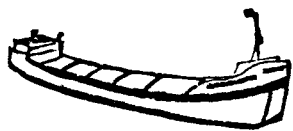


EUROPEAN COMMUNITIES

EUROPA TRANSPORT



OBSERVATION OF TRANSPORT MARKETS

ANNUAL REPORT 1986



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PRESENTATION OF THE 1986 ANNUAL REPORT

The "Europa Transport" publications present a substantial part of the statistical information on the international intra-Community transport of goods collected under the "Market Observation System".

Three reports are published :

- Analysis and Forecasts
- Annual Report
- Market Developments.

The contents of the following "Annual Report 1986" are as follows:

Chapter 1: General Assessment
 All 3 modes

Chapter 2: Road

- 2.1 Intra Eur-12 international road activity in 1986
- 2.2 Detailed analysis of the intra EUR-10 international road haulage market in 1985
- 2.3 Cross-trades, an analysis of the multilateral intra EUR-10 international road haulage market in 1985 and EUR-12 estimates for 1986
- 2.4 Traffic with Spain and Portugal (tonnages)
- 2.5 Transit traffic through Austria and Switzerland
- 2.6 Transport Inquiry Surveys
- 2.7 Price and cost indices

Chapter 3: Inland Waterways

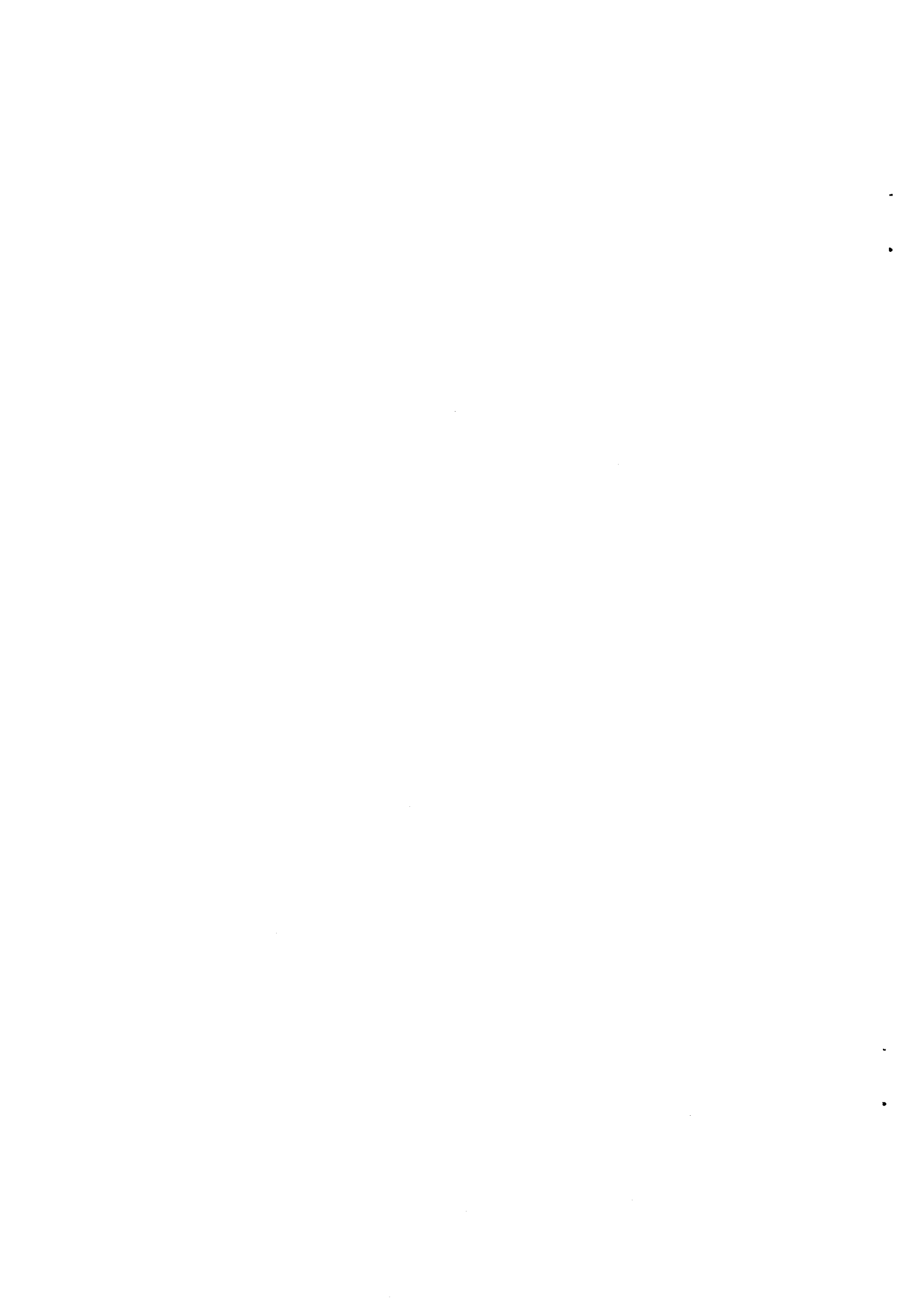
- 3.1 Overall development of the traffic
- 3.2 Development by relation
- 3.3 Inland Waterways transport by commodity groups
- 3.4 Inland Waterways transport by transport market
- 3.5 Fleet developments and overcapacity
- 3.6 Inland Waterways transport by flag
- 3.7 Transport inquiry survey
- 3.8 Cost and prices indices

Chapter 4: Rail

- 4.1 General traffic development
- 4.2 Traffic development by relation
- 4.3 Traffic development by commodities
- 4.4 Railway price indices

Chapter 5: Combined transport

- 5.1 Container transport (1986)
- 5.2 Piggy-back transport (1986)



CHAPTER 1

General market assessment - All modes

General Note

Except where otherwise stated, all Community totals in this Report refer to EUR-12 even prior to 1986; it follows that the Community totals are not generally comparable with those published in previous Annual Reports.

1.1 Volumes of international transport within the Community

International intra-Community transport rose to a record high in 1986 with a modest increase of 2.0%. This growth was less than predicted and reflects the growing difficulty of forecasting global traffic volumes in terms of "simple" macro indicators such as gross domestic product (gdp) or industrial production.

The road traffic growth of 4.7% in 1986 was almost identical with the two previous years (+5.6%, 5.0%). For the last 3 years gdp grew at 2.4%, 2.5% and 2.6% so that growth of road traffic has been almost exactly twice that of gdp. As other modes showed slower growth, road continued to strengthen its share in the market.

Rail traffic suffered a sharp decline in 1986 principally due to the further deterioration in the steel industry and the fact that the last quarter was particularly favourable to inland waterways due to less adverse weather conditions.

Inland waterway traffic increased faster than total traffic (for only the second time since 1979), but the outstanding event in 1986 was without doubt the "boom and slump" on the liquid cargo market.

Combined transport was held back by strikes and the reduction in milk transport, following the Tchernobil accident, but, despite this, traffic losses were restricted to 2% in 1986.

Table 1.1 Annual intra EUR-12 tonnage flows by mode of transport (mio tonnes)

Year Mode	1983	1984	1985	1986 (provisional)
Road	185.6	195.9	205.8	215.5
Rail	60.3	68.0	68.5	61.0
I.W.	182.5	192.0	185.8	192.6
Total	428.4	455.9	460.1	469.1

Table 1.2 Annual growth rates - intra EUR-12 tonnage flows (%)

Year Mode	84/83	85/84	86/85
Road	+ 5.6	+ 5.0	+ 4.7
Rail	+12.8	+ 0.7	-10.9
I.W.	+ 5.2	- 3.2	+ 3.7
Total	+ 6.4	+ 0.9	+ 2.0

Table 1.3 Differential growth rates
(Modal growth rate minus total growth rate)

Year Mode	84/83	85/84	86/85
Road	- 0.8	+ 4.1	+ 2.7
Rail	+ 6.4	- 0.2	-12.9
I.W.	- 1.2	- 4.1	+ 1.7

Note: In tables 1.1, 1.2 and 1.3 B and L have been combined, i.e. traffic between B and L is excluded.

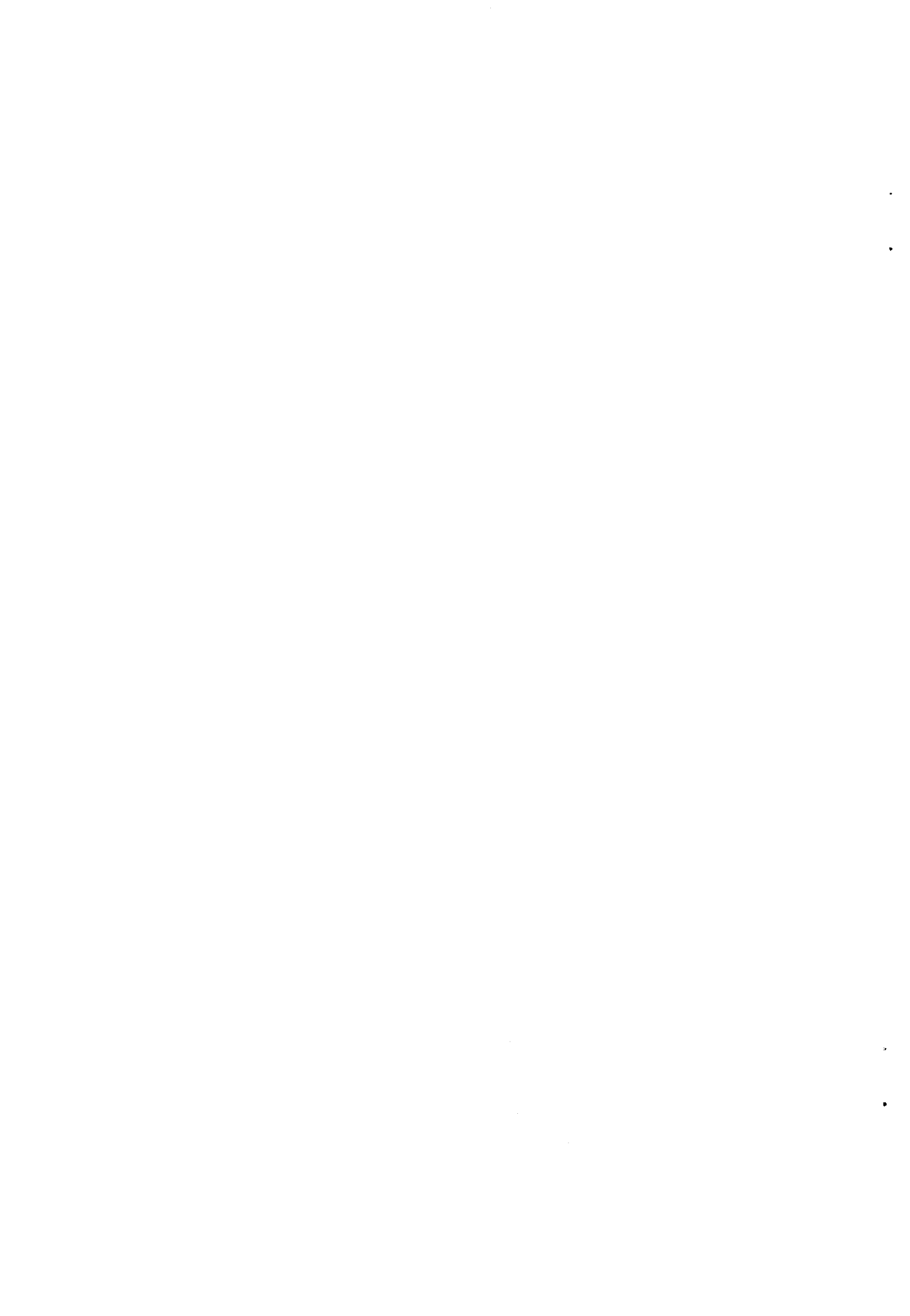
1.2 Modal split

Table 1.4, which gives the annual modal split development, shows the continued increasing market share of road.

The 1986 decline in rail share completely wiped out the gain achieved in 1984 and maintained in 1985. Inland waterway share continues gradually downward. Readers will note that the change from EUR-10 to EUR-12 has increased the road share by about 1% so that road is now higher than inland waterway over the whole period examined.

Table 1.4 Modal split evolution (EUR-12)

Year	Road %	Rail %	I.W. %	Total %
1983	43.3	14.1	42.6	100
1984	43.0	14.9	42.1	100
1985	44.7	14.9	40.4	100
1986 (prov.)	45.9	13.0	41.1	100



CHAPTER 2

ROAD

Contents

The contents of Chapter 2 can be summarized as follows :

- § 2.1 : Intra EUR-12 international road activity in 1986.
- § 2.2 : Detailed analysis of the intra EUR-10 international road haulage market in 1985.
- § 2.3 : Cross-trades, an analysis of the multilateral intra EUR-10 international road haulage market in 1985 and EUR-12 estimates for 1986.
- § 2.4 : Traffic with Spain and Portugal - tonnages.
- § 2.5 : Transit traffic through Austria and Switzerland.
- § 2.6 : Transport Inquiry Surveys.
- § 2.7 : Price and Cost indices.

2.1 Intra EUR-12 international road activity in 1986

2.1.1 Introduction

Annual data for 1986 at Community level from the Road Directive is only available several months after the completion of this Report. Pending an extension to the Directive to supply simple quarterly data more quickly, comments on 1986 have to be based on national sources. For consistency it is now proposed to use the same series as are produced in the Quarterly "Market Developments Report"; these series run from 1983 and include Spain and Portugal, they do not, however, include any breakdown by nationality of haulier. The former analysis by nationality of haulier (from national sources) will be discontinued until data from the "extended Directive" is available.

2.1.2 Total Intra EUR-12 tonnages, 1986

International road transport between the 12 States that now form the EEC continued to grow strongly in 1986, the increase is provisionally estimated to have been 4.7 %. This increase was only marginally less than in 1984 (5.6 %) and 1985 (5.0 %) despite a much lower increase in industrial production (1.9 % in 1986 compared to 2.7 % in 1984 and 3.3 % in 1985).

Road transport continued its traditional position as being the mode with the highest growth rate.

2.1.3 Intra EUR-12 tonnages by relation, 1986

Table 2.0 gives the tonnages (in millions) for each relation (Belgium and Luxembourg combined) for 1986 together with the percentage change from the previous year. In a few cases the 1986 figures are not yet available and it has been necessary to insert the value from the previous year; in these cases the percentage change is shown as N (Not known).

The 15 major flows (those over 5 million tonnes) all occur on the relations between D, F, I, NL and B/L. For these major flows the largest observed increase in 1986 was NL → B/L (up 11 %) followed by NL → F (up 9 %); the only flow to decline was D → B/L (down 6 %).

The intermediate flows (those between 1 and 5 million tonnes) are more diversely oriented. Large increases were observed to and from Spain (D → E (up 31 %), E → D (up 30 %), F → E (up 22 %), E → F (up 13 %)) and also NL → UK (up 23 %); the only flow to decline was D → UK (down 6 %).

For the smaller flows (under 1 million tonnes) there are often large changes; it is, however, more appropriate to examine the row and column totals of Table 2.0; this is done in the next section.

2.1.4 Development of inward and outward tonnages for each Member State, 1983-1986.

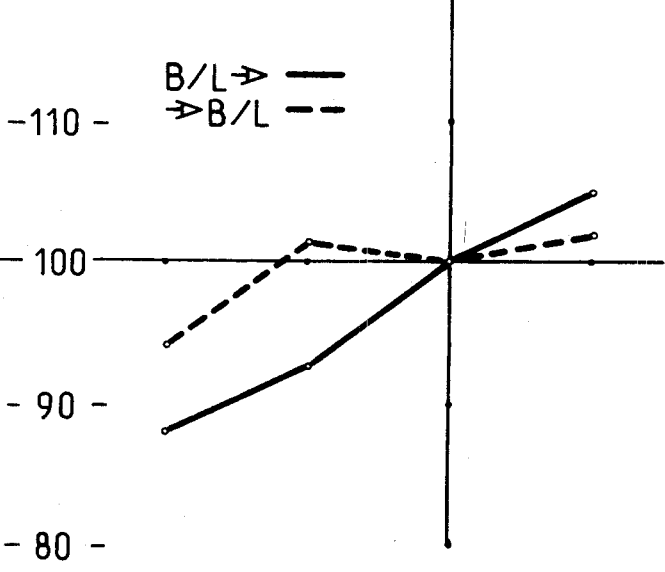
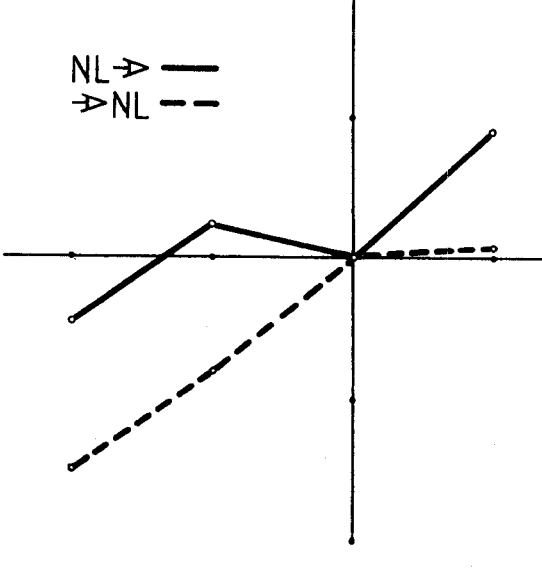
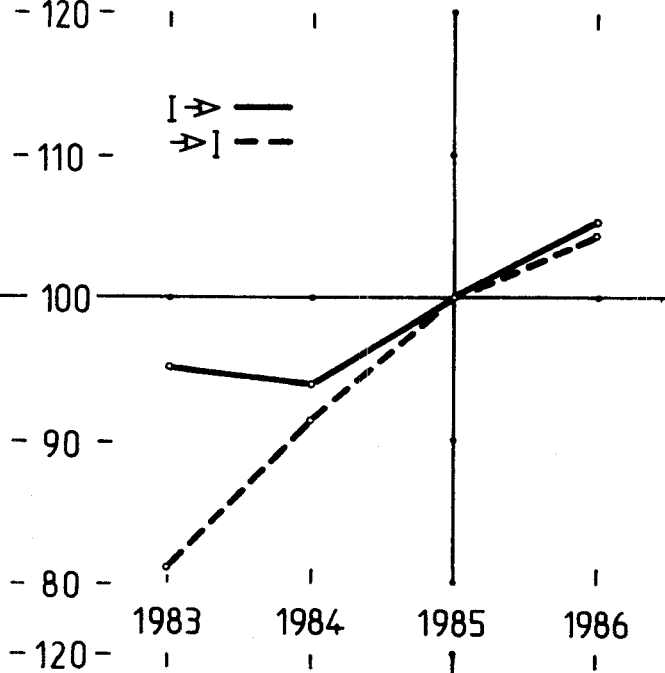
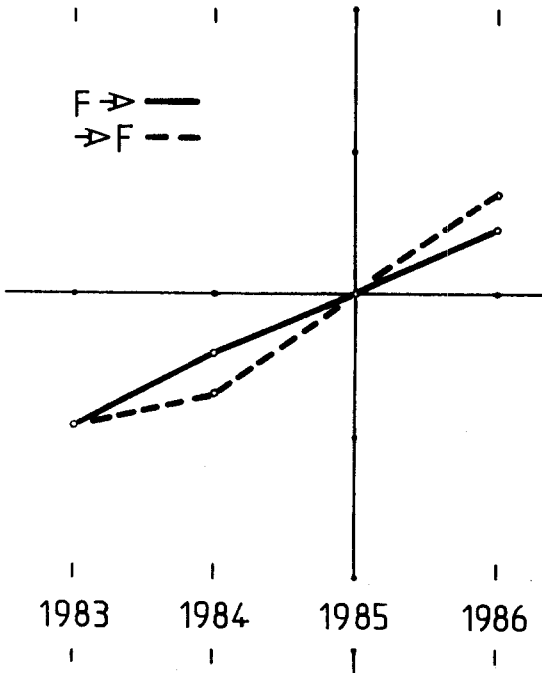
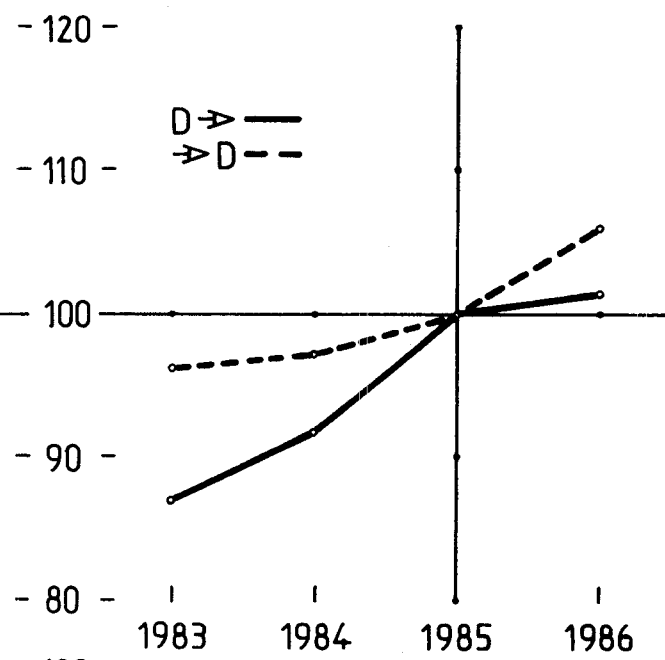
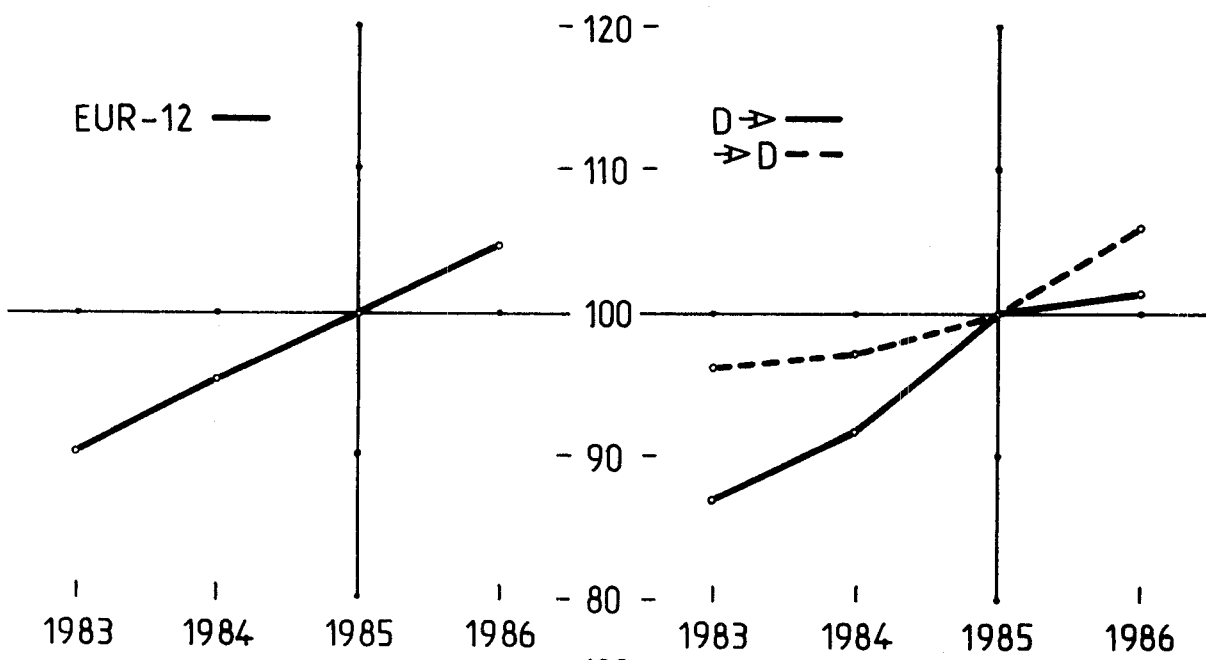
Graph 2.0 shows the development of inward and outward tonnages for each Member State together with that for Intra-EUR-12 as a whole (the development of inward and outward flows are necessarily equal). Each graph uses 100 as the base in 1985 permitting the quick identification of the 1985 to 1986 change (the figures are also shown in the margins of Table 2.0) as well as the maintenance (or otherwise) of recent trends since 1983.

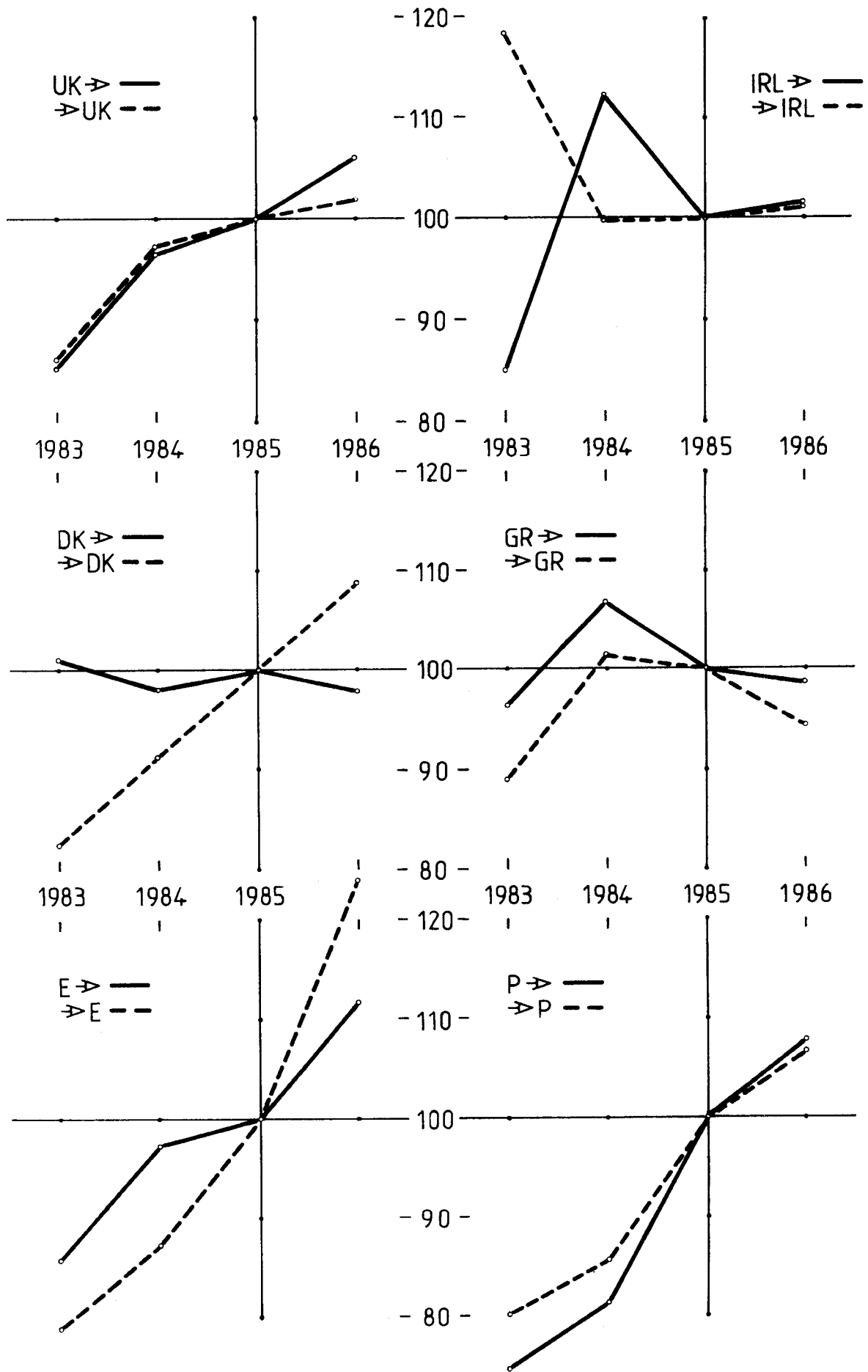
A very diverse pattern emerges from these graphs. The most outstanding features are:

- (i) the rapid growth of traffic with Spain and Portugal consequent on adhesion (both pre-adhesion and post-adhesion).
- (ii) the decline of traffic with Greece (since 1984).
- (iii) the stagnation of outward traffic from Denmark compared the high growth of inward traffic.
- (iv) the resurgence of outward traffic from the Netherlands.

Table 2.0 Total international traffic by relation: year 1986 and % evolution on 1985

Mio tonnes	TO From	D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	Total
	D		11.3 + 4 %	6.7 + 4 %	19.1 + 2 %	10.0 - 6 %	1.3 - 6 %	0.1 + 5 %	2.5 + 7 %	0.3 + 4 %	1.0 +31 %	0.2 +21 %	52.5 +1.4 %
	F	12.8 + 4 %		6.2 + 4 %	3.4 + 3 %	12.7 + 2 %	2.4 + 1 %	0.0 - 4 %	0.3 + 6 %	0.1 -15 %	3.6 +22 %	0.3 +24 %	41.9 +4.6 %
	I	6.4 + 4 %	5.2 + 7 %		0.9 - 6 %	0.9 + 7 %	1.5 - 0 %	0.1 + 4 %	0.2 + 9 %	0.1 - 4 %	0.6 +42 %	0.1 +37 %	16.0 +5.5 %
	NL	17.2 + 7 %	5.1 + 9 %	2.1 + 6 %		10.7 +11 %	1.0 +23 %	0.1 +20 %	0.6 +11 %	0.1 -32 %	0.5 +40 %	0.1 +28 %	37.4 +8.9 %
	B/L	11.7 + 8 %	18.7 + 8 %	1.5 +12 %	14.1 - 1 %		1.0 + 4 %	0.1 + 2 %	0.4 +11 %	0.1 -15 %	0.4 + 6 %	0.1 +26 %	47.9 +5.0 %
	UK	0.9 +11 %	1.5 + 8 %	1.3 + 3 %	0.4 +15 %	0.6 + 3 %		0.6 N	0.2 +10 %	0.0 -20 %	0.2 N	0.0 N	5.9 +6.1 %
	IRL	0.1 +12 %	0.1 + 2 %	0.1 - 5 %	0.0 -40 %	0.1 -19 %	0.5 + 9 %	N	0.0 +51 %	0 N	0.0 N	0 N	0.8 +1.6 %
	DK	3.0 - 1 %	0.3 + 5 %	0.3 -23 %	0.3 - 5 %	0.1 +12 %	0.5 - 5 %	0.0 + 0 %	0.0 + 0 %	0.0 + 8 %	0.0 +43 %	0.0 +114 %	4.6 -2.2 %
	GR	0.4 + 5 %	0.1 + 5 %	0.1 - 3 %	0.1 -22 %	0.0 + 1 %	0.0 -29 %	0 N	0.0 + 6 %	0 0.0	0.0 -54 %	0 N	0.7 -1.5 %
	E	1.1 +30 %	3.4 +13 %	0.8 +14 %	0.5 +12 %	0.3 - 2 %	0.4 N	0.0 -25 %	0.1 +32 %	0.0 +320 %	0.0 + 0.3	0.3 -25 %	6.8 +11.6 %
	P	0.1 +19 %	0.3 + 8 %	0.1 -14 %	0.1 +15 %	0.1 - 0 %	0.0 N	0 N	0.0 + 7 %	0.0 N	0.3 +14 %		0.9 +7.9 %
	Total	53.7 +6.1 %	46.0 +7.1 %	19.1 +4.6 %	38.8 +0.8 %	35.6 +1.9 %	8.6 +2.1 %	1.0 +1.3 %	4.3 +8.7 %	0.7 -5.7 %	6.6 +23.9 %	1.0 +6.5 %	215.5 +4.7 %





2.2 Detailed analysis of the intra EUR-10 international road haulage market in 1985

2.2.1 Introduction

As explained earlier, the data currently available for 1986 are taken from many different sources and do not permit a detailed structural analysis to be carried out with sufficient consistency and reliability.

The most extensive comparable data currently available relate to those collected for the Road Statistical Directive for 1985.

- Note that:
- a) bilateral traffic is covered by the Directive but that cross-trade traffic is not (= traffic by haulier from Member State A between Member State B and Member State C).
 - b) Tonnages for Italian hauliers relate to foreign trade statistics; the tonne-kilometres have been estimated assuming that the average distance to each Member State is the same as that of the hauliers from the partner country.
 - c) Tonnages for Luxembourg hauliers for 1983 and 1984 from the Directive have not yet been delivered to the SOEC; 1982 data continues to be used provisionally for 1983 and 1984.
 - d) The figures for the UK are particularly sensitive to the problem of unaccompanied semi-trailers which are not recorded in the road Directive statistics and should consequently be treated with some reserve. Further UK-traffic across the Northern Ireland/Republic of Ireland land boundary is excluded, this exaggerates the apparent share of Irish hauliers both to UK and EUR-10 total (table 2.5).

2.2.2 Intra EUR-10 international road traffic - Tonnages

Table 2.1 Total international bilateral traffic by relation: year 1985 and % evolution on 1984

To From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10
D		9 350	5 276	17 947	8 394	1 000	708	27	2 444	299	45 445
F	11 575	1.7%	8.0%	5.0%	5.8%	N	- 6.0	-38.6%	12.1%	- 8.6%	5.3%
I	- 2.1%	5 714	1.4%	6.3%	5.2%	N	2 008	43	329	88	33 624
NL	5 918	4 873	1 073	1 127	22	1 086	15.8%	-21.8%	17.1	- 5.4%	2.8%
B	- 3.2%	- 2.3%	10.8%	5.4%	N	802	- 7.3%	11.3%	2.6%	-28.7%	- 2.0%
L	16 642	4 051	1 688	10 535	136	136	802	44	620	92	34 610
UK	1.9%	6.8%	- 0.1%	8.1%	N	N	15.1%	41.9%	11.5%	-15.6%	4.5%
IRL	8 148	14 131	1 272	13 081	1 136	1 136	400	11	209	30	38 418
DK	- 0.1%	2.2%	1.4%	4.6%	N	N	0.3%	83.3%	7.2	-11.8%	2.6%
GR	1 747	556	31	177	797	45	45	-	-	1	3 354
EUR-10	N	N	N	-	N	N	N	-	-	-	N
	563	1 165	771	400	248	7	754	754	149	17	4 074
	5.8%	11.3%	- 6.5%	13.0%	-	N	18.7%	18.7%	10.4%	-39.3%	6.8%
	23	86	36	13	10	2	471	4	4	3	648
	-14.8%	-14.9%	2.9%	-	25.0%	-	-18.1%	33.3%	33.3%	200.0%	-15.1%
	2 595	236	298	361	106	-	455	18	33	33	4 102
	- 1.7%	- 2.5	24.7%	2.8%	-13.8%	-	- 8.3%	-	-	6.5%	- 0.9%
	347	37	229	83	19	-	24	-	13	-	752
	- 8.9%	-43.9%	-56.0%	18.6%	-	-	9.1%	-	-	-	-31.1%
	47 558	34 485	15 315	35 799	31 920	2 822	5 999	966	4 005	779	179 648
	0.4%	2.1%	1.4%	5.1%	5.7%	N	3.2%	13.5%	11.4%	-16.0%	3.2%

'000 TONNES

Table 2.2

International traffic per relation by hauliers registered in the country of unloading:
Year 1985 and % evolution on 1984

TO From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR 10
D		4111	2484	12212	4074	586	400	14	1299	256	25436
F	6637	-3.5%	13.3%	3.7%	4.7%	N	- 5.2%	-53.3%	4.8%	- 8.6%	3.9%
I	2878	2796	- 3.2%	7.7%	11.0%	N	8.6%	-14.6%	- 5.0%	-34.4%	5.3%
NL	4228	1238	618	12.2%	7.0%	N	- 4.5%	45.2%	5.7%	-14.5%	5.3%
B	3572	5274	481	8012	5.6%	N	- 4.8%	50.0%	1.9%	-20.2%	2.8%
L	1013	366	0.8%	0.4%	335	N	- 0.8%	83.3%	7.0%	-11.8%	2.3
UK	197	554	-	N	N	2	N	-	-	-	1824
IRL	14.5%	4.3%	-11.8%	35.2%	75.0%	-	-	22.7%	3.1%	-27.3%	9.2%
DK	10	4	18	3	-	-	46	-	4	-	85
GR	11.1%	33.3%	-10.0%	-25.0%	-	-	-16.4%	-	33.3%	-	- 9.6%
EUR-10	19408	14369	6654	23364	14606	1485	2127	787	2152	497	85449
	2.9%	3.5%	-2.6%	3.0%	6.4%	N	-0.9%	19.8%	3.7%	-13.6%	3.5%

'000 TONNES

Table 2.3 International traffic per relation by hauliers registered in the country of loading:
Year 1985 and % evolution on 1984

TO	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR 10
From		5239	2792	5735	4320	414	308	13	1145	43	20009
D	4938	6.2%	3.6%	7.6%	6.9%	N	6.2%	- 7.1%	21.7%	-8.5%	7.1%
F	- 5.4%		3254	798	3747	215	1363	2	137	67	14521
I	3040	2077	5.1%	3.1%	- 4.0%	N	19.6%	-71.4%	75.6%	9.8%	- 0.2%
NL	- 5.4%	-16.7%		366	470	-	687	24	88	116	6868
	12414	2813	1070	8.3%	3.3%	-	- 8.8%	-22.6%	- 2.2	-37.6%	- 9.2%
B	0.8%	8.4%	11.8%		7981	113	525	5	409	18	25348
L	4576	8857	791	5068	8.9%	N	29.3%	-	17.2%	20.0%	5.2%
UK	- 3.5%	0.2%	1.8%	13.5%		N	48	-	56	-	19984
IRL	734	190	31	73	463		9.1%	-	7.7%	-	2.7%
DK	N	N	N	N	N		40	-	-	-	1531
GR	366	611	396	185	233	5	-	-	-	-	N
EUR-10	366	611	396	185	233	5	-	-	-	-	N
	1.7%	18.4%	- 1.0%	- 5.6%	- 2.9%	N	425	1.7%	250.0%	-47.1%	4.2%
	13	82	18	10	10	2				3	563
	-27.8%	-16.3%	20.0%	11.1%	25.0%	-	-18.3%			200.0%	-15.8%
	1748	214	207	123	72	-	453	14		27	2858
	- 8.0%	6.5%	14.4%	- 1.6%	- 1.4%	-	- 8.3%	-22.2%		8.0%	- 5.3%
	321	34	102	75	19	-	23	-	4		578
	- 8.8%	-24.4%	-24.4%	17.2%	-	-	27.8%	-	-	-	- 9.3%
	28150	20117	8661	12433	17315	1337	3872	179	1853	283	94200
	- 1.2%	1.1%	4.7%	9.3%	5.0%	N	5.6%	-7.7%	22.1%	-19.6%	2.9%

'000 TONNES

Table 2.4 Shares of the market held by hauliers from EUR-10 on
intra EUR-10 international journeys

Tonnages

Member State	1 9 8 5			% change 1985/1984	Share %		
	I N	+ O U T	= Total		1983	1984	1985
D	19 408	+ 20 009	= 39 417	+ 5.0	21.9	21.6	21.9
F	14 369	+ 14 521	= 28 890	+ 1.6	16.0	16.3	16.1
I	6 654	+ 6 868	= 13 522	- 6.0	8.8	8.3	7.5
NL	23 364	+ 25 348	= 48 712	+ 4.1	26.7	26.9	27.1
B	14 606	+ 19 984	= 34 590	+ 4.3	18.3	19.0	19.3
L	1 485	+ 1 531	= 3 016	NA	(1.3)	(1.3)	1.7
UK	2 127	+ 1 940	= 4 067	+ 1.5	2.4	2.3	2.3
IRL	787	+ 563	= 1 350	+ 1.8	0.8	0.8	0.8
DK	2 152	+ 2 858	= 5 010	- 1.6	3.1	2.9	2.8
GR	497	+ 578	= 1 075	-11.3	0.7	0.7	0.6
EUR-10	85 449	+ 94 200	= 179 649	+ 3.2	100	100	100

Table 2.1 shows an overall increase of + 3.2% of the tonnage in bilateral traffic moved in 1985, compared with 1984.

Significant increases were noted for traffic to Ireland (+ 13.5 %) and to Denmark (+ 11.4 %) while there was a 16 % fall in traffic to Greece. A large increase occurred for traffic from U.K. (+ 6.8 %), but there were substantial falls in the traffic to Ireland (- 15.1 %) and to Greece (- 31.1 %). For the major flows (over 5 million tonnes) the largest increases were NL \Rightarrow B (up 8.1 %) and D \Rightarrow I (up 8.0 %), the largest fall was I \Rightarrow D (down 3.2 %).

Tables 2.2 and 2.3 break down the "bilateral" tonnage movements into those carried by hauliers from the country of unloading and the country of loading respectively.

The margins of tables 2.2 and 2.3 lead to the results of table 2.4 where the market share, per Member State of haulier, is expressed for 3 consecutive years. For 1985, Greek and Italian hauliers lost market share. German hauliers improved their market share.

The detail, by transport relation, is given in table 2.5.

Table 2.5 Percentage share of traffic (in tonnes) held by hauliers from "origin" Member States (1)

From \ To	Year	D	F	I	NL	B	L	UK	IRL	DK	GR	Total EUR - 10
D	83	-	52	54	31	53	-	35	22	41	13	43
	84	-	54	55	31	51	-	41	32	43	14	43
	85	-	56	53	32	51	41	44	48	47	14	44
F	83	38	-	56	32	40	-	62	9	23	46	43
	84	44	-	55	31	38	-	66	13	28	66	44
	85	43	-	57	30	35	41	68	5	42	76	43
I	83	56	53	-	44	50	-	68	59	41	69	55
	84	53	50	-	35	42	-	64	50	39	61	51
	85	51	43	-	34	41	-	63	35	37	54	47
NL	83	75	68	59	-	76	-	52	23	62	12	73
	84	75	68	57	-	75	-	58	16	63	14	73
	85	75	69	63	-	76	83	65	11	66	20	73
B	83	58	64	61	37	-	-	6	21	26	0	52
	84	58	64	62	36	-	-	11	0	27	0	52
	85	56	63	63	39	-	52	12	0	27	0	52
L	83	-	-	-	-	-	-	-	-	-	-	-
	84	-	-	-	-	-	-	-	-	-	-	-
	85	42	34	-	41	58	-	89	-	-	-	46
UK	83	75	52	57	66	98	-	-	16	4	52	51
	84	68	49	48	55	97	-	-	19	3	61	49
	85	65	52	51	46	94	71	-	16	9	53	48
IRL	83	83	85	61	83	100	-	88	-	40	100	86
	84	67	97	43	69	100	-	90	-	0	100	88
	85	57	95	50	77	100	100	90	-	0	100	87
DK	83	75	87	77	34	72	-	99	86	-	69	76
	84	72	83	76	36	59	-	99	100	-	81	73
	85	67	91	69	34	68	-	100	78	-	82	70
GR	83	91	75	23	90	100	-	93	-	36	-	60
	84	92	68	26	93	100	-	86	-	33	-	59
	85	93	92	45	90	100	-	96	-	31	-	77
EUR-10	83	59	59	55	34	57	-	62	19	41	38	53
	84	60	59	55	33	55	-	63	23	42	38	53
	85	59	58	57	35	54	47	65	19	46	36	52

Since table 2.5 only relates to "bilateral" traffic, the sum of the shares of traffic held by hauliers from the "origin" and "destination" country is necessarily 100%; hence the shares of traffic by hauliers from "the destination" country can be obtained by subtracting the share held by the "origin" country in table 2.5 from 100%. Example D hauliers have 57% of the traffic from F to D and 41% of the EUR-10 traffic to D (in 1985).

(1) Italian, Danish and Greek data give no breakdown between Belgium and Luxembourg; in compiling the marginal EUR-10 totals, the traffic for these 3 Member States is assumed to be with Belgium.

Table 2.6. Outward/Inward tonnage ratios by country of haulier

Member State of haulier	Ratio OUT/IN		1985
	1983	1984	
D	.93	.99	1.03
F	.94	1.05	1.01
I	1.42	1.11	1.03
NL	1.06	1.06	1.08
B	1.54	1.42	1.37
(L)	NA	NA	1.03
UK	.91	.87	.91
IRL	.67	1.02	.72
DK	1.62	1.45	1.33
GR	.98	1.11	1.16
EUR-10	1.11	1.11	1.10

Table 2.6 shows the ratio of outward/inward tonnages by country of haulier. A high ratio indicates difficulties in obtaining backhauls, a ratio close to 1.0 indicates well-balanced traffic and a low ratio that hauliers have to make empty journeys outwards to obtain return loads. It should be noted that this is a rather "simple" indicator which ignores both the fact that specialized vehicles may not find suitable backhauls and the fact that the volume/weight ratios may be different in the two directions.

The results of Table 2.6 show that the overall outward/inward ratio remains stable at about 1.11 but that the spread of ratios around this average remains much reduced (unweighted standard deviation is 0.19 in 1984 and 1985 compared to 0.32 in 1983).

Compared with 1984, the main changes of the OUT/IN-ratios were as follows:

Member State	Change 85/84	Explanation
IRL	-0.30	- 16.0% outwards + 20.0% inwards
DK	-0.12	- 5.0% outwards + 4.0% inwards

Shares of the road haulage market held by hire and reward operators

The results from the Road Statistical Directive give a breakdown between "hire and reward" and "own-account" operators.

Table 2.7. gives the share, in tonnes, for hire and reward hauliers. In previous reports the share of own account was given since it is easier to see differences in percentages in the range 10 - 20 % than 80 - 90 %. However because of the subsequent use of the hire and reward data in assessing the importance of the Community Quota it has been decided to show the tonnages (and shares) for hire and reward.

The Italian foreign trade data does not contain such a breakdown.

Table 2.7. Share of market held by hire and reward hauliers on intra-community journeys (x '000 tonnes).

Member State	Inwards 1985	Outwards 1985	Total 1985	Share in % of Hire and Reward		
				1983	1984	1985
D	15 759	16 648	32 407	81.3	81.3	82.2
F	11 615	11 142	22 757	81.6	75.0	78.8
I	N	N	N	N	N	N
NL	20 493	21 505	41 998	85.0	84.6	86.2
B	9 315	13 667	22 982	69.2	65.8	66.4
L	566	756	1 322	N	N	43.8
UK	1 752	1 686	3 438	87.4	86.2	84.5
IRL	487	402	889	59.9	66.7	65.9
DK	1 990	2 519	4 509	89.9	90.3	90.0
GR	497	578	1 075	100.0	100.0	100.0
Total	62 474	68 903	131 377	80.4	78.3	79.1

2.2.3 Intra EUR-10 international road traffic - Tonnes kilometers

The analysis carried out in section 2.2.2 can be repeated for tonnes-kilometers (e.g. table 2.8 corresponds to table 2.1).

Table 2.8. International bilateral intra EUR-10 traffic in tonnes-kilometers.
Year 1985 and % evolution on 1984 (x mio tkm)

TO FROM	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10
D	4544	4982	5349	2655	197	532	32	1342	693	20326	
	1.6%	8.2%	5.6%	6.1%	N	-3.3%	-38.5%	11.5%	-8.8%	5.0%	
	4952	5045	1626	3408	94	1374	41	418	175	17133	
F	-2.9%	-3.6%	8.6%	6.7%	N	13.6%	-8.9%	19.4%	-12.9%	1.1%	
	5819	4362	1523	1534	23	1705	126	403	139	15634	
I	-2.2%	-3.7%	10.9%	10.4%	N	-9.7%	23.5%	+2.5%	-28.7%	-1.3%	
	5781	2457	1669	1669	45	407	38	451	249	13598	
NL	3.8%	11.6%	-0.5%	6.0%	N	17.3%	40.7%	10.5%	-15.0%	4.7%	
	2787	3795	1976		213	178	18	189	78	10965	
B	-0.9%	5.6%	8.0%	6.5%	N	0.6%	260.0%	5.6%	-12.4%	4.2%	
	328	116	30	56	155	24	0	0	3	712	
L	N	N	N	N	N	N	N	N	N	N	
	432	757	1255	118	4	155	155	162	56	3130	
UK	4.3%	7.7%	-10.4%	6.1%	0.0%	14.8%	9.5%	-38.5%	-2.1%		
	25	98	56	13	8	136	6	5	5	351	
IRL	-28.6%	34.2%	0.0%	30.0%	33.3%	N	0.0%	20.0%	66.7%	8.3%	
	1115	284	507	260	97	0	28	96	2888		
DK	-2.4%	-2.4%	24.6%	3.6%	-13.4%	N	-8.1%	-6.7%	6.7%	0.7%	
	802	104	147	221	51	74	0	38	1438		
GR	-8.9%	-37.7%	-56.1%	19.5%	2.0%	N	10.4%	0.0%	8.6%	-16.4%	
	22041	16517	16254	9695	581	4931	438	3009	1494	86175	
EUR-10	-0.5%	2.5%	0.5%	7.1%	6.7%	N	0.1%	10.6%	10.5%	-13.4%	2.2%

Table 2.9. International traffic per relation by hauliers registered in the country of unloading.
Year 1985 and % evolution on 1984 (x mio tkm).

To From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10
D		1920	2345	3878	1333	102	323	17	780	591	11289
F	2733	-3.9%	13.5%	4.6%	4.5%	N	-8.8%	-52.8%	4.8%	-8.5%	3.7%
I	3.0%		-7.9%	8.7%	13.4%	N	4.3%	-4.7%	-4.9%	-34.8%	2.3%
NL	2831	2503		1003	894	23	626	82	253	64	8279
	0.2%	10.5%		12.2%	12.0%	N	-7.1%	60.8%	5.4%	-14.7%	5.6%
	1142	832	916		366	8	145	34	148	198	3789
B	6.0%	12.0%	-15.9%		9.6%	N	-9.4%	47.8%	2.1%	-20.5%	-1.0%
	1182	1481	655	1232		93	161	18	137	78	5037
B	4.9%	7.1%	7.4%	2.9%		N	1.9%	260.0%	6.2%	-12.4%	4.9%
L	183	60	0	31	64		3	0	0	3	344
	N	N	N	N	N		N	N	N	N	N
UK	134	306	611	105	4	1		107	148	25	1441
	13.6%	1.0%	-15.4%	41.9%	33.3%	N		18.9%	2.8%	-26.5%	-3.2%
IRL	11	6	28	2	0	0	17		6	0	70
	10.0%	50.0%	-12.5%	-60.0%	0.0%	N	-19.0%		20.0%	-100.0%	-10.3%
DK	290	27	155	173	32	0	2	3		15	697
	12.4%	-46.0%	56.6%	5.5%	-30.4%	N	0.0%			7.1%	10.1%
GR	62	7	81	23	0	0	5	0	28		206
	-10.1%	-82.1%	-67.3%	64.3%	0.0%	N	-54.5%	0.0%	12.0%		-49.3%
EUR-10	8568	7142	6963	7547	4735	261	1720	302	1731	1034	40003
	3.2%	4.6%	-3.6%	6.3%	9.4%	N	-4.7%	21.8%	3.3%	-14.0%	2.8%

Table 2.10 International traffic per relation by hauliers registered in the country of loading.
Year 1985 and % evolution on 1984 (x mio tkm).

TO FROM	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10
D	2623	2637	1472	1322	95	209	15	562	102	9037	
F	5.9%	3.9%	8.4%	7.7%	N	6.6%	-6.2%	22.2%	-10.5%	6.6%	
I	2219	2873	526	1366	60	936	0	187	116	8283	
NL	-9.2%	-0.1%	8.5%	-1.9%	N	18.5%	-100.0%	73.1%	6.4%	-0.1%	
B	2988	1859	520	640	0	1079	44	149	75	7354	
L	-4.5%	-17.9%	8.6%	8.3%	N	-11.1%	-13.7%	-2.6%	-37.5%	8.1%	
UK	4639	1625	1303	1303	37	262	4	304	51	9810	
IRL	3.2%	11.4%	5.0%	5.0%	N	40.1%	0.0%	15.6%	18.6%	7.1%	
DK	1606	2313	744	121	17	17	0	52	0	5929	
GR	-4.7%	4.6%	13.1%	91	N	-10.5%	0.0%	4.0%	0.0%	3.6%	
EUR-10	145	56	24	24	91	22	0	0	0	368	
	N	N	N	N	N	N	N	N	N	N	
	298	451	86	114	3	48	14	31	1689		
UK	10.7%	13.0%	-5.2%	-0.9%	N	6.7%	250.0%	-45.6%	-1.1%		
IRL	14	92	11	8	4	119	0	5	281		
DK	-44.0%	33.3%	16.7%	33.3%	0	3.5%	0.0%	150.0%	14.2%		
GR	826	257	86	65	25	499	25	80	2190		
	-6.7%	6.6%	14.3%	-1.5%	N	-8.3%	-16.7%	5.3%	-2.1%		
	739	96	66	51	1	70	0	10	1231		
	-8.9%	-25.0%	16.5%	2.0%	N	25.0%	0.0%	0.0%	-6.2%		
	13474	9372	3667	4960	321	3213	136	460	46172		
EUR-10	-2.7%	0.9%	3.8%	4.4%	N	2.9%	-8.1%	21.9%	-11.7%	1.8%	

Table 2.11 Tonne-kilometres achieved by country of haulier on international intra EUR-10 traffic (x mio tkm).

Member States	Inward + Outward		% change 85/84	Share %		
	1984	1985		1983	1984	1985
D	16780	17605	+ 4.9	20.2	19.9	20.4
F	15115	15425	+ 2.1	16.8	17.9	17.9
I	15223	14317	- 6.0	19.4	18.1	16.6
NL	16255	17357	+ 6.8	18.9	19.3	20.1
B	10053	10664	+ 6.1	11.0	11.9	12.4
L	439 ^p	629	N	0.5	0.5	0.7
UK	3511	3409	- 2.9	4.3	4.2	4.0
IRL	494	583	+18.0	0.7	0.6	0.7
DK	3912	3921	+ 0.2	4.9	4.6	4.6
GR	2516	2265	-10.0	3.4	3.0	2.6
EUR-10	84300	86175	+ 2.2	100	100	100

Table 2.12 Market share held by Hire and Reward hauliers on intra-community journeys (x mio tkm)

Member States	1 9 8 5		Total 1985 Hire and Reward	Share of Hire and Reward in %		
	Inward	Outward		1983	1984	1985
D	7550	8078	15628	88.1	88.1	88.8
F	6222	7012	13234	88.5	85.5	85.8
I	N	N	N	N	N	N
NL	7051	8621	15672	88.4	89.3	90.3
B	3214	4150	7364	72.9	69.0	69.1
L	132	222	354	N	N	56.3
UK	1488	1502	2990	91.4	90.2	87.7
IRL	282	251	533	83.9	91.3	91.4
DK	1592	1906	3498	89.5	90.2	89.2
GR	1034	1231	2265	100.0	100.0	100.0
Total	28565	32973	61538	86.9	85.7	85.6

2.3 Cross-trades, an analysis of the multilateral intra EUR-10 international road haulage market in 1985 and EUR-12 estimates for 1986.

2.3.1 Introduction

As explained in note a) of Section 2.2.1, the Directive only relates to bilateral journeys between Member States. Cross-trade journeys are allowed under Community Quota authorizations (which then are valid for the whole of EUR-10) or in other specific cases.

The Commission has extensive data on the Community Quota Statistics (a brief analysis was published in the 1983 Annual Report) and is seeking comprehensive information on other types of cross-trade journeys through an extension to the Directive.

2.3.2 Importance of cross-trades carried under Community Quota authorizations

The number of Community Quota authorizations which only grew slowly during the early 1980's jumped from 4038 in 1984 to 5268 in 1985 and 7437 in 1986. These increases stemmed from the Council decision of December 1984 to increase the number of authorizations by 30% in 1985 and 15% for each of the following 4 years; an additional boost occurred in 1986 due to the admission of Spain and Portugal to the Community.

In June 1986, the Council took a decision, in principle, to increase the number of authorisations by 40 % cumulatively for each year up to 1992. However as formal legislation on this had not been agreed, the Commission was obliged to take a decision on the basis of the existing 15 % rule, (to which some extra authorisations were added in compensation) so that the number of authorisations at the beginning of 1987 was 9446. The Council decided to make an ad-hoc increase of 40 % (instead of 15 %) just for 1987 to be operative just for the second half of 1987; the number of authorisations for the second half of 1987 was thus 11,535.

As the criteria for the allocation of authorizations between Member States depends, particularly, on tonne-kilometres, the analysis presented here relates principally to tonne-kilometres and not to tonnes as was published in the 1983 Annual Report. Further it is more appropriate to examine the share of Community Quota authorizations in all "hire and reward" movements in terms of tonne-kilometres as the average distance under a Community Quota authorization is about twice that of all movements. Table 2.13 shows the main results for tonne-kilometres for 1984 and 1985 together with estimated results for 1986 (the results for 1986 are on an EUR-12 basis).

Table 2.13 Intra Community international road traffic
Breakdown by type of traffic (tonne-kilometres)

	Intra EUR-10		Intra EUR-12
	1984 (mio)	1985 (mio)	1986 ('000 mio)
Total bilaterals	84 300	86 175	109 (e)
of which			
own account	<u>-12 098</u>	<u>- 12 382</u>	<u>- 13 (e)</u>
Hire and Reward bilaterals	72 202	73 793	95.7 (p)
Cross-trades (under Community Quota)	<u>+ 1 642</u>	<u>+ 2 188</u>	<u>+ 3.401</u>
Total Hire and Reward	73 844	75 981	99.1 (p)
of which			
Total under Community Quota	7 720	10 350	15.537
% of Total Hire and Reward			
Total under Community Quota	10.5%	13.6%	15.7% (p)
Cross-trades under Community Quota	2.2%	2.9%	3.4% (p)
% of Total under Community Quota			
Cross-trades	21.3%	21.0%	21.9%

e= estimate

p= provisional

2.3.3 Cross-trades under Community Quota authorizations by Member State of haulier

Tables 2.14 A and B show the breakdown of the various tonne-kilometre figures for hire and reward movements in 1985 and 1986 respectively by nationality of haulier.

Table 2.14 A

1985 TONNE-KILOMETRES INTERNATIONAL INTRA-COMMUNITY
(Hire and Reward only - million tonne-kilometres)

Member State of haulier	T-km achieved			Using Comm. Quota authorizat.
	All movements			
	Bilateral	Cross-trade	Total	
D	15628	60	15688	2125
F	13234	256	13490	1489
I	12255 (a)	3	12258	1491
NL	15672	886	16558	1479
B	7364	576	7940	1084
L	354	209	563	294
UK	2990	77	3067	770
IRL	533	44	577	204
DK	3498	77	3575	1255
GR	2265	0	2265	160
EUR-10	73793	2188	75981	10350

Note

- (a) The figure for Italy has been calculated from the (estimated) tonne-kilometres for all Italian hauliers by assuming that the Italian "Hire and Reward" share is the same as the Community average, in absence of any other information.

Table 2.14 B

1986 TONNE-KILOMETRES INTERNATIONAL INTRA-COMMUNITY
(Hire and Reward only - million tonne-kilometres)

Member State of haulier	T-km achieved			Using Comm. Quota authorizat.
	All movements			
	Bilateral	Cross-trade	Total	
D	17696	106	17802	2722
F	15444	616	16060	1853
I	12200 p	40	12240p	1902
NL	17536	1164	18700	1908
B	8000 p	877	8877p	1474
L	546	338	884	445
UK	3962	88	4050	1032
IRL	600 p	53	653p	280
DK	3800 p	90	3890p	1776
GR	2123	0	2123	217
E	12040 p	25	12065p	1549
P	1770 p	4	1774p	380
EUR-12	95717 p	3401	99118p	15537

p= provisional

The following table 2.15 expresses the results in percentage terms.

Table 2.15 Percentage of movements by type 1985 and 1986

Member State of haulier	Cross-trades as % of all Comm. Quota movements		Comm. Quota movements as % of all H. & R. movements		Cross-trades as % of all Hire and Reward movements	
	1985	1986	1985	1986	1985	1986
D	2.8%	3.9%	13.5%	15.3%	0.4%	0.6%
F	17.2%	33.2%	11.0%	11.5%	1.9%	3.8%
I	0.2%	2.1%	12.2%	15.5% p	0.1%	0.3% p
NL	59.9%	61.0%	8.9%	10.2%	5.4%	6.2%
B	53.2%	59.5%	13.7%	16.6% p	7.3%	9.9% p
L	71.2%	76.0%	52.2%	50.3%	37.1%	38.2%
UK	9.9%	8.5%	25.1%	25.5%	2.5%	2.2%
IRL	21.8%	18.9%	35.4%	42.9% p	7.6%	8.1% p
DK	6.2%	5.1%	35.1%	45.7% p	2.2%	2.3% p
GR	0%	0%	7.1%	10.2%	0%	0%
E		1.6%		12.8% p		0.2% p
P		1.0%		21.4% p		0.2% p
EUR-10/12	21.1%	21.9%	13.6%	15.7% p	2.9%	3.4% p

p= provisional

As far as the importance of cross-trades in all hire and reward movements is concerned, the results for 1986 (final column of Table 2.15) show that Member States fall into 4 groups.

- i) L: over 35%
- ii) NL, B, IRL: 6 - 10%
- iii) F, UK, DK: about 2 - 4%
- iv) D, I, GR, E, P: less than 0.6%

The exceptionally high figure for Luxembourg is due to the small geographical size of the country which makes some cross-trading essential. The high figures for NL, B and IRL are due to the relatively small geographical size and position of NL and B and, in the case of IRL, the ease of picking up loads for the UK while returning from the Continent. The result for D, I, GR, E and P shows that these hauliers are not currently interested in cross-trading.

Finally in Table 2.16 the evolution of the percentage of cross-trade movements under Community Quota (first column of Table 2.15) in recent years is examined.

Table 2.16

PERCENTAGE OF CROSS-TRADE MOVEMENTS UNDER COMMUNITY QUOTA BY MEMBER STATE OF HAULIERS

Member State of haulier	TKM			
	1983	1984	1985	1986
D	3.5	3.8	2.8	3.9
F	16.7	18.5	17.2	33.3
I	0.3	0.2	0.2	2.1
NL	58.4	60.8	59.9	61.0
B	48.7	54.3	53.2	59.5
L	59.9	63.4	71.2	76.0
UK	10.2	9.4	9.9	8.5
IRL	22.8	25.8	21.8	19.0
DK	5.1	5.0	6.2	5.1
GR	0	0	0	0
E				1.6
P				0.9
EUR 10/12	20.3	21.3	21.1	21.9

The results show that the overall proportion of cross-trading has been very stable in recent years despite the large increase in the number of authorisations in 1985 and 1986.

The large increase in cross-trading for F in 1986 is due to the adhesion of Portugal and, more especially, Spain to the Community which increased the possibilities for F hauliers to transit F on intra-Community journeys.

The steady increase in cross-trading for L reflects the large proportionate increase in Community Quota authorisations for L which is much larger than the increase of bilateral traffic.

2.3.4 Cross-trades under Community Quota authorizations by Member State of loading

The figures in Table 2.13 for hire and reward hauliers can also be broken down by Member States of loading (or unloading). The breakdown by Member States of loading is given in Table 2.17 and a table in percentage terms, similar to Table 2.15, is given in Table 2.18. In both Tables 2.17 and 2.18 the figures for EUR-10 are necessarily the same as in Table 2.14 and Table 2.15 respectively.

Table 2.17 1985 Tonne-kilometres international intra-Community (Hire and reward only - million tonne-kilometres)

Member State of loading	All movements				Using Community Quota Authorizat.
	Hauliers from loading	Member unload.	State of cross-trades	total	
D	8078	10023	459	18560	2424
F	7012	7410	324	14746	1557
I	6295	7270	635	14200	2982
NL	8621	3082	199	11902	939
B	4150	4318	393	8861	994
L	222	273	12	507	73
UK	1502	1275	81	2858	482
IRL	251	62	20	333	103
DK	1906	625	51	2582	691
GR	1231	187	15	1433	104
EUR-10	39268	34525	2188	75981	10350

Table 2.18 Percentage of movements by Member State of loading by type 1985 (tonne-kilometres)

Member State of loading	Cross-trades as % of all Comm. Quota movements	Comm. Quota movements as % of all H&R movements	Cross-trades as % of all Hire and Reward movements
D	18.9	13.1	2.5
F	20.8	10.6	2.2
I	21.3	21.0	4.5
NL	21.2	7.9	1.7
B	39.5	11.2	4.4
L	16.1	14.4	2.4
UK	16.9	16.9	2.8
IRL	19.2	30.9	6.0
DK	7.3	26.8	2.0
GR	14.1	7.3	1.0
EUR-10	21.1	13.6	2.9

There is much more variation between Member States in the percentages shown in Table 2.15 than in Table 2.18; this applies to all three columns of percentages. This implies that whereas there is a wide variation in the propensity of hauliers of different nationalities to carry out cross-trades, the geographical spread of the cross-trade movements is more even.

2.4. Traffic with Spain and Portugal - Tonnages

As in the previous section, the analysis is restricted to bilateral traffic, i.e. cross-trade traffic is excluded.

2.4.1. Traffic with Spain (E)

Table 2.19 Tonnages carried by EUR-10 and Spanish hauliers to and from Spain (000's tonnes)

Bilateral relation	1983		1984		1985	
	Hauliers from		Hauliers from		Hauliers from	
	EUR-10 1)	E	EUR-10 1)	E	EUR-10 1)	E
D -E	738	575	782	695	770	805
F -E	1535	3501	1563	3552	1899	3785
I -E	406	252	462	287	413	298
NL -E	121	333	158	389	208	438
B -E	336	276	398	293	448	314
L -E	-	34	-	37	-	24
UK -E	112	349	105	439	126	490
IRL-E	21	28	11	23	27	20
DK -E	42	15	46	16	51	14
GR -E	1	1	2	1	3	3
Total	3312	5364R	3527	5732	3945	6191
Growth rates			+6%	+7%	+12%	+8%
Total all hauliers	8676R		9259		10136	
Growth rate			+ 7%		+ 9%	

1) Haulier of the partner country.

In 1985 overall traffic with Spain grew by 9%, almost the double of the intra EUR-10 average. Whereas the tonnages for Spanish hauliers show nearly the same increase in 1985 as the previous year, the growth rate of tonnages transported by hauliers from the partner EUR-10 countries was twice as high (12% compared to 6%). Both the French and the - fairly low - Dutch tonnages show a substantial increase in 1985; German and Italian hauliers however see their tonnages actually decrease.

2.4.2. Traffic with Portugal (P)

Table 2.20 Tonnage carried by EUR-10 and Portuguese hauliers to and from Portugal (000's tonnes)

Bilateral relation	1983		1984		1985	
	Hauliers from		Hauliers from		Hauliers from	
	EUR-10	Portugal	EUR-10	Portugal	EUR-10	Portugal
D -P	66	110	67	133	70	164
F -P	252	176	296	214	263	230
I -P	80	76	91	74	78	65
NL -P	28	19	32	23	44	28
B -P	0	31	0	35	-	47
L -P	-	1	-	1	-	2
UK -P	11	24	5	36	11	37
IRL-P	0	-	0	-	-	-
DK -P	12	2	7	3	8	5
GR -P	0	-	0	-	-	0
Total growth rates	449	439	498 +11%	519 +18%	474 -5%	578 +11%
of which to Portugal growth rates	266	221	289 +9%	265 +20%	256 -11%	311 +17%
from Portugal growth rates	183	218	209 +14%	254 +17%	218 +4%	267 +5%
Total all hauliers	888		1 017		1 052	
Growth rate			+ 15 %		+ 3 %	

For 1985, EUR-10 traffic with Portugal shows only a 3% increase, below the EUR-10 average (4.7%) and much less than the spectacular 15% growth in 1984. Portuguese hauliers however increased their share in road transport substantially (49% in 1983 to 55% in 1985).

2.4.3. Traffic between Spain and Portugal

Table 2.21 Tonnage carried by Spanish and Portuguese hauliers in traffic between Spain and Portugal (000's tonnes)

Bilateral relation	1983		1984		1985	
	Hauliers from		Hauliers from		Hauliers from	
	E	P	E	P	E	P
E to P	172	73	196	110	226	157
P to E	64	132	72	134	83	171
Total growth rates	236	205	268 +14%	244 +19%	309 +15%	328 +34%
Total E & P hauliers	441		512		637	
Growth rate			+16%		+24%	

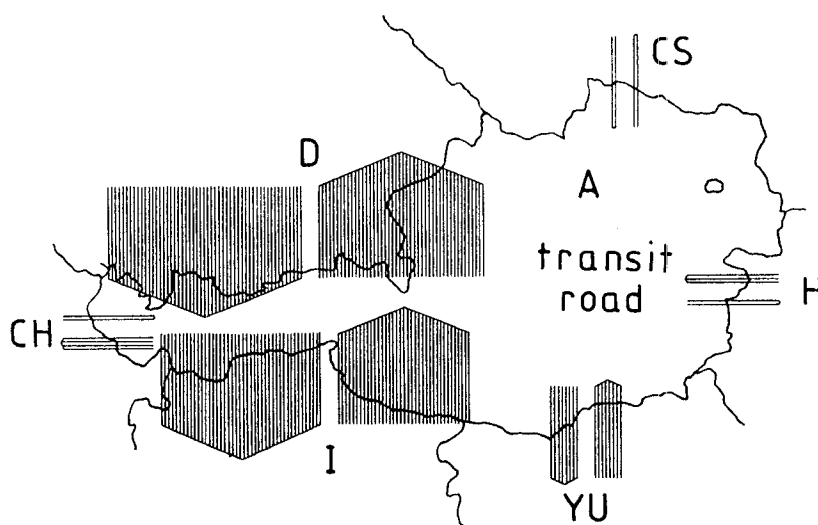
In 1985, traffic between Spain and Portugal increased spectacularly by 24%, particularly due to transports by Portuguese hauliers (up 34%), who thereby increased their share.

2.5. Transit traffic through Austria and Switzerland

2.5.1 Transit traffic through Austria

Table 2.22. Road transit traffic through Austria
1985 compared with 1984 ('000 tonnes)

from border \ to border	year	A/D	A/I	A/CH	A/YU + H + CS	Total
D/A	1984	8	7 375	425	1 460	9 268
	1985	2	7 988	464	1 460	9 914
I/A	1984	6 707	2	82	65	6 856
	1985	6 736	0	77	62	6 875
CH/A	1984	127	10	5	25	167
	1985	132	8	8	24	172
YU + H + CS/A	1984	1 643	155	35	189	2 022
	1985	1 734	128	29	172	2 063
Total	1984	8 485	7 542	547	1 739	18 313
	1985	8 604	8 124	578	1 718	19 024



In 1985, total transit traffic using Austrian roads increased by 4 % to 19 mio tonnes.

77 % of all road transit traffic through Austria flows between the German and Italian borders.

Table 2.23 shows that three quarters of total transport between these borders is performed by road haulage, and only one quarter by railways.

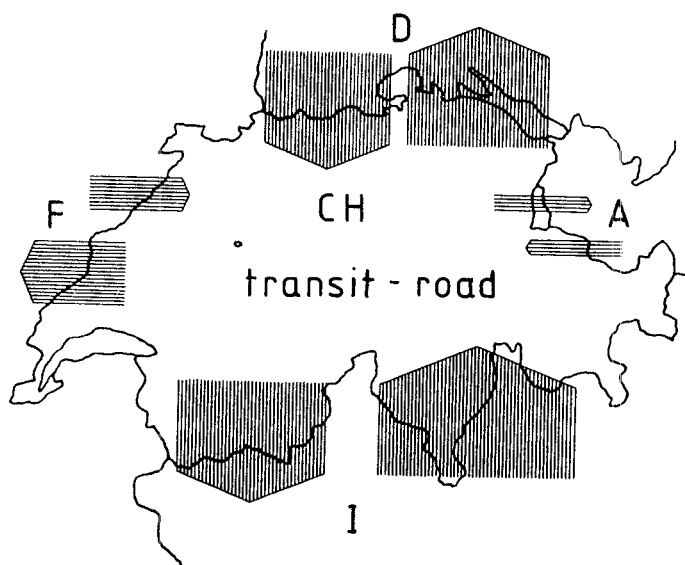
Table 2.23 Total transit traffic through Austria between German and Italian borders by mode, 1985 compared with 1984 ('000 t)

direction \ mode	year	Road	Rail	Total
D/A/I	1984	7 376	3 058	10 434
	1985	7 988	3 161	11 149
I/A/D	1984	6 707	1 350	8 057
	1985	6 736	1 327	8 063
Total	1984	14 083	4 408	18 491
	1985	14 724	4 488	19 212
Modal split		76 %	24 %	100 %

2.5.2 Transit traffic through Switzerland

Table 2.24 Road transit traffic through Switzerland, 1985 compared with 1984 ('000 tonnes).

to from border border	year	CH/D	CH/F	CH/I	CH/A	Total
D/CH	1984	9	11	283	5	308
	1985	6	14	311	3	334
F/CH	1984	11	3	68	9	91
	1985	8	5	67	8	88
I/CH	1984	341	139	0	17	497
	1985	356	147	1	23	527
A/CH	1984	1	5	14	1	21
	1985	8	7	22	5	42
Total	1984	362	158	365	32	917
	1985	378	173	401	39	991



In 1985, total road transit traffic through Switzerland increased by 8 % to almost 1 mio tonnes.

89 % of all transit traffic using Swiss roads is concentrated on the routes between the Italian and German borders (67%), and the Italian and French borders (22%).

Table 2.25 however shows that the share of road haulage only accounts for a mere 8 % of the total quantity of goods carried between the German and Italian borders, railways being by far the main mode of transport (due to Swiss capacity restrictions on road vehicles).

Table 2.25 Total transit traffic through Switzerland, between German and Italian borders by mode, 1985 compared with 1984 ('000 tonnes)

direction \ mode	year	Road	Rail	Total
D/CH/I	1984	283	4 773	5 056
	1985	311	5 386	5 697
I/CH/D	1984	341	2 459	2 800
	1985	356	2 276	2 632
Total	1984	624	7 232	7 856
	1985	667	7 662	8 329
Modal split		8 %	92 %	100 %

2.6 Transport Inquiry Surveys - Road

2.6.1 Introduction

The main aim of the quarterly surveys among road hauliers is to collect within the shortest time possible information about the changes that are at work in road transport (border-crossing transport EUR-10; E and P not being included yet in T.I.S. system).

The survey does not only reflect changes in the level of road transport activity during the previous quarter, but also looks forward into the next quarter. Also, a series of key-indicators are published, which reflect the working conditions in road transport firms.

Unlike real statistical figures, the ones published in this chapter merely reflect opinions and only indicate a trend. Moreover, only global EUR-10 figures are quoted here; a breakdown by Member States can be found in the published quarterly reports.

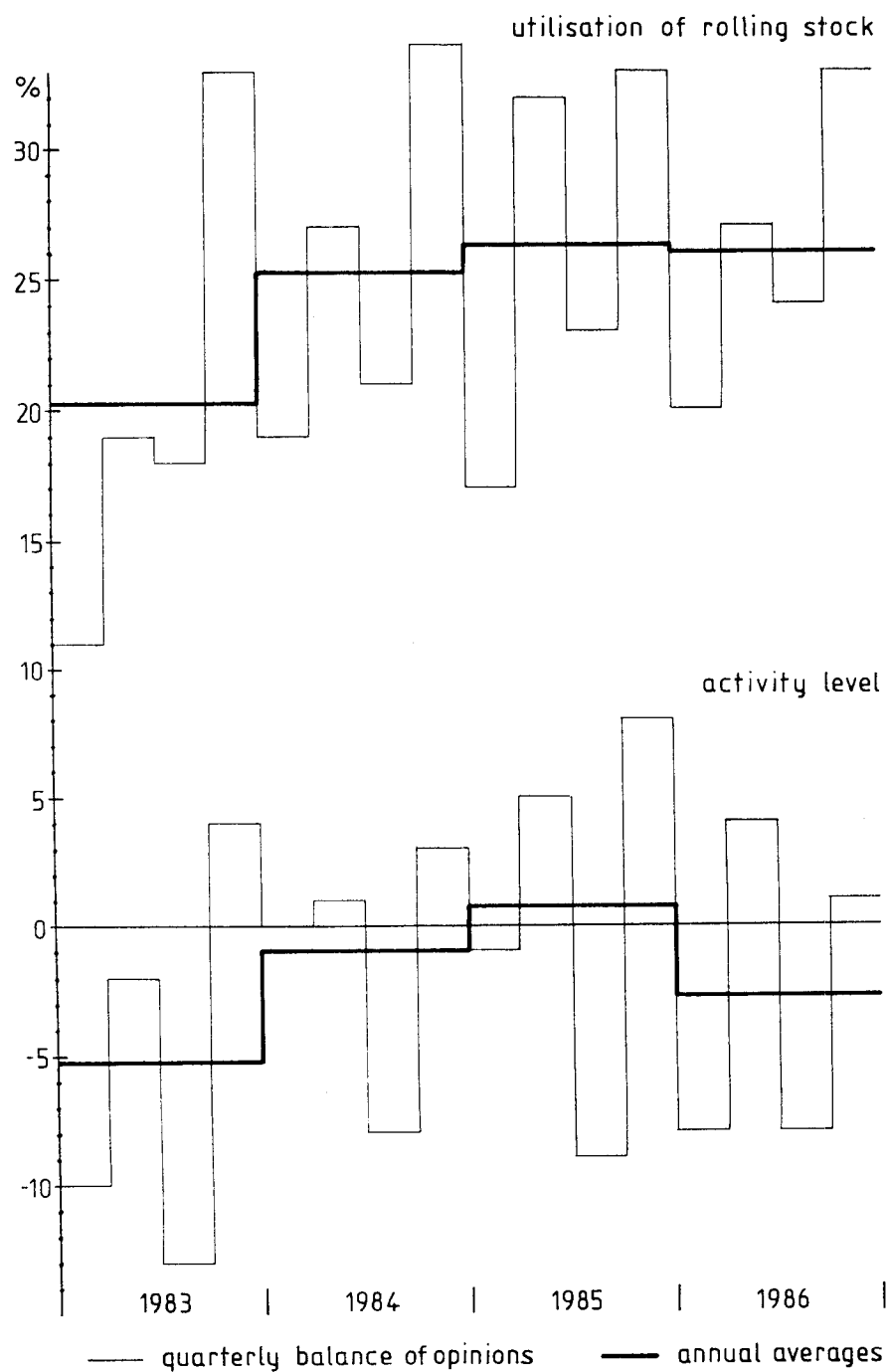
2.6.2 Transport activity - utilisation of rolling stock (graph 2.1)

Seasonal fluctuations are very noticeable on activity level and utilisation of rolling stock in road transport: winter weather and factories closing during summer holidays seem to affect these indicators quite consistently.

Smoothing out the quarterly fluctuations by taking the average of the "balance of opinions"-figures over the whole year yields the following conclusions:

- (i) 1986 shows an opinion of overall decrease in activity in almost every Member State, compared to 1985. However, both French and Irish hauliers report an increased activity compared to 1985.
- (ii) The overall utilisation of rolling stock remains around the same average of the 2 previous years.

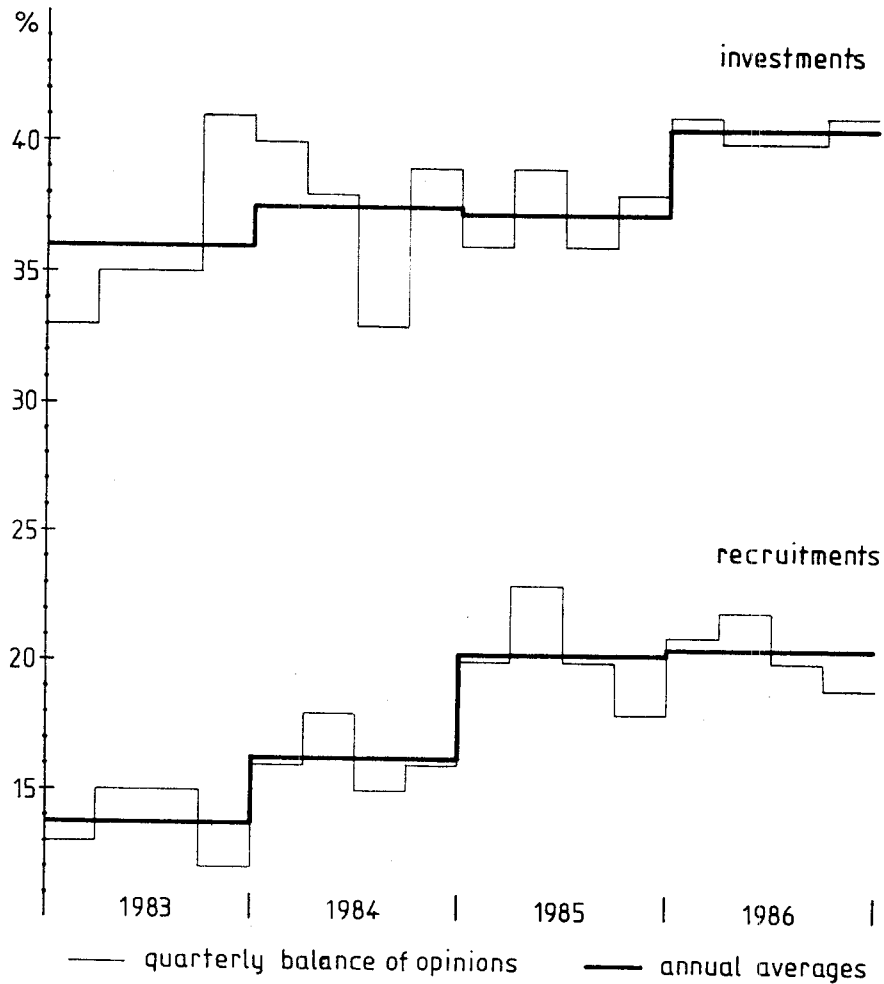
Graph 2.1. Activity level and utilisation of rolling stock



2.6.3 Economic indicators

2.6.3.1. Investments and recruitments (graph 2.2)

Graph 2.2. Number of firms (%) declaring (i) to have made investments
(ii) to have recruited drivers

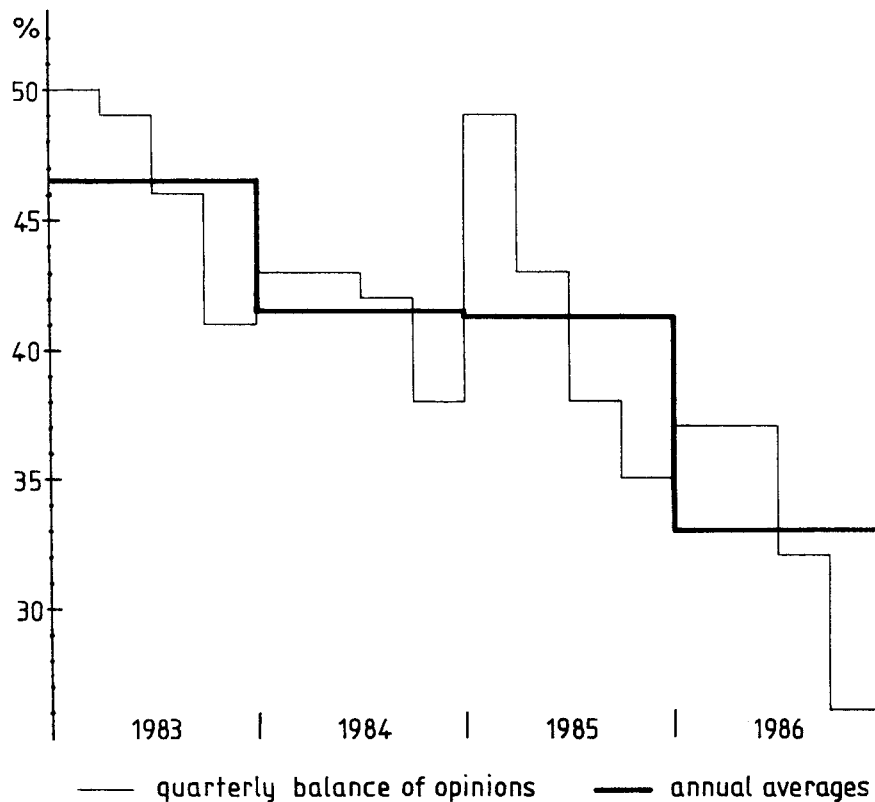


In each quarter of 1986, about 40 % of the consulted firms declared having made investments, a 3 % increase of the annual average compared to 1985. Particularly in Germany more firms have invested during 1986 than the year before.

On the other hand, the number of firms reporting recruitment of drivers remains stable, compared to 1985.

2.6.3.2 Cash-flow (graph 2.3)

Graph 2.3 Number of firms (%) reporting cash-flow problems



For 1986, a trend of substantial improvement can be noted. Particularly French firms report a better cash-flow situation; Greek hauliers however seem to meet year after year with serious liquidity problems.

2.6.4 Conclusions

The overall results for 1986, provided by the road transport inquiry surveys, are a little bit confusing.

Taking into account - the positive investments (cf graph 2.2)
- the stable level of utilisation of rolling stock (cf graph 2.1)
- and the exposed information that road activity was actually up 4.7% in 1986 (cf table 2.0), the slightly pessimistic figure for reported opinion on activity (graph 2.1) is somewhat disturbing.

2.7 Price and Cost indices

For technical reasons, it has not been possible to include the more detailed analyses of road prices and road costs in this annual report.

The broader quarterly indices up to the end of 1986, published in the quarterly report n. 24 are reproduced here for readers' convenience.

2.7.1 Price indices

Table 2.26 Quarterly evolution of price indices by relation in ECU (1983-1986)

Haulier Transp. Untern.	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	1983				1984				1985				1986			
D D F	98.3	99.3	100.0	103.7	103.3	104.3	104.0	104.1	105.5	105.2	105.6	107.3	108.5	109.8	112.1	113.4
D D I	99.4	100.4	100.0	100.8	102.5	102.8	103.8	104.1	104.8	104.2	106.1	107.2	108.3	108.9	111.2	116.4
D D NL	97.5	98.8	100.0	101.5	102.1	102.8	102.1	102.5	102.8	103.2	104.4	106.9	107.8	110.8	113.9	114.8
D D BL	98.8	99.6	100.0	101.6	102.7	102.7	102.0	102.7	105.8	103.8	105.2	107.1	108.6	111.7	113.5	115.0
F F D	100.2	96.8	100.0	101.4	103.0	108.0	106.3	106.9	110.7	110.7	113.1	113.0	111.0	111.7	111.2	
F F I	104.1	98.2	100.0	100.9	102.8	104.6	105.5	106.1	107.4	107.8	109.9	110.7	110.6	110.8	111.6	110.5
F F NL	105.3	100.2	100.0	104.9	100.6	103.8	105.8	104.8	109.4	104.5	109.2	108.6	114.1	109.8	111.7	108.9
F F BL	102.4	98.7	100.0	100.7	101.9	102.1	103.0	104.0	107.0	107.0	108.9	110.1	111.4	106.6	109.0	110.8
I I D	95.1	99.3	100.0	93.4	106.6	104.2	112.5	105.5	104.5	108.4	106.9	105.2	101.1	108.2	112.8	107.7
I I F	103.4	105.1	100.0	99.6	106.6	102.3	114.7	107.2	110.3	108.6	106.3	107.0	107.3	100.4	109.4	111.6
I I NL	93.6	97.0	100.0	91.7	97.2	98.5	104.4	110.0	107.4	103.7	99.8	102.3	104.6	109.1	103.7	111.5
I I BL	101.3	97.2	100.0	100.8	105.6	109.1	115.9	111.4	117.6	114.7	109.6	104.8	111.2	107.2	112.9	114.4
NLNL D	100.2	99.1	100.0	100.0	100.6	102.0	100.4	101.1	99.9	100.9	103.1	103.0	102.8	104.6	106.0	106.8
NLNL F	98.9	98.5	100.0	98.4	99.7	101.1	99.9	101.0	100.6	100.6	101.2	102.9	104.2	103.8	103.9	107.1
NLNL I	96.7	96.3	100.0	98.2	99.1	98.8	99.4	99.7	98.9	99.7	103.1	103.6	104.0	104.7	107.5	107.6
NLNL BL	99.5	95.3	100.0	91.9	94.4	94.1	98.3	97.8	97.3	94.4	97.5	97.9	101.6	96.5	102.1	106.2
BLBL D	104.8	101.9	100.0	101.6	107.2	105.3	102.9	116.2	109.8	95.4	111.2	108.2	112.1	112.9	111.4	116.0
BLBL F	86.1	89.7	100.0	96.7	85.9	81.2	88.6	89.9	90.8	85.5	99.1	92.5	95.9	90.7	97.3	99.2
BLBL I	94.0	103.3	100.0	100.3	96.8	100.3	104.7	94.6	104.0	100.8	100.7	112.7	101.7	111.2	114.0	113.8
BLBL NL	82.3	86.7	100.0	85.0	85.6	98.5	88.8	88.2	94.1	94.1	100.3	101.2	91.8	89.3	88.7	74.8
GRGR D	*****	*****	100.0	95.4	91.8	93.2	97.0	98.2	106.0	104.8	101.3	97.0	103.4	97.9	102.0	102.2
GRGR F	*****	*****	100.0	96.8	101.4	95.9	99.8	114.0	117.3	108.5	105.8	95.7	92.7	112.2	104.4	101.2
GRGR I	*****	*****	100.0	94.3	93.6	94.8	100.9	93.1	96.2	99.1	102.0	79.2	71.9	89.1	84.0	81.7
GRGR NL	*****	*****	100.0	98.9	80.9	78.5	86.7	98.6	104.4	93.5	86.9	82.8	96.8	95.1	98.6	96.8
GRGR BL	*****	*****	100.0	103.5	105.5	108.4	111.7	109.8	122.0	114.0	116.2	108.7	113.2	115.5	107.8	112.9

Table 2.27 Weighted average prices in ECU and in national currency (NC) (1983-1986)

Country Pays Land	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	1983				1984				1985				1986			
ECU																
D	98.7	99.7	100.0	102.0	102.7	103.3	103.3	103.6	104.9	104.3	105.6	107.2	108.3	109.9	112.2	114.9
F	102.6	98.0	100.0	101.3	102.5	105.1	105.3	105.8	108.6	108.3	109.9	111.2	111.8	109.9	111.1	110.6
I	98.3	100.7	100.0	95.7	105.1	103.2	112.5	107.1	108.0	108.3	105.9	105.3	104.6	105.1	110.3	110.1
NL	99.3	98.0	100.0	98.1	99.2	100.1	99.8	100.3	99.4	99.6	101.9	102.2	103.0	103.1	105.3	106.8
BL	92.1	95.3	100.0	97.5	94.0	92.1	95.1	98.2	98.8	91.6	103.2	100.9	100.1	100.3	102.5	103.6
GR	*****	*****	100.0	96.4	91.3	91.3	96.3	99.7	106.5	102.8	99.7	93.5	99.1	98.8	100.6	100.0
NC																
D	99.0	99.3	100.0	101.2	101.4	101.5	101.7	101.7	102.6	102.8	103.5	103.6	103.2	103.9	104.2	105.2
F	97.7	97.4	100.0	101.8	103.1	105.5	105.6	105.7	107.8	108.0	109.2	109.2	108.6	109.8	111.3	110.2
I	96.3	100.2	100.0	96.8	107.2	105.3	114.5	109.2	110.2	114.2	115.9	116.1	113.9	114.5	118.4	117.2
NL	98.5	98.0	100.0	97.7	98.6	99.1	99.0	99.3	98.3	99.0	100.5	99.6	99.0	98.2	98.5	98.8
BL	90.4	94.3	100.0	98.1	94.4	91.9	94.2	96.8	96.6	90.5	101.8	98.7	97.2	96.4	98.0	98.2
GR	*****	*****	100.0	102.0	101.4	105.2	111.8	119.4	128.0	132.3	136.1	155.8	172.5	174.4	181.3	187.5

2.7.2 Cost indices

Table 2.28 Total cost indices in ECU (1982-1986)

	1.1.82	1.7.82	1.1.83	1.7.83	1.1.84	1.7.84	1.1.85	1.7.85	1.1.86	1.7.86	1.1.87
D	100.0	105.9	109.0	110.2	112.2	113.9	115.5	115.6	119.0	115.8	119.6
F	100.0	102.6	108.5	110.0	111.3	116.1	120.1	121.7	124.2	118.0	121.1
NL	100.0	103.8	108.6	106.1	108.8	108.7	111.0	112.1	117.7	113.6	119.3
B/L	100.0	97.6	101.8	100.9	101.8	105.9	110.1	109.9	112.8	109.4	112.1
UK	100.0	108.5	100.4	110.9	111.7	111.8	111.9	127.5	114.1	111.3	93.8
DK	100.0	100.1	110.2	107.8	108.2	112.2	118.4	117.2	117.1	113.6	119.7

Table 2.29 Fuel cost indices in ECU (1982-1986)

	1.1.82	1.7.82	1.1.83	1.7.83	1.1.84	1.7.84	1.1.85	1.7.85	1.1.86	1.7.86	1.1.87
D	100.0	100.2	105.5	98.3	102.5	99.1	109.7	104.1	105.2	74.5	77.7
F	100.0	102.3	111.8	106.8	106.6	111.7	118.7	119.9	114.0	92.4	101.3
NL	100.0	101.7	105.3	96.7	103.3	95.3	99.5	96.9	98.2	66.5	74.8
B/L	100.0	98.0	104.6	99.2	101.2	99.8	105.5	102.8	102.1	76.9	73.8
UK	100.0	104.8	103.3	108.8	109.3	108.3	114.8	134.3	121.7	107.0	107.2
DK	100.0	97.7	116.6	105.7	104.2	108.6	111.5	110.4	102.1	76.7	86.0

Table 2.30 Wage cost indices in ECU (1982-1986)

	1.1.82	1.7.82	1.1.83	1.7.83	1.1.84	1.7.84	1.1.85	1.7.85	1.1.86	1.7.86	1.1.87
D	100.0	107.9	111.0	115.6	116.5	120.8	121	123.7	127.4	133.2	137.6
F	100.0	105.4	110.0	116.4	116.8	121.1	124.3	127.5	136.5	134.8	137.1
NL	100.0	105.5	111.8	111.1	112.0	113.6	115.3	117.9	125.8	129.0	135.6
B/L	100.0	95.4	99.7	100.1	100.3	106.0	111.7	112.9	114.9	117.0	121.5
UK	100.0	109.1	98.7	109.4	109.9	112.1	109.2	123.8	111.7	112.6	101.5
DK	100.0	101.0	109.0	107.8	107.9	107.8	117.9	116.7	119.0	120.9	123.9

Table 2.31 Total cost indices in national currency (1982-1986)

	1.1.82	1.7.82	1.1.83	1.7.83	1.1.84	1.7.84	1.1.85	1.7.85	1.1.86	1.7.86	1.1.87
D	100.0	102.3	102.4	102.5	103.5	104.2	105.5	106.4	106.0	101.8	102.2
F	100.0	108.5	113.8	121.1	123.7	128.3	132.3	134.1	133.6	130.2	133.2
NL	100.0	101.1	102.5	100.8	103.0	102.4	104.3	106.4	107.8	102.6	104.7
B/L	100.0	105.6	110.2	110.4	114.6	115.3	118.7	119.7	120.6	115.4	116.6
UK	100.0	106.0	108.4	112.8	113.1	117.7	119.9	126.3	126.3	126.2	120.6
DK	100.0	102.5	111.6	110.3	110.7	114.8	118.6	118.6	117.0	113.2	117.8

Table 2.32 Fuel cost indices in national currency (1982-1986)

	1.1.82	1.7.82	1.1.83	1.7.83	1.1.84	1.7.84	1.1.85	1.7.85	1.1.86	1.7.86	1.1.87
D	100.0	96.8	99.1	91.4	94.6	90.7	100.2	95.9	93.7	65.5	66.1
F	100.0	108.2	117.2	117.6	118.5	123.5	130.6	132.1	122.6	101.9	111.5
NL	100.0	99.0	99.4	91.9	97.8	89.8	93.5	92.0	90.0	60.1	65.6
B/L	100.0	106.1	113.3	108.6	113.9	108.8	113.8	112.0	109.2	81.1	76.8
UK	100.0	102.4	111.5	110.7	110.7	114.0	123.1	133.1	134.7	120.8	107.0
DK	100.0	100.0	118.0	108.2	106.6	111.2	111.7	111.7	102.0	76.4	84.7

Table 2.33 Wage cost indices in national currency (1982-1986)

	1.1.82	1.7.82	1.1.83	1.7.83	1.1.84	1.7.84	1.1.85	1.7.85	1.1.86	1.7.86	1.1.87
D	100.0	104.3	104.3	107.6	107.6	110.5	110.5	113.8	113.5	117.1	117.1
F	100.0	111.4	115.3	128.2	129.8	133.9	136.8	140.4	146.8	148.7	150.8
NL	100.0	102.7	105.5	105.5	106.0	107.0	108.4	111.9	115.3	116.5	119.0
B/L	100.0	103.2	107.9	109.5	113.0	115.5	120.4	122.9	122.9	123.5	126.4
UK	100.0	106.6	106.6	111.3	111.4	118.0	117	122.7	123.6	127.1	130.6
DK	100.0	103.4	110.3	110.3	110.3	110.3	118.1	118.1	118.9	120.5	122.0

CHAPTER 3

INLAND WATERWAYS

3.1 Introduction

3.1.1 The data and the summary of the contents

Data reproduced in this issue are statistical data from the national statistical offices of Belgium, the Federal Republic of Germany, France and the Netherlands. They correspond to those presented on the basis of the directives relative to the statistical statements on commodity transports by inland waterways handed on to the Statistical Office of the European Communities (Eurostat). The figures concerning Rhine traffic, including prices, were provided by the Central Rhine Commission. Data on cost and price developments are submitted by the Institut pour le Transport par Batellerie (ITB-Brussels) and by the Economic Bureau for Road and Waterway Transport (EBW-Ryswyk). Other data concerning France were provided by the Office National de la Navigation (ONN-Paris). The figures of table 3.23 were provided by IVR-Rotterdam.

The analysis contains a comparison between 1985 and 1986 and between 1979 and 1986. This is done in order to provide an insight in the developments since the start of the present crises in the inland waterway sector.

The tables and graphs contain rather detailed information. The analysis concentrates on the most relevant items only.

The contents of chapter 3 can be summarized as follows:

- 3.1 Overall developments of the traffic
- 3.2 Development of the traffic by relation
- 3.3 Development of the traffic by commodities
- 3.4 Inland waterway transport by market (Rhine and North-South)
- 3.5 Fleet developments and overcapacity
- 3.6 Inland waterway transport by flag
- 3.7 Transport inquiry survey
- 3.8 Cost and price indices

3.1.2 Overall developments

The weather condition were more favorable in 1986. It was indeed possible to charge 100% on the Rhine a long period during the year as is shown in figure 3.1. This fact has helped a great deal to increase the traffic with 4.1%. Figure 3.1 gives a picture of the water level on the Rhine in 1986 on the scale of Kaub and Ruhrort. The white parts represent periods with restrictions.

Figure 3.1

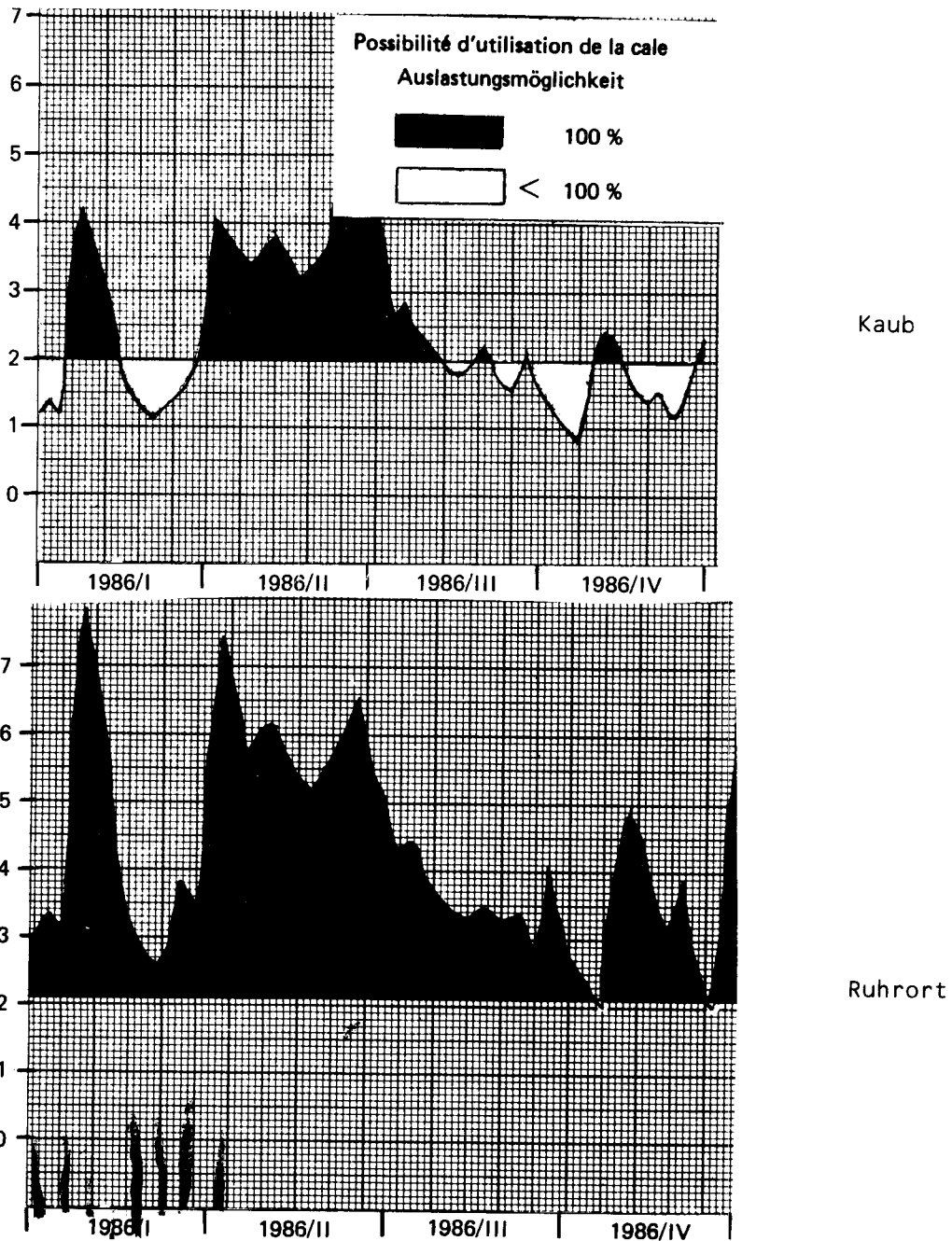


Table 3.1 National and international transport activity by country ('000 tonnes)

	B/L *	D*	F*	NL*	Total**	Growth rate %
1979	91191	221170	85536	236825	438799	
1980	90943	212900	84864	237599	433899	- 1.1
1981	87705	202770	76894	222606	406442	- 6.3
1982	85837	196831	69249	204548	379518	- 6.6
1983	88148	199568	64941	210062	380177	+ 0.2
1984	91140	208709	61857	221725	391444	+ 3.0
1985	88010	195016	56732	222530	376462	- 3.8
1986	91485	200387	56310	235178	390824	+ 3.8
Differ. 86-79 growth rate %	+ 294 + 0.3	-20783 - 9.4	-29226 - 34.2	- 1647 - 0.7	-47975 - 10.9	
Differ. 86-85 growth rate %	+3475 + 3.9	+ 5371 + 2.8	- 422 - 0.7	+12648 + 5.7	+14632 + 3.8	

* EUR 5: Import + export + national transport
 ** EUR 5: Total national transport + total export
 (See also table 3.4)

During the period 1979/1986 the total activity has diminished with almost 11%. The French market was reduced by a third. The evolution in the other Member States has been less dramatic (-9.4% in Germany, -0.7% in the Netherlands and even +0.3% in UEBL). In 1986 the Member States as a whole has registered positive results comparing with the previous year. The biggest uplift was noted in Netherlands (+5.7%). Developments in tonne/kilometers show a slightly different picture (see table 3.2). The t/km total EUR 5 transport in 1986 was 5,4% more than in 1985.

In tkm the total EUR-5 transport activity in '86 was only 2.4% below the '79 level.

Table 3.2 National and international activity (*) by country ('000 tkm)

	B/L	D	F	NL	Total	Growth rate %
1979	5908	50987	11898	33472	102265	
1980	5853	51435	12151	33478	102917	+ 0.6
1981	5442	50010	11068	31792	98312	- 4.5
1982	4958	49401	10226	31363	95948	- 2.4
1983	4934	49100	9447	32281	95762	- 0.2
1984	5201	51996	8880	33593	99670	+ 4.1
1985	5015	48183	8394	32736	94328	- 5.3
1986	5446	52185	7767	34438	99836	+ 5.4
1986-1979 Difference	- 462	- 1198	- 4131	966	- 2429	
growth rate %	- 7.8	+ 2.4	- 34.7	+ 2.9	- 2.4	
1986-1985 Differ. 86-85	+ 431	+ 4002	- 627	+ 1702	+ 5508	
growth rate %	+ 8.6	+ 8.3	- 7.2	+ 5.2	+ 5.4	

(*) activity = import + export + national + transit distances as far as covered within the mentioned Member States.

N.B.: As the national statistics used in table 3.2 take into account only the distances as far as covered in the Member States, one must be careful with the interpretation by country. For instance, a major port like Antwerp is very close to the Dutch border, therefore an increase of exports from Antwerp to NL + D will contribute very little to the Belgium transport statistics but much more to the Dutch.

3.1.3 Development by market

By market, national transport and international transport, which is split in international Rhine traffic and North/South traffic, the developments can be summarized as in table 3.3

Table 3.3 National and international transport by market ('000 tonnes) 1986

	National	International	
		Rhine (NL/D) border	North/South
part of total i.w. transport	51.6%	35.6%	12.8%
1986-1985 tonnes gained or lost growth rate	+ 7468 + 4.0%	+ 6480 + 5.0%	+ 2549 + 5.5%
1986-1979 tonnes lost growth rate	-44763 -18.8%	+ 3497 + 2.6%	- 1953 - 4.1%

This table shows clearly that the loss of transport since 1979 is concentrated in the national markets (-18.8%). The lower activity in the building industry is to a large extent responsible for this downward trend in national traffic.

Rhine traffic monitored at the NL/D border has reached last year 136.8 mio t, that is 5% more than in 1985. There has been in 1986 an extreme demand for transport of oil products which caused almost two third of the growth of the inland waterway traffic. This phenomenon will be examined in a more detailed way later on (§3.8.5).

North-South traffic has increased 5.5% , and reached in 1986 49.2 mio t. To follow the evolution of this traffic this report reveals the average number of waiting days on the bourse. On the regulated part of the North-South market the balance or imbalance between the demand of transport and the capacity available is reflected in more or less waiting time. Comparable with the realization of prices on the free market. That is the reason why waiting time on bourses is considered to be the best indicator for the activities on that part of the market. In exception of the waiting time of transport from France, once more growing, the "tour de role" ships had to wait less for their cargo in 1986 than in the previous year (see § 3.7.3, table 3.29).

On the free markets, specially on the Rhine, the prices have not improved, on the contrary, there was once more a reduction of the profits (see § 3.8.5.).

3.2 Inland waterway transport on a country-by-country basis

Table 3.4 presents: tonnage figures for 1984 and 1985, the tonnage gained or lost and growth rates for each bilateral relation and for national traffic.

Table 3.4 Inland waterways: tonnes carried, national and international intra-community traffic ('000 tonnes)

TO FROM		B/L	D	F	NL	Total outgoing	Total outgoing and national
B/L	1985	21471	9433	3455	14647	27535	49006
	1986	20869	10164	3666	15181	29011	49880
	diff. growth rate (%)	- 602 - 2.8	+ 731 + 7.8	+ 211 + 6.1	+ 534 + 3.6	+ 1476 + 5.4	874 + 1.8
D	1985	10125	63715	3095	25554	38774	102489
	1986	11266	65063	2953	26950	41169	106232
	diff. growth rate (%)	+ 1141 + 11.3	+ 1348 + 2.1	- 142 - 4.6	+ 1396 + 5.5	+ 2395 + 6.2	+ 3743 + 3.7
F	1985	3189	8994	30455	3863	16046	46501
	1986	2910	9008	29747	3998	15916	45663
	diff. growth rate (%)	- 279 - 8.8	+ 14 + 0.2	- 708 - 2.3	+ 135 + 3.5	- 130 - 0.8	- 838 - 1.8
NL	1985	25690	74100	3681	74995	103471	178466
	1986	27429	74983	4028	82609	106440	189049
	diff. growth rate (%)	+ 1739 + 6.8	+ 883 + 1.2	+ 347 + 9.4	+ 7614 + 10.2	+ 2969 + 2.9	+10583 + 5.9
Total entry traff.	1985	39004	92527	10231	44064	185826	
	1986	41605	94155	10647	46129	192536	
	diff. growth rate (%)	+ 2601 + 6.7	+ 1628 + 1.8	+ 416 + 4.1	+ 2065 + 4.7	+ 6710 + 3.6	
Total entry traff. and nat.	1985	60475	156242	40686	110059		376462
	1986	62474	159218	40394	128738		390824
	difference growth rate (%)	+ 1999 + 3.3	+ 2976 + 1.9	- 292 - 0.7	+ 9679 + 8.1		14362 + 3.8

Total international intracommunity traffic was up by 3.8%. All totals of outgoing and ingoing traffic of the Member States showed an increase, with exception of the exports from France (-0.8%). The biggest increase was noted in Dutch exports (+3.0 mio t; +2.9%). Further analyses will show that this rise in activity was concentrated in oil products and building materials (see table 3.7, 3.9, 3.15 and 3.17).

Domestic transport

On the national transport market the Netherlands and Germany occupied the first place, both 70 mio tonnes in 1983. Since then the evolution has been different. In the following years national traffic in The Netherlands was up by 5.0 %, 2.18 % and 10.2 % respectively to arrive at 83 mio t. in 1986. The German market went sharply down in 1985 -9.3 % or 6,5 mio t. with only a small compensation in 1986 which brought the total at 65 mio t. This divergency is remarkable because the German economy as a whole did quite well compared to the Dutch. A further analysis will be given in the next paragraphs.

The small Belgian market showed a limited decrease (-2.8 %) in 1986. Adding to this decrease the one of the previous year (-2.5 %) than it will become clear that little by little the effect of the uplift that could be observed in 1984 (+9.7 %) is vanishing. The total outcome of this market is still quite good.

The evolution of the French national market for inland waterway transport can only be described as dramatic. Year after year losses are noted. The time series of annual decreases ('82 -11.8 %, '83 -9.6 %, '84 - 8.0 %, '85 - 9.3 %, '86 - 2.3 %) gives no reason to believe that a turning point in the trend is near.

3.3. Inland waterway transport by commodities

3.3.1 Major commodities

The five commodities most relevant to inland water transport are:

- building materials (NST 6)
- ores and metal waste (NST 4)
- petroleum products (NST 3)
- agricultural products (NST 0 + 1)
- coal (NST 2)

These five groups cover 79 % of the international waterway transport.

Table 3.5 (1) Inland waterways. Different categories NST in international traffic ('000 tonnes)

NST	1985	1986	86/85	
			differ- ence	growth rate %
0 agricultural) products +)	23229	20877	- 2352	- 10.1
1 foodstuff and) animal fodder)	10734	11307	+ 573	+ 5.3
2 solid mineral fuels	31071	37104	+ 6033	+ 19.4
3 petroleum products	40459	38887	- 1572	- 3.9
4 ores and metal waste	12771	12311	- 460	- 3.6
5 metal products	44403	49385	+ 4982	+ 11.2
6 crude and manu- factured minerals	7442	7202	- 240	- 3.2
7 fertilizers	15901	17995	+ 2094	+ 13.2
8 chemicals	4804	5404	+ 600	+ 12.5
9 miscellaneous articles				
Total	190814	200472	+ 9658	+ 5.1

(1) Data concerning national traffic were not available. Consequently the analysis in the following paragraphs are limited to the international traffic.

Table 3.6 Different categories NST in international traffic in % of the total.

NST	1985	1986	difference
0 agricultural products	5,4	4,8	- 0,6
1 foodstuff and animal fodder	7,0	6,5	- 0,5
2 solid mineral fuels	6,3	6,2	- 0,1
3 petroleum products	16,4	17,8	+ 1,4
4 ores and metal waste	21,1	18,4	- 2,7
5 metal products	6,4	5,9	- 0,5
6 crude and manufactured minerals			
7 building materials	23,4	25,6	+ 2,2
8 fertilizers	3,7	3,5	- 0,2
9 chemicals	7,9	8,7	+ 0,8
miscellaneous articles	2,4	2,6	+ 0,2
Total	100,0	100,0	

Despite the declining activity in the building industry the group building materials (most of it being sand and gravel) is still by far the most important (25.6 %) followed by ores and metal waste (18.4 %).

Oil products occupies the third place with a total of 37.0 mio tonnes (17.8 % of the market) and precedes by far the category chemicals, which, with 18.0 mio t. represent 8.7 % of the market.

3.3.2 NST 6: Building materials

After the decrease in transport of building materials in the period 1979 - 1982 the market seemed to have stabilised in the years 1979 - 1984. But in 1985 a new decrease could be noted. Last year, however, the negative tendency reversed and became positive.

The uplift in this international traffic manifested itself on all the main relations (see table 3.7) with an exception for B to NL (- 2 % or - 134000 t.) and the relation Germany and France in both directions, which stayed on the same level as 1985. The total international NST 6 traffic went up by 11.2 % (+ 5,0 mio t.).

Table 3.7 Inland waterways: Tonnes of NST 6 (sand, gravel etc.) carried on bilateral relations ('000 tonnes).

TO		B/L	D	F	NL	Total outgoing
FROM						
B/L	1985		734	810	6626	8170
	1986		1177	827	6492	8496
	difference		+ 443	+ 17	- 134	+ 326
	growth rate (%)		+ 60.4	+ 2.1	- 2.0	+ 4.0
D	1985	1526		356	14418	16300
	1986	2205		355	16802	19362
	difference	+ 679		- 1	+ 2384	+ 3062
	growth rate (%)	+ 44.5		- 0.3	+ 16.5	+ 18.8
F	1985	100	6198		1301	7599
	1986	574	6133		1641	8348
	difference	+ 474	- 65		+ 340	+ 749
	growth rate (%)	+ 474.0	- 1.1		+ 26.1	+ 9.9
NL	1985	9752	2424	158		12334
	1986	9884	2984	311		13179
	difference	+ 132	+ 560	+ 153		+ 845
	growth rate (%)	+ 1.4	+ 23.1	+98.8		+ 6.9
Total in-going	1985	11378	9356	1324	22345	44403
	1986	12663	10294	1493	24935	49385
	difference	+ 1285	+ 938	+ 169	+ 2590	+ 4982
	growth rate (%)	+ 11.3	+ 10.03	+12.8	+ 11.6	+ 11.2

3.3.3 NST 4: Ores and metal waste

After four years of continuing decrease total transport of NST 4 swung up in 1984 by 16.9 %, together with an additional growth of 2.1 % in 1985 the level of activity was then back on the level of 1979. This development has not continued during the last year. A lost of 3.9 % has been noted.

Table 3.8 Inland waterways: tonnes of NST 4 (ores, etc.) carried in national traffic and on bilateral relations.

TO FROM		B/L	D	F	NL	Total outgoing
B/L	1985		686	615	216	1517
	1986		537	746	203	1486
	difference		- 149	+ 131	- 13	- 31
	growth rate (%)		- 21.7	+21.3	- 6.0	- 2.0
D	1985	172		415	358	945
	1986	226		423	590	1239
	difference	+ 54		+ 8	+ 232	+ 294
	growth rate (%)	+ 31.4		+ 1.9	+ 64.8	+ 31.1
F	1985	7	4		17	28
	1986	9	7		6	22
	difference	+ 2	+ 3		- 11	- 6
	growth rate (%)	+ 28.6	+ 75.0		- 64.7	- 21.4
NL	1985	1817	34945	1207		37969
	1986	1875	33031	1134		36140
	difference	+ 158	- 1914	- 73		- 1829
	growth rate (%)	+ 8.7	- 5.5	- 6.1		- 4.8
Total in- going	1985	1996	35635	2237	591	40459
	1986	2210	33575	2303	799	38887
	difference	+ 214	- 2060	+ 66	+ 208	- 1572
	growth rate (%)	+ 10.7	- 5.8	+ 3.0	+ 32.2	- 3.9

Table 3.8 shows that there is only one traffic relation of real importance: NL - D, which covers 85 % of total NST 4 transport. It was again this relation that was mainly responsible for the rather negative outcome in 1986.

3.3.4 NST 3: Petroleum products

Total activity on the international oil market had an important evolution in 1986 (+ 12.4 %). A more detailed examination of table 3.9 shows striking differences by member State. Outgoing traffic Belgium and The Netherlands recovered a growth of 3,3 and 3,2 mio t. (resp. + 74.7 % and + 13.2 %) while traffic to and from Germany and France were slightly down.

From March till June 1986 there was a strong demand on the oil transport market which uplifted the price for liquid cargo in a very strong way (see 3.8.5 fig. 3.3 and fig. 3.4).

Unfortunately has this price uplift brought certain investors to transform dry cargo ships into tankers or to let build new, taking advantage of the investment facilities in certain member states. The moment the demand for transport of liquid cargo went down to more or less the old level, transport prices went even further down because of this new superfluous capacity.

This development of the tanker fleet is symptomatic for the whole waterway transport market (see also § 3.5.3 overcapacity).

Table 3.9 Inland waterways: tonnes of NST 3 (oil prod. etc.) carried on bilateral relations ('000 tonnes)

TO		B/L	D	F	NL	Total outgoing
FROM						
B/L	1985		2571	181	1607	4359
	1986		3793	299	3521	7613
	difference		+1222	+ 118	+ 1914	+ 3254
	growth rate (%)		+ 47.5	+66.2	+119.1	+ 74.7
D	1985	404		377	546	1327
	1986	281		379	267	927
	difference	- 123		+ 2	- 279	- 400
	growth rate (%)	- 30.5		+ 0.5	- 51.1	- 30.1
F	1985	52	959		22	1033
	1986	9	973		14	996
	difference	- 43	+ 14		- 8	- 37
	growth rate (%)	- 82.7	+ 1.5		- 36.4	- 3.6
NL	1985	6810	17160	382		24352
	1986	7158	19655	755		27568
	difference	+ 348	+ 2495	+ 373		+ 3216
	growth rate (%)	+ 5.1	+ 14.5	+97.6		+ 13.2
Total	1985	7266	20690	940	2175	31071
in-	1986	7448	24421	1433	3802	37104
going	difference	+ 182	+ 3731	+ 493	+ 1627	+ 6033
	growth rate (%)	+ 2.5	+ 18.0	+52.5	+ 74.8	+ 19.4

3.3.5 NST 0+1: Agricultural products

Agricultural products like cereals and animal foods are important commodities for inland navigation. The agricultural sector generates 12 % of total inland waterway traffic.

Table 3.10 Inland waterways: tonnes of NST 0+1 (agricultural products) carried on bilateral relations ('000 tonnes).

TO FROM		B/L	D	F	NL	Total outgoing
B/L	1985		1143	448	1886	3477
	1986		1042	357	1266	2665
	difference		- 101	- 91	- 620	- 812
	growth rate (%)		- 8.8	-20.3	- 32.9	- 23.4
D	1985	869		78	1553	2500
	1986	1906		90	1405	3401
	difference	+ 1037		+ 12	- 148	+ 901
	growth rate (%)	+119.3		+15.4	- 9.5	+ 36.0
F	1985	2168	2241		2232	6641
	1986	1484	1513		2124	5121
	difference	- 684	- 728		- 108	- 1520
	growth rate (%)	- 31.6	- 32.5		- 4.8	- 22.9
NL	1985	2406	7828	377		10611
	1986	2355	7058	277		9690
	difference	- 51	- 770	- 100		- 921
	growth rate (%)	- 2.1	- 9.8	-26.5		- 8.7
Total in- going	1985	5443	11212	903	5671	23229
	1986	5745	9613	724	4795	20877
	difference	+ 302	- 1599	- 179	- 876	- 2352
	growth rate (%)	+ 5.5	- 14.3	-19.8	- 15.4	- 10.1

Total transport volumes of these commodities went down considerably in 1986. Particularly there was this year a strong drop of the French exports (- 1,5 mio t) and in correlation with that a decline of German imports of the same volume.

The Dutch in- and exports are in balance on a negative way, they fall both approximately - 0,9 mio t.

3.3.6 NST 2: Solid mineral fuels

All taken together, 1986 was a rather good year for the carriers of coal. Total international activity went up by 2.7 % and the intercommunity traffic by 5.3 %.

The evolution by relation indicates that coal imported from overseas is gaining market share at the expense of coal production in the community. German coal (community production) dropped by 9.8 %, while German imports via the Dutch ports went up by 35.4 %.

Table 3.11 Inland waterways: tonnes of NST 2 (coal, etc.) carried in national traffic and on bilateral relations ('000 tonnes)

TO FROM		B/L	D	F	NL	Total outgoing
B/L	1985		938	181	260	1379
	1986		739	349	84	1172
	difference		- 199	+ 168	- 176	- 207
	growth rate (%)		- 21.2	+92.8	- 67.7	- 15.0
D	1985	702		1450	2537	4589
	1986	830		1167	2235	4232
	difference	+ 128		- 283	- 302	- 457
	growth rate (%)	+ 18.2		-19.5	- 11.9	- 9.8
F	1985	10	61		7	78
	1986	8	71		18	97
	difference	- 2	+ 10		+ 11	+ 19
	growth rate (%)	- 20.0	+ 16.4		+157.1	+ 24.4
NL	1985	737	3341	510		4588
	1986	779	4523	504		5806
	difference	+ 42	+ 1182	- 6		+ 1218
	growth rate (%)	+ 5.7	+ 35.4	- 1.2		+ 26.5
Total in- going	1985	1449	4340	2141	2804	10734
	1986	1617	5333	2020	2337	11307
	difference	+ 168	+ 990	- 121	- 467	+ 573
	growth rate (%)	+ 11.6	+ 22.8	- 5.7	- 16.7	+ 5.3

3.4. Inland waterway transport by market

3.4.1 Introduction

Intra-Community inland waterway transport can basically be divided into two separate geographical and organizational markets: the Rhine and the North-South (i.e. traffic between the Netherlands, Belgium and France west of the Rhine).

3.4.2 Rhine

About 75 % of all intra-Community traffic by inland waterways goes by the Rhine. Moreover, the Rhine plays an important role in the interior transport of the Netherlands, the Federal Republic of Germany and, although to a lesser extent, France. The table below shows the development in tonnes and tonne/kilometres of traditional Rhine traffic (i.e. total traffic crossing the Dutch/German border at Emmerich/Lobith and the traffic above this border including Switzerland):

Table 3.12 Traditional Rhine traffic ('000 tonnes and '000 000 tkm).

	'000 tonnes	differ.	growth rate	'000 000 tkm	differ.	growth rate
1979	205 473			36 772		
1980	198 166	- 7 307	- 3.4	36 326	- 446	- 1.2
1981	189 731	- 8 435	- 4.3	35 486	- 840	- 2.3
1982	184 253	- 5 478	- 2.9	35 143	- 343	- 1.0
1983	187 691	+ 3 438	+ 1.9	35 095	- 48	- 0.1
1984	198 576	+ 10 885	+ 5.8	37 307	+ 2 212	+ 6.3
1985	187 731	- 10 845	- 5.5	34 564	- 2 743	- 7.4
1986	194 348	+ 6 617	+ 3.5	38 187	+ 3 623	+ 10.5
1986/ 1979		- 11 125	- 5.4		+ 1 415	+ 3.9

In contrast to the previous year in which the bad meteorological circumstances and the poor navigability of the river due to the water levels had caused a fall of Rhine activity, 1986 is characterized by water levels allowing a 100 % loading of the ships during the entire year, except for the autumn months on the middle and upper Rhine. During the first semester the traffic rose quickly in comparison with the previous year and, although the summer brought about a certain set-back, the winter term showed, taking into account the seasonal fluctuations, a relative recovery.

Table 3.12 shows that the traffic losses affecting the Rhine navigation have always been greater in volume than in tonne/kilometres during the period 1979-1985, except for this last year. Inversely, the gains observed have induced more important growth in the field of transport performance expressed in tonne/kilometres than those in brute tonnes. This gives evidence on the constant increase of average transport distance.

In 1986 traditional traffic increased by 3.5 %, from 187.7 mio tonnes last year to 194.3 mio tonnes this year, while transport performance attained about 38.3 mrrd tonne/kilometres, which means an increase of 10.5 %. This growth differential is essentially due to the fact that the goods transported on long distances, all along the river, have benefited from more positive developments than the common goods which are habitually the main activity on the lower part of the Rhine; this while the water levels - being excellent in most sectors during the entire year - have played no role whatsoever as far as the geographical balance of the various flows is concerned.

If the traffic being performed on the Dutch part of the Rhine is added to traditional Rhine traffic, one gets the results on total Rhine traffic:

Table 3.13. Total Rhine traffic ('000 tonnes)

	traditional Rhine traffic	Dutch Rhine traffic	total Rhine traffic	Difference	growth
1979	205 473	81 762	287 235		
1980	198 166	84 555	282 721	- 4 514	- 1.6
1981	189 731	80 287	270 018	- 12 703	- 4.5
1982	184 253	73 171	257 424	- 12 594	- 4.7
1983	187 691	76 462	264 153	+ 6 729	+ 2.6
1984	198 576	76 442	275 018	+ 10 865	+ 4.1
1985	187 731	80 162	267 893	- 7 125	- 2.6
1986	194 348	91 380	285 728	+ 17 835	+ 6.7
1986/ 1979	- 11 125	+ 9 618		- 1 507	- 0.5

Moreover, table 3.14 below presents a repartition of the volumes transported via the Rhine by bilateral intra-community relation.

Table 3.14. Intra-Community Rhine traffic by bilateral relation ('000 tonnes)

To From	B + L	D	F	NL	Total
B + L	-	9 932	951	10 612	21 495
D	10 941	-	2 915	26 205	40 061
F	1 053	8 889	-	2 620	12 562
NL	16 324	73 479	2 646	-	92 454
Total	28 323	92 300	6 512	37 437	166 572

The traffic registered at the Dutch/German border at Emmerich/Lobith is another particularly significant indicator for the level of activity of the international Rhine navigation. Tables 3.15 and 3.16 present a separate analysis of the traffic by commodity group and by direction.

Table 3.15 International Rhine traffic passing Emmerith/Lobith upstream ('000 tonnes)

Commodity group	1985	1986	differ.	growth %
0. Agricultural products	2099	2268	+ 169	+ 8.1
1. Articles of food and fodder	6494	6320	- 174	- 2.7
2. Coal	4978	6345	+ 1367	+ 27.5
3. Oil products	22181	27049	+ 4868	+ 22.0
4. Ore	37164	33985	- 3179	- 8.6
5. Steel products	4048	4333	+ 285	+ 7.0
6. Sand, gravel	2960	3193	+ 233	+ 7.9
7. Fertilizer	2834	2711	- 123	- 4.3
8. Chemical products	5242	5127	- 115	- 2.2
9. Machinery, etc.	1018	1182	+ 164	+ 16.1
Total	89018	92513	+ 3495	+ 3.9

Table 3.16 International Rhine traffic passing Emmerich/Lobith downstream ('000 tonnes)

Commodity group	1985	1986	differ.	growth %
0. Agricultural products	1638	2572	+ 934	+ 57.0
1. Articles of food and fodder	1515	1600	+ 85	+ 5.6
2. Coal	3712	3152	- 560	- 15.1
3. Oil products	1027	543	- 484	- 47.1
4. Ore	673	779	+ 106	+ 15.8
5. Steel products	6437	5659	- 778	- 12.1
6. Sand, gravel	18212	21565	+ 3353	+ 18.4
7. Fertilizer	1773	1848	+ 75	+ 4.2
8. Chemical products	3678	3871	+ 193	+ 5.3
9. Machinery, etc.	2643	2704	+ 61	+ 2.3
Total	41308	44293	+ 2985	+ 7.2

With a total of 13.8 mio tonnes registered last year at the Dutch/German border, 1985 activity (130,3 mio tonnes) has been exceeded by 5.0%. In fact, 1986 figures are the third best annual performance ever in the Rhine history (records in 1978 and 1984). Average monthly performance has been 10.9 mio tonnes, while June shows the best absolute monthly performance with a level of 13.1 mio t. In this respect, one should furthermore note that the calculated gain of 6.5 mio tonnes has been realized owing to the "relatively strong" shipping activity in the first semester. Like traditional Rhine traffic the registered number of tonnes at the Dutch/German border has indeed decreased during the second half of 1986 (-11.1 mio tonnes compared to the first semester).

Upstream traffic has reached higher results with 92.5 mio tonnes (+3.9%) and has mainly benefit from the "relatively strong" growth of oil products (+22.0%) and coal (27.5%). On the other hand, the continuing difficulties in the European iron sector had their reflexion on the behaviour of the ore shipping market which has lost 8.6%. Downstream activity has increased by 7.2% owing to a strong push of the building materials transport in the direction of the Netherlands (+18.4%) as well as an increased volume of cereals (+57.0%).

3.4.3. North-South

North-South consists of the network of rivers and canals west of the Rhine between The Netherlands, Belgium and France. By commodity group the market situation changed between 1985 and 1986 as follows:

Table 3.17 North-South traffic ('000 tonnes)

	1985	1986	Difference	Growth Rate
Total	46643	49192	2549	5.5 %
<u>NST Chapters</u>				
0) agricultural	4965	3424	- 1532	- 30.9 %
1) products	3746	3564	- 181	- 4.8 %
2) coal	1360	1416	56	4.1 %
3) oil products	6653	10795	4142	62.3 %
4) ore	3050	2059	- 995	- 32.6 %
5) steel products	1753	2226	473	27.0 %
6) sand, gravel	15290	18207	2917	19.1 %
7) fertilizer	2124	1989	- 135	- 6.4 %
8) chem. products	5744	3366	- 2378	- 41.4 %
9) machinery, etc.	1967	2150	183	9.5 %

Although one cannot say that there was a considerable alteration in the North-South traffic as a whole, with an overall growth rate of 5.5%, commodity groups showed sharp ups and downs if one looks at them separately.

First due to the extreme low oil price there was in 1986 a policy to stock as much oil as possible. Consequently the transportation of oil products from sea ports to inland destination increased substantially on both the Rhine and North-South.

Secondly, what has been said for the Rhine concerning the decrease of the transport of ore as a result of the continuing difficulties in the European iron sector, goes also for North-South.

Furthermore there was a sharp increase of 2917 tons in sand and gravel transport and an even extreme decrease in the transportation of chemical products. Apparently there is a necessity to react almost immediately on fluctuations in certain economic areas. This illustrates the dependence of the inland waterway transport market on altered economic situations.

And it also must be taken into account that domestic transport in B and NL and North-South traffic are 3 components of the same market. The following examples will make that clear.

There are near the Dutch-Belgian border several sand and gravel puts in exploitation. If for a destination in the Netherlands a Belgian put has been used, the sand or gravel transport will be considered as North-South traffic. If another put close by but on the other side of the border would have been used, one had spoken of domestic traffic for the same transport. So it can be pure coincidental whether a transport has been labeled North-South or domestic. Other commodity groups have that coincidental aspect, too, specially on the Antwerp-Rotterdam route. If for some reason seagoing vessels with chemical products temporarily change harbour from Rotterdam to Antwerp or vice versa it can cause an alteration in the North-South traffic of chemical products in a certain period.

This too can be an explanation for the sudden increase of sand and gravel transport and the decrease of transport of chemical products on the North-South in 1986.

3.5 Fleet developments

The evolution of demand has been highlighted in the previous paragraphs.

In this paragraph the development of the supply side, i.e. the fleet is given.

As a reference it is recalled that total demand in 1986 was -107% below the level of 1979 measured in tonnes and 2.4% in tkm.

3.5.1 Total fleet

Table 3.18 shows the size of the total fleet Member State - in number of vessels and carrying capacity between 1.1.1979 and 1.1.1987.

Table 3.18 Fleet developments: total fleet in number of vessels and carrying capacity ('000 tonnes)

	1.1. 1979	1.1. 1986	1.1. 1987	1987/1979		1987/1986	
				diff.	growth rate (%)	diff.	growth rate (%)
B :vessels	3321	2513	2372	- 949	- 28.6	- 141	- 5.6
carrying capacity	1955	1729	1715	- 240	- 12.3	- 14	- 0.8
D :vessels	4230	3143	3103	-1127	- 26.6	- 40	- 1.3
carrying capacity	3859	3277	3265	- 594	- 15.4	- 12	- 0.4
F :vessels	5525	4729	4599	- 926	- 16.8	- 130	- 2.8
carrying capacity	2618	2308	2229	- 389	- 14.9	- 79	- 3.4
NL :vessels	6631	6293	6267	-3641	- 5.5	- 26	- 0.4
carrying capacity	4840	5479	5552	+ 712	+ 14.7	+ 73	+ 1.3
Total:vessels	19707	16678	16341	-3366	- 17.0	- 337	- 2.0
carrying capacity	13272	12793	12761	- 511	- 3.8	- 32	- 0.3

In 1985 the capacity of the fleet went slightly down (-0.8%), which brought the capacity on the level of -3.6% compared to 1979. This figure is the result of two opposite tendencies: on the one hand the fleets of Belgium, Luxembourg, Germany and France decreased by 14.5%, on the other hand the capacity of the Dutch fleet increased by 14.7%.

Consequently, the relative shares of the national fleets in the total fleet changed considerably over the years, as is shown in table 3.19.

Table 3.19 National shares in total fleet capacity

	1.1.1979	1.1.1987	difference
B	14.9%	13.5%	- 1.4%
D	29.3%	29.7%	- 3.6%
F	19.9%	17.6%	- 2.3%
NL	35.9%	43.2%	+ 7.3%

3.5.2 Rhine fleet

Table 3.20 presents the situation of the Rhine fleet - in number of vessels and carrying capacity - at various dates, in general and by flag.

Table 3.20 Development of the Rhine fleet by number of vessels and carrying capacity ('000 tonnes)

	1.1. 1979	1.1. 1986	1.1. 1987	1987/1979		1987/1986	
				diff.	growth %	diff.	growth %
B :vessels	1727	1611	1594	- 133	- 7.7	- 17	- 1.1
carrying capacity	1304	1328	1320	+ 16	+ 1.2	- 8	- 0.6
D :vessels	3156	2666	2642	- 514	-16.3	- 24	- 0.9
carrying capacity	3245	2990	2985	- 260	- 8.0	- 5	- 0.2
F :vessels			**				
carrying capacity	823	908	908	+ 85	+10.3		
	480	473	473	- 7	+ 1.5		
NL :vessels	5575	5605	5665	+ 90	+ 1.6	+ 60	+ 1.1
carrying capacity	3879	4946	5120	+1241	+32.0	+174	+ 3.5
Total:vessels	11672	11125	11103	- 569	- 4.9	- 22	- 0.2
* carrying capacity	9475	10317	10419	+ 944	+10.0	+102	+ 1.0

(*) Swiss fleet included

(**) Level 1.1.1986

On certain points there are differences to be noted between the development of the total fleet and the Rhine fleet. Indeed, while the total fleet has decreased in carrying capacity and number of ships between 1979 and 1987, the carrying capacity of the Rhine fleet went up in the same period with 994000 tonnes (+10%). However, the corresponding number of ships had a fall of 569 units (-4.9%). Mainly the Dutch fleet, and in a minor way the Belgian fleet, took part in this development.

Table 3.21 Flag shares of the Rhine fleet

	1.1.1979	1.1.1987	difference
B	13.8%	12.7%	- 1.1%
D	34.2%	28.7%	- 5.5%
F	5.1%	4.5%	- 0.6%
NL	40.1%	49.1%	+ 9.0%

The part of the total fleet with a Rhine certificate has considerably increased since 1979. Numerous shipowners specially in Netherlands and Belgium have asked and obtained a Rhine certificate (see table 3.22)

Table 3.22 Part of the total fleet with Rhine certificate in tonnes

	1.1.1979	1.1.1987	difference
B	66.7%	77.0%	+ 10.3%
D	84.1%	91.4%	+ 7.3%
F	18.3%	21.2%	+ 2.9%
NL	84.1%	93.5%	+ 11.4%

So, total fleet or Rhine fleet, situations and developments are to a large extent similar.

Table 3.22 presents a recent annual development of the Rhine fleet according to origin of change: new building, demolishing, sell and buy abroad, new or expired Rhine certificate. Figures were only available from 1.6.86 till 30.5.87.

Table 3.23 Breakdown Rhinefleet developments 86-87 in tons and number of ships ()

	NL	D	F	B	L	Swiss	others	Total
1. new building	(8) 20.028	0	0	0	0	(4) 7.965	0	(12) 27.993
Scrapping	(142) 110.644	(89) 62.689	(4) 1.493	(10) 5.436	0	(1) 2.000	0	(246) 190.262
balance	(-134) -98.616	(-89) -62.689	(-4) -1.493	(-10) -5.436	0	(3) 5.965	0	(-234) -162.269
2. change of flag								
import	(64) 78.775	(34) 54.646	0	(11) 14.100	0	(4) 4.023	(1) 604	(114) 152.148
export	(14) 15.369	(27) 34.034	(5) 10.374	(26) 32.719	0	(41) 59.260	(1) 392	(114) 152.148
balance	(50) 63.404	(7) 20.612	(-5) -10.374	(-15) -18.619	0	(-37) -55.237	(0) 212	0
3. change of capacity								
increase	73.786	79.427	5.602	4.191	0	4.492	1.000	175.224
decrease	21.337	56.121	660	10.917	0	2.084	0	84.393
balance	52.449	23.306	4.992	-6.726	0	2.408	1.000	90.931
4. Rhine certifi- cat new	(355) 253.325	(14) 22.706	(6) 9.519	(115) 141.097	(1) 370	(14) 17.519	0	(505) 444.536
expired	(40) 25.316	(48) 58.661	(21) 6.277	(20) 8.132	0	(2) 2.214	0	(121) 100.600
balance	(315) 228.009	(-34) -35.955	(-15) 3.242	(95) 132.965	(1) 370	(12) 15.305	0	(384) 343.936

Scrapping. The Dutch ministry of transport and public works reports the following: There has been the opportunity to introduce requests for a scrapping premium from 01.01.1986 to 01.01.1987. The total application amounts to 410.000 tons. So far 200.000 has been demolished. Whether the total amount of 410.000 tons will be realised is not yet known. That depends on the barge owners. The Dutch scrapping scheme of 1986 is, as yet, a one year action and concerns only dry cargo ships.

Change of flag. Although the total Rhine fleet has almost not altered as a result of import and export, the internal changes between the several fleets were considerable on that point. More important i.g. for the increase of the Dutch fleet than the new buildings was the import of ships; 20028 tons to 70775 tons. The fact that (over) capacity is being exported from one fleet to another emphasises the necessity of an international approach of the capacity problem.

Table 3.24 shows a closer view of the change of flags (import and export of ships) in a breakdown in nationalities and number of ships.

Table 3.24 Breakdown in- and exports of ships

To From	NL	D	F	B	L	Switzerland	Others	Total export
NL	-	10	0	3	0	1	0	14
D	21	-	0	3	0	2	1	27
F	2	3	-	0	0	0	0	5
B	21	4	0	-	0	1	0	26
L	0	0	0	0	-	0	0	0
Switzer	20	17	0	4	0	-	0	41
Others	0	0	0	1	0	0	-	1
Total import	64	34	0	11	0	4	1	114

As for the position of the Swiss fleet the following can be said. On 15th July 1986 the Swiss Parliament has accepted a law that opens the possibility to remove foreign ships from the Swiss shipregister.

The exports figure of Swiss ships represents no real export but rather, for financial reasons under Swiss flag sailing foreigners, who were under the new legislation obliged to return to their own national flag.

Expectations are that the Swiss fleet will go down in number from ±400 to ±250 for that reason.

3.5.3 Overcapacity

At the request of the Commission of the European Communities the Institute EBW in Ryswyk has carried out a general study to determine the productivity development of the inland navigation fleet on a figure base. It has been possible to analyse the components of a voyage - namely the loading time, the navigation time, the unloading time, the number of working hours per day, etc. - on the basis of a sufficient number of detailed reports of Dutch ships transporting dry bulk commodities on the national and international market. The general conclusion is that the general productivity increase during the period 1980-1985 amounts to 3% per year. If we adopt this figure as a mean for the European fleet and if we suppose that it is also valid for 1986, we must notice - on the assumption that 1979 was a year with a reasonable equilibrium between supply and demand - that overcapacity has reached a level of 20%.

Table 3.25 Estimated overcapacity if the total fleet and of the Rhine fleet

Development since 1979	1.1.1987	
	Total fleet	Rhine fleet
Demande (tkm)	- 2.4%	+ 3.6%
Supply (t. carrying capacity)	- 3.5%	+10.0%
Balance	- 1.2%	+ 6.4%
Productivity development	+ 21.0%	+21.0%
Estimated overcapacity	+ 19.8%	+27.4%

The results corresponds very well to the one the Central Rhine Commission has calculated with more detailed analyses.

While the global amount of tonnage of the German fleet fell back by 0.8% during the past 8 years and while the Belgian Rhine fleet has reached its 1979 level again, the Dutch Rhine fleet grew by 32.0% in the same period.

The strong increase of the Dutch Rhine fleet has contributed to the annihilation of the national scrapping schemes. This growth could partially be explained by the Dutch investment premiums on new building (WIR).

Partially as has been pointed out before as a result of the import of ships from other Member States.

3.6 Inland waterway transport by flag

Today we do not yet dispose of all data needed to determine the share of the fleet of each of the Member States in inland waterway transport in 1985 and 1986. Therefore, data from 1984 (1), based on tonnes carried, are presented here in order to give an insight in traffic on each of the inland waterway transport markets.

3.6.1 Flag shares on national and international markets

In table 3.26 flag shares are given for national transports, international transports, ingoing and outgoing traffic and total traffic, including transit traffic of Belgium/Luxembourg, the Federal Republic of Germany, France and the Netherlands. Next to the traffic shares of each country the share is given for other carriers ("o"). Under this heading vessels of Swiss and East bloc nationalities are the most important.

Table 3.26 Inland waterways : national and international traffic in tonnes, share by nationality of the vessel, 1984 (%)

	Nationality of the vessel	National traffic (%)	Internation. traffic (%)	outgoing traffic (%)	ingoing traffic (%)	total traf. (including transit)
B/L	B/L	89.4	30.5	32.8	28.8	41.9
	D	0.4	9.7	13.9	6.5	9.6
	F	0.5	5.7	5.6	5.9	6.2
	NL	8.0	49.1	41.4	54.8	38.2
	O	1.7	5.0	6.3	4.0	4.1
D	B/L	1.1	6.1	7.4	5.4	4.7
	D	86.8	32.5	23.2	37.5	47.7
	F	0.1	1.4	1.8	1.2	1.6
	NL	8.1	48.1	53.4	45.2	35.5
	O	3.9	11.9	14.2	10.7	10.5
F	B/L	0.1	20.1	12.7	32.6	8.3
	D	0.1	31.7	39.6	18.1	14.4
	F	99.0	19.1	17.1	22.6	60.1
	NL	0.0	17.0	14.3	21.7	8.5
	O	0.8	12.1	16.3	5.0	8.7
NL	B/L	1.1	12.3	11.3	14.7	10.6
	D	0.4	24.3	28.7	13.7	16.8
	F	0.2	1.8	1.5	2.5	1.6
	NL	97.9	53.7	50.3	61.7	65.2
	O	0.4	7.9	8.2	7.4	5.8

(1) Source: Eurostat

As becomes clear from the table national traffic is in the hands of transporters of that same country. In France and in the Netherlands flag shares are almost 100%, in Belgium and Germany flag shares are about 90%. Only Dutch carriers have an appreciable share in the national traffic of other Member States (8% in Germany and Belgium).

In international traffic, the very strong position of the Dutch fleet is the most interesting feature. Not only do Dutch vessels carry 53.7% of Dutch international traffic, they also are the main transporter in German (45%) and Belgian (49%) international traffic. This important market share is hold in ingoing as well as outgoing traffic.

In German and Belgian international traffic, national carriers hold important market shares of about a third of the tonnage transported.

Of the French international inland waterway transport market - relatively small - German carriers hold the biggest share (31.7%) in particular in outgoing traffic.

In table 3.27 figures on market shares in total international traffic, based on tonnes carried, as well as in international Rhine shipping are given. The market share of the Netherlands has increased from 47.4% to 48.0% in 1984.

Table 3.27 National shares in total international transport and in international transport by market, 1984 (%)

Flag	Total international traffic (tonnes) 1	Rhine traffic (tonnes) 2	North/South traffic (t) 3
B/L	13.0	6.9	31.8
D	25.4	30.5	7.7
F	3.7	1.6	4.3
NL	48.0	51.0	49.3
O	9.9	10.0	6.9

(1) Source: Eurostat

(2) registered at the Dutch/German border: source CBS

(3) registered at the Belgian/Dutch border: source CBS

3.7. Transport Inquiry Survey

3.7.1. Introduction

The results of the opinion surveys carried out among waterway operators on the Rhine and the North/South network give a quick insight into the effects of the economic depression on the inland waterway sector.

On the Rhine, these surveys are carried out by the Central Rhine Commission among 21 shipowner companies and cooperatives of private operators.

On the North/South, the Institut pour le Transport par Batellerie (ITB - Brussels) and the Economic Bureau for road and waterway transport (EBW - Rÿswÿk) collect information among a panel of owner/operators and shipowners on behalf of the Commission. The Office National de la Navigation (ONN - Paris) also supplies important information.

3.7.2 Rhine

The particularly bad meteorological circumstances during the first quarter in 1985 had caused a considerable setback of the traffic. This could not be compensated for in the spring and the summer, and matters even deteriorated in autumn because of the water levels. At the beginning of 1986, a recovery of the exceptional setback of the corresponding period in the preceding year occurred. Nevertheless, this traffic growth crumbled during the second trimester and in the summer of 1986 a stagnation of Rhine transports arose. At last, in the fourth trimester, traffic has progressed "relatively strongly", because the bad navigability of 1985 has not prevailed again.

In general, the good navigation conditions have permitted a better use of the capacity. In fact, the number of vessels has been less than in 1985 while the transport volume has been higher.

Table 3.28 Traditional Rhine traffic ('000 tonnes and '000 000 tkm)

	'000 T	'000 T	Change %	'000 000	'000 000	change %	
	1985	1986		:tkm 1985	:tkm 1986		
<u>quarter</u>							
1	40 985	43 185	+ 5,4	7 498	8 419	+ 12,3	
2	52 520	54 818	+ 4,4	10 001	11 191	+ 11,9	
3	52 334	50 812	- 2,9	10 092	10 183	+ 0,9	
4	41 892	45 533	+ 8,7	6 973	8 394	+ 20,4	
Total	187 731	194 348	+ 3,5	34 564	38 187	+ 10,5	

The interviewees had the impression that the mean transport prices had been low during the entire year and that the level reached during the fourth quarter might even deteriorate in the middle of 1986. In fact, nothing whatsoever gives the impression of a turning over of this trend in the near future.

The use of capacity available has increased during the first quarters before it stabilized during the rest of the year. As a mean, only 13% of the shippers have used their capacity fully in 1986. Most shipowners situated their loading rate between 75 and 100%. Approximately 71% of the transporters placed themselves in this category for the entire year; this figure is somewhat higher during the first and third quarter. No transporter has registered a loading rate below 50%.

Except for the beginning of the year, no request for extra capacity on the free market has been done. The decreasing trend has reached its lowest point (14%) during the third quarter to rise again to 23% during the last quarter. At the beginning of the year, 62% of the shippers still have turned to the free market to obtain extra capacity. However, no relation between the development of the realized traffic and the request for extra capacity can be established.

In relation with the respective year's quarter, the number of transport contracts which are newly arranged or prolonged has been judged as being normal by 77, 58, 76 et 83% of the shippers respectively. The answers of other interviewees are half positive half negative as far as signed contracts are concerned.

3.7.3 North/South

Waiting time on the bourses is one of the best indicators of activity on the North/South market for dry bulk cargo. Transport of oil products is free from bourse-intervention. The same applies for sand and gravel transport originating in the Netherlands and for a number of large bulk transports on the relation NL-B.

The following table shows the evolution of waiting days by traffic relation. For the total of North/South traffic the level of waiting time for the year 1986 showed not much difference compared to the previous years.

The steady growing waiting time on the F-B/NL relation has to be seen in the light of the crisis of the French inland waterway transport market and the local infrastructure.

The number of waiting days for the French national market shows a similar negative development which has its reflection on the international transport. F-B/NL traffic has to pass the same relatively small canals as the national inland waterway transport. The route from Belgium to Paris is only accessible for ships smaller than 500 tons whereas on the Rhine and German waterways an average ship already measures over 1000 tons. The French-North traffic will likely leave behind more and more comparing to the waterways with possibilities for bigger ships.

Table 3.29 Quarterly average of waiting days in international N/S traffic by traffic relation

Traffic relation		Q1	Q2	Q3	Q4	Yearly average
1) NL -- F	1982	10.1	16.6	20.0	15.0	15.4
	1983	11.5	18.8	17.6	8.9	14.2
	1984	14.3	20.1	16.2	11.4	19.1
	1985	14.2	19.3	18.0	13.9	16.3
	1986	17.1	14.2	17.3	8.5	14.1
	1987	11.6				
2) NL -- E	1982	8.7	10.9	14.7	13.3	11.9
	1983	12.7	13.3	12.9	8.4	11.8
	1984	12.5	12.2	14.0	10.7	12.3
	1985	13.5	12.9	13.6	8.7	12.2
	1986	10.9	9.7	12.7	8.5	10.4
	1987	8.4				
3) B -- B+F	1982	5.8	6.0	8.2	6.1	6.5
	1983	7.5	7.7	8.4	4.7	7.1
	1984	7.7	7.5	8.1	7.0	7.6
	1985	10.1	7.8	9.9	7.9	8.9
	1986	10.9	7.8	11.2	8.1	9.5
	1987	10.4				
4) B --- NL	1982	-	-	-	9.5	-
	1983	8.1	8.6	9.5	6.9	8.3
	1984	8.9	8.7	8.7	8.5	8.7
	1985	10.7	10.6	11.3	8.5	10.3
	1986	8.8	7.9	10.5	7.3	8.6
	1987	9.3				
5) F -- B+NL	1982	9.2	18.0	16.1	12.5	14.0
	1983	20.9	17.0	21.0	16.2	18.8
	1984	19.0	19.6	22.8	18.6	20.0
	1985	18.7	19.1	26.6	10.3	18.7
	1986	18.3	25.1	30.5	29.2	25.8
	1987	30.8				

The general feeling of the transporters about the market situation (balance of opinions on demand utilisation of capacity and forecast of activity) changed from very negative in 1984 to less negative and sometimes slightly positive towards the end of 1985 and stayed that way during the year 1986.

3.8. Cost and price indices

Cost and price indices were presented for the first time in the Annual Report 1983. In 1984 the system was further developed. In 1985 minor improvements have been made.

All indices are on the basis 1.1.1979 = 100. This year had been chosen by the CCR as a base year for Rhine market observation, because it is considered to be the latest year with equilibrium between supply and demand.

Some of the tables and graphs that are summarized and commented here, have already been presented in the quarterly reports No. 22 and 24.

3.8.1. Methodology

Cost indices are calculated for four shiptypes :

- ships having a carrying capacity of 350 tonnes;
- ships having a carrying capacity of 600 tonnes;
- ships having a carrying capacity of 1200 tonnes;
- pusher units.

When the previous reports were presented, cost information for pusher units was not yet available. These cost indices were therefore based on the costs of big motorvessels (2200 tonnes). The results of a detailed study on costs of pusher units became available in 1985. The corrected results over the period 1979-1985 are included in the graphs and tables presented in the annual reports since 1985.

The cost indices are calculated following a given cost structure in the base year (1.1.1982). The following cost elements are taken into account :

- wages,
- capital,
- fuel,
- other costs.

On waiting days the following assumptions were made :

Rhine : 1 day,
N/S : 10 days.

The calculations are based on the actual cost developments on 47 international traffic relations representing total international waterway transport in the Community. By weighting the various relations and cost elements, cost indices are found for each of the bilateral traffic relations between Member States and for the North-South and Rhine inland waterway transport markets.

The information is collected twice a year, on 1 January and 1 July.

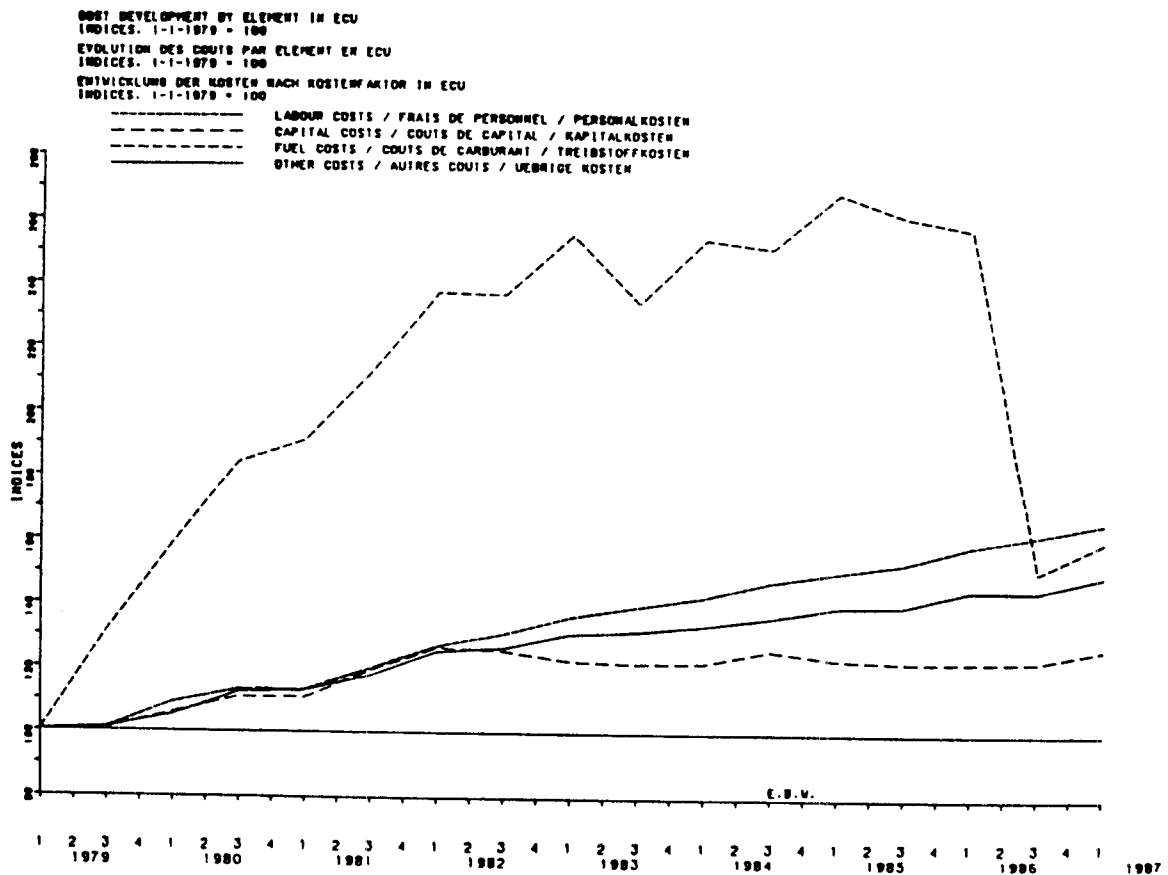
Price indices for the Rhine are collected by the CCR in cooperation with the Arbeitsgemeinschaft. The data are provided by 22 transport organizations, that means: most of the big ship owner companies and some cooperatives of small operators. These organizations are responsible for 50 to 60% of the total tonnage moved.

Price indices for international North-South traffic are collected by EBW (Rijswijk) and ITB (Brussels). The information is obtained from both shippers and transporters. Some 200 mainly small transport firms provide information for this part of the market observation system.

3.8.2. Overall cost development and by market (in ECU)

Over the last years the cost development in inland navigation has been dominated by the evolution of fuel costs. The highest level for these costs was recorded on 1.1.1985. Since then fuel costs started to decrease gradually. A real fall of oil prices emerged shortly after 1.1.1986.

Figure 3.2. : Overall cost indices by element (Rhine + North-South) in ECU.



The decrease of total costs in 1986 was exclusively caused by the sharp fall of the oil prices in the beginning of 1986. All other components have increased. Specially wages and other costs are steadily growing cost components.

These "other costs" represent mainly services provided to the transporter, such as: repairs, maintenance, port fees, insurance, etc.

Table 3.30.: Cost indices by elements and by market
1.1.1985, 1.1.1986, 1.1.1987 in ECU (1.1.1979 = 100).

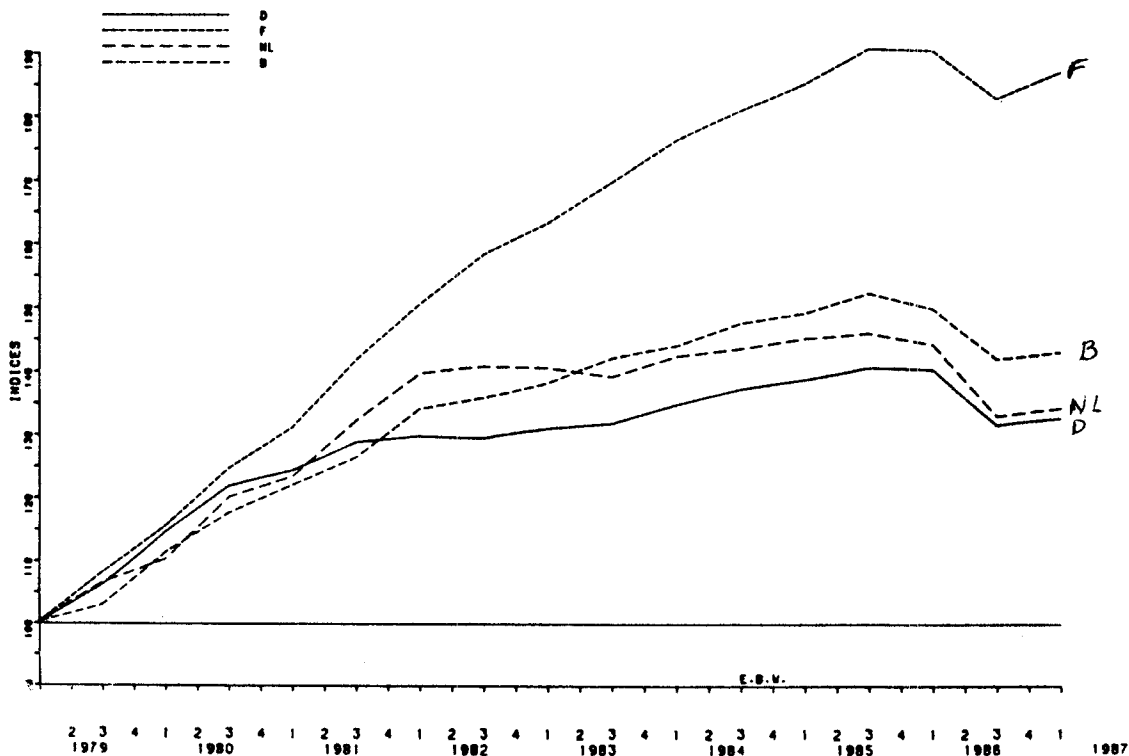
Market	Cost elements	1.1.1985	1.1.1986	1.1.1987
Overall	wages	150	158	166
	capital	122	122	126
	fuel	268	258	160
	other costs	139	145	150
	total costs	152	155	151
Rhine	wages	152	160	169
	capital	125	126	132
	fuel	271	263	167
	other costs	143	148	153
	total costs	157	160	154
North/South	wages	148	156	161
	capital	118	115	118
	fuel	264	250	150
	other costs	135	139	144
	total costs	143	147	146

From 1979 till the end of 1985 total costs increased slightly more in Rhine traffic (+60) than in North-South (+47), mainly because the boom in oil prices had a greater impact on Rhine costs (Rhine traffic is in general more fuel consuming per tkm). Now that oil prices have gone down the difference in cost level has become less.

3.8.3. Total cost development by flag in national currency

If costs are monitored in national currency, big differences appear between cost developments by flag, mainly due to differences in inflation rates in the period 1979-1984. However in 1986 the evolution was in all Member States concerned about the same, namely a decrease of total costs during the first three quarters and an upgoing line thereafter.

Figure 3.3.: Overall cost indices in national currency



In the following table cost increases in 1986 are broken down by nationality of the carrier.

Table 3.31.: Total cost indices by nationality of the carrier in national currency (1.1.1979 = 100).

	B (BF)	D (DM)	F (FF)	NL (HFL)
1.1.1985	149	139	185	145
1.1.1986	150	140	190	144
1.1.1987	142	133	186	134
Increase 1986	- 5,3 %	- 5 %	- 2,1 %	- 6,9 %

A registration of costs and prices in national currency includes so many monetary effects that it is not possible to get a clear and separate view of the developments in the European transport market. Therefore the rest of the analyses will be based on ECU.

3.8.4. Cost developments by shiptype (in ECU)

Table 3.32.: Cost indices (total costs) by shiptype in ECU

Year	350 tons	600 tons	1200 tons	pushed units
1.1.1979	100	100	100	100
1.1.1980	110	108	112	111
1.1.1981	118	113	119	135
1.1.1982	131	128	135	159
1.1.1983	134	130	142	171
1.1.1984	137	132	144	173
1.1.1985	146	139	150	182
1.1.1986	151	142	153	183
1.7.1986	147	140	145	152
1.1.1987	151	143	150	160

The incident of the fuel cost increase in the years 1979/1985 and the steep decrease in 1986 was most strongly felt for pusher units. Apart from the oil prices the costs developments over the years were relatively small. During the last two years costs increased more for small vessels than for big ones. The following table will give a closer look at the influence of the oilprice fluctuation and the other costs elements for the several shiptypes in 1986.

Table 3.33

COST DEVELOPMENT BY ELEMENT AND SHIPTYPE IN ECU IN THE YEAR 1986

INDICES PER 1.1.1986 (1.1.1979 = 100)
AND PER 1.1.1987

LOADING CAPACITY	COST ELEMENT					TOTAL COSTS
	LABOUR COSTS	CAPITAL COSTS	FUEL COSTS	OTHER COSTS		
350 TONNES	167	114	159	144		151
600 TONNES	152	121	140	144		143
1200 TONNES	166	128	161	150		150
PUSH TOW *	166	147	165	159		160

3.8.5. Comparison between cost and price developments by market

a) Rhine market

The comparison of cost and price indices for Rhine traffic may require some explanation.

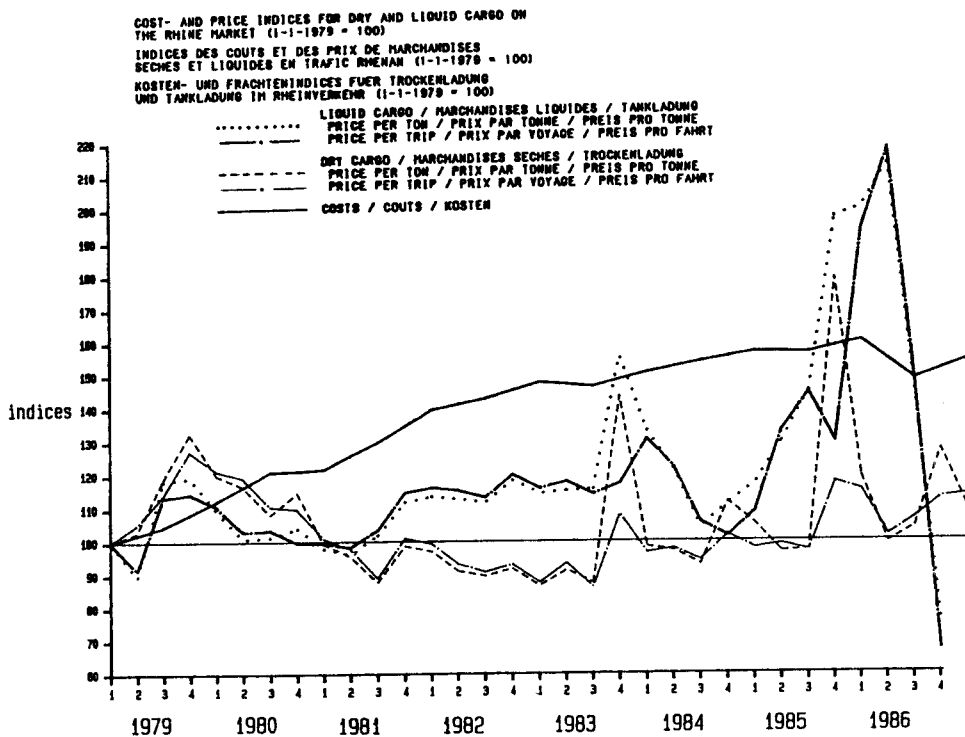
Cost indices are calculated on the basis of costs per trip. Price indices can either be based on prices per tonne or revenues (prices) per trip. For a clean comparison costs per trip should be compared with revenues per trip. As long as the average loading factor of the ships does not change the pattern of price indices per tonne or per trip will be the same (price per tonne x tonnes carried = revenue per trip). However, in Rhine traffic the average loading factors are far from constant. In periods of low water levels the loading factors can go down sharply (up to 50% of the normal level). In these circumstances transporters receive in general a "low water allowance" per ton, which is a compensation to keep the revenues per trip on the agreed level. So prices per tonne will show an upswing in this situation while prices per trip will remain the same.

But there is a second effect that has to be taken into account. Reduced load factors imply that more ships are needed to keep the normal cargo flow going. So an increase in demand is felt in the market which causes a further upward pressure on prices. Consequently, not only prices per tonne, but also revenues per trip will go up - although to a much lesser degree - in such periods.

What influenced the price developments on the Rhine in 1986 the most was the extreme low oil price. The Oil trade reacted in filling their total storage. As a result there was a strong demand on the liquid cargo market that swept the transport price sky high. After in second half of 1986 every storage had been filled and the oil price had increased the transport price for liquid cargo sunk again very fast to the old (low) level.

In figure 3.3 price indices per trip and per tonne are presented for dry and liquid cargo and compared to the evolution of costs in Rhine traffic as a whole.

Figure 3.4.: Cost and price developments for Rhine traffic in ECU



The above-presented graph shows clearly the strong oil-price-effect in the second quarter of 1986 and the low-water-effect in the last quarter of 1985.

The cost/price ratio of 1979 has been chosen as the reference level, because this year is considered as a year with equilibrium between demand and supply on the Rhine market. The downgoing demand in 1980, and the overcapacity that resulted thereof, caused a sharp fall in prices both in dry and liquid cargo.

In dry cargo the situation deteriorated further in the period 1981-1983. In 1983 profitability reached its lowest point, with prices down to 90 while costs had gone up to 150. Since then the situation has improved slightly and gradually. Since then the evolution of prices runs more or less parallel with the evolution of costs. The uplift in prices in 1986 concerned mainly liquid cargo.

General remarks

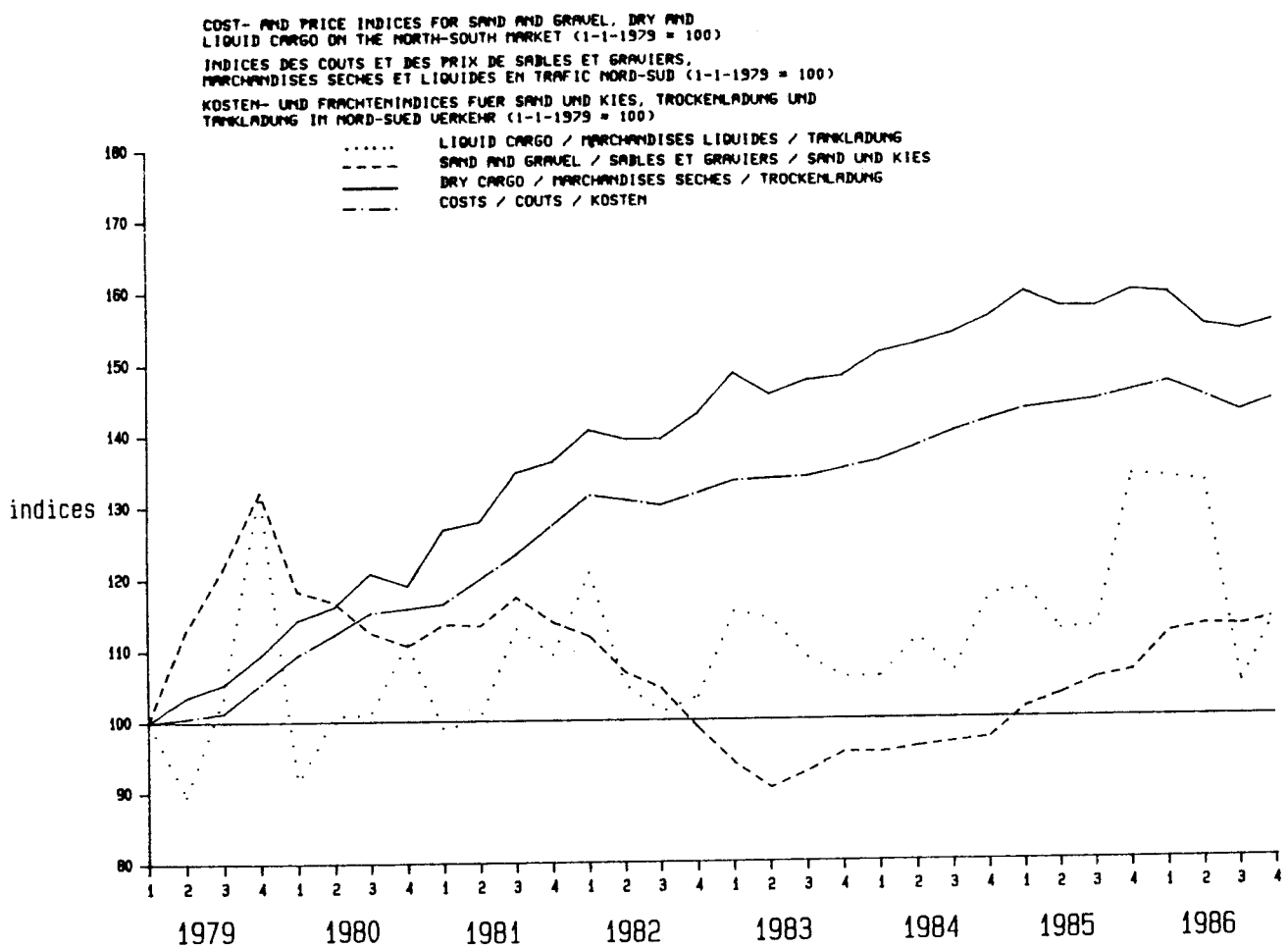
The cost indices are based on a detailed study - carried out in 1982 - concerning the cost structure and the productivity of different types of inland navigation enterprises. Since then the periodical changes in cost elements (fuel, wages, etc.) have been applied on the costs per trip calculated for the base year, but possible changes in the productivity were not taken into account so far. In 1985 the EBW on behalf of the Commission carried out a global study on the productivity-evolution for motorvessels in dry cargo. The outcome indicates an average productivity increase (more trips as a result of shorter turn around times longer working hours and other factors) of about 3% per annum. It is intended to introduce in the future a correction factor for productivity changes in the calculation of cost indices.

b) North-South market

In international North-South traffic there are different market regimes, which results in different price developments.

- * The market for liquid cargo is free, as it is on the Rhine. The same applies for most of the sand and gravel transports.
- * The rest of dry cargo is in principle subject to a tour de rôle system, although there are exceptions for certain transports between NL and B. Prices in this regulated market are fixed after negotiations between representatives of transporters and shippers in the tariff committees, or by transporters unilaterally.

Figure 3.5.: Cost and price developments for international North-South traffic, in ECU.



Prices in the free segment of the North-South market show roughly the same pattern as on the Rhine. The lowest point in prices compared to costs was reached at the end of 1983. Since then prices developed parallel with costs or tended to rise slightly more.

Prices in liquid cargo showed the same upswing in 1986 as on the Rhine. The effect of the low oil prices and the extra demand for tankers in Rhine traffic in this period has played a role. And like on the Rhine the upswing has turned out to be of a temporary nature.

As the prices in the regulated market are currently more attractive for the transporters than on the free market, the overcapacity in dry cargo vessels tends to concentrate on the waiting lists of the tour de rôle-systems (including the tour de rôle systems for domestic transport in NL and B). This leads to an increase of waiting times, see § 3.7.3, which has a similar negative effect on the profitability as the low prices on the free markets.

CHAPTER 4

RAIL

4.1 Introduction

4.1.1 Data and summary of the chapter

The goods transport by railway is the least integrated part of the market observation system. The statistical data presented in this chapter have been supplied by the statistical offices of 12 member countries. They correspond to those presented on the basis of the Statistical Directive for rail transport sent to the Statistical Office of the European Community (Eurostat). The information concerning the tariff development in the Federal Republic of Germany, Belgium, France, Italy and in the Netherlands has been prepared on basis of price surveys carried out among railway companies in five countries.

The analysis establishes a comparison between the data of 1985 and 1986 plus in several cases statistical series constructed since 1979 in order to determine the developments that have arisen over a longer period and in order to be able to make comparison with the data presented for other modes (especially inland waterway).

The tables contain relatively detailed information. The analysis, however, is restricted to the principal results.

The contents of chapter 4 can be summarized as follows:

1. General traffic development
2. Traffic development by relation
3. Traffic development by commodities
4. Railway price indices

4.1.2 General traffic development

The 1986 rail freight figures were disappointing in almost every Member State, with an overall decline for the Twelve of almost 4%, from 678.9 million tonnes in 1985 to 652.1 million tonnes.

International traffic fell faster than national traffic, particularly on the French and German railways. As explained in greater detail in Section 4.3, this loss of traffic since 1985 is due, above all, to the 5.1% decline in activity in the steel industry which reduced the volume of ore, scrap and steel products moved by rail.

The irreversible decline in heavy industry forced the railways to continue restructuring their national and international services towards low volume, high value-added goods in 1986 too.

During the period 1979-1986 total activity has decreased by 20,4% (EUR 12), although there were large differences between the Member States. The French market has shrunk by one third. The developments in the other countries have been less dramatic in spite of important activity losses in United Kingdom (-18,1%), in Italy (-18,0%), in Ireland (-15,1%) and in the Netherlands (-14,5%).

Table 4.1 Breakdown by country of national and international traffic (by 1000 tonnes)

	D *	F *	I *	NL *	B/L *	UK *	IRL *	DK *	GR *	EUR 10 **	Variation %	E *	P *	EUR 12 **	Variation %
1979	346601	206766	56107	21397	79305	170559	3799	5413	4057	779326		35800	3800	818926	- 2.7
1980	338396	203161	58143	21802	74613	154671	3629	4936	3646	756692	-2.9	36500	3700	796892	- 4.9
1981	324058	180971	52869	20769	72768	155123	3722	4740	2993	720851	-4.7	33100	3700	757651	- 9.1
1982	297325	166083	46644	17744	64746	142822	3739	4767	2474	653676	-9.3	30800	3900	688376	- 1.8
1983	289737	157416	44997	17399	64986	147366	3320	4761	3356	639391	-2.2	32300	4600	676291	- 6.2
1984	308975	158492	49458	19212	72591	80924	3387	4915	3854	598525	-6.4	30700	5300	634525	+ 7.0
1985	313280	152544	48132	19919	74143	140480	3379	5306	3970	642698	+7.4	30700	5300	678698	- 3.9
1986	294404	137168	46029	18290	65454	139643	3126	5276	4093	622890	-3.1	25061	5240	652113	
Diff. 86-79 growth rate%	-52197 - 15.1	-69598 - 33.7	-10078 - 18.0	- 3107 - 14.5	-13851 - 17.5	-30916 - 18.1	- 673 -17.7	-137 -2.5	+ 36 +0.9	-156436 - 20.1		-10739 - 30.0	+1440 +37.9	-166813 - 20.4	
Diff. 86-85 growth rate%	-18876 - 6.0	-15376 - 10.1	- 2103 - 4.3	- 1829 - 8.2	- 8689 - 14.7	+ 845 - 0.6	- 233 - 7.4	- 30 -0.6	+123 +3.1	- 19808 - 3.1		- 5639 - 18.4	- 60 - 1.1	- 26585 - 3.9	

* Country: Imports + exports + national traffic
 ** EUR : Total national traffic + total export traffic

(See also table 4.4)

4.2 Railway traffic development by relation

Table 4.2 shows the number of tonnes in 1985 and 1986, the increase or decline registered and the growth rate of each bilateral relation and of the national traffic.

For the sake of uniformity with the chapters concerning road and waterway transport, the data concerning Belgium and Luxembourg have been combined.

As far as Ireland is concerned, the only international rail traffic is between the Republic of Ireland and Northern Ireland. On this relation no information has been communicated.

International intra-community traffic (EUR-12) has decreased by 0.9%. Total traffic entering Member States has registered a regression, except for the imports toward the Netherlands (+6,4%). As far as the outgoing traffic is concerned, the situation is slightly more differentiated: even if the large majority of the exports of Member States by rail show a regression, traffic coming from Greece and, although in a lesser way, Denmark shows a certain growth (11,3% and 3,1% respectively).

The deterioration of intra-Community traffic has continued in a more and more severe manner during the entire year 1986. During the fourth trimester the loss amounts to 16,0% in comparison with the corresponding period in the preceding year. The phenomenon can be partially explained by the fact that the rail had benefited in 1985 from the transfer of certain Rhine traffic, in particular between the Netherlands and Belgium on one hand and Germany on the other hand. This phenomenon did not occur again during the next year because of the fact that the water levels registered on the Rhine did not reach the same extremely low levels in autumn.

Table 4.2 Volume of traffic by rail (national and intra-Community traffic / 1000 tonnes)

TO		D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	EUR12 total traff outw.	EUR12 total traff outw. and nat.
FROM														
D	1985	238935	6069	6018	1781	5440	106	-	893	85	406	14	20812	259747
	1986	227181	4841	5430	1667	4689	83	-	833	68	440	8	18059	245240
	gr.rate(%)	-4.9	-20.2	-9.8	-6.4	-13.8	-21.7	-	-6.7	-20.0	+8.4	-42.9	-13.2	-5.6
F	1985	3466	114292	7163	564	6606	232	-	89	22	79	8	18229	132521
	1986	3455	104027	6310	378	4606	232	-	117	16	173	29	15316	119343
	gr.rate(%)	-0.3	-9.0	-11.9	-33.0	-30.3	0	-	+31.5	-27.3	+119.0	+262.5	-16.0	-9.9
I	1985	2345	1548	17221	440	1075	462	-	67	26	27	17	6007	23228
	1986	2233	1691	16695	430	1009	350	-	90	21	40	18	5882	22577
	gr.rate(%)	-4.8	+9.2	-3.1	-2.3	-6.1	-24.2	-	+34.3	-19.2	+48.2	+5.9	-2.1	-2.8
NL	1985	4457	1456	567	5166	956	20	-	14	5	6	0	7481	12647
	1986	3823	1357	557	5273	939	20	-	14	9	5	-	6724	11997
	gr.rate(%)	-14.2	-6.8	-1.8	+2.1	-1.8	0	-	0	+80.0	-16.7	-	-10.1	-5.1
B/L	1985	3337	5864	1373	1974	5476*	47	-	83	10	40	1	18205	18205
	1986	3320	5168	1495	2593	5140*	22	-	67	35	43	-	17883	17883
	gr.rate(%)	-0.5	-11.9	+8.9	+31.4	-6.1	-53.2	-	-19.3	+250.0	+7.5	100.0	-1.8	-1.8
UK	1985	128	58	160	2	43	120808	-	0	0	.	.	391	121199
	1986	110	52	192	2	36	138505	-	-	-	-	19	411	138916
	gr.rate(%)	-14.1	-10.3	+20.0	0	-16.3	+14.7	-	-	-	-	-	+5.1	+14.6
IRL	1985	-	-	-	-	-	-	3369	-	-	-	-	-	3369
	1986	-	-	1	-	-	-	3126	-	-	-	1	2	3128
	gr.rate(%)	-	-	+100.0	-	-	-	-7.2	-	-	-	+100.0	+200.0	-7.2
DK	1985	466	22	62	7	28	3	-	2312	1	1	0	590	2902
	1986	432	38	106	4	24	2	-	2361	1	4	-	611	2972
	gr.rate(%)	-7.3	+72.7	+71.0	-42.9	-14.3	-33.3	-	+2.1	0	+300.0	-	+3.6	+2.4
GR	1985	58	1	3	6	3	0	-	0	1205	.	-	71	1276
	1986	55	3	2	6	13	-	-	-	1235	-	-	79	1314
	gr.rate(%)	-5.2	+200.0	-33.3	0	+333.3	-	-	-	+2.5	-	-	+111.3	+3.0
E	1985	348	207	87	39	132	.	-	15	0	.	.	.	.
	1986	332	193	38	36	109	.	-	12	2	22998	211	933	23931
	gr.rate(%)	-4.6	-6.8	-56.3	-7.7	-17.4	-	-	-20.0	+200.0	-	-	-	-
P	1985	11	21	13	0	1	.	-	-	.	.	.	.	.
	1986	8	18	6	-	1	.	-	-	-	197	4690	230	4920
	gr.rate(%)	-27.3	-14.3	-53.9	-	0	-	-	-	-	-	-	-	-
EUR-12 total traf. entry	1985	14616	15246	15446	4813	19760	870	-	1161	149	.	.	.	.
	1986	13768	13361	14137	5116	16566	709	-	1133	152	902	286	66130	.
	gr.rate(%)	-5.8	-12.4	-8.5	+6.9	-16.2	-18.5	-	-2.4	+2.0	-	-	-	-
EUR12 total traf. entry and nat.	1985	253551	129538	32667	9979	19760	121678	3369	3473	1354	.	.	.	.
	1986	240949	117388	30832	10389	16566	139214	3126	3494	1387	23900	4976	.	592221
	gr.rate(%)	-5.0	-9.4	-5.6	+4.1	-16.2	+14.4	-7.2	+0.6	+2.4	-	-	-	-

* 1985: B — L : 3 911
L — B : 1 505
5 416

1986: B — L : 3 789 (- 3.1%)
L — B : 1 351 (-10.2%)
5 140 (- 6.1%)

The relative importance of the intra-Community flows in 1986 is traced in table 4.5. The railway commodities transport toward Belgium and Luxembourg (25,1%), Italy ((23,8%), France (19,8%) and Germany (17,3%) represents 86%. Simultaneously, the traffic from Germany (26,8%), France (26%) and the Benelux countries (33,8%) are approximately equal importance and correspond to more than 87% of the total.

Table 4.3 Relative importance of the intra-Community ingoing and outgoing flows in 1986 (%)

	Ingoing	Outgoing
D	17,3	26,8
F	19,8	26,6
I	23,8	9,4
NL	9,1	12,5
B/L	25,1	21,4
GB	1,2	0,7
IRL		0,0
DK	2,0	1,1
GR	0,3	0,1
E	1,3	1,3
P	0,1	0,1
Total	100,0	100,0

Among these principal flows, the intra-Community traffic from and toward the above mentioned countries has registered the following decreases:

- U.E.B.L. : - 3,5 Mio t; - 9,3%
- Germany : - 3,6 Mio t; - 10,5%
- France : - 4,9 Mio t; - 16,3%
- Italy : - 1,4 Mio t; - 6,5%
- Netherlands : - 0,5 Mio t; - 3,7%

If one considers separately the ingoing and outgoing traffic, one finds that the following relations have undergone variations of more than one million tonnes:

- toward the E.U.B.L. : - 3,2 Mio t; - 16,2%
- from France : - 3,0 Mio t; - 16,7%
- from Germany : - 2,8 Mio t; - 13,7%
- toward France : - 1,9 Mio t; - 12,4%
- toward Italy : - 1,3 Mio t; - 8,2%

In 1986 the Belgium-Luxembourg ingoing and outgoing traffic has lost the growth gained in the two previous years by falling 1 million tonnes to end below the 1984 level. This also holds for Germany which also does not succeed in reaching the 1984 figures (-2,0 Mio t). On the whole the 1985 gains were wiped out to produce results poorer than the year before this short-lived growth.

Important changes (500000 tonnes) have been registered in the following relations:

F	B/L	:	- 2,0 Mio t;	- 30,3%
D	F	:	- 1,2 Mio t;	- 20,2%
F	I	:	- 0,9 Mio t;	- 11,9%
D	B/L	:	- 0,8 Mio t;	- 14,2%
B/L	F	:	- 0,7 Mio t;	- 11,9%
NL/	D	:	- 0,6 Mio t;	- 14,2%
D	I	:	- 0,6 Mio t;	- 9,8%
B/L	NL	:	+ 0,6 Mio t;	+ 31,4%

The relations concerning France already have undergone - except for the relation toward the E.U.B.L. - negative developments between 1984 and 1985. The other relations, which mark this year of decline, had registered important progress last year, in particular in the case of the flows between the Netherlands and Germany. These have benefitted in 1986 - let's repeat it - from transports that are usually carried out by the inland navigation, because of low water levels on the Rhine. The relations of the E.U.B.L. toward Germany remained stable and, finally, the traffic between the E.U.B.L. and the Netherlands continued to grow.

Other analyses show that this very important activity decrease of the intra-Community traffic essentially concerns the ores, metal waste and metal products.

The underlying edition of the annual report integrates for the first time in the tables of the railway traffic data, concerning the exchanges of Spain and Portugal with the other Member States. Table 4.4 provides information on the traffic from and to the two countries of the Iberic peninsula.

Total railway traffic between Spain/Portugal and other Common Market countries is rather limited. Spain generates 78% of the traffic and Portugal 22%. Incoming traffic (50%) and outgoing traffic (49.5%) take almost equal shares. About half of the traffic goes to or comes from Germany which is followed by France (27%), the E.U.B.L. (10%) and Italy (7%).

Last year Germany occupied the first place in national traffic with 227 Mio t, followed by United Kingdom (139 mio t) and France (104 Mio t).

The developments of these three traffic groups have been very different: Germany and France have registered between 1985 and 1986 losses of respectively 11,8 Mio t (-4,9%) and 10,3 Mio t (-9,0%), while British national traffic increased by 17,7 Mio t (+14,7%). This divergence is so much the more remarkable as the German economy has attained better results than the British one.

The Italian market which is much less extensive, has registered a slight decrease (-3,1%) in 1986. This constitutes a new depression for the traffic flows that have not benefitted from the recovery in 1985.

The development of the fluvial transport market in Belgium and Luxembourg is also negative (-6,1%). This follows the excellent progression of 21% in 1985 which lies above the 1984 level. Equally, Dutch national traffic gains 2,1% in comparison to the preceding year. Compared to the rest the interior traffic in the Benelux has behaved very well in 1986.

4.3 Traffic development by commodity group

4.3.1 Main commodity groups

A detailed analysis of the data divided by NST group shows that the development of railway transport is essentially linked to a limited number of categories, which have been more affected by the economic recession and structural changes. One should nevertheless not forget that other factors (political, commercial, etc.) also could have played an important role in the development of these generally negative trends.

The four main commodity groups which are transported by rail are the following:

- Solid mineral fuels (NST 2)
- Metal products (NST 5)
- Ores and metal waste (NST 4)
- Machinery, transport equipment and manufactural articles (NST 9)

These 4 NST categories represent 63% of total railway traffic.

If one adds to this crude and manufactured minerals and building materials (NST 6) and petroleum products (NST 3) one comes to 81% of total commodities transported by rail.

Table 4.4 Volume of product categories NST 2, 4, 5 and 9 transported by rail (national and international traffic ('000 T) EUR 10

	NST				
	2 Coal	4 Ore	5 metal products	9 machinery transport equipment manufactural articles	Total
1982	207082	92259	106211	81117	487369
1983	201856	85751	104161	83473	475241
1984	151870	89206	113446	85872	440394
1985	199849	92055	117731	88128	497763
1986					

Table 4.5 Market shares of the NST 2, 4, 5 and 9 categories in the total of national and international railway traffic (%) EUR 10

	NST				
	2 Coal	4 Ore	5 metal products	9 machinery transport equipment manufactural articles	Total
1982	31,3	14,1	16,1	12,3	73,7
1983	31,2	13,2	16,1	12,9	73,4
1984	25,0	14,7	18,7	14,1	72,5
1985	29,9	13,8	17,6	13,2	74,5
1986					

Consequently, rail freight is dominated by bulk commodities, i.e. products with a low value/weight ratio. Since the unit price of the product is so low, transport costs account for a relatively large proportion of the final cost. Rail offers a number of advantages in this respect, since it can carry large tonnages in a single consignment. At the same time, however, this can work to its disadvantage insofar as it implies heavy specialization in a small number of commodities produced by a limited firms.

The predominance of NST categories 2, 4 and 5 - all three of them associated with the steel industry - suggested a fairly close cause-and-effect relationship between certain industrial indicators for the steel industry and rail freight traffic.

Table 4.6 sets the industrial production, coal production and crude steel production indices alongside rail traffic levels.

Table 4.6 Industrial indicators and goods traffic transport by rail (EUR 12)

Year	Industrial production	Coal production	Crude steel production	Commodities traffic by rail
1979	100.0	100.0	100.0	100.0
1980	99.7	103.9	91.2	97.3
1981	97.5	103.9	89.3	92.5
1982	96.2	102.4	79.0	84.1
1983	97.2	97.6	77.6	82.6
1984	99.8	68.9	85.1	77.5
1985	103.1	86.8	85.5	82.9
1986	105.1	90.9	80.4	79.6

Table 4.6 shows at a glance how the rail transport indicator mirrors, albeit sometimes with a certain timelag, general trends in industrial production and in activity in the branches of the economy to which it is most closely tied.

Table 4.7 Volume of products of NST2 category (solid mineral fuels) carried by rail on internal routes and bilateral routes (1000 tonnes).

TO		D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	EUR-12 total traff. outw.
FROM													
D	1985	71530	2846	142	608	2993	3	-	22	0	1	0	6615
	1986	68980	1922	108	640	2502	3	-	14	-	3	-	5192
	gr.rate(%)	-3.6	-30.0	-23.9	+5.3	-16.4	0	-	-36.4	-	+200.0	-	-21.5
F	1985	604	12668	88	-	62	-	-	-	0	-	-	754
	1986	482	11213	100	-	65	-	-	0	-	8	-	655
	gr.rate(%)	-20.2	-11.5	+13.6	-	-4.8	-	-	-	-	-	-	-13.1
I	1985	0	9	450	-	0	-	-	-	-	-	-	9
	1986	-	8	417	-	-	-	-	-	-	-	-	8
	gr.rate(%)	-	-11.1	-7.3	-	-	-	-	-	-	-	-	-11.1
NL	1985	14	283	0	4	0	-	-	-	-	-	-	297
	1986	18	265	0	.	6	.	.	-	.	.	.	289
	gr.rate(%)	+28.6	-6.4	0	-	-	-	-	-	-	-	-	-2.7
B/L	1985	122	517	21	0	11500	-	-	-	-	-	-	660
	1986	66	377	15	0	10213	-	-	0	-	-	-	458
	gr.rate(%)	-45.9	-27.1	-28.6	0	-11.2	-	-	-	-	-	-	-30.6
UK	1985	-	0	-	-	-	77802	.	-	-	.	.	0
	1986	-	-	-	.	-	-	.	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
IRL	1985	-	-	-	-	-	-	.	-	-	.	.	-
	1986	-	-	-	.	-	-	.	-	-	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
DK	1985	0	0	0	-	-	-	-	175	-	-	-	0
	1986	-	-	-	-	-	-	-	167	-	-	-	-
	gr.rate(%)	-	-	-	-	-	-	-	-4.6	-	-	-	-
GR	1985	-	-	-	-	-	.	-	-	310	-	-	-
	1986	-	-	-	.	-	.	.	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
E	1985	0	-	-	-	-	.	-	-	-	-	.	0
	1986	-	-	0	.	-	.	.	-	.	.	.	0
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	0
P	1985	-	-	-	-	-	.	.	-	-	.	.	-
	1986	-	-	-	.	-	.	.	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
EUR-12 total traf. entry	1985	740	3655	251	608	3055	3	-	22	0	1	0	8335
	1986	566	2572	223	640	2573	3	-	14	-	11	-	6602
	gr.rate(%)	-23.5	-29.6	-11.2	+5.3	-15.8	0	-	-36.4	-	+1000.0	-	-20.8

Table 4.8 Volume of products of NST4 category (iron ore, iron and steel waste, blast furnace dust; non ferrous ores and waste) carried by rail on internal routes and bilateral routes (1000 tonnes)

TO		D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	EUR-12 total traff. outw.
FROM													
D	1985	35209	48	1151	35	171	-	-	-	-	-	-	1405
	1986	31761	51	888	39	140	-	-	0	-	0	-	1118
	gr.rate(%)	-9.8	+6.3	-22.9	+11.4	-18.3	-	-	-	-	-	-	-20.4
F	1985	220	9968	1897	2	472	0	-	-	-	-	-	2591
	1986	368	7955	1196	2	233	-	-	3	-	0	-	1802
	gr.rate(%)	+67.3	-20.2	-37.0	0	-50.6	-	-	-	-	-	-	-30.5
I	1985	3	29	2330	0	0	0	-	-	-	-	0	32
	1986	1	18	2168	0	0	0	-	-	-	-	0	19
	gr.rate(%)	-66.7	-37.9	-7.0	0	0	0	-	-	-	-	0	-40.6
NL	1985	3054	3	1	78	24	-	-	1	-	-	-	3083
	1986	2402	7	-	.	44	.	.	-	.	.	.	2453
	gr.rate(%)	-21.4	+133.3	-100.0	-	+83.3	-	-	-100.0	-	-	-	-20.4
B/L	1985	68	857	0	0	10763	1	-	1	-	0	-	927
	1986	34	712	0	369	8360	1	-	0	-	-	-	1116
	gr.rate(%)	-50.0	-16.9	0	-	-22.3	0	-	-100.0	-	-	-	-25.8
UK	1985	0	-	-	-	3	8843	-	-	-	-	-	3
	1986	-	-	-	.	4	.	-	-	.	-	-	4
	gr.rate(%)	-	-	-	-	+33.3	-	-	-	-	-	-	+33.3
IRL	1985	-	-	-	-	-	-	686	-	-	-	-	-
	1986	-	-	-	.	-	.	-	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
DK	1985	22	-	0	-	-	-	-	45	-	-	-	22
	1986	12	-	0	-	-	-	-	38	-	-	-	12
	gr.rate(%)	-45.5	-	0	-	-	-	-	-15.6	-	-	-	-45.5
GR	1985	-	-	-	-	-	-	-	-	0	-	-	-
	1986	-	-	-	.	-	.	-	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
E	1985	0	0	-	-	-	-	.	-	-	.	.	0
	1986	0	0	-	.	-	.	.	-	.	.	.	0
	gr.rate(%)	0	0	-	-	-	-	-	-	-	-	-	0
P	1985	-	-	-	-	-	-	.	-	-	.	.	-
	1986	-	-	-	.	-	.	.	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
EUR-12 total traff. entry	1985	3367	937	3049	37	670	1	-	2	-	0	0	8063
	1986	2817	788	2084	410	421	1	-	3	-	0	0	6524
	gr.rate(%)	-16.3	-15.9	-31.7	+1008.1	-37.3	0	-	+50.0	-	0	0	-19.1

Production of both crude steel and coal - two of the key products moved by rail - declined between 1980/81 and 1983. This was followed by a particularly sharp decline in coal production in 1984. Industrial output in general started to recover in 1983, but it took another year for the tide to turn in the steel industry and until 1985 in the coal industry. Throughout this period, total industrial output kept relatively close to 1979 level and never lost more than 3.8 points, even in the worst year (1982). By contrast, coal and steel activity both suffered far heavier losses in quick succession (31.1% by coal in 1984 after 22.4% by steel in 1983). The average decline in rail traffic levels stood between these two values.

Between 1985 and 1986 the upswing in general industrial output in the twelve Member States was further consolidated. In contrast to the coal industry, which continued the revival started in 1985, the steel industry suffered further losses (down 5.1%), which triggered slightly smaller losses of rail traffic.

4.3.2 NST 2: Solid mineral fuels

All in all 1986 was a poor year, both on national and international services.

The development by relation reveal a fall in output in the Community. German coal exports, for example, were down 21.5%.

The national traffic figures fell sharply in France (down 11.5% or 1.5 million tonnes) and Belgium/Luxembourg (down 11.2% or 1.3 million tonnes). It is not clear to what extent the return of certain coal transport to the inland waterways or the continuing switch to nuclear power in several countries are responsible for this phenomenon.

4.3.3 NST 4: Ores and metal waste

After three successive years' uninterrupted growth, ore and metal waste movements fall sharply in 1986 to return to close to 1984 levels.

Table 4.8 shows that the Netherlands-Germany route is the busiest international line, carrying 37% of all NST 4 international rail freight. Together with the France-Italy link it bore the brunt of the 1986 decline in international rail traffic.

The top exporting regions were North Rhine Westphalia and Hamburg (Germany), Antwerp and Flanders (Belgium), the Netherlands and Nord-Pas-de-Calais (France). The top importers were Wallonia (Belgium), Lower Saxony, Saarland and North Rhine Westphalia (Germany) and Lorraine (France).

Table 4.9 sets out the region-by-region breakdown between the leading routes in 1986 in the form of a comparison with the 1985 traffic figures and of each region's relative market share. At present, these routes generate over 70% of all NST 4 traffic moved by rail.

Table 4.9 Region-by-region breakdown of NST traffic in 1986 (%)

Route	1986/1985	Market share
- From Germany:		
. North Rhine Westphalia	- 16.5	11.7
. Hamburg	- 10.5	7.3
- From Belgium:		
. Antwerp	- 15.8	8.2
. Flanders (excluding Antwerp)	- 6.4	3.2
- From the Netherlands:	- 20.4	3.8
- From France:		
. Nord-Pas-de-Calais	- 13.8	1.6
- To Belgium:		
. Wallonia	- 9.7	11.9
- To Germany:		
. Lower Saxony	- 9.2	8.3
. Saarland	- 10.1	8.2
. North Rhine Westphalia	- 18.6	4.9
- To France:		
. Lorraine	- 11.2	1.7

Table 4.10 Volume of products of NST5 category (metal products) carried by rail on internal routes and bilateral routes (1000 tonnes).

TO		D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	EUR-12 total traff. outw.
FROM													
D	1985	43177	1448	698	198	649	28	-	86	1	172	0	3280
	1986	39373	1246	679	154	619	22	-	80	0	216	-	3016
	gr.rate(%)	-8.8	-14.0	-2.7	-22.2	-4.6	-21.4	-	-7.0	-100.0	+25.6	-	-8.0
F	1985	676	14847	1178	59	2633	31	-	20	1	0	0	4598
	1986	759	13287	1158	36	1858	34	-	42	0	0	0	3887
	gr.rate(%)	+12.3	-10.5	-1.7	-39.0	-29.4	+9.7	-	+110.0	-100.0	0	0	-15.5
I	1985	183	426	4615	3	30	13	-	2	-	1	0	658
	1986	184	463	4309	4	32	6	-	0	-	1	0	690
	gr.rate(%)	+0.5	+8.7	-6.6	+33.3	+6.7	-53.8	-	-100.0	-	0	0	+4.9
NL	1985	182	80	5	48	67	15	-	0	0	-	-	349
	1986	198	65	3	.	102	.	.	.	.	.	.	368
	gr.rate(%)	+8.8	-18.8	-40.0	-	-52.2	.	-	-	-	-	-	+5.4
B/L	1985	1602	2001	462	78	9047	21	-	16	0	0	-	4180
	1986	1689	1822	382	64	7213	3	-	8	-	3	-	3971
	gr.rate(%)	+5.4	-8.9	-17.3	-17.9	-20.3	-85.7	-	-50.0	-	-	-	-5.0
UK	1985	81	23	27	-	34	6701	.	-	-	.	.	165
	1986	67	23	28	.	28	.	.	0	.	.	.	146
	gr.rate(%)	-17.3	0	+3.7	-	-17.6	-	-	-	-	-	-	-11.5
IRL	1985	-	-	-	-	-	.	18	-	-	.	.	-
	1986	-	-	-	.	-	.	.	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
DK	1985	52	0	-	0	0	-	-	19	-	-	-	52
	1986	51	0	0	-	-	-	-	19	-	-	-	51
	gr.rate(%)	-1.9	0	-	-	-	-	-	-	-	-	-	-1.9
GR	1985	-	-	-	-	-	-	-	-	-	-	-	-
	1986	0	-	-	.	-	.	.	-	.	.	.	0
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
E	1985	0	0	8	-	16	.	.	-	-	.	.	24
	1986	2	1	2	.	11	.	.	-	.	.	.	16
	gr.rate(%)	-	-	-75.0	-	-31.3	-	-	-	-	-	-	-33.3
P	1985	-	-	-	-	-	.	.	-	-	.	.	-
	1986	-	-	-	.	-	.	.	-	.	.	.	-
	gr.rate(%)	-	-	-	-	-	-	-	-	-	-	-	-
EUR-12 total traf. entry	1985	2776	3978	2376	338	3429	108	-	124	2	173	0	13306
	1986	2950	3620	2252	258	2650	65	-	130	0	220	0	12145
	gr.rate(%)	+6.3	-9.0	-5.3	-23.7	-22.7	-39.8	-	+4.8	-100.0	+27.2	0	-8.7

4.3.4 NST 5: Metal products

In 1986 metal product movements were down 12.3% on 1985. The top exporting and importing regions were broadly the same as for NST category 4. Traffic grew on very few interregional routes in 1986.

Table 4.11 sets out the region-by-region breakdown between leading routes in 1986, in the form of a comparison with the 1985 figures and of each region's relative market share. At present, these routes generate 37% of all NST 5 traffic moved by rail.

Table 4.11 Region-by-region breakdown of NST 5 traffic in 1986 (%)

Route	1986/1985	Market share
- From Germany:		
. North Rhine Westphalia	- 12.9	11.1
. Saarland	- 8.7	2.3
- From France:		
. Nord-Pas-de-Calais	- 5.7	3.0
. Lorraine	- 12.6	2.4
. Provence-Alpes-Côte d'Azur	+ 10.1	1.5
- From Belgium:		
. Wallonia	- 22.7	1.2
- To Germany:		
. North Rhine Westphalia	- 10.8	8.5
. Rhineland Palatinate	- 3.3	2.0
. Lower Saxony	- 7.8	1.9
- To France:		
. Picardy	+ 0.3	2.0
. Nord-Pas-de-Calais	- 22.2	1.1

Table 4.12 Volume of products of NST9 category (vehicles, transport equipment, machinery, engines and parts thereof, manufactures of metal, glass, glassware, ceramic products, leather, textiles, clothing and other manufactured articles) carried by rail on internal routes and on bilateral routes (1000 tonnes).

TO		D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	EUR-12 total traff. outw.
FROM													
D	1985	17986	506	1443	289	847	23	-	274	93	207	12	3694
	1986	17132	496	1489	236	835	16	-	324	61	197	8	3662
	gr.rate(%)	-4.7	-2.0	+3.2	-18.3	-1.4	-30.4	-	+18.2	-34.4	-4.8	-33.3	-0.9
F	1985	336	12406	851	100	384	11	0	35	11	38	4	1770
	1986	293	11736	993	89	368	7	-	50	9	56	10	1875
	gr.rate(%)	-12.8	-5.4	+16.7	-11.0	-4.2	-36.4	-	+42.9	-18.2	+47.4	+150.0	+5.9
I	1985	1313	945	3639	402	582	398	0	37	20	24	17	3738
	1986	1250	1085	3791	439	699	320	0	82	16	33	17	3941
	gr.rate(%)	-4.8	+14.8	+4.2	+9.0	+20.1	-19.6	0	+121.6	-20.0	+37.5	0	+5.4
NL	1985	285	79	454	1822	340	0	-	12	4	2	-	1176
	1986	276	65	486	.	268	.	.	9	.	.	.	1104
	gr.rate(%)	-3.2	-13.2	+7.0	-	-21.2	.	-	-25.0	.	.	.	-6.0
B/L	1985	572	357	776	437	1399	2	-	45	17	38	0	2244
	1986	615	323	801	382	1281	1	-	42	34	30	0	2228
	gr.rate(%)	+7.5	-9.5	+3.2	-12.6	-8.4	-50.0	-	-6.7	+100.0	-21.1	0	-0.7
UK	1985	14	18	107	0	1	10858	.	-	-	.	.	140
	1986	12	11	145	.	0	.	.	0	.	.	.	168
	gr.rate(%)	-14.3	-38.9	+35.5	.	-100.0	-	-	-	-	-	-	+20.0
IRL	1985	-	-	0	0	-	.	865	-	-	.	.	0
	1986	-	-	-	.	-	.	.	-	.	.	.	-
	gr.rate(%)	-	-	-	.	-	-	-	-	-	-	-	-
DK	1985	246	15	23	6	27	-	-	628	0	0	0	317
	1986	245	34	66	0	23	-	-	683	0	0	0	368
	gr.rate(%)	-0.4	+126.7	+187.0	-100.0	-14.8	-	-	+8.8	0	0	0	+16.1
GR	1985	7	1	1	2	3	0	-	-	88	-	-	14
	1986	17	3	0	.	11	.	.	0	.	.	.	31
	gr.rate(%)	+142.9	+200.0	-100.0	.	+266.7	.	-	-	-	-	-	+121.4
E	1985	125	56	35	8	66	.	.	4	0	.	.	294
	1986	105	55	22	.	52	.	.	4	.	.	.	238
	gr.rate(%)	-16.0	-1.8	-37.1	.	-21.2	-	-	-	-	-	-	-19.0
P	1985	6	17	4	0	1	.	.	-	-	.	.	28
	1986	4	14	1	.	1	.	.	-	.	.	.	20
	gr.rate(%)	-33.3	-17.6	-75.0	-	-	-	-	-	-	-	-	-28.6
EUR-12 total traf. entry	1985	2904	1994	3694	1244	2251	434	0	407	145	309	33	13415
	1986	2817	2086	4003	1146	2257	344	0	511	120	316	35	13635
	gr.rate(%)	-3.0	+4.6	+8.4	-7.9	+0.3	-20.7	0	+25.6	-17.2	+2.3	+6.7	+1.6

4.3.5 NST 9: Miscellaneous products

This category showed the smallest fall in 1986.

It is far harder to pinpoint the busiest regional routes for this category, since the goods are so diverse. Consequently, the analysis of the changes since 1986 has been confined to a few representative routes.

Table 4.13 shows part of the picture today.

Table 4.13 Region-by-region breakdown of NST 9 traffic in 1986 (%)

Route	1986/1985	Market share
- From Germany:		
. North Rhine Westphalia	- 11.7	4.2
- To France:		
. Ile de France	- 1.4	3.0
. Provence-Alpes-Côte d'Azur	+ 10.1	1.5

4.4 Rail prices indices

4.4.1 Introduction

At the moment price surveys are conducted in Germany, Belgium, France, Italy and the Netherlands. These five railways have agreed on a method based on a basket of representative commodities for each link, based on the actual traffic data for the reference period (1981). The indices are based on the official rail tariffs in francs. They take no account of the reductions granted, which are sometimes substantial.

4.4.2 Price developments by route

The quarterly data are published in the market development reports, taking the rates on 31 December 1981 as 100. Price trends in 1986 are summed up in the table set out below.

Table 4.14 Price index 1986

Route		index		increase (%) in 1986
		31.12.1985	31.12.1986	
D	F	126	130	3.2
D	I	125	127	1.6
D	NL	115	116	0.9
D	B/L	125	128	2.4
F	D	130	133	2.3
F	I	155	158	1.9
F	NL	133	137	3.0
F	B/L	143	148	3.5
I	D	116	117	0.9
I	F	151	155	2.7
I	NL	141	142	0.7
I	B/L	146	155	5.4
NL	D	116	117	0.9
NL	F	121	124	2.5
NL	I	128	129	0.8
NL	B/L	136	142	4.4
B/L	D	125	126	0.8
B/L	F	142	147	3.5
B/L	I	145	149	2.8
B/L	NL	130	135	3.9

The biggest price increases (over 4%) were on the links from Italy to Belgium/Luxembourg and from the Netherlands to Belgium/Luxembourg. Tariffs also rose by over 3% on the links from Belgium/Luxembourg and the Netherlands and from Germany to France.

Usually, these increases matched the inflation rates in the two countries linked and, where appropriate, in any countries transited. But rail tariffs seem to have risen faster than the average inflation rate on some routes (e.g. between Belgium/Luxembourg and the Netherlands). And in some places the increases kept well below the average inflation rate (e.g. link from France to Italy).

CHAPTER 5

COMBINED TRANSPORT

5.1 Container transport 1985

The data in paragraph 5.1.1 to 5.1.3 have been established with the assistance of Intercontainer (Société internationale pour le transport par transcontainers); an enterprise owned by 25 European railways companies for the international carriage of containers.

These data cover container movements by rail in Europe which is a wider area than the Community.

From paragraph 5.1.4 onwards, data are reproduced on intracommunity transports of containers by rail as they are collected through the Statistical Directive Rail.

- 5.1.1. International rail container traffic amounted in 1986 to 887,083 TEU. This total was slightly (2 %) below 1985. The transport market by nature very brisk had to cope in 1986 more than ever with external influences. Traffic growth was held back by the Tschernobyl accident which reduced sharply the volumes of fresh milk carried in block trains to Italy and by severe strikes in Belgium and France.

Table 5.1 Development of total container traffic by rail (in TEU)(*)

year	traffic	in/decrease	growth rate
1980	811,500		
1981	783,750	- 27,750	- 3.4%
1982	718,500	- 65,250	- 8.3%
1983	760,750	+ 42,000	+ 5.8%
1984	824,750	+ 64,000	+ 8.4%
1985	904,803	+ 80,000	+ 9.7%
1986	887,083	- 17,720	- 2.0%

Table 5.2 Development of total container traffic by rail (in '000 000 TEU-km)

year	traffic	in/decrease	growth rate
1980	623.7		+ 6.1%
1981	605.9	- 17.8	- 2.9%
1982	556.2	- 49.7	- 8.2%
1983	606.7	+ 50.5	+ 9.1%
1984	662.9	+ 56.2	+ 9.3%
1985	749.1	+ 86.2	+11.3%
1986	755.6	+ 6.5	+ 0.9%

(*) TEU: Twenty feet equivalent unit.

Traffic to and from the ports remains, in terms of both volume and revenue, the most important container traffic. However, strong growth area throughout 1986 and continuing now is the inner Europe use of pool containers and Swap body traffic.

Table 5.3 Container traffic broken down by sector, in TEU and share of each sector

year	container traffic to and from the ports		continental traffic		UK + Ireland		USSR	
	number	%	number	%	number	%	number	%
1981	467,000	59.6	250,750	32.0	41,500	5.3	24,500	3.1
1982	424,500	59.1	245,000	34.1	33,750	4.7	15,000	2.1
1983	444,500	58.4	264,500	34.8	31,500	4.1	20,000	2.6
1984	478,000	58.0	293,000	35.5	32,000	3.9	22,000	2.7
1985	513,000	56.7	330,000	36.5	37,500	4.2	24,000	2.6
1986	492,000	55.5	339,750	38.3	33,500	3.8	22,000	2.4

Table 5.3 A

		1986	86/85
maritime containers	loaden	387,912 TEU	+ 1 %
	empty	103,949 TEU	-20 %
continental	loaden	227,100 TEU	+ 6 %
	empty	112, 54 TEU	- 3 %
others (transits, direct. G.B.)		55,671 TEU	- 9 %

Container traffic to and from the ports. The loaden container traffic in this sector renden a new record high with 387.912 TEU an increase of 1.3 % over 1985. The volume of empty container traffic fell by 20 % from the previous year. On the one hand this development indicates an important balance and a more rational organization of certain traffic flows for a large part of the year on the other hand the 1985 figures were distorted by an extra ordinary high empty traffic volume.

Continental traffic. The decesive factor affecting continental traffic which rose by 2.8 % was a major increase in loaded movements.

Others. The other two market sectors of inter container are direct traffic with Great Britain and Eire and traffic with or via the USSR according together for 6.2 % of TEU volume. Both sectors recorded a down turn.

5.1.2 The following table shows the inter-container-traffic by relation.

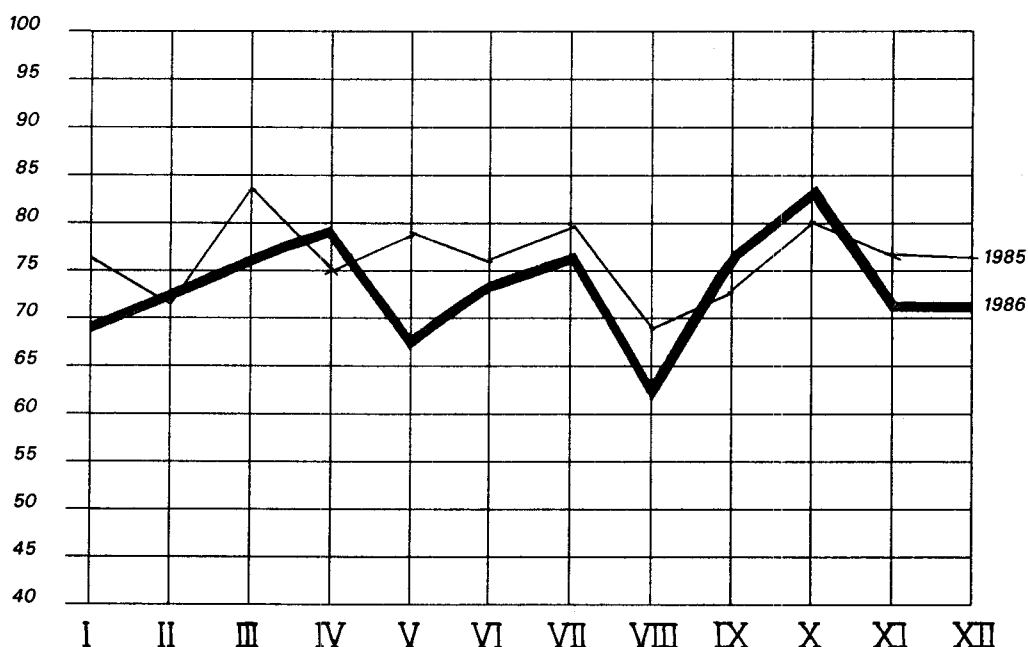
Table 5.4 Total Intercontainer EUR-12 traffic by relation (in TEU) 1986 and 1985, comparing 85/86.

From	To	D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	third countries	Total
D	85	18152	13107	36393	15565	7743	233	0	24515	1744	963	14	53916	171363
	86	24378	8755	30108	13685	8019	104	0	28349	1688	1302	13	49556	174825
86/85	+34.3%	-33.2%	-17.3%	-12.1%	+3.6%	-124%	-124%	0	+15.6%	-3.2%	+35.2%	-7.1%	-8.1%	+2.0%
F	85	9095	10772	24169	8125	16085	551	16	638	116	5799	296	11853	87462
	86	5002	13967	30276	5190	14108	365	0	3283	233	8437	47	11441	92349
86/85	-45.0%	+29.7%	+25.3%	-36.1%	-12.3%	+414.6%	-33.8%	0	+414.6%	+101.0%	+45.5%	-84.1%	-3.5%	+5.6%
I	85	43182	23904	2	22797	26450	24089	0	3123	138	1	40	24968	158959
	86	37652	26799	0	22367	23818	21451	4	4205	8	395	10	22598	159307
86/85	-12.8%	+12.1%	-1.9%	-1.9%	-10.0%	-11.0%	-11.0%	4	+34.6%	-94.2%	-75%	-9.5%	+0.2%	+0.2%
NL	86	30005	5688	26226	8	33978	1	0	1067	154	425	0	15098	113410
	86	29312	3967	24298	30	24689	0	0	1188	463	564	2	18241	102754
86/85	-4.8%	-30.3%	-7.4%	+275%	-27.3%	0	0	0	+11.3%	+200.6%	+32.7%	+20.8%	+20.8%	-9.4%
B/L	85	12844	16721	26075	33677	0	0	0	1661	502	300	30	14832	106342
	86	10045	13091	25555	28547	16	0	0	1301	1687	428	0	14195	93715
86/85	-21.8%	-21.7%	-2.0%	-15.2%	16	0	0	0	-21.7%	+189.9%	+42.7%	0	-4.3%	-11.9%
UK	85	190	1370	10294	1	2	0	0	0	0	0	0	215	12172
	86	221	311	10164	10	17	0	0	0	0	0	0	102	10825
86/85	+16.3%	-77.3%	-1.3%	0	0	0	0	0	0	0	0	0	-52.6%	-11.1%
IRL	85	0	0	7	0	0	0	0	0	0	0	0	0	7
	86	0	0	0	0	0	0	0	0	0	0	0	0	0
86/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DK	85	22948	612	3510	486	1376	0	0	0	0	0	0	1550	30495
	86	24185	2979	4705	244	936	0	0	0	2	208	0	791	34485
86/85	+5.4%	+386.8%	+34.0%	-50.9%	-32.0%	0	0	0	0	0	0	0	-49.0%	+11.1%
GR	85	816	53	39	213	257	0	0	0	0	0	0	1094	2496
	86	1307	204	14	319	963	9	0	0	0	0	0	593	3522
86/85	+60.2%	+285.0%	-64.1%	+49.8%	+274.7%	0	0	0	0	0	0	0	-45.8%	+41.1%
E	85	1198	5551	730	423	479	6	0	9	0	0	1248	476	12172
	86	958	6287	125	500	582	0	0	164	0	3	980	706	10325
86/85	-20.0%	+13.3%	-82.9%	+10.2%	+21.5%	0	0	0	0	0	0	-21.5%	+48.3%	-15.2%
P	85	9	561	10	2	0	0	0	0	0	663	0	48	1284
	86	0	20	4	0	0	0	0	0	0	1052	0	6	1082
86/85	0	-96.4%	-60.0%	0	0	0	0	0	0	0	+58.7%	0	-87.5%	-15.2%
third countries	85	59088	8937	33796	13504	14832	416	8	1761	947	336	2	62107	199582
	86	61601	11322	30217	15800	14046	691	2	1783	536	421	27	64935	202644
86/85	+4.3%	+26.7%	-10.6%	+17.0%	+5.3%	+66.1%	-75%	-75%	+1.2%	-43.4%	+25.3%	+4.6%	+4.6%	+1.5%
Total	85	198346	88251	160250	94808	101202	25307	24	33224	3798	8935	1602	196993	904803
	86	194661	87702	155466	86692	87194	22620	6	40273	4617	12830	1079	172563	887083
86/85	-1.9%	-0.6%	-3.0%	-8.6%	-13.8%	-10.6%	-10.6%	-75%	+21.2%	+21.6%	+43.6%	-32.6%	-12.4%	-2.0%

In table 5.4 the total amount of 887.083 TEU of 1986 and the total amount of 904.803 TEU of 1985 are divided over EUR-12 and third countries with growth rates in %.

Considerable differences between 85/86 figures can be noticed in the national transport figures of Germany (+34.3%) and France (+29.7%) and in the relation Germany-Italy (-17.3%) Tschernobyl (accident), Germany-France (-33.2% - strike of S.N.C.F). Total to and from B/L had also a severe fall back of resp. -13.8% and 11.9% (strike). In last trimester of 1986 the container transport market recovered (see also fig. 5.1) so that the results as a whole were not far behind of 1985 after all. The relation third countries EUR-12 take 21.8% of the total amount. The main relations are Sweden (3.7% of the total amount), Switzerland (5.7%) and Austria (4.7%).

5.1.3 Monthly development of container traffic 1986 comparing with '85 (in 1000 TEU)
fig. 5.1



Apart from the normal seasonal ups and downs the monthly developments reflects clearly the hold back of the traffic growth by the Tschernobyl accident in the period May and June and the other hold backs due to the strikes in Belgium and France.

5.1.4 Figures are also available from the Council statistical directive rail. The figures relate to national and international container traffic in number of containers, full and empty and in tonnes by Member States. Not all the figures are yet available. In the following tables are published the figures of 1985 of EUR-10 and the figures of 1986 from Germany, France, Italy, Belgium and Denmark.

Table 5.5 National, international and Transit traffic by container 1985

Country	national		international				Transit		Total	
	loaded empty	number ('000) ton	loading		unloading		number ('000) ton	number ('000) ton	number	('000) ton
			number	('000) ton	number	('000) ton				
Germany	loaded	323.297	99.169	1.568	100.904	1.371	81.719	1.162	605.089	7.928
	empty	204.489	36.974	.	56.350	.	23.223	.	321.036	
France	loaded	240.155	34.726	594	34.045	583	61.971	1.334	370.897	6.099
	empty	195.991	20.379	.	22.050	.	5.182	.	243.602	
Italy	loaded	127.227	99.284	1.904	130.158	2.636	469	8	357.138	6.358
	empty	99.738	50.967	.	16.156	.	49	.	166.910	
Nether-lands	loaded	57.800	50.900	1.064	56.300	1.012	.	.	173.000	2.992
	empty	23.800	23.500	.	16.900	.	.	.	64.200	
Belgium	loaded	69.006	71.815	1.348	87.852	1.472	6.533	110	235.206	3.944
	empty	39.850	29.725	.	17.272	.	3.861	.	90.708	
Luxem-bourg	loaded	1.690	103	2	46	1	.	.	1.839	40
	empty	1.694	75	.	72	.	.	.	1.841	
United Kingdom	loaded	717.700	.	.	.	.	.	.	717.700	9.374
	empty	40.800	.	.	.	.	.	.	40.800	
Ireland	loaded	68.000	.	.	.	.	.	.	68.000	1.317
	empty	41.000	.	.	.	.	.	.	41.000	
Danmark	empty	29.446	22.559	307	13.714	196	6.155	80	71.874	994
	loaded	10.010	2.201	.	6.742	.	1.128	.	20.081	
Greece	empty	.	1.193	22	3.142	53	.	.	4.335	75
	loaded	.	982	.	191	.	.	.	1.173	

Table 5.6 National, international and Transit traffic by container 1986

Country	national			international			Transit			Total		
	loaded empty	number ('000)	ton	loading		unloading ('000)	number	ton	number	ton	number	ton
				number	ton							
Germany	loaded	349.562	4.243	90.982	1.401	99.933	1.389	92.385	1.324	632.862	8.357	
	empty	218.051	.	40.162	.	46.114	.	21.534	.	325.861	.	
France	loaded	224.737	3.398	37.138	671	31.989	566	57.182	1.224	351.046	5.860	
	empty	184.623	.	12.271	.	18.413	.	3.294	.	218.601	.	
Italy	loaded	158.501	2.175	103.582	2.078	135.381	2.723	79	1	397.543	6.978	
	empty	91.181	.	43.256	.	15.257	.	196	.	149.890	.	
Belgium	loaded	60.892	1.000	61.049	1.174	75.553	1.301	5.105	92	202.599	3.567	
	empty	37.167	.	24.794	.	12.708	.	2.750	.	77.419	61	
Luxem- bourg	loaded	1.691	37	811	18	339	6	.	.	2.841	.	
	empty	1.675	.	216	.	551	.	.	.	2.442	.	
Danmark	loaded	34.321	461	21.244	299	21.126	229	5.820	77	82.511	1.066	
	empty	9.811	.	2.221	.	6.582	.	1.000	.	19.614	.	

Table 5.7 National, international transit traffic by container growth rate 86/85 in %

Country	national			international			Transit			Total		
	loaded empty	number ('000)	ton	loading		unloading ('000)	number	ton	number	ton	number	ton
				number	ton							
Germany	loaded	+8.1%	+10.9%	-8.3%	-10.7%	-1.0%	+1.3%	+13.1%	+13.9%	+4.6%	+5.4%	
	empty	+6.6%	.	+8.6%	.	-18.2%	.	-7.3%	.	+1.5%	.	
France	loaded	-6.4%	-5.3%	+6.9%	+13.0%	-6%	-2.9%	-7.7%	-8.2%	-5.4%	-3.9%	
	empty	-5.8%	.	-39.8%	.	-16.5%	.	-36.4%	.	-10.3%	.	
Italy	loaded	+24.6%	+20.2%	+4.3%	+9.1%	+4.0%	+3.3%	.	.	+11.3%	+9.8%	
	empty	-8.6%	.	-15.1%	.	-5.6%	.	.	.	-10.2%	.	
Belgium	loaded	-11.8%	-1.4%	-15.0%	-12.9%	-14.0%	-11.6%	-21.9%	-16.4%	-13.9%	-9.6%	
	empty	-6.7%	.	-16.6%	.	-25.4%	.	-28.8%	.	-14.7%	.	
Luxem- bourg	loaded	0.0%	0%	+687%*	800%*	+636%*	+500%*	.	.	+54.5%	+52.5%	
	empty	-1.1%	.	+181%*	.	+665%*	.	.	.	+54.5%	.	
Danmark	loaded	+16.6%	+12.2%	-5.8%	-2.6%	+54.0%	+16.8%	-5.4%	-3.8%	+14.8%	+7.2%	
	empty	-2.0%	.	+0.9%	.	-2.4%	.	-11.3%	.	-2.3%	.	

*Given their low volume these sectors are highly sensitive to extreme fluctuations.

5.2. Piggy Back Transport

The sources of paragraph 5.2.1 are the year reports and statistics of the U.I.R.R. (Union internationale des sociétés de transport combiné rail/route). Paragraph 5.2.2 presents data of the statistical Directive Rail.

5.2.1 Piggy back (combined rail/route traffic) is the transport of lorries or their loading units (Swop-bodies or semi-trailers) by rail.

In combined rail/road traffic we distinguish the transport of

1. Swop-bodies with vertical loading
2. Semi-trailers with vertical or horizontal loading
3. Whole road-trains with horizontal loading accompanied by drivers in sleeping cars.

The transport of swop-bodies covers 61 % of the piggy back transport in Europe today. It offers the advantage that only a low dead weight must be transported on the railway and hence the traction power of the locomotives can be exploited fully. The second most frequent technique (28 %) especially in international traffic is the transport of semi-trailers in the special pocket wagons.

To fulfil loading gauge requirements special wagons have been developed where in the axles of the semi-trailer are sunk in a "pocket" between the bogies of the wagon almost down to the upper edge of the rails.

The technique with the strongest growth is the rolling motorway, with a traffic share of 11 %. There, whole lorries are driven up onto special very flat wagons under their own power. The driver accompanies the transport in a sleeping car.

Fig. 5.2 Total traffic in 1986 - split according to technique

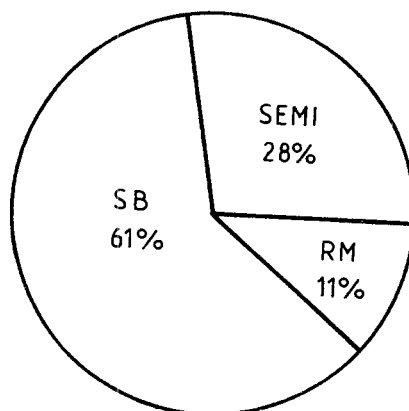


Table 5.9 gives the matrix of shipments in international piggy back transport between states whereas table 5.8 presents the developments of the last four years.

Table 5.8 Number of dispatches in international piggy-back transport by Country and Company of dispatch.

Country	Company	1983	1984	1985	1986	growth rate 1985/1986
D	Kombiverkehr	66,650	77,600	87,500	106,000	+21.1%
F	Novatrans	33,556	35,045	39,803	43,482	+ 9.2%
I	Cemat	9,607	11,723	11,989	15,089	+25.8%
NL	Trailstar	5,445	4,887	5,588	6,187	+10.7%
B	T.R.W.	13,075	13,810	15,161	17,193	+13.4%
DK	Kombi-Dan	-	-	-	1,024	-
E	Transnova	8,610	10,973	9,592	11,537	+20.2%
third countries A	Oekombi	-	11,244	16,623	23,033	+38.6%
CH	Hupac	28,856	30,783	36,907	39,650	+ 7.4%
S	S-Combi	-	-	-	2,700	-
Total		165,799	196,873	223,163	265,896	+19.1%

Table 5.9 EUR-12 + third countries* piggy back traffic (number of despatches).

From	To	D	F	I	NL	B	DK	E	Subtotal EUR-12	third countries				Total
		A	CH	YU	H									
D	-	2,850	39,786	385	1,550	450	9,550	54,571	20,488	17,500	2,500		95,059	
F	3,150	-	13,333	10	934		130	17,557	327	294			18,178	
I	37,736	13,350	-		11,823	616	204	63,729	64	831			64,624	
NL	454	1	6,012	-				6,467	696	424		2	7,586	
B	1,550	930	11,472		-		1,575	15,527	1,162				16,689	
DK	450		577			-		1,027					1,027	
E	9,550	125	200		1,489		-	11,364	173				11,537	
Subtotal EUR-12	52,890	17,256	71,380	395	15,796	1,066	11,459	170,242						
third countries														
A	19,714	367	50	829	1,056		117		-	44		17		
CH	17,400	294	800	498		32			89	-				
YU	2,200													
H				10										
Total	92,204	17,917	72,230	1,732	16,852	1,098	11,576		10			-		

*Not in this table is the Swedish and Norwegian traffic outside the UIRR treaty.

Kombiverkehr (W. Germany) today has the largest share of the European piggy back transport.

There has been in 1986 a satisfactory increase of 21.1 % in international traffic. The international rolling motorways show already in the third year of their existence a 50 % growth.

The French Novatrans was able to increase traffic by 9.2 % in spite of the strike of the French railway in the end of the year.

Cemat has standardized the piggy back traffic in Italy by fusion with the company Ferpac and is striving now to conduct the international traffic over the alps further by rail to central and southern Italy.

The Netherlands company Trailstar conducts traffic mainly between Rotterdam, Venlo and northern Italy. The traffic with swap-bodies, predominantly with Swop-tank constructions has grown especially in 1986.

The Belgian T.R.W. also has its focus on the traffic with Italy. It accounts for around 70 % of the total.

The main emphasis of Kombi-Dan (Denmark), (founded in 1985) is the traffic with W-Germany, Switzerland and Italy. Up to now only vertical loading by crane has been available, where by swap-bodies amount to 90 % of the volume.

The activities of the Spanish Transnova are resting at the moment. The traffic in Spain was made more difficult in 1986 by tariff increases.

5.2.2 Data from the rail statistical Directive for 1986 are available for the countries Germany, France, Italy, Belgium and Denmark, see table 5.11.

Table 5.10 shows the figures of 1985 and table 5.12 gives the comparison between 1985/86.

Table 5.10 rail/road 1985

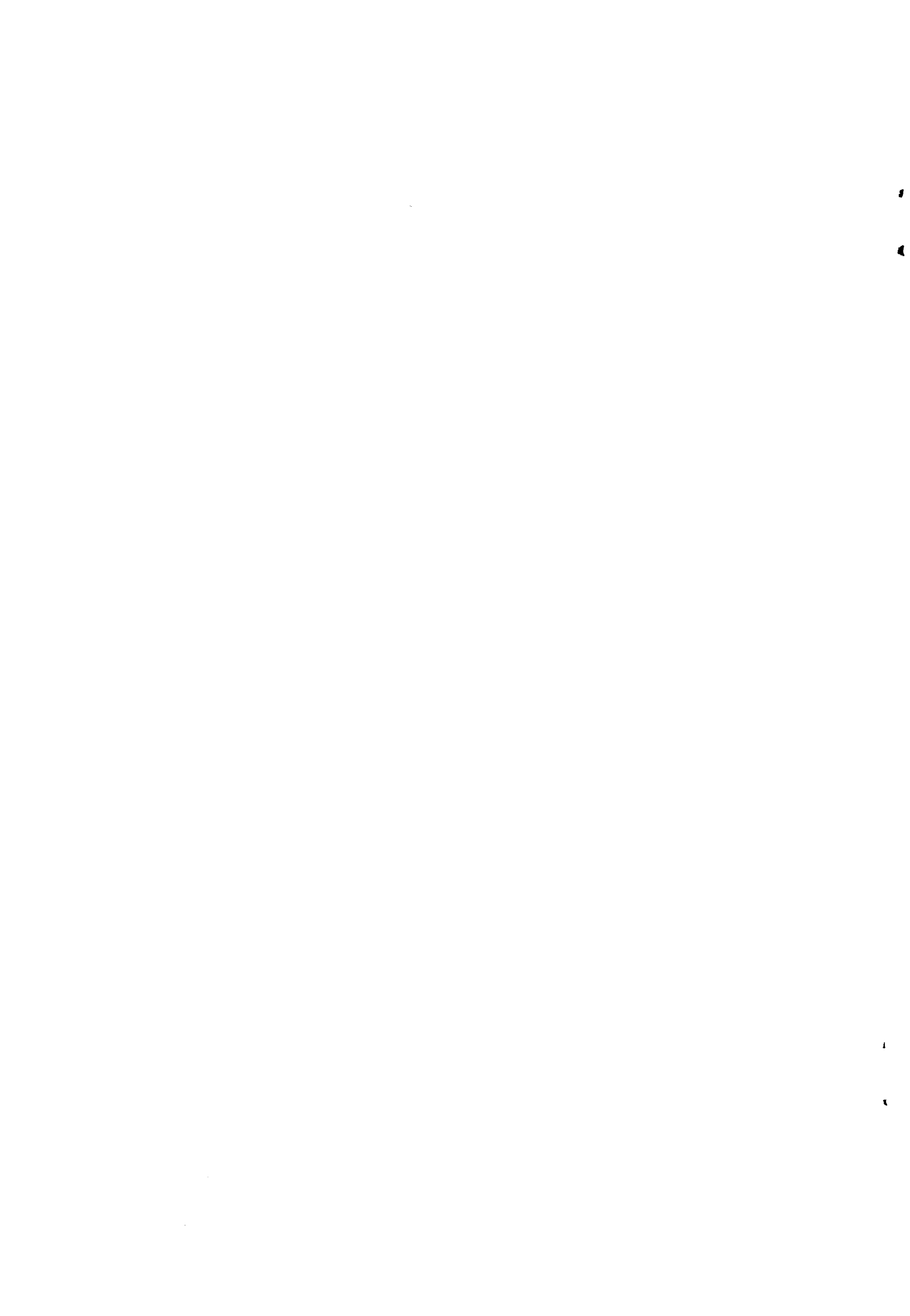
Country	national		international				Transit		Total	
	number	1000 tons	loading		unloading		number	1000 tons	number	1000 tons
			number	1000 tons	number	1000 tons				
D	308143	4395	82959	1919	82465	1582	11116	253	484683	8150
F	128592	2059	25331	553	25055	556	17912	542	196890	3711
I	11646	307	47608	1046	50157	1524	-	-	109411	2877
NL	-	-	6200	168	6300	117	4500	90	17000	375
B	786	35	13163	405	12721	352	96	2	26766	793

Table 5.11 rail/road 1986

Country	national		international				Transit		Total	
	number	1000 tons	loading		unloading		number	1000 tons	number	1000 tons
			number	1000 tons	number	1000 tons				
D	316267	4452	97667	1969	95881	1553	14334	310	524149	8283
F	134670	2159	32288	672	31922	704	19524	601	218404	4136
I	9793	244	57937	1538	54580	1658	1	0	122311	3440
B	458	8	14223	454	12857	372	190	4	27728	838
DK	357	7	-	3	-	9	-	-	357	18

Table 5.12 rail/road 1986/85 growth rate

Country	national				international				Transit				Total			
	number		1000 tons		loading		unloading		number		1000 tons		number		1000 tons	
D	+ 2.6%	+ 1.3%	+ 17.7%	+ 2.6%	+16.3%	- 1.8%	+28.9%	+22.5%	+ 8.1%	+ 1.6%						
F	+ 4.7%	+ 4.9%	+27.5%	+21.5%	+27.4%	+26.6%	+ 9.0%	+10.9%	+10.9%	+11.5%						
I	-15.9%	-20.5%	+21.7%	+47.0%	+ 8.8%	+ 8.8%	-	-	+11.8%	+19.6%						
B	-41.7%	-77.1%	+ 8.1%	+12.0%	+ 1.1%	+ 5.7%	+97.9%	+100%	+ 3.6%	+ 5.7%						



SOURCES

(a) Road Opinion Survey

B Institut du Transport routier
DK Danmarks Statistik
D IFO (Institut für Wirtschaftsforschung)
F Centre de Productivité des Transports
GR Ethniki Statistiki Ypiresia (National Statistical Office)
IRL University College, Dublin
I Centro Studi sui Sistemi di Trasporto
L Service central de la Statistique et des Etudes économiques
NL Economisch Bureau voor het Weg- en Watervervoer
UK Department of Transport

(b) Road Cost Survey

D Bundesverband des Deutschen Güterfernverkehrs (BDF) e.V.
F Comité national routier
NL Economisch Bureau voor het Weg- en Watervervoer
B Instituut voor Wegtransport
L Fédération des Commerçants du Grand-Duché
UK Road Haulage Association Ltd.
DK Landsforeningerne Danske Vongmaend

(c) Road Price Survey

B Institut du Transport routier
D BÄG (Bundesanstalt für den Güterfernverkehr)
F Ministère des Transports
I Centro Studi sui Sistemi di Trasporto
L Ministère des Transports
NL NIWO (Nederlandsche Internationale Wegvervoer Organisatie)
CBS (Centraal Bureau voor de Statistiek)

(d) Inland Waterway Opinion Survey

Rhine Central Rhine Commission
North-South B Institut pour le Transport par Batellerie
NL Economisch Bureau voor het Weg- en Watervervoer

(e) I.W. Cost Survey

NL Economisch Bureau voor het Weg- en Watervervoer
in collaboration with :
F Office national de la navigation
B Institut pour le transport par Batellerie
D Bundesverband der deutschen Binnenschifffahrt

(f) Rail Tariff Indices

D DB (Deutsche Bundesbahn)
F SNCF (Société nationale des chemins de fer français)
I FS (Azienda autonoma delle Ferrovie dello Stato)
NL NS (Nederlandse Spoorwegen)
B NMBS/SNCB (Société Nationale des Chemins de fer belges)

(g) Combined Transport

Intercontainer (container traffic - trafic conteneurisé -
Containerverkehr)
Interunit (Piggy-back - Ferroutage - Huckepack)

(h) Road Tonnages

D KBA-BAG Kraftfahrt-Bundesamt und der Bundesanstalt für
den Güterfernverkehr
F Ministère des Transports - Service des Transports routiers
R-2
I Ministero dei Trasporti - Dir. generale POC
NL CBS - Centraal Bureau voor de Statistiek
B/L INS - Institut national de Statistiques
UK GSS - Department of Transport
IRL University College, Dublin
DK Danmarks Statistik
GR Ethniki Statistiki Ypiresia
E Ministerio de Transportes, Turismo y Comunicaciones
P Ministerio dos Transportes e Comunicações
A Österreichisches Statistisches Zentralamt
CH Bundesamt für Statistik
SOEC (Luxembourg) Directive 78/546

(i) I.W. Tonnages

ONI Office national de Navigation
CCR Commission Centrale pour la Navigation du Rhin
SOEC (Luxembourg) Directive 80/1119

Rail Tonnages

SOEC (Luxembourg) Directive 80/1177

(j) Rhine fleet developments

Internationale Vereinigung des Rheinschiffsregisters (IVR)

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(Statistical Office of the European Communities)

European Communities — Commission

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