member railways																	
Note : Other EU railways : ca 10000km																	
1435 mm = standard gauge																	

Motorways : Length at End of Year

2.3

	km																index 1970 =100
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	
1970	488	184	6061	11	387	1553	0	3913	7	1209	478	66	108	403	1183	16 051	100
1980	1203	516	9225	91	2008	5264	0	5900	44	1780	938	132	204	850	2683	30 838	192
1990	1631	601	10809	190	4693	6824	26	6193	78	2092	1445	316	225	939	3180	39 242	244
1992	1667	706	11013	280	6486	7408	32	6289	95	2134	1554	520	318	1005	3244	42 751	266
1993	1686	747	11080	330	6577	7614	53	6401	100	2167	1557	579	337	1061	3252	43 541	271
1994	1665	786	11143	380	6485	7956	72	6401	121	2178	1559	587	388	1125	3286	44 132	275
1995	1666	830	11190	420	6962	8275	72	6401	123	2300	1596	687	394	1231	3308	45 455	283
1996	1674	880	11300	470	7293	8600	80	6439	115	2360	1607	710	431	1330	3344	46 633	291

Source : EUROSTAT, IRF, national statistics

Estimates in italic

D : includes D-E : 1970=1600, 1980=1687, 1990=1850

Transport Infrastructure : Roads

1996

1000 km

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
Motorways	1.7	0.9	11.3	0.5	7.3	8.3	0.1	6.4	0.1	2.4	1.6	0.7	0.4	1.3	3.3	46.3
National roads	12.6	3.7	41.5	9.1	17.6	26.9	4.4	44.8	1.0	2.1	10.3	9.0	12.3	14.6	12.4	222.3
State roads	1.3	7.1	178.3	29.1	70.5	360.1	10.7	113.4	1.9	8.6	19.8	46.1	29.1	83.4	38.1	997.4
Municipal roads	128.5	60.0	418.6	75.6	67.1	569.0	76.3	142.0	2.3	114.0	98.0	62.5	35.9	38.9	339.1	2227.9
Toll roads, km	1			871	2083	6768		5575			179	600				16 077

Source : EUROSTAT, UN, ECMT, IRF, ASECAP, national statistics

Note : There are about 1 million park and ride spaces and 0.3 million parking spaces at airports in the EU

2.5																
Urban Rail and Trolleybus Systems																
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
Length of track, km (1998)																
Metro	40	-	343	26	252	293	-	111	-	120	38	30	17	110	402	1 782
Light rail + tram	296	:	2838	-	284	125	-	444	-	370	272	72	75	148	197	5 121
Number of systems																
Metro	1	-	5	1	3	5	-	3	-	2	1	1	1	1	3	27
Light rail + tram	5	-	57	-	3	8	-	6	-	4	5	1	1	3	8	101
Monorail	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
Funicular	-	-	6	-	5	6	-	14	-	-	3	5	-	1	5	45
Trolleybus	1	1	3	1	-	6	-	11	-	1	4	2	-	-	-	30
Sources: Light Rail Transit Association, Jane's Urban Transport Systems																
Note : Heritage tramways and non-urban light-rail systems not included; Funiculars: 45 urban systems in 35 places																
Metro: includes only heavy rail/full metro; there are 15 systems with underground stations and separate track classified as light rail																
Under construction (1999):																
Metro	Copenhagen ('Mini-Metro'), Rennes; planned: Thessaloniki										Monorail	Düsseldorf (Airport)				
Light rail+tram	Birmingham, Croydon, Heilbronn, Lyon, Montpellier, Orleans, Porto										Funicular	Evian (F), Künzelsau (D)				

Transport Infrastructure : Pipelines																2.6
Length of oil pipelines																km
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
1970	52	-	3 358	-	1 099	3 609	-	1 860	-	323	604	-	-	-	1 634	12 539
1980	458	77	3 387	-	1 753	5 254	-	3 069	-	391	777	-	-	-	3 166	18 332
1990	301	444	3 547	-	2 678	4 948	-	4 086	-	391	777	-	-	-	2 422	19 594
1991	294	444	3 318	-	3 097	4 871	-	4 098	-	391	777	-	-	-	2 650	19 940
1992	294	409	3 318	-	3 536	4 871	-	4 235	-	391	777	-	-	-	2 762	20 593
1993	294	409	3 318	-	3 536	4 830	-	4 235	-	391	777	-	-	-	2 601	20 391
1994	294	409	3 318	-	3 536	4 830	-	4 235	-	391	777	-	-	-	2 602	20 392
1995	294	409	3 318	-	3 691	4 830	-	4 235	-	391	777	-	-	-	2 602	20 547
Length of gas pipelines, 1997																km
Transmission	3453	1086	53000	789	6637	32060	1015	28500	:	11429	5068	599	820	527	17900	162883
Distribution	41231	16168	282000	1072	17533	140590	5075	170000	:	109000	19058	1435	1170	3000	253200	1060532
Source : EUROSTAT, UN, ECMT, Eurogas, national statistics										D : includes D-E : 1970=2.2, 1980=5.0, 1990=3.3						

Inland Waterways : Length in Use

2.7

Navigable canals, rivers and lakes regularly used for transport km

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	1 553	-	6 808	-	-	7 433	-	2 337	37	5 599	350	-	6 000	:	2 351	32 468	100
1980	1 510	-	6 697	-	-	6 568	-	2 337	37	4 843	350	-	6 057	:	2 351	30 750	95
1990	1 513	-	<u>6 669</u>	-	-	6 197	-	1 366	37	5 046	351	-	6 237	:	2 351	29 767	92
1991	1 513	-	7 341	-	-	5 951	-	1 366	37	5 046	351	-	6 237	:	2 353	30 195	93
1992	1 513	-	7 341	-	-	5 867	-	1 466	37	5 046	351	-	6 245	:	2 353	30 219	93
1993	1 513	-	7 681	-	-	5 825	-	1 466	37	5 046	351	-	6 245	:	2 353	30 517	94
1994	1 531	-	7 681	-	-	5 736	-	1 466	37	5 046	351	-	6 245	:	2 353	30 446	94
1995	1 531	-	7 343	-	-	5 962	-	1 466	37	5 046	351	-	6 245	:	2 353	30 334	93
1996	1 531	-	7 339	-	-	5 678	-	1 466	37	5 046	351	-	6 245	:	2 353	30 046	93

Source : EUROSTAT, UN

D : includes D-E : 1970=2300, 1980=2302, 1990=2319

Note : about 11500km are canals, 18500km are rivers and lakes

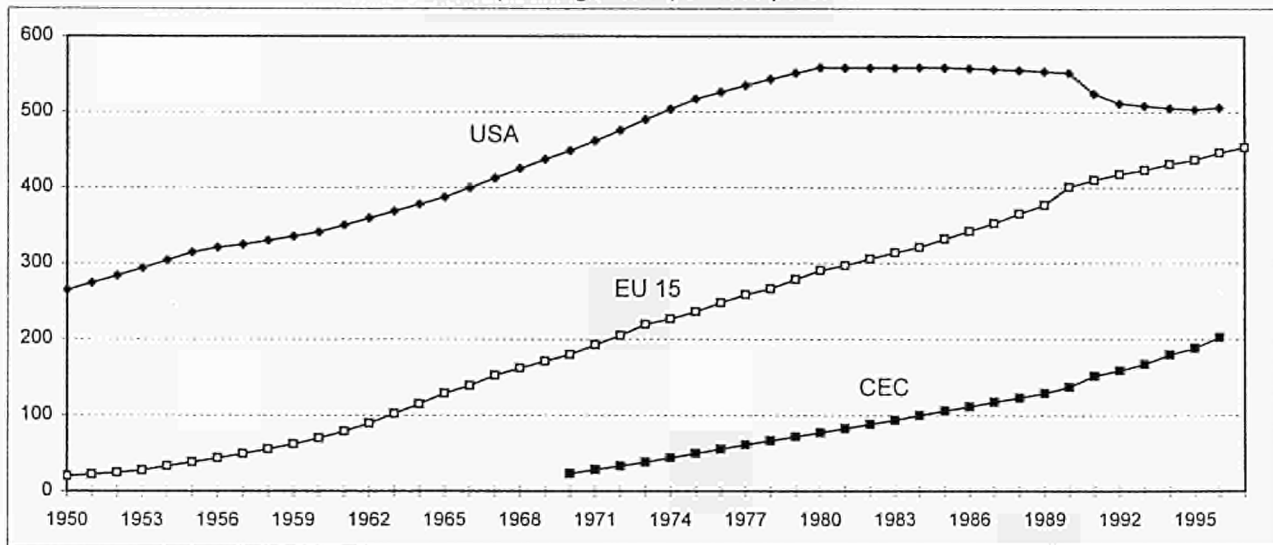
Sweden: data not available

Chapter 3

Means of Transport

Motorization 1950-97

number of passenger cars per 1000 persons



USA : change in time series from 1993 : pick-ups, sports utility vehicles and light vans not included

Road	Motorization																index 1970= 100
	Number of cars per 1000 Inhabitants																
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	
1970	214	218	194	26	70	234	133	189	212	197	160	49	155	284	214	184	100
1980	321	271	330	89	202	341	217	313	352	322	298	94	256	347	277	291	158
1990	388	309	447	171	308	466	227	483	480	368	388	187	389	421	361	401	218
1991	397	307	460	173	321	474	234	501	496	368	397	203	385	421	360	410	223
1992	400	310	471	177	335	476	242	518	513	373	412	205	384	414	360	418	227
1993	409	312	479	188	343	478	250	520	523	376	422	224	371	410	367	423	231
1994	423	312	488	199	351	478	263	540	540	383	433	242	368	409	372	432	235
1995	428	321	495	211	362	477	267	553	559	364	447	258	372	411	374	437	238
1996	435	329	500	223	376	477	272	571	559	370	458	277	379	413	388	447	243
1997	442	340	505	229	390	478	307	577	573	372	469	297	378	419	398	454	247

Source : EUROSTAT , national statistics , IRF Estimates in italic Underlined : change in the time series

Road	Passenger Cars															3.3	
	million															index 1970= 100	
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	
1970	2.1	1.1	15.1	0.2	2.4	11.9	0.4	10.2	0.1	2.6	1.2	0.4	0.7	2.3	11.9	62.5	103
1980	3.2	1.4	25.9	0.9	7.6	18.4	0.7	17.7	0.1	4.6	2.2	0.9	1.2	2.9	15.6	103.2	170
1990	3.9	1.6	35.5	1.7	12.0	26.4	0.8	27.4	0.2	5.5	3.0	1.8	1.9	3.6	20.7	146.1	240
1991	4.0	1.6	36.8	1.8	12.5	27.1	0.8	28.4	0.2	5.6	3.1	2.0	1.9	3.6	20.8	150.2	247
1992	4.0	1.6	37.9	1.8	13.1	27.3	0.9	29.4	0.2	5.7	3.2	2.0	1.9	3.6	20.9	153.7	253
1993	4.1	1.6	38.9	2.0	13.4	27.6	0.9	29.7	0.2	5.8	3.4	2.2	1.9	3.6	21.3	156.4	257
1994	4.3	1.6	39.8	2.1	13.7	27.7	0.9	30.9	0.2	5.9	3.5	2.4	1.9	3.6	21.7	160.1	263
1995	4.3	1.7	40.4	2.2	14.2	27.8	1.0	31.7	0.2	5.6	3.6	2.6	1.9	3.6	21.9	162.7	268
1996	4.4	1.7	41.0	2.3	14.8	27.9	1.0	32.8	0.2	5.7	3.7	2.8	1.9	3.7	22.8	166.7	274
1997	4.5	1.8	41.4	2.4	15.3	28.0	1.1	33.2	0.2	5.8	3.8	3.0	1.9	3.7	23.5	169.6	279

Source : EUROSTAT , national statistics , IRF

D : includes D-E : 1970=1.2, 1980=2.7, 1990=4.8

Road	Goods Vehicles ⁽¹⁾																index 1970= 100
	thousands																
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	
1970	187	245	1 188	105	710	1 504	49	877	9	286	121	100	108	145	1 749	7 383	100
1980	217	249	1 511	401	1 338	2 515	65	1 338	9	314	184	230	146	182	1 828	10 527	143
1990	285	287	1 653	743	2 333	3 568	143	2 349	11	507	253	555	264	310	2 428	15 689	213
1991	364	291	1 660	793	2 495	3 685	148	2 448	12	527	259	620	264	310	2 348	16 224	220
1992	400	297	1 849	798	2 650	3 677	145	2 400	13	565	269	684	263	305	2 609	16 923	229
1993	407	306	2 020	826	2 735	3 618	135	2 314	14	575	276	747	253	302	2 587	17 115	232
1994	417	322	2 114	849	2 832	3 606	130	2 325	15	578	283	830	249	304	2 588	17 442	236
1995	433	333	2 215	884	2 937	3 597	121	2 500	15	578	290	866	272	308	2 582	17 931	243
1996	446	340	2 273	915	3 057	3 600	115	2 850	16	597	294	917	259	312	2 642	18 633	252

Source : EUROSTAT, IRF, national statistics (1) difference in definitions between countries (includes vans in some countries),
 Estimates in italic the comparability of the data is therefore limited.

D : includes D-E : 1970=160, 1980=234, 1990=264

Road		Vehicles by Category															3.6
1995		B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
Passenger cars	petrol	69%	75%	77%	80%	83%	87%	87%	87%	88%	90%	92%	92%	95%	97%	99%	85%
	diesel	31%	25%	23%	20%	17%	13%	13%	13%	12%	10%	8%	8%	5%	3%	1%	15%
Light duty vehicles		247	180	1 250	708	2 348	3 409	60	1 905	5	5	90	331	220	242	2 072	13 072
Heavy duty vehicles g.v.w.	3.5 - 7.5 tonnes	71	23	498	28	205	297	26	525	6	93	14	169	4	12	81	2 050
	7.5 - 16 tonnes	46	13	295	57	92	134	9	289	2	191	17	79	8	16	167	1 415
	16 - 32 tonnes	57	94	225	87	149	216	47	329	9	291	164	47	19	43	254	2 030
	> 32 tonnes	4	10	12	6	13	18	5	9	1	20	18	3	12	1	17	148
Powered 2-wheelers	< 50 cc	321	119	1 293	334	2 812	2 676	4	2 298	7	728	440	1 935	102	0	336	13 405
	> 50 cc	143	37	1 890	246	1 378	827	9	2 231	4	179	105	138	50	124	1 565	8 927

Source : Research project : Methodologies for estimating air pollutant emissions from transport (MEET); Aristotle University, Thessaloniki, Greece and national statistics (hdv for FIN & S)

Note : Passenger cars functioning on LPG & LNG : 1.8 million. Electric cars : ca. 10 000

Vehicle Production

thousands

	1995	1996	1997	Change 97/96 %	1995	1996	1997	Change 97/96 %
	Passenger cars				Commercial vehicles			
B	410	385	378	-1.9	62	52	58	+11.2
D	4 360	4 540	4 678	+3.0	307	303	345	+13.7
E	1 959	1 942	2 010	+3.5	375	471	552	+17.3
F	3 051	3 148	3 351	+6.5	424	443	479	+8.1
I	1 422	1 318	1 563	+18.6	245	227	254	+11.6
NL	100	145	197	+35.8	17	18	20	+10.8
A	43	58	68	+16.4	9	9	10	+17.4
P	41	119	131	+10.4	16	13	17	+32.6
S	388	368	376	+2.2	102	95	104	+9.1
UK	1 532	1 686	1 698	+0.7	233	238	238	-0.2
EU	13 307	13 708	14 450	+5.4	1 791	1 870	2 077	+11.1
	Motorcycles/Mopeds				Bicycles			
B	60.0	61.2	65.0		160	390	420	+7.7
DK					180	170	180	+5.9
D	68.2	59.4	58.8	-1.0	3 220	2 840	2 820	-0.7
EI					40	40	45	+12.5
E	279.9	255.4	299.7	+17.3	410	280	290	+3.6
F	394.6	398.7	413.8	+3.8	1 421	1 334	1 291	-3.2
I	928.3	941.3	1050	+11.5	5 200	3 950	3 400	-13.9
NL					750	705	730	+3.5
A	15.0	15.9	18.7	+17.6	100	110	110	+0.0
P	n.a.	n.a.	n.a.	n.a.	590	580	560	-3.4
Fin					110	100	100	+0.0
S	0.1	0.1	0.1	+17.8	140	130	145	+11.5
UK	13.9	13.6	16.9	+24.3	1 250	1 230	1 270	+3.3
EU	1 760	1 746	1 923	+10.1	13 571	11 859	11 361	-4.2

Source: Verband der Automobilindustrie (VDA)

Association Européen des Constructeurs de Motocycles (ACEM)

European Bicycles Manufacturers Association (EBMA)

Note: Moped production (1000) 1995: 1380, 1996: 1350, 1997: 1480

Rail		Rail Transport Vehicles															3.8	
		Passenger transport vehicles (coaches + railcars + trailers)															units	index 1970= 100
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15		
1970	3 415	1 481	31 506	574	3 353	15 053	481	11 357	114	1 932	4 125	980	1 043	2 705	18 678	96 797	100	
1980	3 641	1 613	29 118	660	3 506	15 922	343	13 611	102	1 986	4 055	1 143	1 095	2 021	17 042	95 858	99	
1990	3 286	1 594	24 139	810	3 839	15 748	314	14 025	114	2 268	3 689	1 232	957	1 747	12 564	86 326	89	
1996	3 271	1 534	18 163	869	4 448	15 764	334	13 068	146	2 691	3 287	1 394	947	1 589	8 000	75 505	78	
1997	3 430	1 375	18 548	787	4 079	15 746	347	12 273	146	2 688	3 315	1 367	959	1 619	8 000	74 679	77	
D : includes D-E : 1970=10000, 1980=10761, 1990=9635																		
		Goods Transport Wagons															thousands	index 1970 = 100
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15		
1970	48.9	10.3	459.0	9.0	41.0	302.4	9.5	125.9	4.2	19.2	34.9	9.0	21.9	48.2	364.9	1 508.3	100	
1980	43.4	8.3	476.4	10.9	41.0	253.1	4.7	113.4	3.7	12.3	38.7	6.7	21.5	45.9	141.2	1 221.2	81	
1990	30.3	4.6	366.7	11.0	37.2	162.0	1.8	99.7	2.7	6.7	34.3	4.6	15.2	27.5	34.4	838.9	56	
1996	19.6	4.1	240.5	11.1	28.7	112.2	1.6	80.6	2.3	5.8	27.1	4.2	13.7	19.9	14.0	585.3	39	
1997	18.9	3.2	224.1	8.6	28.5	106.0	1.6	76.7	2.3	4.7	26.3	4.2	13.0	18.3	14.0	550.5	36	
D : includes D-E : 1970=138.0, 1980=142.2, 1990=163.2																		
Source : UIC, data relate to main railways (UIC members)												Estimates in italic						

Sea	EU Merchant Fleet															3.9	
	Ships of 1000 grt and over															Data as at January 1st, 1998	
	B	DK (a)	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	as at 1.1. 1997
	Total fleet controlled																
Number	126	558	1526	2996	214	219	41	534	2	521	43	45	143	345	657	7 970	7 663
mio dwt	3.7	12.0	21.2	121.3	3.2	7.4	0.16	11.3	0	4.6	0.6	0.9	3.1	16.3	21.2	227.0	214.1
	National flag																
Number	4	372	488	837	119	121	34	386	2	378	26	34	99	167	219	3 286	3 325
mio dwt	0.011	6.57205	7.422	42.3	1.421	4.2939	0.14	6.509	0	2.254	0.12	0.45	1.074	1.784	6.31	80.7	83.0
	Foreign flag																
Number	122	186	1038	2159	95	98	7	148	-	143	17	11	44	178	438	4 684	4 338
mio dwt	3.719	5.41015	13.81	79.01	1.759	3.1438	0.02	4.754	-	2.38	0.47	0.42	1.984	14.51	14.9	146.3	131.1
	Share of foreign flag in total fleet																
Number	97%	33%	68%	72%	44%	45%	17%	28%	-	27%	40%	24%	31%	52%	67%	59%	57%
dwt	100%	45%	65%	65%	55%	42%	11%	42%	-	51%	80%	49%	65%	89%	70%	64%	61%

Source : ISL merchant fleet data bases; aggregates based on quarterly updates from the Lloyd's Maritime Information System

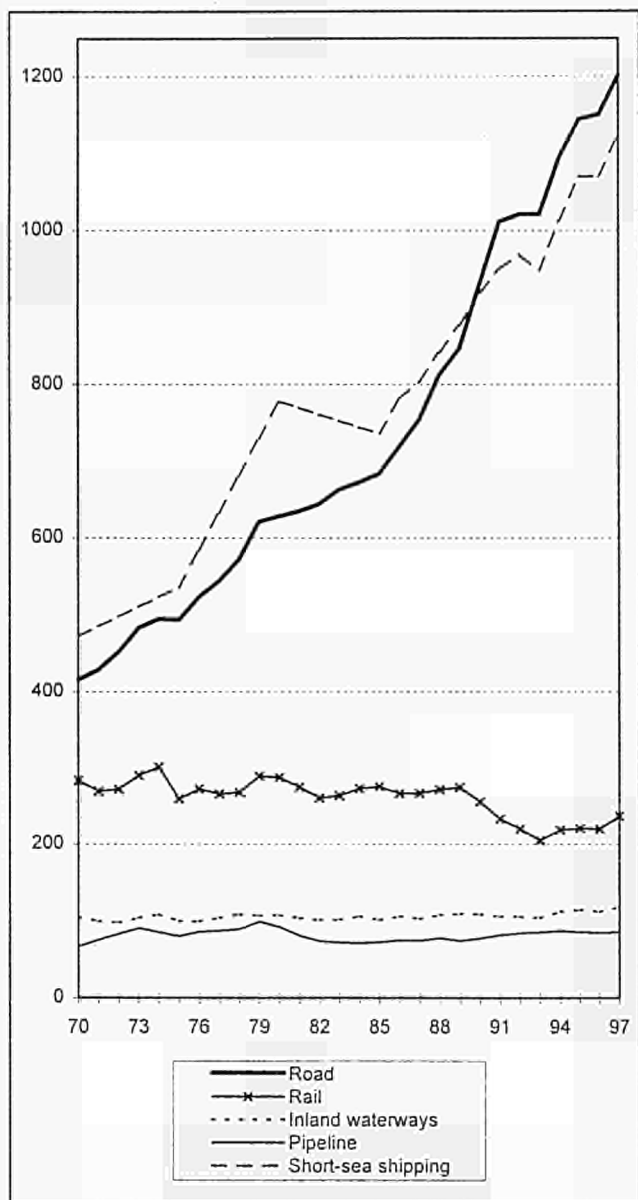
(a) including international registers like the Danish International Ship Register, including vessels registered at territorial dependencies

Chapter 4

Goods Transport

Evolution 1970-97

billion tkm



Evolution 1970-97 Performance by mode

1000 mio tkm

	Road	Rail	Inland Waterways	Pipelines	Sea (intra-EU)	Total
1970	412	283	103	66	472	1 337
1980	626	287	107	93	778	1 891
1990	929	255	108	77	919	2 288
1994	1 094	219	112	86	1 012	2 524
1995	1 145	221	114	85	1 070	2 635
1996	1 151	220	112	85	1 070	2 638
1997	1 202	237	119	86	1 124	2 768
1990-97	+ 29 %	- 7 %	+ 10 %	+ 12 %	+ 22 %	+ 21 %

Source : EUROSTAT, ECMT, UIC, national statistics

Average annual change

% per year

	Road	Rail	Inland Waterways	Pipelines	Sea (intra-EU)	Total
1970-80	+4.3	+0.2	+0.3	+3.4	+5.1	+3.5
1980-90	+4.0	-1.2	+0.1	-1.9	+1.7	+1.9
1990-97	+3.7	-1.1	+1.4	+1.6	+2.9	+2.8
1997	+4.4	+8.0	+6.3	+1.0	+5.0	+4.9

Modal split

%

	Road	Rail	Inland Waterways	Pipelines	Sea (intra-EU)
1970	30.8	21.2	7.7	5.0	35.3
1980	33.1	15.2	5.7	4.9	41.1
1990	40.6	11.2	4.7	3.4	40.2
1994	43.3	8.7	4.4	3.4	40.1
1995	43.4	8.4	4.3	3.2	40.6
1996	43.6	8.3	4.2	3.2	40.6
1997	43.4	8.6	4.3	3.1	40.6

Note : for a modal split based on 4 modes, see table 4.3

Transport Distances and Groups of Goods

General data

1996	Road	Rail (1)	Inland waterways	Pipe-lines	Sea intra-EU	Total
Tons transported (million)	10600	900	400	500	750	13150
Ton-km (billion)	1150	220	110	85	1070	2635
Average n° of km per ton	110	245	280	170	1430	200
% of internat. traffic, tons (2)	4	20	50	50	55	10
% of internat. traffic, tkm (2)	20	45	75	50	85	50
Modal Split of tons (%)	80	7	3	4	6	100
Modal Split of tkm (%)	44	8	4	3	41	100

(1) : average km / tonne is ca. 300 km if international traffic is not counted twice

(2) : represents the % share of international transport compared to total transport for each mode, calculated in tons and tkm

Distance classes*

National transport
(national traffic only)

km	% of	
	tons	tkm
0-49	60	10
50-149	22	20
150- 499	15	45
500-	3	25

Groups of goods*

% of tkm

(NST/R classification groups in brackets)	Road	Rail	Inland waterways	Total
Agricultural products (0, 1)	29	13	13	25
Coal, other solid mineral fuels (2)	1	12	12	4
Petroleum and petroleum products (3)	5	8	19	6
Iron ore, steel other metal products (4, 5)	8	20	18	11
Cement, building materials (6)	19	11	25	18
Chemicals, fertilizers (7, 8)	9	11	10	10
Machinery, manufactured articles (9)	29	25	3	26
All goods	100	100	100	100

* data refer to EU 12, 1992 and 3 modes: road, rail and inland waterways

Modal Split by Country

1997
tkm in %

	Road	Rail	Inland Waterways	Pipelines
B	70.4	14.6	12.0	3.0
DK	73.2	8.1	0.0	18.7
D	67.1	16.2	13.8	2.9
EI	98.1	1.9	0.0	0.0
E	84.2	10.1	0.0	5.7
F	74.3	16.9	1.9	6.9
IRL	91.3	8.7	0.0	0.0
I	85.1	9.4	0.1	5.4
L	68.2	20.3	11.5	0.0
NL	47.1	3.6	43.0	6.3
A	39.2	35.5	5.2	20.1
P	85.7	14.3	0.0	0.0
FIN	71.0	27.6	1.4	0.0
S	63.4	36.6	0.0	0.0
UK	84.3	9.3	0.1	6.2
EU 15	73.1	14.5	7.2	5.2

Modal split for EU 15

%

	Road	Rail	Inland Waterways	Pipelines
1970	47.7	32.7	12.0	7.7
1980	56.2	25.8	9.6	8.3
1990	67.9	18.7	7.9	5.6
1994	72.4	14.5	7.4	5.7
1995	73.2	14.1	7.3	5.4
1996	73.5	14.0	7.1	5.4
1997	73.1	14.4	7.2	5.2

Goods Transport		Road															4.5	
		Haulage on National Territory																
		National and International															1000 mio tkm	
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK (2)	EU15	Index 1970= 100	(1) modal share %
1970	13.5	7.0	90.2	4.9	27.9	63.6	4.0	58.7	0.3	16.3	6.8	7.2	12.4	17.8	81.6	412.2	100	47.7
1980	16.5	11.3	145.4	7.3	48.2	<u>98.1</u>	5.0	119.6	0.6	23.2	10.0	10.0	18.4	21.4	90.8	625.8	152	56.2
1990	25.0	13.7	182.8	10.9	78.9	190.5	5.1	177.9	1.3	31.8	13.3	12.2	26.3	26.5	133.0	929.2	225	67.9
1992	28.5	14.1	252.4	11.9	85.9	198.7	5.2	184.9	1.7	39.6	13.7	12.1	24.7	24.3	123.4	1021.0	248	71.4
1993	30.3	13.3	251.5	12.9	88.0	191.2	5.1	179.4	1.8	39.5	14.2	11.4	25.0	<u>25.9</u>	131.5	1020.9	248	72.2
1994	35.3	14.5	272.5	12.8	92.2	210.7	5.3	187.2	1.7	40.7	14.7	13.0	<u>25.7</u>	27.0	140.7	1094.0	265	72.4
1995	36.6	14.7	279.7	14.8	94.6	232.8	5.4	194.8	1.9	42.2	14.9	13.0	23.2	29.3	146.7	1144.6	278	73.2
1996	34.9	14.5	280.7	15.9	92.5	229.2	5.5	198.3	1.9	43.9	15.5	13.2	24.1	31.2	150.2	1151.4	279	73.5
1997	36.0	14.7	301.8	16.5	96.2	237.2	5.5	207.2	1.9	45.0	15.7	13.5	25.4	33.1	152.5	1202.2	292	73.1

Source : ECMT , national statistics. For B, DK, EL, E, L, NL and P calculations by NEA based on Eurostat statistics, estimates.

(1): road+railways+inland waterways+pipelines (oil) (2): vehicles with a payload over 3 tonnes

Estimates in italic underlined: change in time series D : includes D-E : 1970=12.2, 1980=21.0, 1990=13.0

Goods Transport		Road														4.6
		Haulage by Vehicles Registered in the Country														1000 mio tkm
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
National haulage																
1994	17.5	9.5	227.9	15.1	77.2	124.1	4.4	146.9	0.5	25.7	<i>10.9</i>	11.2	19.3	25.2	137.8	853.2
1995	19.0	9.3	201.3	12.4	78.7	135.3	4.5	162.4	0.5	27.0	11.3	11.1	21.3	27.8	143.7	865.6
1996	17.2	9.4	199.2	12.5	76.3	136.5	4.7	163.6	0.4	27.6	11.7	11.3	22.2	29.8	146.2	868.6
1997	<i>18.0</i>	9.7	203.1	<i>13.0</i>	78.8	139.0	4.7	<i>171.3</i>	0.4	27.6	11.3	<i>11.5</i>	23.8	31.4	<i>149.2</i>	892.9
International haulage																
1994	22.9	11.4	33.7	0.6	20.7	20.7	0.2	10.1	3.0	37.2	<i>15.1</i>	1.8	2.0	1.7	14.4	195.4
1995	24.1	12.4	34.6	0.9	23.1	21.8	0.2	12.0	3.3	38.7	15.5	1.9	2.3	2.0	14.4	207.4
1996	21.2	11.3	34.9	0.8	25.9	21.7	0.2	11.9	2.7	38.1	16.6	1.9	2.6	2.9	15.5	208.3
1997	23.0	11.2	40.2	0.9	28.1	21.3	0.2	12.5	2.3	39.2	13.9	2.0	4.4	2.6	16.3	218.0
Source : ECMT, NEA (study for DG VII) Estimates in italics																

Railways

1000 mio tkm

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100	(1) modal share %
1970	7.9	1.9	113.0	0.7	9.7	67.6	0.5	18.1	0.8	3.7	10.0	0.8	6.3	17.3	24.5	282.8	100	32.7
1980	8.0	1.6	121.3	0.8	11.3	66.4	0.6	18.4	0.7	3.4	11.2	1.0	8.3	16.6	17.6	287.3	102	25.8
1990	8.4	1.7	101.7	0.6	11.6	50.7	0.6	19.5	0.6	3.1	12.3	1.5	8.4	19.1	15.8	255.5	90	18.7
1992	8.4	1.9	69.8	0.5	9.6	49.5	0.6	19.9	0.6	2.8	11.8	1.8	7.8	19.2	15.5	219.7	78	15.4
1993	7.6	1.8	64.9	0.5	8.1	45.0	0.6	18.4	0.6	2.7	11.4	1.7	9.3	18.6	13.8	204.9	72	14.5
1994	8.1	2.0	69.9	0.3	9.0	48.8	0.6	20.5	0.6	2.8	12.6	1.6	9.9	19.0	13.0	218.8	77	14.5
1995	7.6	2.0	68.8	0.3	10.4	48.1	0.6	21.7	0.5	3.1	13.2	2.0	9.6	19.4	13.3	220.6	78	14.1
1996	7.2	1.8	67.7	0.3	10.0	49.5	0.6	21.1	0.5	3.1	13.3	1.9	8.8	18.8	15.1	219.7	78	14.0
1997	7.5	1.6	72.7	0.3	11.5	53.9	0.5	23.0	0.6	3.4	15.0	2.2	9.9	19.1	16.9	238.1	84	14.5

Source : UIC, ECMT, national statistics

non-UIC railways are included (ca. 1% of market)

Estimates in *italic*

D : includes D-E : 1970=41.5, 1980=56.4, 1990=39.8 (1): road+railways+inland waterways+pipelines (oil)

Inland Waterways

1000 mio tkm

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100	(1) modal share %
1970	6.7		51.2			12.2		0.4	0.3	30.6	1.3		0.5		0.3	103.5	100	12.0
1980	5.9		53.6			10.9		0.2	0.3	33.5	1.6		0.7		0.4	106.9	103	9.6
1990	5.4		56.7			7.2		0.1	0.3	35.7	1.7		0.4		0.3	107.9	104	7.9
1992	5.1		57.2			6.9		0.1	0.3	33.6	1.5		0.4		0.2	105.3	102	7.4
1993	5.0		57.6			5.9		0.1	0.3	32.1	1.5		0.5		0.2	103.1	100	7.3
1994	5.6		61.8			5.6		0.1	0.3	36.0	1.8		0.5		0.2	111.9	108	7.4
1995	5.8		64.0			5.9		0.1	0.3	35.5	2.0		0.4		0.2	114.3	110	7.3
1996	5.8		61.3			5.7		0.1	0.3	35.5	2.1		0.5		0.2	111.6	108	7.1
1997	6.1		62.2			6.0		0.2	0.3	41.0	2.1		0.5		0.2	118.6	115	7.2

Source : ECMT, Eurostat, national statistics

(1): road+railways+inland waterways+pipelines (oil)

Note : Finland :data published in national statistics include domestic sea traffic (results in table 4.8: without sea)

Estimates in italic

D : includes D-E : 1970=2.4, 1980=2.2, 1990=1.9

Goods Transport

4.9

Pipelines (Oil)

1000 mio tkm

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100	(1) modal share %
1970	0.3	0.0	17.3		1.0	28.2		9.1		4.1	3.6				2.7	66.2	100	7.7
1980	1.8	0.0	19.3		3.0	34.7		11.9		5.0	7.1				10.1	92.9	140	8.3
1990	1.0	1.7	16.6		4.2	20.5		11.5		4.9	5.3				11.0	76.7	116	5.6
1992	1.2	2.4	15.7		5.3	23.4		12.2		5.5	6.7				11.0	83.4	125	5.8
1993	1.3	2.5	16.1		5.4	23.3		12.2		5.5	6.7				11.6	84.6	128	6.0
1994	1.4	2.9	16.8		5.5	22.8		12.5		5.6	7.0				12.0	86.4	131	5.7
1995	1.4	2.9	16.6		5.9	22.2		12.8		5.3	6.8				11.1	84.9	128	5.4
1996	1.5	3.5	14.5		6.1	21.9		12.6		6.0	7.1				11.6	84.7	128	5.4
1997	1.5	3.8	13.2		6.5	22.1		13.2		6.0	8.0				11.2	85.6	129	5.2

Source : ECMT, Eurostat

(1): road+railways+inland waterways+pipelines (oil)

Estimates in italic

D : includes D-E : 1970=2.2, 1980=5.0, 1990=3.3

Sea Port Traffic (Major Seaports)

million tons

Port, Country	1970	1980	1990	1996	1997	Change
						97/96 %
1 Rotterdam, NL	226	276	288	284	303	+6.7
2 Antwerpen, B	78	82	102	107	112	+5.0
3 Marseille, F	74	103	90	91	94	+3.9
4 Hamburg, D	47	63	61	71	77	+7.9
5 Le Havre, F	58	77	54	56	60	+6.3
6 Amsterdam, NL	21	34	47	55	57	+3.2
7 London, UK	64	48	58	53	56	+5.4
8 Tees & Hartlep., UK	23	38	40	45	51	+14.8
9 Trieste, I	27	38	34	41	46	+11.9
10 Genoa, I	53	51	44	46	46	+0.2
11 Forth ports, UK	:	29	25	46	43	-5.4
12 Algeciras, E	8	22	25	34	37	+9.1
13 Dunkerque, F	25	41	37	35	37	+4.6
14 Wilhelmshaven, D	22	32	16	37	36	-2.2
15 Milford Haven, UK	41	39	32	37	35	-5.5
16 Bremen/B'haven, D	23	25	28	32	34	+8.0
17 Southampton, UK	28	25	29	34	33	-3.3
18 Zeebrugge, B	8	12	30	28	32	+13.7
19 Tarragona, E	4	20	24	31	31	+0.0
20 Liverpool, UK	31	13	23	31	31	+0.1
Gothenburg, S	20	22	26	28	30	+8.4
Bilbao, E	11	21	25	22	22	+3.1
Lisbon, P	9	14	14	13	12	-9.5
Thessaloniki, EL	8	9	14	13	:	
Dublin, IRL	7	7	8	9	11	+25.6
København, DK	6	7	9	10	11	+2.7
Helsinki, FIN	4	5	8	10	11	+7.7
Sum of top 20 ports	861	1 068	1 088	1 192	1 250	+4.9
1970-1997 : + 1.4 % p.a.						

Source : Institute of Shipping Economics and Logistics, Bremen

Container Port Traffic

1000 TEU

Port, Country	1990	1995	1996	1997	Change 97/96 %
1 Rotterdam, NL	3 667	4 787	4 971	5 445	+9.5
2 Hamburg, D	1 969	2 890	3 054	3 338	+9.3
3 Antwerpen, B	1 549	2 329	2 654	2 969	+11.9
4 Felixstowe, UK	1 436	1 924	2 065	2 237	+8.3
5 Bremen/B'haven, D	1 198	1 524	1 543	1 703	+10.3
6 Algeciras, E	553	1 155	1 307	1 538	+17.7
7 Gioia Tauro, I	0	16	572	1 448	+153.2
8 Le Havre, F	858	970	1 020	1 185	+16.2
9 Genoa, I	310	615	826	1 180	+42.9
10 Barcelona, E	448	689	765	950	+24.2
11 Valencia, E	387	672	710	832	+17.2
12 La Spezia, I	450	965	970	616	-36.5
13 Southampton, UK	345	681	805		:
14 Piraeus, EL	426	600	575		:
15 Zeebrugge, B	342	528	553		:
16 Marseille, F	482	498	544		:
17 Gothenburg, S	352	458	489		:
18 Liverpool, UK	239	406	420		:
19 Livorno, I	416	424	417		:
20 Tilbury, UK	363	338	395		:
21 Helsinki, FIN	246	336	370		:
22 Thamesport, UK	9	275	350		:
23 Dublin, IRL	215	297	328		:
24 Bilbao, E	189	297	301		:
25 Las Palmas, E	184	281	300		:
26 Lisbon, P	264	248	288		:
27 Teesport, UK	110	195	280		:
28 Napoli, I	133	226	271		:
29 Aarhus, DK	156	223	247		:
30 Thessaloniki, EL	54	211	239		:
Sum of above ports	17 348	25 059	27 630		:
Hong Kong	5 101	12 550	13 460	14 386	+6.9
Singapore	5 224	11 846	12 944	14 136	+9.2

Source: Containerisation International Yearbook, Port of Rotterdam

Sea

EU Port Hinterland Container Traffic

	Port container traffic 1996 1000 TEU	Port hinterland container traffic			
		1996 1000 TEU	of which :		
			Road %	Rail %	Inland water-way %
UK	5 304	4 549	84	16	0
NL	5 078	3 682	49	15	36
D	4 641	2 754	64	34	2
I	3 731	3 027	89	11	0
E	3 281	1 673	92	8	0
B	3 207	2 539	59	20	21
F	1 840	1 403	76	23	1
EL	814	682	98	2	0
S	758	647	54	46	0
FIN	649	567	83	17	0
IRL	761	746	89	11	0
P	512	452	93	7	0
DK	492	396	89	11	0
EU 15	31 068	23 117	71	17	8

Source: MDS Transmodal

Maritime (ISO) containers

	Length	Width	Height	Max laden weight
20 foot container (1 TEU) Avg weight 2.3t	20 ft 6.1 m	8 ft 2.435 m	8 - 9 ft 2.435 - 2.745 m	20.3t
40 foot container (2 TEU) Avg weight 4.2t	40 ft 12.2m	8 ft 2.435m	8 - 9ft 2.435 - 2.745 m	30.4t

Capacity

Ocean-going container ship	Several 1000 TEU	Inland ship	160 TEU
Feeder ship	600 TEU	Train	80 TEU
		Lorry	2 TEU

Note : largest container ship in 1998 : 6690 TEU

Goods Transport		Sea														4.13
Domestic Transport of Member States																
1000 mio tkm																
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
1970	0.1	1.8	0.9	2.4	24.5	8.0	0.3	26.2				0.8	2.4	6.9	23.0	97.3
1980	0.2	1.9	1.4	5.2	31.1	8.6	0.2	31.1				1.1	2.2	10.3	52.0	145.1
1990	0.2	1.9	0.3	6.6	33.0	6.7	0.2	35.7				1.9	2.0	8.3	51.7	148.6
1991	0.2	2.3	0.9	6.2	34.8	6.5	0.3	37.1				1.0	1.8	7.5	50.8	149.2
1992	0.2	2.0	0.9	6.6	32.7	6.3	0.3	34.8				1.2	1.7	7.1	48.9	142.7
1993	0.1	1.7	0.7	7.0	29.2	6.4	0.3	34.0				1.3	1.7	7.4	47.8	137.7
1994	0.1	1.7	0.7	6.1	30.8	6.4	0.3	34.7				1.4	2.1	7.7	50.7	142.6
1995	0.1	2.3	0.8	7.1	37.2	6.2	0.3	35.3				1.4	2.6	7.9	52.5	153.7
1996	0.1	2.4	0.8	7.3	36.3	6.2	0.3	37.9				1.3	2.9	8.0	53.0	156.5

Source : DG VII (results from a study)

Goods Transport		Sea														4.14
		International Intra-EU Transport														
		1000 mio tkm														
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
1970	21.5	11.6	43.8	9.7	15.0	33.4	10.7	57.3		33.9		4.9	56.1	5.7	71.4	374.9
1980	36.9	12.5	59.6	43.6	40.6	74.5	6.1	97.2		67.5		17.0	70.3	11.1	96.0	632.8
1990	54.2	13.6	62.5	49.9	59.0	79.6	8.7	116.1		80.4		21.4	81.5	15.5	127.8	770.0
1991	54.9	15.6	60.3	50.2	63.1	82.8	8.9	127.3		83.3		21.1	83.3	16.2	133.4	800.5
1992	56.5	16.2	71.5	52.5	64.7	84.1	9.0	123.0		84.1		23.4	86.3	18.6	136.5	826.2
1993	53.0	16.0	72.6	45.2	63.3	82.7	9.6	120.2		79.1		22.0	86.7	19.0	141.1	810.4
1994	56.4	17.6	79.8	49.4	68.7	85.3	10.7	126.7		84.1		25.2	91.9	21.3	152.8	869.8
1995	57.5	18.1	83.8	56.0	76.6	86.1	11.3	132.5		89.1		27.1	98.6	21.7	158.1	916.5
1996	54.7	18.9	84.8	55.3	73.9	85.3	11.4	132.9		89.1		24.6	101.3	22.2	159.6	914.0

Source : DG VII (results from a study) D : includes D-E : 1970=2.8, 1980=4.2, 1990=5.5

Inland Ports

Freight loaded and unloaded

Fluvial and fluvio-maritime traffic
million tons

Port	Country	1995	1996	1997	Change 97/96 %	
1	Duisburg	D	48.4	44.4	49.3	11.0
2	Liège	B	14.9	15.8	17.5	11.2
3	Paris	F	20.3	18.5	17.0	-8.1
4	Strasbourg	F	9.7	9.3	9.3	-0.3
5	NV Zeekanaal, Brabant	B	8.5	8.6	8.7	1.2
6	Karlsruhe	D	10.3	10.3	8.4	-18.6
7	Ludwigshafen	D	8.2	7.7	8.0	3.7
8	Köln	D	6.8	7.6	7.9	4.4
9	Mannheim	D	7.7	7.9	7.8	-1.2
10	Dortmund	D	5.4	4.8	5.4	12.6
11	Heilbronn	D	4.9	5.2	4.9	-5.3
12	Bruxelles / Brussel	B	5.1	4.8	4.9	1.0
13	Ports Rhénans Alsace	F	0.4	4.5	4.8	5.4
14	Neuss	D	4.9	4.7	4.3	-8.5
15	Frankfurt am Main	D	3.6	3.8	3.7	-1.6
16	Saarlouis / Dillingen	D	2.5	3.6	3.3	-9.0
17	Düsseldorf	D	3.0	3.0	3.2	7.6
18	Krefeld	D	3.4	3.3	3.1	-6.3
19	Kehl	D	3.1	2.9	2.9	-0.8
20	Magdeburg	D	2.5	2.2	2.8	28.7
	Berlin	D	3.4	2.4	2.3	-2.0
	Västerås	S	2.4	2.7	2.1	-21.4
	Wien	A	1.4	1.7	1.7	-5.3
	Arnhem	NL	1.3	1.7	1.7	0.0
	Köping	S	1.6	1.5	1.5	3.6
	Mertert	L	1.6	1.4	1.4	4.8
	Linz	A	1.1	1.2	1.0	-11.3
	Mantova	I	0.5	0.7	0.5	-20.4
	Varkaus	FIN	0.3	0.4	0.4	-7.7
<i>for information :</i>						
	Basel	CH	8.0	7.2	7.8	9.5

Source: European Federation of Inland Ports (EFIP)

Airport Traffic (Major Airports)

1000 tons

Airport, Country	1995	1996	1997	change 97/96 %
1 Frankfurt Rhein/Main, D	1 297	1 338	1 373	2.6
2 London Heathrow, UK	1 043	1 053	1 170	11.1
3 Amsterdam Schiphol, NL	978	1 083	1 161	7.2
4 Paris Charles de Gaulle, F	824	866	951	9.8
5 Bruxelles, B	427	451	518	15.0
6 Köln/Bonn, D	276	316	374	18.6
7 Luxembourg, L	286	281	339	21.0
8 London Gatwick, UK	232	277	270	-2.6
9 Madrid Barajas, E	230	243	266	9.6
10 Roma Fiumicino, I	257	259	243	-6.2
11 Paris Orly, F	276	246	223	-9.7
12 London Stansted, UK	93	107	131	21.7
13 East Midlands, UK	83	105	127	21.1
14 Milano Malpensa, I	126	98	123	25.5
15 Athens Hellenikon, EL	98	111	120	8.0
16 Stockholm Arlanda, S	104	113	114	0.5
17 Wien Schwechat, A	93	95	107	13.1
18 Oostende, B	82	92	106	15.1
19 Lisbon, P	89	90	100	10.8
20 Munich, D	65	76	96	26.0
21 Manchester, UK	51	81	95	17.1
22 Barcelona, E	68	80	81	1.0
23 Helsinki, FIN	78	84	85	1.4
24 Dublin, IRL	60	67	85	25.9
25 Dusseldorf, D	56	57	69	21.0
26 Milano Linate, I	68	66	61	-7.3
Total of these airports	7 340	7 733	8 385	8.4

Source : ACI

Combined Transport

Traffic of UIRR companies Consignments* (thousands)					
Company	1996	1997	1998	change 98/97 %	
<u>International traffic</u>					
Kombiverkehr, D	335.6	347.2	358.7	+3.3	
Cemat, I	113.2	128.9	126.7	-1.7	
Ökombi, A	132.6	127.6	138.7	+8.7	
Novatrans, F	77.9	87.9	80.4	-8.5	
T.R.W., B	65.5	74.6	64.2	-13.9	
C.T.L., UK	22.1	32.4	32.7	+0.8	
Trailstar, NL	19.3	22.7	25.7	+13.2	
Skani Kombi, S/DK	12.8	14.4	12.1	-16.0	
Combiberia, E	9.6	13.5	13.9	+2.6	
Total	788.6	849.2	853.0	+0.4	
<u>National traffic</u>					
Kombiverkehr, D	250.3	266.4	260.9	-2.1	
Cemat, I	193.8	221.6	205.4	-7.3	
Novatrans, F	146.6	162.1	172.3	+6.3	
Ökombi, A	38.6	51.5	55.3	+7.3	
Skani Kombi, S/DK	19.9	5.7	3.9	-31.8	
T.R.W., B	1.0	2.3	2.8	+20.9	
Total	650.2	709.6	700.6	-1.3	
*Consignment = equivalent of an average road transport (= 2.3 TEU)					
Tonne-kilometres			traffic % of consignments		
Year	bio tkm	of which national	Semi- trailers	Rolling road	Swap bodies
1990	19	7	20%	18%	62%
1995	25	7	14%	19%	67%
1996	28	8	12%	20%	68%
1997	30	8	10%	19%	71%
1998	30	8	9%	20%	71%

Traffic of Intercontainer-Interfrigo 1000 TEU				
Type of transport	1995	1996	1997	change 97/96 %
Combined transport	1296.3	1349.3	1286.3	-4.7

Source: UIRR; Intercontainer

TEU : twenty foot equivalent unit (corresponds to 10-12 tonnes)

Alpine Transport

Traffic through the Alps : internal, import, export and transit traffic

(Alpine Arc : Mt. Cenis/Fréjus to Brenner)

Rail million net-tonnes

	<u>Switzerland</u>		<u>Austria</u>	<u>France</u>	Total
	St. Gotthard	Simplon/ Lötschberg	Brenner	Mont-Cenis	
1985	11.2	2.8	4.7	7.5	26.2
1990	13.6	4.3	5.5	7.2	30.6
1992	12.4	5.0	8.2	6.8	32.4
1993	11.7	4.3	7.6	7.0	30.6
1994	13.2	4.7	8.3	7.7	33.9
1995	13.6	4.4	8.4	8.0	34.4
1996	11.7	4.0	7.9	9.7	33.3
1997	13.7	4.3	7.8	10.1	35.9
annual growth					
85-90	4.0	9.0	3.2	-0.8	3.2
90-96	-2.5	-1.2	6.2	5.1	1.4
1997	17.1	7.5	-1.3	4.1	7.8

Road million net-tonnes

	<u>Switzerland</u>		<u>Austria</u>	<u>France</u>	Total
	St. Gotthard	Simplon G.St. Bernard St. Bernardino	Brenner	Fréjus Mont-Blanc	
1985	1.9	0.8	14.3	12.3	29.3
1990	3.1	1.1	13.6	21.8	39.6
1992	3.9	1.2	16.5	23.1	44.7
1993	4.5	1.1	17.1	24.7	47.4
1994	5.1	1.1	17.6	26.5	50.3
1995	5.5	1.1	20.0	25.8	52.4
1996	5.9	1.2	19.0	25.0	51.1
1997	6.0	1.0	20.1	25.3	52.4
annual growth					
85-90	10.3	6.6	-1.0	12.1	6.2
90-96	11.3	1.5	5.7	2.3	4.3
1997	1.7	-16.7	5.8	1.2	2.5

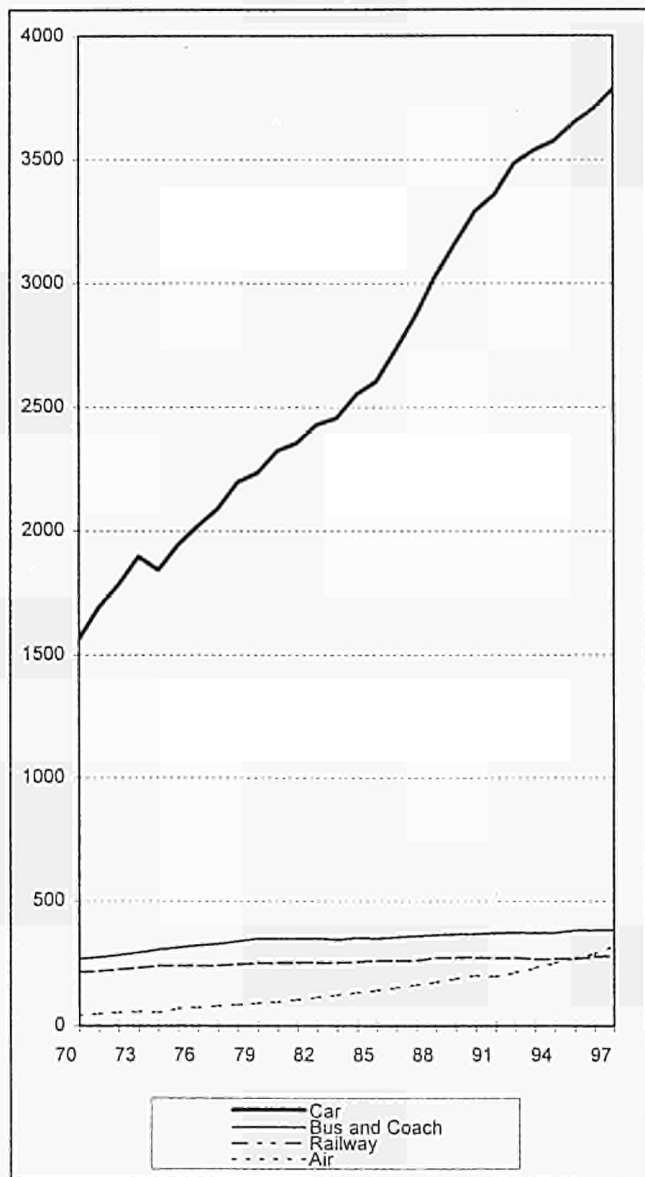
Source: GVF

Chapter 5

Passenger Transport

Evolution 1970-97

billion pkm



Main Modes of Transport

Performance by mode

1000 mio pkm

	Passenger cars	Buses & Coaches	Tram + Metro	Railway	Air (1)	Total
1970	1 583	270	38	217	43	2 151
1980	2 333	347	40	253	96	3 069
1990	3 302	369	48	274	204	4 197
1994	3 584	334	41	270	254	4 483
1995	3 656	384	41	270	274	4 624
1996	3 710	386	41	279	290	4 707
1997	3 787	393	41	282	322	4 825
1990-97	+ 15 %	+ 6 %	- 13 %	+ 3 %	+ 58 %	+ 15 %

Sources: tables 5.2, 5.4, 5.5, 5.6 and estimates

(1) European traffic, Source : AEA, IACA and estimates

Worldwide traffic of EU carriers was 550 bio pkm in 1995

Average annual change

% per year

	Passenger cars	Buses & Coaches	Tram + Metro	Railway	Air	Total
1970-80	+4.0	+2.6	+0.4	+1.6	+8.4	+3.6
1980-90	+3.5	+0.6	+1.8	+0.8	+7.8	+3.2
1990-97	+2.0	+0.9	-1.9	+0.4	+6.7	+2.0
1997	+2.1	+1.6	+1.1	+1.2	+10.8	+2.5

Modal split

%

	Passenger cars	Buses & Coaches	Tram + Metro	Railway	Air
1970	73.6	12.5	1.8	10.1	2.0
1980	76.0	11.3	1.3	8.2	3.1
1990	78.7	8.8	1.1	6.5	4.9
1994	79.9	7.4	0.9	6.0	5.7
1995	79.1	8.3	0.9	5.8	5.9
1996	78.8	8.2	0.9	5.9	6.2
1997	78.5	8.1	0.9	5.8	6.7

All Modes of Transport Performance by mode

1000 mio pkm

	Powered two-wheelers	Cycling	Walking	Water-borne transport	Main modes	All modes
1970	97	60	155	13	2 151	2 477
1980	115	67	165	20	3 069	3 436
1990	112	71	149	26	4 197	4 556
1994	118	70	161	27	4 483	4 859
1995	121	70	163	27	4 624	5 005
1990-95	+ 8 %	-2 %	+ 9 %	+4 %	+10 %	+ 10 %

Sources : UITP : Transport demand study for DG VII

Main modes : see table 5.1.b

Average annual change

% per year

	Powered two-wheelers	Cycling	Walking	Water-borne transport	Main modes	All modes
1970-80	+1.7	+1.0	+0.7	+4.1	+3.6	+3.3
1980-90	-0.3	+0.7	-1.0	+3.0	+3.2	+2.9
1990-95	+1.6	-0.4	+1.8	+0.8	+2.0	+1.9

Modal split trips

%

	Powered two-wheelers	Cycling	Walking	Water-borne transport	Main modes
1970	3.9	2.4	6.3	0.5	86.9
1980	3.3	1.9	4.8	0.6	89.3
1990	2.5	1.6	3.3	0.6	92.1
1994	2.4	1.4	3.3	0.6	92.3
1995	2.4	1.4	3.2	0.5	92.4

Modal Split for Land Transport

by Country (pkm) in % for 1995

	Passenger cars	Powered two-wheelers	Bus	Urban rail (tram & metro)	Railway
B	81.0	1.2	11.1	0.7	6.0
DK	79.0	0.8	13.7	-	6.4
D	82.7	1.4	7.8	1.0	7.2
EI	64.3	9.9	23.2	0.8	1.8
E	81.6	3.4	10.0	1.1	4.0
F	84.5	2.1	5.2	1.1	7.0
IRL	86.3	0.5	10.5	-	2.6
I	75.8	6.5	10.6	0.6	6.5
L	86.6	0.7	7.4	-	5.3
NL	81.8	1.5	8.1	0.8	7.8
A	74.6	1.4	11.5	1.7	10.7
P	81.7	3.2	10.7	0.4	3.9
FIN	80.0	1.5	12.8	0.6	5.1
S	83.5	0.7	8.5	1.4	6.0
UK	87.7	0.6	6.4	1.0	4.3
EU 15	82.2	2.5	8.3	0.9	6.0

Passenger Transport		Passenger Cars 1000 mio pkm															5.5	
	B	DK	D	EL (2)	E (3)	F	IRL (4)	I	L (4)	NL	A (5)	P	FIN	S	UK	EU15	index 1970= 100	(1) modal share %
1970	49.3	33.3	394.6	8.6	64.3	304.7	15.3	211.9	2.1	66.3	32.9	17.5	23.7	55.4	303.5	1 583.4	100	73.6
1980	65.4	38.1	513.7	27.6	188.9	452.5	27.9	324.0	2.7	107.1	47.8	41.0	33.9	66.7	396.0	2 333.3	147	76.0
1990	80.7	53.7	683.1	48.8	282.0	586.0	36.3	522.6	4.0	136.2	62.4	65.0	51.2	90.0	600.2	3 302.2	209	78.7
1992	84.6	56.6	719.5	50.6	305.2	618.0	38.7	602.2	4.3	138.6	69.3	71.6	50.5	91.7	595.2	3 496.6	221	
1993	86.9	57.4	729.8	53.5	311.8	634.6	40.0	603.1	4.5	140.5	67.9	82.9	49.7	90.7	596.2	3 549.4	224	
1994	89.5	59.1	720.7	56.0	318.6	651.2	41.2	600.3	4.6	146.9	68.2	90.0	49.6	84.0	603.7	3 583.6	226	79.9
1995	91.2	61.0	730.5	58.8	328.3	664.3	42.4	614.5	4.7	146.8	68.1	99.5	50.1	87.0	609.0	3 656.1	231	79.1
1996	92.4	63.5	730.8	61.7	339.3	674.3	43.8	617.8	4.7	145.9	65.7	105.0	50.4	92.7	622.1	3 710.0	234	78.8
1997	94.0	65.5	740.5	64.4	350.0	685.1	45.0	633.2	4.8	151.2	67.0	109.0	51.5	93.6	632.5	3 787.3	239	78.5
passenger-km per person per year																		
1997	9259	12445	9030	5886	8913	11691	12162	11012	11566	9692	8312	10977	10049	10587	10720	10128	(218)	
Source : ECMT, national statistics, estimates, studies																		
Estimates in italic																		
D : includes D-E : 1970=24.5, 1980=56.0, 1990=90.3																		
(1) : Passenger cars +buses and coaches + tram + metro + railways+ air																		
(2): result from a DG VII study																		
(3): Spain : 1980-96 estimate based on vehicle stock and vehicle-km data																		
(4): estimate based on results of DG VII studies																		
(5): Austrian Ministry for Environment																		

Passenger Transport		Powered Two-wheelers															5.6
1000 mio pkm																	
	B	DK	D	EL (1)	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	1.08	1.14	19.79	1.03	9.25	21.36	0.19	29.38	0.02	4.11	1.46	4.06	0.43	0.38	3.69	97.37	100
1975	1.22	1.13	20.02	1.42	10.85	21.96	0.22	35.76	0.03	4.06	1.54	4.42	0.56	0.47	5.30	108.96	112
1980	1.26	0.97	19.62	2.13	11.55	20.59	0.23	39.90	0.03	3.71	1.50	4.20	0.63	0.53	8.06	114.91	118
1985	1.25	0.89	17.72	3.18	12.10	18.80	0.24	42.92	0.03	3.21	1.39	4.23	0.75	0.56	7.60	114.87	105
1990	1.21	0.83	15.32	4.85	12.39	16.95	0.25	44.15	0.03	2.75	1.25	4.73	0.91	0.58	5.85	112.05	115
1994	1.34	0.64	12.00	7.87	13.67	16.52	0.26	51.98	0.04	2.72	1.32	3.94	0.95	0.70	4.35	118.30	121
1995	1.35	0.63	12.80	8.60	13.65	16.69	0.26	53.13	0.04	2.78	1.32	3.95	0.95	0.71	4.41	121.27	125
passenger-km per person per year																	
1995	133	121	157	823	348	287	73	927	98	180	164	398	186	80	75	326	
Source : UITP; Germany 1994-1995 : DIW																	
(1): Greece : result of a DGVII study																	
Estimates in italic D : includes D-E : 1970=8.29, 1975=8.52, 1980=8.14, 1985=7.47, 1990=6.30																	

Passenger Transport		Buses & Coaches															5.7	
1000 mio pkm																		
	B	DK	D	EL (2)	E (3)	F	IRL	I	L	NL	A	P	FIN	S	UK (4)	EU15	index 1970= 100	(1) modal share %
1970	9.3	4.6	67.7	9.4	20.9	25.2	3.3	32.0	0.3	11.1	9.1	4.4	7.0	5.5	60.0	269.8	100	12.5
1980	9.1	7.3	90.0	15.6	28.1	36.0	4.5	57.8	0.3	13.2	9.8	7.6	8.5	7.3	52.0	347.1	129	11.3
1990	10.9	9.3	73.1	17.7	33.4	41.3	3.9	84.0	0.4	13.0	8.7	10.3	8.5	9.0	46.0	369.4	137	8.8
1992	11.6	9.3	69.9	18.5	35.5	41.1	4.3	87.8	0.4	14.0	9.4	11.4	8.0	9.3	43.0	373.4	138	
1993	11.6	9.2	70.2	18.9	37.1	42.0	4.5	81.5	0.4	13.7	10.3	11.8	8.0	9.3	44.2	372.7	138	
1994	12.0	9.5	68.6	19.6	38.1	42.6	5.0	79.3	0.4	13.9	10.8	12.6	8.0	9.2	4.3	333.8	124	7.4
1995	12.5	10.6	68.5	20.2	40.2	41.0	5.2	85.9	0.4	14.5	10.5	13.1	8.0	8.8	44.3	383.6	142	8.3
1996	11.4	11.4	68.2	20.4	37.7	41.6	5.3	88.1	0.4	14.4	12.5	13.5	8.0	9.3	44.2	386.4	143	8.2
1997	11.9	11.4	68.0	20.7	44.0	42.0	5.5	88.1	0.4	14.5	12.5	13.1	8.0	9.4	43.2	392.6	146	8.1
passenger-km per person per year																		
1997	1172	2166	829	1976	1120	717	1486	1532	964	929	1551	1319	1561	1063	732	1050	(132)	
Source : ECMT, national statistics			Estimates in italic			(1) : Passenger cars +buses and coaches + tram + metro + railways+ air												
(2): result from a DG VII study			(3) : Spain : from 1995, old series was extrapolated to avoid break															
(4) : data for Great Britain only until 1992			D : includes D-E : 1970=19.1, 1980=24.4, 1990=16.5															

Passenger Transport		Tram + Metro															5.8	
		1000 mio pkm																
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100	(1) modal share %
1970	0.86	-	14.63	0.63	3.67	6.50	-	2.21	-	1.24	0.75	0.93	0.10	1.44	5.20	38.16	100	1.8
1975	0.76	-	14.06	0.71	3.83	6.90	-	3.05	-	1.22	0.80	0.75	0.10	1.70	4.80	38.68	101	
1980	0.77	-	13.84	0.68	3.88	7.70	-	3.66	-	1.35	0.82	0.74	0.12	1.97	4.30	39.83	104	1.3
1985	0.78	-	15.37	0.76	3.47	9.20	-	4.14	-	1.39	1.04	0.64	0.34	1.86	6.30	45.29	119	
1990	0.74	-	15.10	0.83	4.38	10.20	-	4.57	-	1.26	1.11	0.67	0.35	1.86	6.50	47.57	125	1.1
1994	0.79	-	8.90	0.72	4.15	10.00	-	5.10	-	1.39	1.34	0.58	0.37	1.51	6.50	41.35	108	0.9
1995	0.80	-	8.50	0.74	4.25	9.00	-	5.23	-	1.38	1.53	0.53	0.39	1.42	6.80	40.57	106	0.9
1996	0.80	-	8.40	0.74	4.49	9.50	-	5.20	-	1.39	1.56	0.50	0.40	1.40	6.65	41.03	107	0.9
1997	0.80	-	8.30	0.75	4.57	9.80	-	5.20	-	1.40	1.56	0.50	0.42	1.40	6.80	41.50	109	0.9
passenger-km per person per year																		
1997	79		101	72	116	167		90		90	194	50	81	158	115	111	(99)	
Source : 1970-95: UITP, 1996-97: national statistics, estimates (1) : Passenger cars +buses and coaches + tram + metro + railways+ air																		
Estimates in italic D : includes D-E : 1970=4.83, 1975=5.06, 1980=5.34, 1985=7.07, 1990=6.50																		

Passenger Transport		Railways															5.9	
		1000 mio pkm																
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100	(1) modal share %
						(2)												
1970	7.6	3.6	56.9	1.5	15.0	41.0	0.8	34.9	0.2	8.0	6.4	3.5	2.2	4.6	30.6	216.6	100	10.1
1980	7.0	4.5	63.0	1.5	14.8	54.7	1.0	42.9	0.2	8.9	7.6	6.1	3.2	7.0	30.4	252.8	117	8.2
1990	6.5	5.1	62.1	2.0	16.7	63.8	1.2	48.3	0.2	11.1	8.7	5.7	3.3	6.0	33.4	274.0	127	6.5
1992	6.8	4.8	57.2	2.0	17.6	62.6	1.2	51.1	0.3	15.4	9.7	5.7	3.1	5.4	31.9	274.8	127	
1993	6.7	4.8	58.7	1.7	16.5	58.2	1.3	49.9	0.3	15.2	9.5	5.4	3.0	5.8	30.6	267.5	124	
1994	6.6	5.1	62.4	1.4	16.1	58.7	1.3	51.7	0.3	14.4	9.4	5.1	3.0	5.9	29.0	270.5	125	6.0
1995	6.8	5.0	63.5	1.6	16.0	55.3	1.3	52.4	0.3	14.0	9.8	4.8	3.2	6.2	30.2	270.3	125	5.8
1996	6.8	4.9	64.7	1.8	16.3	59.5	1.3	52.8	0.3	14.1	9.9	4.5	3.3	6.4	32.3	278.8	129	5.9
1997	7.0	5.0	64.0	1.9	17.3	61.8	1.4	52.1	0.3	14.4	8.3	4.6	3.4	6.3	34.4	282.2	130	5.8
passenger-km per person per year																		
1997	688	948	780	180	441	1055	375	906	711	925	1032	460	659	711	583	755	(119)	
Source : ECMT, UIC and national statistics Non-UIC railways are included (ca. 2% of market) (2) : railway strike in 1995																		
D : includes D-E : 1970=17.7, 1980=22.0, 1990=17.5 (1) : Passenger cars +buses and coaches + tram + metro + railways+ air																		

Passenger Transport		Waterborne Transport															5.10
1000 mio pkm																	
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	0.9	1.8	0.3	1.6	0.1	0.3	0.4	1.1		0.2	0.0	0.1	0.9	3.6	1.8	13.0	100
1975	0.8	1.8	0.6	1.9	0.1	0.6	0.5	1.4		0.3	0.0	0.1	1.5	4.4	2.1	16.1	123
1980	0.7	1.8	0.7	2.7	0.2	1.1	0.7	2.0		0.4	0.0	0.1	1.7	4.5	3.0	19.5	150
1985	0.6	1.8	0.6	3.0	0.2	1.3	0.9	2.6		0.5	0.0	0.1	2.1	4.3	3.6	21.6	166
1990	0.5	1.8	0.9	4.1	0.2	1.8	0.9	3.3		0.6	0.0	0.1	3.0	5.0	4.1	26.2	201
1994	0.4	1.8	1.1	4.7	0.2	2.1	1.1	3.2		0.5	0.0	0.1	2.9	4.4	4.8	27.2	209
1995	0.4	1.8	1.1	4.8	0.2	2.0	1.1	3.5		0.4	0.0	0.1	2.9	4.5	4.5	27.3	209
passenger-km per person per year																	
1995	36	342	13	454	5	34	313	62		28	4	10	568	514	76	73	

Source : UITP

Passenger Transport

Bicycle Transport

1000 mio person-km

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970 = 100
1970	4.0	4.5	17.0	0.3	0.7	4.5	0.65	8.0	0.02	11.0	1.6	0.3	1.7	1.6	4.4	60.3	100
1975	3.85	4.5	18.2	0.3	0.7	4.5	0.70	8.2	0.02	11.6	1.6	0.3	1.9	1.4	4.4	62.2	103
1980	3.7	4.5	22.3	0.3	0.7	5.0	0.80	8.5	0.02	9.9	1.6	0.3	2.2	1.6	5.1	66.5	110
1985	3.55	4.1	24.0	0.3	0.8	4.8	1.07	8.7	0.02	11.8	1.6	0.3	1.9	2.2	6.1	71.2	118
1990	3.4	4.9	23.8	0.3	0.8	4.5	0.75	9.0	0.02	13.0	1.4	0.3	1.5	2.2	5.3	71.2	118
1994	3.3	4.6	23.6	0.3	0.8	4.4	0.67	9.0	0.02	13.2	1.2	0.3	1.3	2.4	4.5	69.6	115
1995	3.3	4.7	23.5	0.3	0.8	4.4	0.67	9.0	0.02	13.3	1.15	0.3	1.3	2.4	4.5	69.6	116

person-cycling-km per person per year

1995	325	893	287	29	20	75	181	157	39	853	143	30	254	271	76	186
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Source : results from DG VII studies

D : includes D-E : 1970=5.0, 1975=5.2, 1980=5.4, 1985=5.6, 1990=5.7

Bicycle Transport

Modal Share by Country and Town

Country	Cycling as a % of all trips	Year	Selected cities	Cycling as a % of all trips	Year
The Netherlands	27	1991/93	Groningen	39	1990
			Utrecht	32	1995
			Amsterdam	28	1990
Denmark	18	1993	Nakskov	35	1995
			Odense	21	1995
			Copenhagen	20	1995
Sweden	12.6	1994/95	Västerås	33	1981
			Malmö	20	1985
			Göteborg	7.5	1992
Germany	10	1994	Münster	34	1990
			Erlangen	30	1990
			Freiburg	22	1996
Belgium	10	1995	Brugge	20	1994/95
			Gent	12	1991
			Brussels	1	1991
Finland	7.4	1992	Oulu	25	1995
			Helsinki	9	1995
Ireland	7	1995	Dublin	5	1995
Austria	5	1995	Salzburg	19	1993
			Graz	13	1993
			Vienna	3	1993
Italy	4	ca 1995	Ferrara	31	1995
			Parma	19	ca 1995
			Padua	19	ca 1995
France	3	1995	Strasbourg	12	1991
			Avignon	10	1980
			Paris	0.7	1991
United Kingdom	2	1995	Cambridge	34	ca 1995
			York	22	1991/93
			London	1	1991/93
Luxembourg	1.5	1995	Luxembourg	1	1995
Greece	1	1995	Volos	12	1995
			Athens	0	ca 1995
Portugal	1	1995	Lisbon	0	1995
Spain	0.7	1995	San Sebastian	1.8	ca 1995
			Valencia	1.5	ca 1995
			Madrid	0	ca 1995
EU 15	5	1995			
Switzerland	9	1989	Basel	20	1990
USA	0.7	1995	Gainesville, FL	33	ca 1995
Japan	14	1992	Tokyo	17	1990

bold: outstanding cities for cyclists (in NL: also Delft, in USA: Davis, CA)

Source : European Cyclists Federation (ECF), Japanese Bicycle Promotion Institute, City administrations and DG VII calculations/estimates based on ECF data on pkm and average trip length. FP4 Research project 'Walcyng'.

Passenger Transport		Air Traffic Between Countries														5.13
reporting country (from and to)		1996														million passengers
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15
B		0.34	1.07	0.42	2.14	1.08	0.17	1.25	0.04	0.31	0.27	0.34	0.15	0.30	1.93	9.80
DK	0.34		1.23	0.00	0.94	0.61	0.10	0.48	0.04	0.49	0.20	0.08	0.00	1.75	1.60	7.86
D	1.08	1.23		4.19	14.83	3.94	0.36	3.84	0.19	1.84	1.93	1.60	0.52	0.67	7.03	43.23
EL	0.42	0.00	4.19		0.19	1.05	0.05	0.98	0.04	0.88	0.80	0.02	0.00	0.87	3.59	13.07
E	2.02	0.94	14.24	0.19		3.81	0.68	2.69	0.23	2.13	0.80	0.80	0.64	1.18	17.80	48.15
F	1.04	0.61	3.68	1.05	3.54		0.47	3.73	0.12	1.25	0.54	1.35	0.21	0.47	6.41	24.49
IRL	0.18	0.10	0.46	0.05	0.70	0.51		0.16	0.00	0.24	0.03	0.12	0.00	0.03	6.99	9.55
I	1.25	0.48	3.84	0.98	2.83	3.98	0.19		0.06	1.10	0.48	0.43	0.11	0.24	4.95	20.91
L	0.04	0.04	0.18	0.04	0.23	0.10	0.00	0.07		0.05	0.01	0.08	0.00	0.00	0.16	0.99
NL	0.25	0.49	1.78	0.88	2.14	1.35	0.22	1.08	0.06		0.37	0.55	0.17	0.56	4.96	14.85
A	0.27	0.20	1.92	0.80	0.79	0.58	0.02	0.47	0.00	0.38		0.10	0.10	0.15	1.16	6.93
P	0.36	0.08	1.75	0.02	0.78	1.40	0.11	0.40	0.08	0.57	0.08		0.08	0.11	2.68	8.52
FIN	0.15	0.00	0.52	0.00	0.64	0.21	0.00	0.11	0.00	0.17	0.10	0.08		0.96	1.03	3.98
S	0.30	1.75	0.68	0.87	1.22	0.48	0.03	0.25	0.00	0.56	0.17	0.08	0.96		1.31	8.65
UK	1.88	1.60	6.88	3.59	17.75	6.62	6.32	4.64	0.16	4.98	1.72	3.00	1.03	1.39		61.56
EU15	9.56	7.86	42.41	13.07	48.72	25.71	8.73	20.15	1.02	14.94	7.49	8.64	3.98	8.69	61.58	282.54

Note : table is meant to be read vertically

bold= 20 most important relations

Airborne Transport

Traffic at Major Airports

Total passenger movements

million passengers

Airport	Country	1970	1980	1990	1997	1998	Change 98/97 %
1 London Heathrow	UK	15.6	27.5	43.0	58.0	60.7	+4.3
2 Frankfurt Rhein-Main	D	9.4	17.6	29.4	40.3	42.7	+6.1
3 Paris Ch. de Gaulle	F	2.2	10.1	22.5	35.3	38.6	+9.5
4 Amsterdam Schiphol	NL	5.2	9.4	16.5	31.6	34.4	+9.0
5 London Gatwick	UK	3.7	9.7	21.2	27.0	29.2	+8.2
6 Rome Fiumicino	I	6.5	11.4	17.7	25.0	25.3	+1.0
7 Madrid Barajas	E	4.8	10.1	16.2	23.6	25.3	+7.0
8 Paris Orly	F	10.4	15.7	24.3	25.1	25.0	-0.4
9 München	D	3.6	6.0	11.4	17.9	19.3	+8.0
10 Bruxelles Zaventem	B	2.8	5.1	7.1	15.9	18.5	+16.0
11 Palma de Mallorca	E	4.8	7.3	11.3	16.6	17.7	+6.7
12 Manchester	UK	1.9	4.3	10.1	16.2	17.5	+8.3
13 Copenhagen Kastrup	DK	6.5	8.6	12.1	16.8	16.7	-1.0
14 Stockholm Arlanda	S	2.6	4.3	14.0	15.2	16.4	+8.0
15 Barcelona	E	4.0	5.8	9.0	15.1	16.0	+6.2
16 Düsseldorf	D	3.6	7.2	11.9	15.5	15.8	+1.4
17 Milano Linate	I	2.9	6.2	9.5	14.3	13.6	-4.6
18 Athens Hellenikon	EL	3.7	9.2	10.1	11.1	n.a.	
19 Dublin	IRL	1.9	2.6	5.5	10.3	11.6	+12.6
20 Vienna	A	1.5	2.7	5.5	9.7	10.6	+9.3
Total of these airports		97.6	180.8	308.3	440.3	454.8	+3.3
Average annual growth rate		1970-1998 :+ 5.8 %					

Source: ACI, ICAO
Estimates in italic

Airborne Transport

Major EU Airlines

Scheduled services, international + domestic

1000 million pkm

Airline	Country	1980	1990	1997	1998	% change 98/97	in Europe 1998
British Airways	UK	16.08	44.66	105.70	116.00	+9.7	17.16
Lufthansa	D	21.06	42.10	71.35	75.44	+5.7	15.61
Air France	F	25.40	36.62	69.99	74.54	+6.5	8.03
KLM	NL	14.06	28.17	55.39	57.28	+3.4	6.98
Alitalia	I	12.88	19.13	35.99	35.56	-1.2	7.45
Iberia	E	14.85	20.49	27.63	32.52	+17.7	7.52
SAS	DK/N/S	7.53	11.52	20.33	20.82	+2.4	8.77
Sabena	B	4.85	5.91	11.27	15.34	+36.1	5.68
Finnair	FIN	2.12	4.71	9.63	10.71	+11.2	5.96
Olympic Airways	EL	5.06	7.76	9.26	8.56	-7.6	3.27
TAP-Air Portugal	P	3.43	6.84	8.77	9.36	+6.7	3.48
Austrian Airlines	A	1.12	2.82	6.23	7.28	+16.9	2.44
Aer Lingus	IRL	2.05	3.14	5.89	6.47	+9.8	2.41
Luxair	L	0.03	0.20	0.45	0.45	+0.9	0.45
Total of companies		130.50	234.05	437.88	470.33	+7.4	95.21
<i>Average annual growth rate 1980-1998 : +7.4%</i>							

Source: AEA , IATA

Estimates in italic

Chapter 6

Safety

Road Fatalities																	6.1
persons killed																	
	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	2950	1208	21332	931	4197	15090	540	10208	132	3181	2238	1417	1055	1307	7770	73 556	100
1980	2396	690	15050	1225	5017	12540	564	8537	98	1997	1742	2262	551	848	6240	59 757	81
1990	1976	634	11046	1737	6948	10289	478	6621	71	1376	1391	2321	649	772	5402	51 711	70
1991	1873	606	11300	2112	8836	10483	445	8083	80	1281	1551	3218	632	745	4753	55 998	76
1992	1672	577	10631	2158	7818	9900	415	8014	73	1253	1403	3084	601	759	4379	52 737	72
1993	1660	559	9949	2159	6378	9867	431	7163	76	1235	1283	2700	484	632	3957	48 533	66
1994	1692	546	9814	2253	5615	9019	404	7091	74	1298	1338	2504	480	589	3807	46 524	63
1995	1449	582	9454	2411	5751	8891	437	7020	68	1334	1210	2711	441	572	3765	46 096	63
1996	1356	514	8758	2531	5483	8541	453	6676	72	1180	1027	2730	404	537	3742	44 004	60

Source: UN-ECE and ECMT up to 1990, CARE/DG VII/Eurostat from 1991 D : includes D-E : 1970=2139; 1980=2009; 1990=3140
 Persons killed are all persons killed within 30 days of the accident. For Member States not using this definition [France (6 days), Italy (7 days), Portugal (1 day), Greece (3 days) and Spain] corrective factors were applied from 1991 (France 1.09 up to 1993 and 1.057 from 1994, Italy 1.078, Portugal 1.3, Greece 1.18, Austria 1.12 for 1991, Spain 1.3 up to 1992). In this table, until 1990, Spanish figures only include those killed within 1 day and Austrian figures within 3 days.

Road Accidents

Number of accidents involving personal injury

1 000

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	77.0	19.8	377.6	18.3	58.0	228.1	6.4	173.1	3.1	58.9	51.6	22.7	11.4	16.6	267.5	1 390.0	100
1980	60.8	12.3	379.2	18.2	67.8	241.0	5.7	163.8	4.0	49.4	46.2	54.1	6.8	15.2	257.3	1 381.9	99
1990	62.4	9.2	340.0	19.6	101.5	162.6	6.1	161.8	4.7	44.9	46.3	45.1	10.2	17.0	265.6	1 296.9	93
1993	54.9	8.5	385.4	22.2	79.9	137.5	6.4	153.4	5.3	40.2	41.8	48.6	6.1	15.0	228.9	1 234.1	89
1994	53.0	8.3	392.8	22.2	78.5	132.7	6.6	170.7	5.4	41.4	42.0	45.8	6.2	15.9	234.1	1 255.6	90
1995	50.7	8.4	388.0	22.8	83.6	132.9	8.1	182.8	5.5	42.6	39.0	48.3	7.8	15.6	244.0	1 280.2	92
1996	48.8	8.0	373.1	23.6	85.6	125.4	8.7	190.1	5.4	41.4	38.3	49.3	7.3	15.3	235.9	1 256.1	90
1997	49.8	8.1	380.8	24.7	86.1	125.2	8.5	190.0	5.2	40.3	39.7	49.4	7.0	15.7	240.1	1 270.5	91

Source : United Nations (Statistics of road traffic accidents), Eurostat

Note : about 1.7 million persons were injured in road accidents in 1997

Railway Fatalities

6.3

Persons killed in accidents involving railways

	B	DK	D	EL	E	F	IRL	I	L	NL	A	P	FIN	S	UK	EU15	index 1970= 100
1970	90	26	599	50	75	273	5	296	2	84	110	200	65	40	129	2044	100
1980	52	18	338	38	74	203	20	228	4	27	75	186	24	49	59	1395	68
1990	20	6	249	34	30	188	14	204	2	43	54	131	36	18	78	1107	54
1995	20	10	275	33	23	129	7	12	3	35	68	95	17	9	28	764	37
1996	26		284	42	21	136	8				47	122	12	16	25		

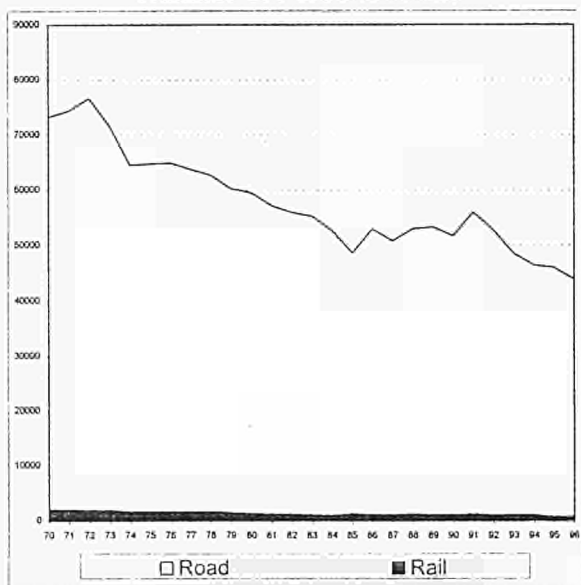
Number of passenger fatalities

1970	3	7	151	1	17	54	0	41	0	10	26	19	5	6	41	381	100
1980	4	3	74	1	17	33	16	48	1	8	9	29	4	25	46	318	83
1990	0	1	50	0	4	30	1	9	0	2	6	22	0	3	37	165	43
1995	3	0	34	3	0	22	0	4	0	0	7	12	1	2	10	98	26
1996	6	0	35	0	0	14	0	1	0	1	3	10	3	0	17	90	24

Source: UIC (UK from 1990: national statistics)

D: includes D-E: 1970=50 (5 pass.), 1980=50 (5 pass.), 1990=51 (5 pass.)

Traffic Safety EU 15 Number of Persons Killed



Fatalities per 1000 million pkm

	Fatalities 1995	Person- km 1995	Fatalities per billion pkm
Pedestrians	7066	163	43
Bicycles	2640	70	38
Powered two-wheelers	6662	120	56
Passenger cars	25008	3650	7
Buses and coaches	215	380	1
Goods vehicles	2056	n.a.	
Other road vehicles	464	n.a.	
Rail passengers	98	270	0.36
Air passengers	73	274	0.27

Note: Road fatalities include drivers and passengers of vehicles
results for road traffic represents non-harmonised data (harmonised results ca. 5 % higher)

Source: for road fatalities: UN-ECE

Air and Sea Fatalities

Air fatalities

	World		EU15*
	number	per billion pkm	number
1990	495	0.3	0
1991	653	0.4	1
1992	1097	0.6	143
1993	936	0.5	13
1994	941	0.4	21
1995	710	0.3	73
1996	1135	0.5	
1997	916	0.4	

Source : ICAO, Airclaims

Note : scheduled services only

* : any nationality of aircraft over EU15 territory

Lives lost at sea

by type of ship

World	1991	1992	1993	1994	1995	1996
Oil	48	2	15	70	2	3
Bulk dry	154	28	41	148	84	50
General cargo	217	78	219	149	192	168
Passenger/gen. cargo	39	-	-	145	2	-
RoRo cargo	-	-	5	51	28	1
Passenger / RoRo cargo	608	1	58	876	-	342
Passenger	17	9	-	-	3	4
not specified	121	128	166	113	68	122
Total	1204	246	504	1552	379	690

Source: Lloyd's Register : World Casualty Statistics

Chapter 7

Environment

Emission Standards

Heavy duty vehicles (Lorries)

grams per kw/h

	as from :	CO	VOCs	NOx	Particulate matter
EURO I	1.10.1993	4.5	1.10	8	0.612 <85 kW 0.36 >85 kW
EURO II	1.10.1996	4.0	1.10	7	0.15
EURO III*	1.1.2000	2.1	0.66	5	0.10

* proposal

Passenger Cars

Petrol grams/km

	as from :	CO	VOCs	NOx
"EURO I"	1.7.1992	3.34	0.66	0.49
"EURO II"	1.1.1996	2.70	0.34	0.25
"EURO III"	1.1.2000	2.30	0.20	0.15
"EURO IV"	1.1.2005	1.00	0.10	0.08

* : as measured on new test cycle for application in year 2000

Diesel grams/km

	as from :	CO	VOCs	NOx	Particulate matter
"EURO I"	1.7.1992	3.34	0.66	0.49	0.18
"EURO II"	1.1.1996	1.00	0.90	-	0.10
"EURO III"	1.1.2000	0.67	0.56	0.50	0.05
"EURO IV"	1.1.2005	0.50	0.30	0.25	0.025

* : as measured on new test cycle for application in year 2000

Emissions by Type of Pollutant

Pollutant	Total emissions EU 15 1995		of which : transport	of which : road transport
	Million tonnes	%	%	%
NO_x Nitrogen oxide	12		64%	51%
Trend 1990-95		-10%	-8%	-9%
CO Carbon monoxide	43		66%	63%
Trend 1990-94 (10 countries)		-19%	-21%	-22%
VOC Volatile organic compounds	13		40%	37%
Trend 1990-95		-12%	-18%	-18%
SO₂ Sulphur dioxide	12		6%	4%
Trend 1990-94 (11 countries)		-30%	-6%	-5%

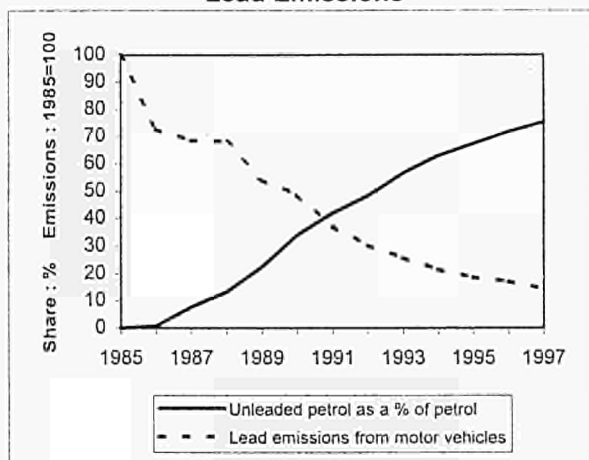
Source : Eurostat, DG VII

Notes :

- Countries with no 1994 data for SO₂ : Greece, Italy, Ireland, Luxembourg
- Countries with no 1994 data for VOC : Greece, Italy, Ireland, Luxembourg, Sweden

Road Vehicles

Lead Emissions



Share of Unleaded Fuel

Percentage share : 2nd quarter 1998

	Diesel	Unleaded petrol	Leaded petrol
B	66	28	6
DK	49	51	0
D	42	58	0
EL	45	26	29
E	57	20	23
F	63	21	16
IRL	43	48	10
I	48	29	23
L	56	40	4
NL	56	44	0
A	63	37	0
P	57	23	20
FIN	47	53	0
S	34	66	0
UK	40	46	13
EU 15	50	38	12

1000 tons of fuel used in 2nd quarter 1998

EU 15	29293	22658	6901
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Source : Eurostat

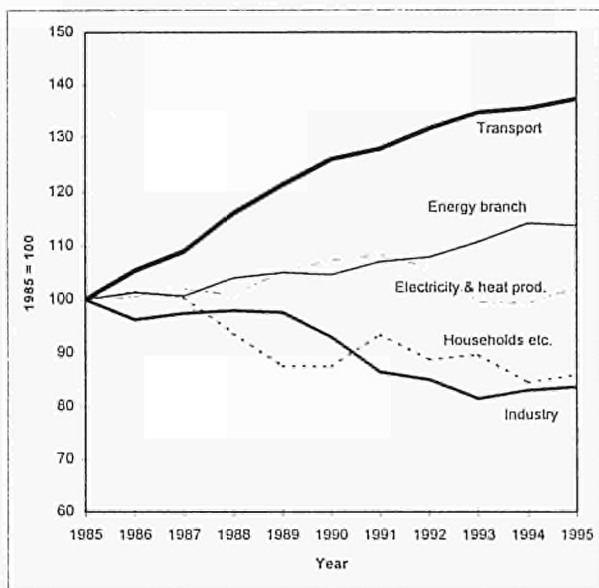
Energy Consumption

	1990	1995	1996	Growth per year 1990-96
	million tonnes oil equivalents			
Gross Inland Consumption	1 236.7	1 366.2	1 417.3	2.3%
minus Losses and Final Non-Energy Consumption	422.9	467.6	473.9	1.9%
Final Energy Consumption	816.8	898.6	943.4	2.4%
of which :				
- Industry	252.6	257.4	266.4	0.9%
	30.9%	28.6%	28.2%	
- Services / households / agriculture	317.5	365.5	393.8	3.7%
	38.9%	40.7%	41.7%	
-Transport	246.7	275.7	283.3	2.3%
	30.2%	30.7%	30.0%	
of which :				
- Rail (1)	6.3	7.4	7.5	2.9%
- Road	206.3	229.0	234.5	2.2%
- Air	27.4	32.5	34.4	3.9%
- Inland navigation	6.7	6.7	6.9	0.5%
Sea (2)	34.85	35.8		

Source : Eurostat

(1) of which petroleum products (million tonnes) 1990: 2.3, 1996: 2.7

(2) Sea (fuel from maritime bunkers) not included in final consumption

CO₂ Emissions (EU 15)CO₂ emissions from fossil fuels

Emissions From Fossil Fuels

Mio tonnes CO₂

	1985		1990		1995	% of EU
	90/85 % p.a.		95/90 % p.a.			
EU 15 (14% of world)	2997	0.6	3088	-0.3	3048	100
Electricity and heat prod.	926.2	1.4	994.1	-1.0	946.4	31
Energy branch	126.1	0.9	132	1.7	143.4	5
Industry	625.8	-1.4	581.8	-2.1	523.4	17
Households, commerce	733.9	-2.6	642	-0.3	630.9	21
Transport	585.3	4.7	737.8	1.7	803.5	26
of which :						
Railways (1)	11.7	-4.9	9.1	-1.4	8.5	0
Road transport	499.7	4.6	626.1	1.6	677.9	22
Air transport	61.5	5.9	82	3.3	96.5	3
Inland navigation (2)	12.4	10.7	20.6	0.0	20.6	1

Notes : (1) : without fossil fuel for electricity production

(2) : including passenger transport and leisure boating

Source : Eurostat

CO₂ Emissions (World)Mio tonnes CO₂

Emissions from fossil fuels	1985	90/85 %p.a.	1990	95/90 %p.a.	1995	% of World	tons per person
World	19491	1.9	21400	0.7	22150	100	4.0
EU 15	2997.3	0.6	3087.7	-0.3	3047.6	14	8.2
USA	4608	1.3	4908	1.3	5229	24	19.9
Japan	910	3.2	1065	1.6	1151	5	9.2
ex-USSR	3534	-1.5	3275	-5.4	2483	11	8.5
China	1871	4.9	2374	4.8	3007	14	2.5
India	427	7.1	602	5.9	803	4	0.9

Source : IEA

Specific Emissions of CO₂ by mode

EU average 1995 (estimate)

grams/passenger km	
Passenger car (1)	125
Bus	45
Railway (2)	65
Air	175

grams/tonne km	
Road freight	190
Railway (2)	30
Inland navigation	30
Sea (intra-EU)	20
Pipeline	7

Source: DG VII

(1) occupancy 1.7 persons/car

(2) The % of railway lines which are electrified represent approximately 75 % of train-km. More than 50% of electrical energy for railways are produced by non-fossil fuels (nuclear, hydro, etc.).

	Fuel density Kg/l at 15°C	Carbon content %	CO ₂ emissions (kg)	
			per l	per kg
Petrol	0.75	85	2.34	3.20
Diesel	0.86	86	2.71	3.15

Noise Emission Limits

for selected vehicles

dB(A)

Motor vehicles

Vehicle category	YEAR			
	1972	1982	1989-90	1995-96
Passenger car	82	80	77	74
Urban bus	89	82	80	78
Heavy lorry	91	88	84	80

Method of measurement described in Council Directive 92/97/EEC of 10 November 1992, Official Journal L371 of 19/12/1992.

Two and three wheelers

Motorcycles	YEAR		
Engine size	1980	1989	1997
< 80 cm ³	78	77	75
>80 cm ³ and < 175 cm ³	80-83	79	77
>175 cm ³	83-86	82	80

Motor assisted cycle	YEAR		
Speed			1997
< 25 km/h			66
> 25km/h			71

Directive 97/24/EC of 17 June 1997, Official Journal L226 of 18/8/1997.

dB (A) : A-weighted decibels , logarithmic scale,

+3dB(A) = doubling of sound pressure level

Aeroplanes

ICAO, Annex 16 classification	Aeroplanes registered in EU Member States* 1996		
Chapter I	3	0.1%	phased out since 1988
Chapter II	331	14.1%	to be phased out by 1.1.2002
Chapter III	2 016	85.8%	

* not including 13 Concorde

Source : Airclaims 9/1996

Chapter 8

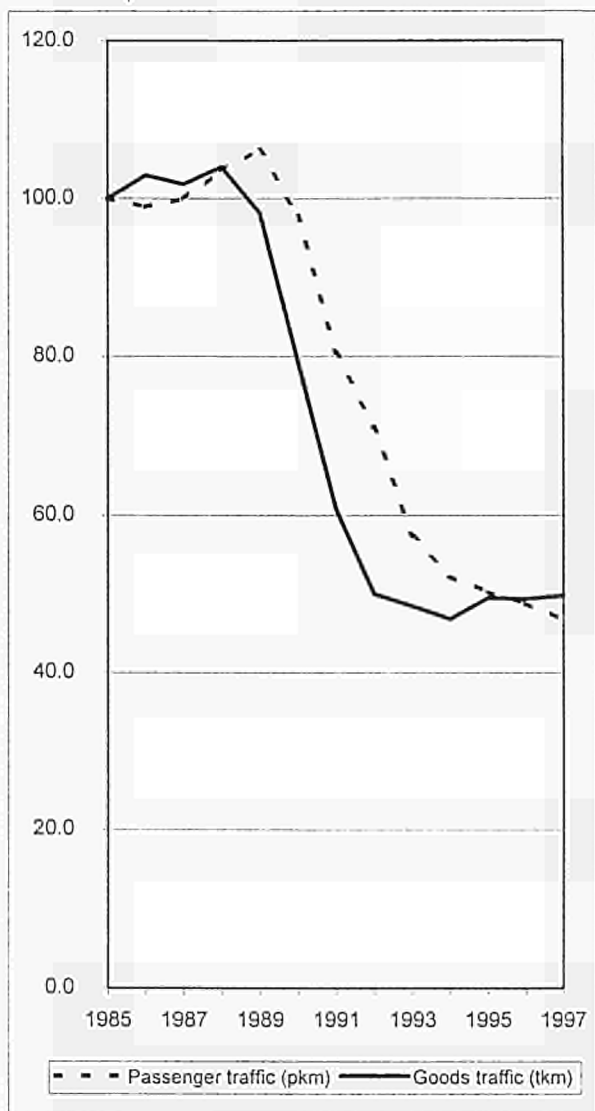
Central and Eastern European Countries (CEC)

BG	Bulgaria
CS	Czechoslovakia (till 1992)
CZ	Czech Republic (from 1993)
EST	Estonia
H	Hungary
LT	Lithuania
LV	Latvia
PL	Poland
RO	Romania
SLO	Slovenia
SK	Slovak Republic (from 1993)

CEC : Railway Transport

Passenger and goods traffic

1985 = 100



CEC : Evolution 1970-97

Performance by mode of transport

1000 mio tkm

	Road	Rail	Inland waterways	Pipelines	Total
1970	55	274	10	16	355
1980	122	364	13	37	537
1985	134	341	13	37	525
1989	145	336	15	39	534
1990	144	270	12	32	458
1994	124	159	6	24	313
1995	132	169	9	23	332
1996	147	168	9	25	349
1997	161	168	10	24	363
1989-97	+ 11.0 %	- 49.9 %	- 32.2 %	- 37.4 %	- 32.0 %

Sources: National statistics, ECMT, UIC

Note : Road : 1997 : break in time series

Average annual change

% per year

	Road	Rail	Inland waterways	Pipelines	Total
1970-80	+8.4	+2.9	+3.0	+8.7	+4.2
1980-89	+1.9	-0.9	+1.0	+0.4	-0.1
1989-97	+1.3	-8.3	-4.7	-5.7	-4.7
1997	+9.5	+0.1	+5.9	-3.6	+3.9

Note : Road : 1997 : break in time series

Modal split

%

	Road	Rail	Inland waterways	Pipelines
1970	15.4	77.3	2.8	4.6
1980	22.8	67.8	2.5	6.9
1985	25.6	64.9	2.4	7.0
1989	27.1	62.9	2.7	7.3
1990	31.5	58.9	2.5	7.1
1995	39.7	50.7	2.6	7.0
1996	42.0	48.1	2.7	7.2
1997	44.3	46.4	2.7	6.7

Goods Transport

8.3

Road

Transport on the territory

1000 mio tkm

	BG	CS	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC	index 1985 = 100	% of all tkm
1970	7.0	10.1			2.4	5.8	3.4	2.9	15.8	5.2	2.1	54.6	41	15.4
1980	13.1	21.3			4.2	11.4	6.9	5.1	44.6	11.8	3.9	122.3	91	22.8
1985	13.5	21.5			4.4	12.7	7.4	5.9	36.6	27.9	4.7	134.5	100	25.6
1989	15.1	23.2			4.8	14.5	8.1	6.0	38.4	30.0	4.6	144.8	108	27.1
1990	13.8	23.3			4.5	15.2	7.3	5.9	40.3	29.0	4.9	144.1	107	31.5
1991	8.0	17.4			3.8	14.0	7.0	4.9	39.6	20.7	4.3	119.8	89	33.1
1992	7.0	14.0			1.5	12.8	5.0	2.5	42.0	15.7	2.8	103.3	77	33.7
1993	8.5		13.0	5.5	1.1	13.4	6.9	1.3	40.7	15.4	2.8	108.5	81	36.1
1994	10.0		22.7	4.9	1.4	13.0	4.6	1.4	45.4	18.3	2.4	124.1	92	39.6
1995	11.0		20.8	5.2	1.6	13.0	5.2	1.8	51.2	19.7	2.4	131.8	98	39.7
1996	11.5		30.1	5.2	1.9	13.1	4.2	2.2	56.5	19.8	2.3	146.7	109	42.0
National and international traffic by vehicles registered in the country														
1997	6.3		40.6	7.3	2.2	18.5	4.7	3.4	63.5	9.2	5.0	160.7	n.a.	44.3

Source: ECMT, national statistics, Eurostat

Note : 1997 data : results of the 1997 Eurostat pilot surveys

Railways

1000 mio tkm

	BG	CS	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC	index 1985 =100	% of all tkm
1970	13.9	55.9			5.1	19.8	13.6	15.5	99.3	48.1	3.3	274.3	81	77.3
1980	17.7	66.2			5.9	24.4	18.2	17.6	134.7	75.5	3.9	364.2	107	67.8
1985	18.2	66.1			6.5	21.8	20.9	19.9	118.9	64.1	4.3	340.6	100	64.9
1989	17.0	66.2			9.6	19.3	21.8	21.1	109.6	67.1	4.2	335.9	99	62.9
1990	14.1	59.4			7.0	16.5	19.3	18.5	81.8	48.8	4.2	269.5	79	58.9
1991	8.7	45.8			6.6	11.6	17.8	16.7	64.0	32.5	3.3	207.0	61	57.2
1992	7.8	44.0			3.4	9.8	11.3	10.1	57.0	24.2	2.6	170.2	50	55.5
1993	7.7		25.2	13.9	3.7	7.1	9.9	9.9	63.3	21.9	2.3	164.8	48	54.8
1994	7.8		22.8	12.3	3.3	6.8	8.0	9.5	64.7	21.6	2.3	159.1	47	50.8
1995	8.6		22.6	13.7	3.6	7.5	7.7	9.8	68.2	24.0	2.9	168.5	49	50.7
1996	7.5		22.2	11.9	3.9	8.0	8.1	12.4	67.4	24.2	2.6	168.2	49	48.1
1997	7.4		20.7	12.4	4.8	8.1	8.6	14.0	67.7	22.0	2.6	168.3	49	46.4

Source: UIC, ECMT

1998: (provisional): 153.4 (-8.8 %)

Goods Transport

8.5

Inland Waterways

1000 mio tkm

	BG	CS	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC	index 1985 =100	% of all tkm
1970	1.83	2.43			0.01	1.76	0.12	0.05	2.30	1.35		9.9	77	2.8
1980	2.61	3.59			0.01	2.15	0.15	0.09	2.33	2.35		13.3	104	2.5
1985	2.00	4.36			0.01	2.14	0.17	0.30	1.41	2.35		12.7	100	2.4
1989	1.95	5.10			0.01	2.11	0.17	0.30	1.19	3.70		14.5	114	2.7
1990	1.61	4.42			0.00	2.04	0.16	0.29	1.03	2.09		11.6	91	2.5
1991	1.02	3.89			0.00	1.72	0.14	0.34	0.74	2.03		9.9	78	2.7
1992	0.84	2.98			0.00	1.60	0.05	0.40	0.75	1.89		8.5	67	2.8
1993	0.46		1.26	0.84	0.00	1.62	0.05	0.00	0.66	1.59		6.5	51	2.2
1994	0.36		1.19	0.85	0.00	1.35	0.03	0.00	0.79	1.90		6.5	51	2.1
1995	0.73		1.32	1.23	0.00	1.26	0.02	0.00	0.88	3.11		8.5	67	2.6
1996	0.63		1.10	1.60	0.00	1.34	0.01	0.00	0.85	3.77		9.3	73	2.7
1997	0.68		0.74	1.52	0.00	1.64	0.01	0.00	0.93	4.33		9.9	77	2.7

Source: ECMT, national statistics

Estimates in italic

Pipelines (Oil)

1000 mio tkm

	BG	CS	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC	index 1985 =100	% of all tkm
1970	0.0	6.4				1.0			7.0	1.8		16.2	44	4.6
1980	0.8	9.8				4.4			17.1	5.2		37.2	102	6.9
1985	1.0	9.0				4.9			17.0	4.8		36.7	100	7.0
1989	0.9	8.5				5.0			17.7	6.7		38.7	106	7.3
1990	0.6	7.5				5.3			13.9	5.1		32.4	88	7.1
1991	0.5	6.2				5.0			10.4	3.2		25.2	69	7.0
1992	0.3	5.3				4.3			11.9	2.6		24.4	67	8.0
1993	0.3		2.0			4.1			12.2	2.5		21.1	57	7.0
1994	0.4		2.2			4.2			14.3	2.8		23.8	65	7.6
1995	0.4		2.3			4.1			13.5	2.9		23.3	63	7.0
1996	0.4		2.3			4.5			15.3	2.7		25.2	69	7.2
1997	0.3		2.1			4.6			15.0	2.3		24.3	66	6.7

Source: ECMT, national statistics

LV: 6 100 mio tkm transit traffic in 1996

LT: 2 000 mio tkm transit traffic in 1995

Passenger Transport													8.7
Railways													
1000 mio pkm													
	BG	CS	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC	index 1985 =100
1970	6.2	20.5			1.2	15.2	2.1	3.8	36.9	17.8	1.5	105.2	80
1980	7.1	18.0			1.6	13.7	3.3	4.8	46.3	23.2	1.4	119.4	90
1985	7.8	19.8			1.6	9.6	3.4	5.2	52.0	31.1	1.7	132.2	100
1989	7.6	19.7			1.6	9.6	3.5	5.6	55.9	35.5	1.4	140.3	106
1990	7.8	19.4			1.5	9.2	3.6	5.4	50.4	30.6	1.4	129.3	98
1992	5.4	16.9			1.0	6.9	2.7	3.7	32.6	24.3	0.5	94.0	71
1993	5.8		8.5	4.6	0.7	6.5	2.7	2.4	24.7	19.4	0.6	75.9	57
1994	5.1		8.5	4.5	0.5	6.4	1.6	1.8	21.8	18.3	0.6	69.1	52
1995	4.7		8.0	4.2	0.4	6.2	1.1	1.4	21.0	18.9	0.6	66.5	50
1996	5.1		8.1	3.8	0.3	6.4	0.9	1.2	19.8	18.4	0.6	64.5	49
1997	5.9		7.7	3.1	0.3	6.5	0.8	1.1	19.9	15.8	0.6	61.7	47
passenger-km per person per year													
1997	704		747	576	178	639	206	461	516	699	310	587	
Source: UIC, ECMT (1970-1980 results) for comparison: bus transport in CEC countries in 1996: 111 bio pkm													

Buses and Coaches

1000 mio pkm

	BG	CS	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC	index 1985 =100
1970	12.2	21.4			2.6	13.6	4.9	3.3	29.1	7.9	2.6	97.7	52
1980	21.6	33.8			3.7	26.4	6.7	4.6	49.2	24.0	4.9	174.8	94
1985	24.7	36.6			4.3	28.0	7.4	5.0	52.1	21.7	6.5	186.3	100
1990	25.9	43.4			4.5	24.1	6.7	5.9	46.3	24.0	6.6	187.2	100
1991	18.9	43.1			3.8	22.3	6.5	4.5	41.7	20.6	4.4	165.8	89
1992	16.8	35.0			3.0	19.4	5.2	2.6	39.0	25.3	3.4	149.7	80
1993	14.0		21.9	11.5	2.5	19.2	3.7	1.7	37.8	19.8	2.8	134.9	72
1994	12.1		16.0	10.9	2.4	18.6	3.8	1.8	34.3	25.0	2.6	127.4	68
1995	11.5		11.0	11.2	2.1	19.1	3.3	1.8	34.0	22.9	2.5	119.5	64
1996	9.2		9.7	11.1	2.1	19.0	2.9	1.6	32.0	12.8	2.4	102.9	55
1997	8.4		8.8	10.6	2.2	18.8	2.6	1.7	33.1	13.5	2.4	102.2	55
passenger-km per person per year													
1997	1 005		853	1 972	1 524	1 847	701	691	858	598	1 206	972	

Source: ECMT

Note : Tram and metro transport is about 15 billion pkm per year

Passenger Cars												8.9	
Vehicle stock												million	
	BG	CS	CZ	SK	EST	H	LT	LV (1)	PL	RO	SLO	CEC	index 1985 =100
1970	0.16	1.00			0.03	0.24	0.05	0.04	0.48	0.04	0.18	2.2	20
1980	0.82	2.12			0.13	1.11	0.25	0.17	2.63	0.24	0.42	7.9	71
1985	1.06	2.73			0.18	1.44	0.34	0.22	3.67	0.95	0.50	11.1	100
1989	1.27	3.12			0.23	1.73	0.45	0.27	4.85	1.22	0.55	13.7	123
1990	1.32	3.24			0.24	1.94	0.49	0.28	5.26	1.29	0.58	14.6	132
1992	1.36	3.48			0.28	2.06	0.57	0.35	6.51	1.59	0.61	16.8	152
1993	1.40		2.69	1.00	0.32	2.09	0.60	0.39	6.77	1.79	0.63	17.7	159
1994	1.59		2.97	0.99	0.34	2.18	0.65	0.42	7.15	2.02	0.66	19.0	171
1995	1.65		3.24	1.02	0.38	2.28	0.72	0.33	7.51	2.20	0.70	20.0	181
1996	1.71		3.32	1.06	0.41	2.43	0.79	0.38	8.05	2.39	0.73	21.3	192
1997	1.75		3.55	1.14	0.43	2.43	0.88	0.43	8.53	2.60	0.77	22.5	203
Cars per 1000 inhabitants :													
1997	209		348	211	293	241	238	175	221	115	390	215	
Source: Eurostat, ECMT, IRF, national statistics													
estimates in italic <u>underlined</u> : change in time series													
(1) change in vehicle register, vehicle stock overestimated before 1994													
CEC passenger car traffic in 1997: ca. 400 bio pkm													

8.10											
Transport Infrastructure											
km											
1996	BG	CZ	SK	EST	H	LT	LV	PL	RO	SLO	CEC
Motorways	314	423	215	65	365	404	0	258	113	310	2 467
State roads	3030	55088	3073	15303	6487	20717	7037	45376	14570	1370	172 051
Provincial/local roads	33943	66449	3921	58800	23197	39161	44618	329315	58477	13189	671 070
All Roads	37287	121960	17867	44168	30049	60282	51655	374949	73160	14869	826 246
Railway lines	4293	9435	3673	1020	7715	1997	2413	23420	11385	1201	66 552
of which electrified	2710	2859	1516	132	2353	122	271	11626	3960	499	26 048
Inland waterways	470	630	172	320	1373	369	347	3812	1613	0	9 106
Oil pipelines	578	736	0	0	2071	399	766	2278	3546	0	10 374
Area (1000 km ²)	110.9	78.9	49.0	45.2	93.0	65.3	64.6	312.7	238.6	20.3	1 079
Railway lines density (length of lines/area) m/km ²	39	120	75	23	83	31	37	75	48	59	62
<i>Source: UN-ECE</i>											
Note : The railways of Estonia, Latvia and Lithuania are broad gauge (1524 mm)											

Airports and Seaports

Traffic at selected major airports

	Million passengers			Change 98/97 %
	1995	1997	1998	
Prague CZ	3.21	4.36	4.63	+6.2
Budapest H	2.94	3.62	3.94	+8.9
Warsaw PL	2.38	3.52	3.82	+9.5
Bucharest RO	1.46	1.47	1.60	+8.7
Sofia BG	1.00	1.08	1.25	+15.3
Ljubljana SLO	0.64	0.71	0.79	+9.3
Riga LV	0.51	0.54	0.55	+3.7
Tallinn EST	0.37	0.50	0.56	+12.1
Vilnius LT	0.35	0.41	0.46	+12.4
Bratislava SK	0.21	0.30	0.33	+10.9

Source: Airport Council International

Traffic at selected seaports

	Million tons loaded/unloaded			Change 97/96 %
	1993	1996	1997	
Constanta RO	26.3	35.8	:	
Ventspils LV	22.4	35.7	36.8	+2.9
Gdansk PL	23.0	16.5	17.4	+5.4
Szceczin PL	14.4	16.3	15.5	-4.4
Bourgas BG	13.6	15.6	:	
Klaipeda LT	15.8	14.8	:	
Tallinn EST	12.5	14.1	17.1	+21.4
Gdynia PL	7.8	8.6	8.8	+3.3
Riga LV	4.7	7.5	:	
Koper SLO	5.2	6.5	:	

Source: ISL, national statistics

External Trade EU 15-CEC

1000 tonnes

EU 15 imports from	1990	1992	1995	1996	1997
Estonia	:	922	3 921	4 436	6 827
Latvia	:	3 714	7 702	6 543	7 486
Lithuania	:	3 712	4 350	3 636	4 227
Poland	27 006	36 473	43 673	40 235	42 349
Czech Rep.	11 204	24 358	22 279	22 136	22 397
Slovak Rep.	<i>inc CZ</i>	<i>inc CZ</i>	6 575	6 002	6 159
Hungary	6 344	6 912	8 332	8 490	8 771
Slovenia	:	1 286	2 512	2 413	2 665
Romania	4 109	2 243	4 741	4 326	4 540
Bulgaria	1 472	1 813	3 923	3 664	4 883
Total 10 countries	50 134	81 434	108 009	101 880	110 303

EU 15 exports to	1990	1992	1995	1996	1997
Estonia	:	628	1 203	1 537	2 047
Latvia	:	602	1 179	1 212	1 650
Lithuania	:	779	576	765	1 135
Poland	3 489	9 332	10 798	14 633	17 001
Czech Rep.	1 482	4 508	5 655	6 885	8 516
Slovak Rep.	<i>inc CZ</i>	<i>inc CZ</i>	1 559	2 111	2 256
Hungary	1 604	2 223	3 538	3 666	4 892
Slovenia	:	1 738	3 404	3 356	4 281
Romania	2 443	3 186	2 776	3 478	2 942
Bulgaria	479	967	1 053	725	1 101
Total 10 countries	9 497	23 962	31 740	38 367	45 821

Source: Eurostat

CEC - MED Countries

	Population	Natural population growth	GDP	GDP (PPP) / capita
	1997 million	1997 %	1997	
			ECU billion	EU=100
Bulgaria	8.4	- 0.5	9.0	23
Czech Rep.	10.2	- 0.2	45.9	64
Slovak Rep.	5.4	+ 0.1	17.2	46
Estonia	1.5	- 0.4	4.1	37
Hungary	10.1	- 0.4	40.4	49
Lithuania	3.7	- 0.2	8.5	30
Latvia	2.5	- 0.5	4.9	27
Poland	38.6	+ 0.1	119.8	37
Romania	22.6	- 0.3	30.8	31
Slovenia	2.0	- 0.1	16.1	68
CEC	104.9	- 0.1	296.5	39
Algeria	29.4	+ 2.2	38.7	21
Cyprus*	0.7	+ 0.9	8.0	75
Egypt	63.1	+ 1.8	63.7	15
Israel	5.8	+ 1.5	83.2	88
Jordan	5.8	+ 2.7	6.0	17
Lebanon	3.1	+ 1.6	12.3	30
Malta	0.4	+ 0.5	2.5	55
Morocco	27.9	+ 1.9	30.3	16
Palestinian Auth.	2.6	+ 3.0	n.d.	n.d.
Syria	15.0	+ 2.4	14.6	15
Tunisia	9.3	+ 1.6	17.1	25
Turkey	63.2	+ 1.5	175.7	32
Mediterranean	226.3	+ 1.8	452.1	23

Source: Eurostat European Commission: Agenda 2000, UN, World Bank

Note: PPP = Purchasing Power Parities

For Mediterranean countries: Gross national product

* : figures refer to the Republic of Cyprus, 1997

Chapter 9

Comparison with USA and Japan

USA : Evolution 1970-96

Performance by mode of transport

1000 mio tkm

	Road (1)	Rail (2)	Inland waterways	Pipelines	Total
1970	602	1 117	343	629	2 691
1975	663	1 101	363	740	2 868
1980	810	1 342	422	859	3 433
1985	891	1 280	410	824	3 405
1990	1 073	1 510	516	853	3 951
1995	1 345	1 906	534	878	4 663
1996	1 440	1 980	518	904	4 842
1990-96	+ 34.1 %	+ 31.1 %	+ 0.5 %	+ 6.0 %	+ 22.5 %

Source: US Department of Transport

(1) Intercity truck traffic

(2) Class 1 railways (91% of rail freight traffic, total traffic 1996 : 2175 bio tkm)

Average annual change

% per year

	Road	Rail	Inland waterways	Pipelines	Total
1970-80	+3.0	+1.9	+2.1	+3.2	+2.5
1980-90	+2.8	+1.2	+2.0	-0.1	+1.4
1990-96	+5.0	+4.6	+0.1	+1.0	+3.4
1996	+7.1	+3.9	-3.0	+3.0	+3.8

Modal split

%

	Road	Rail	Inland waterways	Pipelines
1970	22.4	41.5	12.8	23.4
1975	23.1	38.4	12.7	25.8
1980	23.6	39.1	12.3	25.0
1985	26.2	37.6	12.0	24.2
1990	27.2	38.2	13.1	21.6
1996	29.7	40.9	10.7	18.7

USA : Evolution 1970-96

Performance by mode of transport

1000 mio pkm

	Car *	Railway	Bus	Tram + Metro	Air	Total
1970	3 258	17	81	18	189	3 563
1980	3 926	18	111	18	352	4 424
1985	4 208	18	153	17	467	4 863
1990	4 867	21	196	19	577	5 681
1995	5 701	22	219	18	667	6 627
1996	5 841	22	219	20	716	6 818
1990-96	+ 20.0 %	+ 3.1 %	+ 12.1 %	+ 3.1 %	+ 24.0 %	+ 20.0 %

Source: US Department of Transport

*Passenger car (1996: 3773 bio pkm) and other 2-axle 4-tyre vehicles
(1996: 2068 bio pkm)

Average annual change

% per year

	Car	Railway	Bus	Tram + Metro	Air	Total
1970-80	+1.9	+0.2	+3.2	+0.1	+6.4	+2.2
1980-90	+2.2	+1.8	+5.9	+1.0	+5.1	+2.5
1990-96	+3.1	+0.5	+1.9	+0.5	+3.7	+3.1
1996	+2.5	-1.5	+0.1	+8.6	+7.4	+2.9

Modal split

%

	Car	Railway	Bus	Tram + Metro	Air
1970	91.4	0.5	2.3	0.5	5.3
1980	88.7	0.4	2.5	0.4	8.0
1985	86.5	0.4	3.2	0.4	9.6
1990	85.7	0.4	3.4	0.3	10.2
1996	85.7	0.3	3.2	0.3	10.5

Comparison EU 15 - USA - Japan - World

		EU 15	USA	JAPAN	World	EU % of World
General data						
Population						
million	1997	374	268	126	5 860	6%
Population growth						
%	1997	0.2	1.0	0.2	1.4	1%
Area					(1)	
million km ²	1997	3.24	9.36	0.38	136.26	2%
Population density						
	1997	115	29	334	43	267%
GDP (nominal)						
ECU billion	1997	7 130	6 900	3 710	26 600	27%
GDP per capita (in PPP)						
ECU	1997	19 100	28 600	22 300	5 500	347%
Exports (without intra-EU)						
ECU billion	1997	721	606	371	3 116	23%
Imports (without intra-EU)						
ECU billion	1997	672	792	299	3 201	21%
Vehicle stock and production						
Passenger cars stock						
million	1996	167	134	47	486	34%
Motorization						
cars / 1000 persons	1996	447	506	375	83	539%
Commercial vehicles			(2)			
million	1996	19	77	22	179	11%
Car production						
million	1996	13.7	6.1	7.9	36.7	37%
Com. Vehicles production						
million	1996	1.9	5.7	2.5	14.3	13%
Bicycle production						
million	1996	13.6	8	6.6	101	13%

Sources: UN, World Bank, Eurostat, IRF

(1) This figure for the world's area does not include Antarctica. The Earth's surface is 510 million km², of which land accounts for 149 million km²

(2): many private vehicles (pick-ups, light vans) are classified as commercial

PPP : Purchasing power parities

Comparison EU 15 - USA - Japan - World

		EU 15	USA	JAPAN	World	EU % of World
Transport infrastructure						
Road network						
1000 km	1996	3 500	6 460	1 160	28 000	13%
Motorway network						
1000 km	1996	46	88	6	208	22%
Railway network						
1000 km	1996	166	240	26.5	1 250	13%
Electrified railway lines						
1000 km	1996	76	1.7	17	250	30%
Navig. inland waterways						
1000 km	1996	30	41	0	520	6%
Oil Pipelines						
1000 km	1996	21	276	0.4	580	4%
Transport impact						
Road fatalities						
1000	1996	44.0	41.9	11.7	500	9%
Transport CO₂ emissions						
million tonnes	1995	804	1580	249	4467	18%
Passenger transport						
Passenger car (3)	1996	3 710	5 841	764	15 500	24%
Bus / coach	1996	386	219	95	7 000	6%
Railway	1996	279	22	370	1 900	15%
Tram + metro (4)	1996	41	20	32	250	16%
Air (domestic / intra-EU)	1996	290	716	69	2 650	(2)
Freight transport						
Road	1996	1 151	1 440	306	7 000	16%
Rail	1996	220	2 175	25	6 450	3%
Inland navigation	1996	111	520	0	1 500	7%
Oil pipeline	1996	86	904	0	2 000	4%
Sea (domestic / intra EU)	1996	1 070	596	242	40 000	(2)

Sources: UN, Eurostat, UIC, Fearnleys, IRF

Estimates in Italic

(1): Navigable inland waterways in USA: figures excluding Great Lakes

(2): World indicates total (domestic + international) traffic

(3): Passenger transport includes the use of light trucks in the USA and Japan

(4): Japan: results for tram+metro have been subtracted from the official railway figure

Note: World pkm and tkm totals represent DG VII estimates

Transport CO₂ emissions do not include marine bunkers (=410 mio tonnes)

Conversion factors used for tables 9.1 - 9.4

1 Statute mile	= 1.609 km
1 nautical mile	= 1.852 km
1 US ton	= 0.907 tonnes
1 ton-mile	= 1.459 tonne-km
1 Dollar	= 1.134 ECU (1997)
1 tonne Carbon (C)	= 3.667 Tonnes CO ₂

Statistical Sources

1. Eurostat

Eurostat, Statistical Office of the European Communities

Bech Building, L-2920 Luxembourg

<http://europa.eu.int/eurostat.html>

- *New Cronos (data base)*
- *Transport : Annual Statistics*
- *Air Transport*
- *Maritime Transport*
- *Carriage of Goods : Railways*
- *Carriage of Goods : Road*
- *Carriage of Goods : Inland waterways*
- *Living conditions in Europe*
- *Environment Statistics*
- *Population Statistics*
- *Energy: Yearly Statistics*

Contact points: the Eurostat data shops (see Eurostat web site)

2. International Statistical Sources

United Nations

Economic Commission for Europe (UN-ECE)

Palais des Nations, CH-1200 Genève, Switzerland

Tel +41 22 917 2453

Fax +41 22 917 0039

<http://www.unece.org>

- *Annual Bulletin of Transport Statistics for Europe*
- *Statistics of Road Accidents in Europe*

**European Conference of Ministers of Transport
(ECMT)**

24, rue Louis David, F-75755 Paris Cedex 16, France

Tel +33 1 45 24 97 22

Fax +33 1 45 24 97 42

<http://www.oecd.org>

- *Statistical Trends in Transport*
- *Trends in the Transport Sector*
- *Short term trends survey*

Airports Council International (ACI)

European Region : 6 Square de Meeùs, B-1000 Brussels, Belgium

Tel +32 2 552 0978

Fax +32 2 513 2642

<http://www.aci-europe.org>

- *European Airports Traffic Report*

Association of European Airlines (AEA)

Avenue Louise 350, B-1050 Brussels, Belgium

Tel +32 2 639 8989

Fax +32 2 639 8999

aeasec@aea.infonet.com

- *Yearbook*

Airclaims Limited

Cardinal Point, Newall Road, Heathrow Airport, London TW6 2AS, UK

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European Bicycle Manufacturers Association (EBMA)

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European Automobile Manufacturer's Association (ACEA)

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European Federation of Inland Ports (EFIP)

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Intercontainer-Interfrigo (ICF)

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http://www.icfonline.ch

Institute for Shipping Economics and Logistics (ISL)

Universitätsallee GW 1 Block A, D-28359 Bremen, Germany

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Fax +49 421 2209655

http://www.isl.org

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- Shipping Statistics Yearbook

International Air Transport Association (IATA)

33, Route de l'Aéroport, CH-1215 Geneva Airport, Switzerland

Tel +41 22 799 2525

Fax +41 22 799 2680

http://www.iata.org/ar97

- World Air Transport Statistics

International Civil Aviation Organisation (ICAO/OACI)

999 University Street, Montreal H3C 5H7, Canada

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Fax +514 954 6077

http://www.icao.int

International Road Federation (IRF)

2 chemin de Blandonnet, CH-1214 Vernier, Geneva, Switzerland

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Fax +41 22 306 0270

http://www.irfnet.org/

- World Road Statistics

International Road Union (IRU)

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Fax +41 22 918 2741

http://www.iru.org/

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International Union of Railways (UIC)

16, rue Jean-Rey, F-75015 Paris, France

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Fax +33 1 44 49 20 29

<http://www.uic.asso.fr>

info@uic.asso.fr

- *International Railway Statistics*

Jane's Publications

Coulsden, United Kingdom

Tel +44 181 700 3700

Fax +44 181 763 1006

<http://transport.janes.com/>

- *Jane's World Railways*

- *Jane's Urban Transport Systems*

Light Rail Transit Association (LRTA)

POB 302, Gloucester GL4 4ZD, United Kingdom

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Fax +44 1452 419900

<http://www.lrtta.org>

MDS Transmodal

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Fax +44 1244 348471

<http://www.mdst.co.uk/>

queries@mdst.co.uk

**Union Internationale des Sociétés
de Transport Combiné Rail-Route (UIRR)**

Avenue du Port, 100, bte3, B-1210 Bruxelles, Belgium

Tel +32 2 425 4793

Fax +32 2 425 3827

<http://www.uirr.com>

- *UIRR Report*

Verband der Automobilindustrie e. V.

Westendstrasse 61

60325 Frankfurt am Main, Germany

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Fax +49 069/9 75 07-2 61

<http://www.vda.de/>

3. National Statistical Sources

Belgique/België

Institut National de Statistique (INS)

Rue de Louvain 44, B-1000 Bruxelles, Belgium

Tel +32 2 548 62 11

Fax +32 2 548 62 62

<http://statbel.fgov.be>

Ministère des Communications /

Ministerie van Verkeer en Infrastructuur

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Tel +32 2 233 1211

Fax +32 2 231 1833

<http://www.vici.fgov.be>

as.sg@vici.fgov.be

- *Les transports en Belgique*

Danmark

Danmark Statistik

Sejrogade 11, Postboks 2550, DK-2100 København, Denmark

Tel +45 39 17 39 17

Fax +45 39 17 39 99

<http://www.dst.dk>

dst@dst.dk

- *Transportstatistik*

Deutschland

Statistisches Bundesamt

Gustav-Stresemann-Ring 11, PB 5528, D-65189 Wiesbaden, Germany

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Fax +49 611 753 966

<http://www.statistik-bund.de>

pressestelle@stba.bund400.de

- *Fachserie 8: Verkehr*

Deutsches Institut für Wirtschaftsforschung DIW

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Fax +49 30 897 89 200

<http://www.diw.berlin.de>

- *Verkehr in Zahlen*

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<http://www.statistics.gr>

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Ministerio de Fomento, Centro de Publicaciones
Paseo de la Castellana Pl. 2a, E-28071 Madrid, Spain
- Los Transportes y las Comunicaciones

France

**Institut National de la Statistique
et des Etudes Economiques (INSEE)**
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Service Economique et Statistique (SES)**
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<http://www.equipement.gouv.fr/ecostat/>
- Mémento de Statistiques des Transports

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Ministerio dei Trasporti e della Navigazione
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Piazza della Croce, I-00100 Roma, Italy
<http://www.trasportinavigazione.it>
- Conto nazionale dei trasporti

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économiques (STATEC)**
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<http://www.ine.pt>

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- Estatísticas dos Transportes e Comunicações

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- Transport Statistical Yearbook for Finland

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- Yearbook Transport & Communications

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76 Marsham Street, GB-London W1P 4DR, United Kingdom
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<http://www.detr.gov.uk>

- Transport Statistics Great Britain

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<http://www.ssb.no>

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Switzerland

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Information@bfs.admin.ch

Generalsekretariat EVED, Dienst für Gesamtverkehrsfragen

Kochergasse 10, CH-3003 Bern, Switzerland

- Alpenquerender Güterverkehr auf Strasse und Schiene

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Bureau of Transportation Statistics (BTS)

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Tel +81 3 3202 111

<http://www.stat.go.jp>

Nomenclatures

NST/R
NACE
NUTS

Nomenclatures

1. NST/R : Standard goods classification for transport statistics / revised

List of groups of goods by NST/R groups

Groups of goods	NST/R Chapter	NST/R groups	Description
1	0	1	Cereals
2		02, 03	Potatoes, other fresh or frozen fruit and vegetables
3		00, 06	Live animals, sugar beet
4		5	Wood and cork
5		04, 09	Textiles, textile articles and man-made fibres, other raw animal and vegetable materials
6	1	11, 12, 13, 14, 16, 17	Foodstuffs and animal fodder
7		18	Oil seeds and oleaginous fruits and fats
8	2	21, 22, 23	Solid mineral fuels
9	3	31	Crude petroleum
10		32, 33, 34	Petroleum products
11	4	41, 46	Iron ore, iron and steel waste and blast furnace dust
12		45	Non-ferrous ores and waste
13	5	51, 52, 53, 54, 55, 56	Metal products
14	6	64, 69	Cement, lime, manufactured building materials
15		61, 62, 63, 65	Crude and manufactured minerals
16	7	71, 72	Natural and chemical fertilizers
17	8	83	Coal chemicals, tar
18		81, 82, 89	Chemicals other than coal chemicals and tar
19		84	Paper pulp and waste paper
20	9	91, 92, 93	Transport equipment, machinery, apparatus, engines, whether or not assembled, and parts thereof
21		94	Manufactures of metal
22		95	Glass, glassware, ceramic products
23		96, 97	Leather, textile, clothing, other manufactured articles
24		99	Miscellaneous articles

2. NACE

chapter 60

- 60 Land transport; transport via pipelines**
 - 601 Transport via railways
 - 6010 Transport via railways
 - 602 Other land transport
 - 6021 Other scheduled passenger land transport
 - 6022 Taxi operation
 - 6023 Other land passenger transport
 - 6024 Freight transport by road
 - 602A NACE 6021 + 6022 + 6023
 - 603 Transport via pipelines
 - 6030 Transport via pipelines
- 61 Water transport**
 - 611 Sea and coastal water transport
 - 6110 Sea and coastal water transport
 - 612 Inland water transport
 - 6120 Inland water transport
- 62 Air transport**
 - 621 Scheduled air transport
 - 6210 Scheduled air transport
 - 622 Non-scheduled air transport
 - 6220 Non-scheduled air transport
 - 623 Space transport
 - 6230 Space transport
- 63 Supporting and auxiliary transport activities; activities of travel agencies**
 - 631 Cargo handling and storage
 - 6311 Cargo handling
 - 6312 Storage and warehousing
 - 631A NACE 631+632+634
 - 632 Other supporting transport activities
 - 6321 Other supporting land transport activities
 - 6322 Other supporting water transport activities
 - 6323 Other supporting air transport activities
 - 633 Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
 - 6330 Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
 - 634 Activities of other transport agencies
 - 6340 Activities of other transport agencies
- 64 Post and telecommunications**
 - 641 Post and courier activities
 - 6411 National post activities
 - 6412 Courier activities other than national post activities
 - 642 Telecommunications
 - 6420 Telecommunications

3. NUTS 1999 : Nomenclature of Statistical Territorial Units

Correspondence between the NUTS levels and the national administrative units (NUTS 1-4: 1998; NUTS 5: 1991 (UK 1998))

Country	NUTS 1	N°	NUTS 2	N°	NUTS 3	N°	N° NUTS 4	N° NUTS 5
B	Régions	3	Provinces	11	Arrondissements	43		589
DK	(whole country)	1	(whole country)	1	Amter	15		276
D	Länder	16	Regierungsbezirke	40	Kreise	441		16176
EL	Groups of development regions	4	Development regions	13	Nomoi	51	150	5921
E	Agrupacion de comunidades	7	Com. Autonomas (+CyM)	17+1	Provincias (+ Ceuta y Mellila)	50+2		8077
F	Z.E.A.T (+DOM)	8+1	Régions (+ DOM)	22+4	Départements (+ DOM)	96+4		36664
IRL	(whole country)	1	n.a.	2	Regional Authority Regions	8	34	3445
I	Gruppi di regioni	11	Regioni	20	Provincia	103		8100
L	(whole country)	1	(whole country)	1	(whole country)	1	12	118
NL	Landsdelen	4	Provincies	12	COROP regio's	40		672
A	Gruppen von Bundesländern	3	Bundesländer	9	Gruppen von Polit. Bezirken	35		2351
P	Continente (+ Reg. autonomas)	1+2	Comissaoes de coord. regional	5+2	Grupos de Concelhos	30	305	4208
FIN	Manner-Suomi / Ahvenanmaa	2	Suuralueet	6	Maakunnat	20	85	455
S	(whole country)	1	Riksområden	8	Län	21		286
UK:		12		37		133	443	11206
England	Government Office Regions	9	Counties (some grouped); Inner and Outer London	30	Upper tier authorities or groups of lower tier authorities	93	354	8512
Wales	Country	1	Groups of unitary authorities	2	Groups of unitary authorities or LECs (or parts thereof)	12	22	865
Scotland	Country	1		4		23	41	1247
N. Ireland	Country	1	Country	1	Groups of districts	5	26	582
EUR 15		78		211		1093	1029	98544

European legal acts on transport statistics

Council Regulation (EEC) No 1108/70 of 4 June 1970 introducing an accounting system for expenditure on infrastructure in respect of transport by rail, road and inland waterway (O.J. L 130 of 15.6.1970)

Council Directive (80/1119/EEC) of 17 November 1980 on statistical returns in respect of carriage of goods by inland waterways (O.J. L 339 of 15.12.1980)

Council Directive (80/1177/EEC) of 4 December 1980 on statistical returns in respect of carriage of goods by rail as part of regional statistics (O.J. L 350 of 23.12.1980)

Council Decision (93/704/EC) of 30 November 1993 on the creation of a Community database on road accidents (O.J. L329/63 of 30.12.1993)

Council Directive (95/64/EC) of 8 December 1995 on statistical returns in respect of carriage of goods and passengers by sea (O.J. L 320 of 30.12.1995) and rules for implementation :
Commission Decision (98/385/EC in O.J. L174 of 18.6.1998)

Draft Council Regulation (EC)
on statistical returns in respect of carriage of passengers, freight and mail by air (COM (95) 353 final of 14.09.1995)

Council Regulation (EC) No 1172/98 of 25 May 1998 on statistical returns in respect of carriage of goods by road (O.J. L163 of 6.6.1998)
(replaces Council Directive (78/546/EEC) of 12 June 1978 and Council Directive (89/462/EEC of 18 July 1989)

European Commission

EU transport in figures — Statistical pocketbook — 1999

Luxembourg: Office for Official Publications
of the European Communities

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