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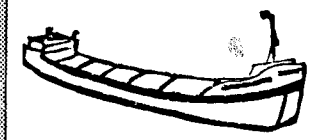

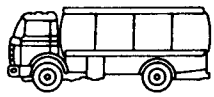

OBSERVATION OF TRANSPORT MARKETS

ANNUAL REPORT
1987

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PRESENTATION OF THE 1987 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 1987" are as follows:

Chapter 1: General Market Assessment - All 3 Modes

Chapter 2: Road

2.1 Intra Eur-12 international road activity in 1987
2.2 Detailed analysis of the intra EUR-12 international road haulage market in 1986
2.3 Cross-trades, an analysis of the multilateral intra EUR-12 international road haulage market in 1986 and estimates for 1987
2.4 National traffic
2.5 Total intra EUR-12 traffic
2.6 Traffic with EFTA
2.7 Transit traffic through non E.C.-countries
2.8 Price and cost indices
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3.2 International traffic by relation
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5.2 Piggy-back transport (1987)

Chapter 6: International intra EUR-10 tonnages (1983-1986) by 10 commodity groups and by modes

CHAPTER 1

General Market assessment - All modes

1.1 Tonnages of international transport within the Community

International intra-Community transport again rose to a record high in 1987 even though the increase was quite modest at 1.5%, marginally less than the previous year (revised to 1.6%). In contrast to the 1960's and early 1970's when international intra-Community transport grew almost twice as fast as gdp (or industrial production), growth in the last 3 years, which has also been a period of steady growth, has been less than gdp (or industrial production); this is due to a change in the structure of goods transported away from "heavy" industry (see Chap. 6).

Road traffic growth of 6.4% in 1987 was the highest recorded since 1979 and is estimated to have exceeded 230 mio tonnes in 1987. As both rail and inland waterway showed small declines in tonnage, the share of road transport advanced strongly.

While rail traffic fell 1.2% in 1987 to 64 mio tonnes, it was still some 10% lower than the "boom" levels of 1984 and 1985. A sharp fall was observed for inward traffic to France (down 9%).

Inland waterway traffic fell 3.1% in 1987 to 186 mio tonnes; this was the lowest figure since 1983, but tonnages have only fluctuated from 176 mio to 192 mio tonnes since 1978.

Combined transport had a very positive year with a 4% increase in container movements and over 8% in piggyback movements; in both cases the level of movements was the highest ever.

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

Year / Mode	1983	1984	1985	1986	1987 (prov.)
Road	187.6	197.9	207.8	217.5	231.3
Rail	62.0	71.5	72.8	65.3	64.4
I.W.	180.3	190.5	186.8	191.9	186.0
Total	429.9	459.9	467.4	474.7	481.9

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

Mode \ Year	84/83	85/84	86/85	87/86
Road	+ 5.5	+ 5.0	+ 4.7	+ 6.4
Rail	+15.2	+ 1.8	-10.4	- 1.2
I.W.	+ 5.7	- 1.9	+ 2.7	- 3.1
Total	+ 7.0	+ 1.6	+ 1.6	+ 1.5
Industrial Production	+ 2.7	+ 3.4	+ 2.0	+ 2.2
G.D.P.	+ 2.4	+ 2.5	+ 2.6	+ 2.2

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

Mode \ Year	84/83	85/84	86/85	87/86
Road	- 1.5	+ 3.4	+ 3.1	+ 4.9
Rail	+ 8.2	+ 0.2	-12.0	- 2.7
I.W.	- 1.3	- 3.5	+ 1.1	- 4.6

Note: In Tables 1.1, 1.2 and 1.3 B and L have been separated i.e. traffic between B and L is included (this is different from the approach adopted in earlier reports).

1.2 Modal split of international transport within the Community

The table below gives the annual modal split development. Road's share continued to increase with a substantial jump to 48.0 in 1987, rail's share which had declined sharply in 1986 fell a little further, while inland waterway's share fell almost 2% in 1987 to 38.6%.

Table 1.4: Modal split evolution (%) - EUR-12

Mode \ Year	1983	1984	1985	1986	1987 (prov.)
Road	43.6	43.0	44.4	45.8	48.0
Rail	14.4	15.6	15.6	13.8	13.4
I.W.	42.0	41.4	40.0	40.4	38.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%

1.3 Comparison of national and international transport within the Community

While tonnage figures are usually used to assess international transport, a comparison between national and international transport is more usefully carried out in tonne-kilometres due to the fact that many national road journeys are very short. Tonne-kilometre figures often become available much later than the corresponding tonnage figures - especially when one is using provisional information based on trade data - so that it is possible to establish the comparison required for 1986,but not yet for 1987.

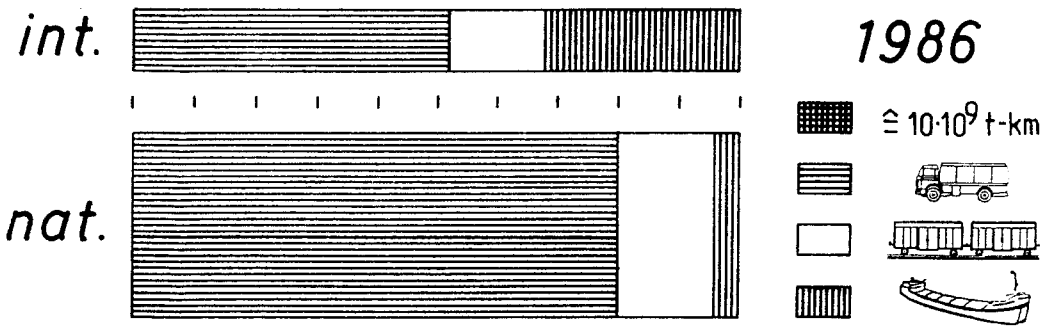
Table 1.5: Total intra EUR-12 t-km performed, 1986 (x 10^9 t-km)

1986 Mode	International intra EUR-12	National EUR-12	Total intra EUR-12
Road	113.8 *	537.5	651.3
Rail	36.8	110.8	147.6
I.W.	73.4	26.5	99.8
Total	224.0	674.8	898.7

*: includes bilateral and cross-trade movements under Community Quota authorizations

The table clearly shows the dominance of road, especially for national transport. The results also show rail to be 4 times larger then inland waterway for national transport, but inland waterway to be twice as large as rail for international transport. Fig. 1.1 visualizes the issues of Table 1.5.

Fig. 1.1



CHAPTER 2

ROAD

Contents

The contents of Chapter 2 can be summarized as follows :

2.1 Intra EUR-12 international road activity in 1987
2.2 Detailed analysis of the intra EUR-12 international road haulage market in 1986
2.3 Cross-trades, an analysis of the multilateral intra EUR-12 international road haulage market in 1986 and estimates for 1987
2.4 National traffic
2.5 Total intra EUR-12 traffic
2.6 Traffic with EFTA
2.7 Transit traffic through non E.C.-countries
2.8 Price and Costs indices
2.9 Transport Inquiry Surveys

2.1 Intra EUR-12 international road activity in 1987

2.1.1 Introduction

Annual data for 1987 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 1987 have to be based on national sources. For consistency, the same series are used 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 analysis by nationality of haulier (from national sources) has been discontinued until data from the "extended Directive" is available.

2.1.2 Total Intra EUR-12 tonnages, 1987

International road transport between the 12 EEC Member States continued to grow strongly in 1987, the increase is provisionally estimated to have been 6.4 %. This increase was slightly higher then in recent years, which ranged from 4.7% to 5.5% over the last three years.

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

2.1.3 Intra EUR-12 tonnages by relation, 1987

Table 2.1 gives the tonnages (in millions) for each relation (Belgium and Luxembourg combined) for 1987 together with the percentage change from the previous year. In a few cases the 1987 figures are not yet available for certain small flows 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 1987 was D → F (up 18%) followed by F → I (up 10%).

In the intermediate flows (those between 1 and 5 million tonnes) the outstanding results were the continued high increases concerning Spain, E → D (up 32%, after 30% previous year), F → E (up 19%, after 22%), D → E (up 19%, after 31%) and E → F (up 15%, after 13%).

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 2.1; this is done in the next section.

2.1.4 Development of inward and outward tonnages for each Member State, 1983-1987

Graph 2.1 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 1986 permitting the quick identification of the 1986 to 1987 change (the figures are also shown in the margins of Table 2.1) as well as the maintenance (or otherwise) of recent trends since 1983.

The most outstanding features are:

(i) the continuing rapid growth of traffic with Spain and Portugal consequent on adhesion (both pre-adhesion and post-adhesion); around 70% increase between 1983 and 1987;

(ii) the relatively uniform increases in 1987 for all other Member States, except for Denmark where outbound traffic remains sluggish.

Graph. 2.1 Development of inward and outward tonnages - EUR-12

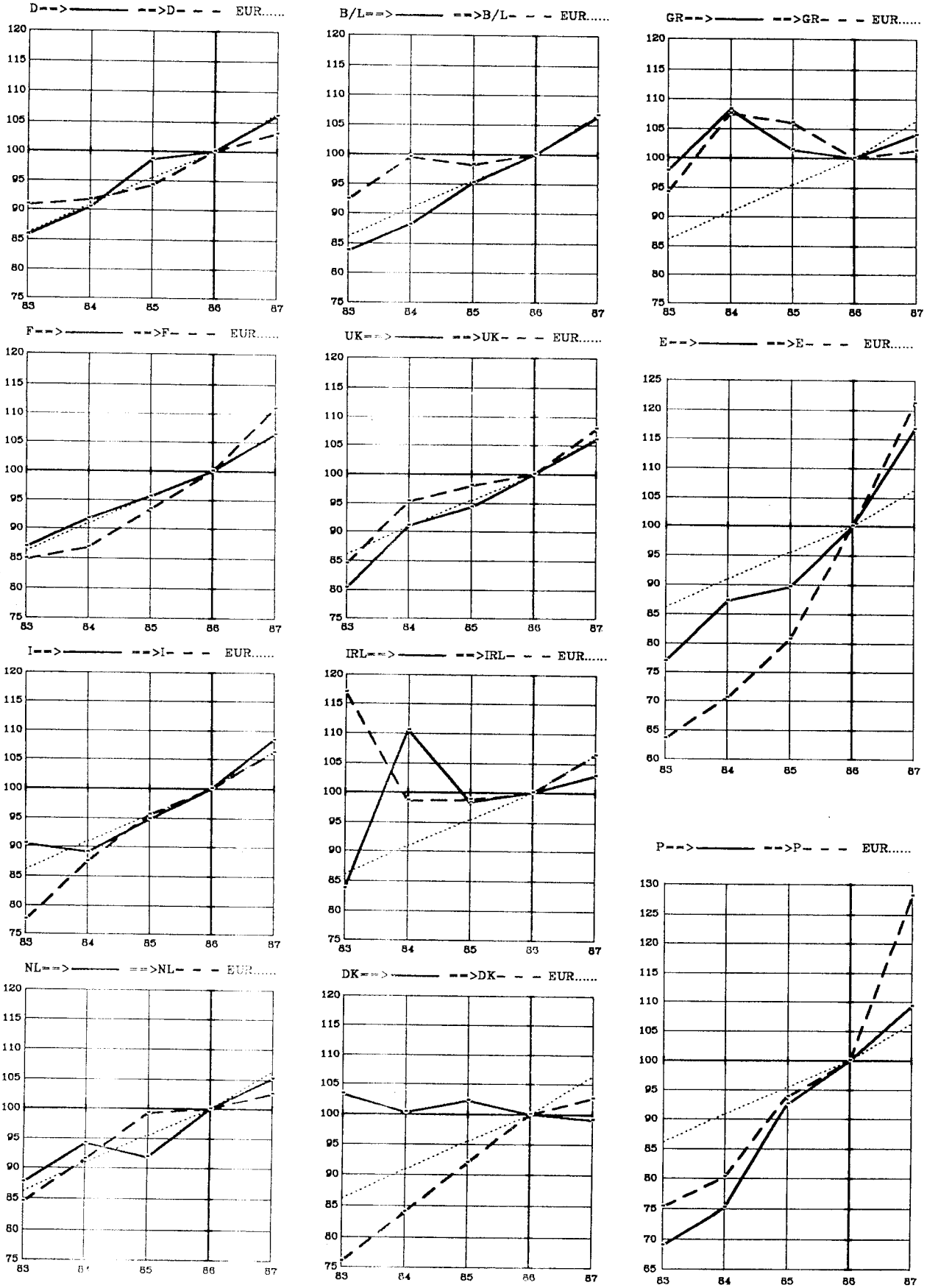


Table 2.1 Total international traffic by relation: year 1987 and % evolution on 1986 (mio tonnes)

To / From	D	F	I	NL	B/L	UK	IRL	DK	GR	E	P	Total
D		13.3 +18%	7.0 +4%	19.2 +0%	10.4 +4%	1.4 +10%	0.1 -10%	2.5 +0%	0.4 +5%	1.2 +19%	0.2 +16%	55.6 +6.0%
F	13.0 +1%		6.8 +10%	3.5 +5%	13.5 +6%	2.6 +7%	0.0 -4%	0.3 +1%	0.1 -2%	4.3 +19%	0.3 +32%	44.6 +6.4%
I	6.9 +6%	5.6 +8%		1.0 +15%	0.9 +1%	1.5 +3%	0.1 -9%	0.2 -5%	0.1 +1%	0.9 +47%	0.2 +36%	17.4 +8.4%
NL	17.4 +1%	5.4 +7%	2.3 +8%		11.6 +9%	1.0 +0%	0.1 +9%	0.6 +5%	0.1 +2%	0.6 +29%	0.1 +31%	39.3 +5.1%
B/L	12.1 +4%	20.2 +8%	1.8 +14%	14.7 +4%		1.3 +26%	0.1 +4%	0.4 +1%	0.1 -6%	0.4 +21%	0.1 +29%	51.0 +6.4%
UK	1.1 +17%	1.7 +9%	1.1 -12%	0.4 +3%	0.7 +7%		0.7 N	0.3 +33%	0.0 -39%	0.2 N	0.0 N	6.3 +6.0%
IRL	0.1 +8%	0.1 -10%	0.1 -24%	0.0 -14%	0.1 +43%	0.5 N		0.0 +4%	0.0 0%	0.0 N	0.0 N	0.8 +2.9
DK	2.9 -4%	0.3 +9%	0.3 -1%	0.3 +7%	0.1 +1%	0.5 +5%	0.0 -12%		0.0 -2%	0.0 +9%	0.0 +33%	4.5 -0.9%
GR	0.4 +2%	0.1 -3%	0.1 +20%	0.1 -11%	0.0 +7%	0.0 +36%	0.0 0%	0.0 -3%		0.0 +300%	0.0 0%	0.7 +4.0%
E	1.5 +32%	3.9 +15%	0.8 +3%	0.5 +6%	0.4 +32%	0.4 N	0.0 N	0.1 +8%	0.0 +19%		0.3 +29%	8.0 +16.8%
P	0.1 +6%	0.3 +21%	0.1 +21%	0.1 -13%	0.1 +7%	0.0 N	0.0 N	0.0 +32%	0.0 0%	0.3 -2%		1.0 +9.3%
Total	55.4 +3.1%	51.0 +10.9%	20.3 +6.2%	39.8 +2.6%	37.9 +6.6%	9.3 +7.9%	1.0 +6.3%	4.4 +2.7%	0.7 +1.3%	8.0 +21.6%	1.3 +28.1%	229.3 +6.4%

Traffic between B and L estimated at 2.0 mio tonnes (as 1986) giving total intra EUR-12 traffic as 231.3 mio tonnes

2.2 Detailed analysis of the intra EUR-12 bilateral international road haulage market in 1986

2.2.1 Introduction

As explained earlier, the data currently available for 1987 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 1986.

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) 1986 Italian data is provisional data from the Directive but tonnages for Italian hauliers for earlier years relate to foreign trade statistics. In such cases t-km were 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.

Ad a) This is an increasing problem with the growth of cross-trades. Comparison of the figures based on quarterly national sources (used in Table 2.1) with those from the Directive (Table 2.2) gives the following results:

	Based on quarterly national sources		Based on Directive
	EUR-12	EUR-10	EUR-10
84/83	+5.5	+5.2	+4.7
85/84	+5.0	+4.8	+3.2
86/85	+4.7	+3.9	+2.8 (+2.4% in Table 2.1; has to be adjusted, see note b)
87/86	+6.4	+5.4	

Ad b) A comparison of the two sources for 1986 indicates (for I hauliers on all EUR-12 relations) that the (provisional) Directive data is 6% lower than the data derived from trade statistics for tonnes and 1% lower for tonne-kilometres. Consequently the increases at EUR-12 level given in the bottom right hand corners of Tables 2.2 and 2.9 respectively are underestimated by 0.4% for tonnes and 0.2% for tonne-kilometres respectively. Because of the provisional nature of the Directive data it has not been considered useful at this stage to revise the pre-1986 data, so that comparisons of 1985 and 1986 have (generally) been excluded from entries including Italian hauliers.

2.2.2 Intra EUR-12 bilateral international road traffic - Tonnages

Table 2.2 Total international bilateral traffic by relation: year 1986 and % evolution on 1985

'000 TONNES

To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10	E	P	EUR-12
D		9796 +5%	5292 N	20573 * +15%	8058 -4%	956 -4%	768 +8%	40 +48%	2586 +6%	248 -17%	48317 * +6.3%	1182	168	49667
F	11300 -2%		5546 N	2813 +6%	10901 +2%	376 -28%	1973 -2%	68 +58%	286 -13%	73 -17%	33336 -0.9%	3495	231	37062
I	5401 N	4665 N		1138 N	1111 N	50 N	705 N	40 N	236 N	141 N	13487 N	792	153	14432
NL	18145 * +9%	4451 +10%	2008 N		10565 +0%	107 -21%	858 +7%	68 +55%	674 +9%	72 -22%	36948 * +6.8%	568	52	37568
B	8689 +7%	14010 -1%	1359 N	12491 -5%		1153 +2%	377 -6%	22 +100%	213 +2%	22 -27%	38336 -0.2%	433	44	38813
L	1659 -5%	683 +23%	56 N	240 +36%	901 +13%		27 -40%	0 0	0 0	1 0	3567 +6.4%	11	1	3579
UK	670 +19%	1181 +1%	661 N	418 +5%	228 -8%	12 +71%		808 +7%	153 +3%	15 -12%	4146 +1.8%	386	29	4561
IRL	43 +87%	113 +31%	29 N	17 +31%	12 +20%	0 -100%	732 +55%		7 +75%	0 -100%	953 +47.1%	4	1	958
DK	2603 +0%	263 +11%	357 N	364 +1%	105 -1%	0 0	433 -5%	14 -22%		32 -3%	4171 +1.7%	50	12	4233
GR	329 -5%	49 +32%	120 N	67 -19%	17 -11%	0 0	22 -8%	0 0	14 +8%		618 -17.8%	17	0	635
EUR-10	48839 *+2.7%	35211 +2.1%	15428 N	38121 *+6.5%	31898 -0.1%	2654 -6.0%	5895 -1.7%	1060 +9.7%	4169 +4.1%	604 -22.5%	183879 +2.4%			
E	1161	4500	851	392	317	3	598	18	63	0			854	8757
P	105	241	92	36	28	1	23	0	9	0		609		1144
EUR-12	50105	39952	16371	38549	32243	2658	6516	1078	4241	604		7547	1545	201409

* % change on 1985 depends on change of definition for NL hauliers

Table 2.3 International traffic per relation by hauliers registered in the country of unloading
Year 1986 and % evolution on 1985

'000 TONNES

To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10	E	P	EUR-12
D		4215	2345	14890	4123	527	477	27	1412	201	* 28217	685	107	29009
		+3%	N	* +22%	+1%	-10%	+19%	+93%	+9%	-21%	+10.9%			
F	6752		1868	2065	7257	171	760	62	207	20	19162	2208	93	21463
	+2%		N	+11%	+5%	-44%	+18%	+51%	+8%	-5%	+0.3%			
I	3008	2792		791	668	30	469	31	168	91	8048	290	53	8391
	+5%	-0%		+12%	+2%	+36%	+18%	-31%	+13%	-9%	+3.8%			
NL	4501	1279	793		2503	19	332	64	228	56	9775	377	20	10172
	+6%	+3%	N		-2%	-17%	+20%	+64%	+8%	-25%	+5.5%			
B	3977	4691	482	7666		539	313	20	175	22	17885	188	27	18100
	+11%	-11%	N	-4%		-2%	-11%	+82%	+14%	-27%	-3.0%			
L	1056	411	20	98	372		6	0	0	1	1964	11	1	1976
	+4%	+12%	N	-6%	+11%		+20%	0	0	0	+7.7%			
UK	224	540	189	264	22	2		681	149	5	2076	300	19	2395
	+14%	-3%	N	+23%	+57%	0		+8%	+10%	-38%	-2.7%			
IRL	12	11	12	2	0	0	64		7	0	108	3	0	111
	+20%	+175%	N	-33%	0	0	+39%		+75%	0	+27.1%			
DK	854	22	123	244	26	0	7	0		6	1282	16	1	1299
	+1%	0%	N	+3%	-24%	0	+250%	0		0%	+3.1%			
GR	29	13	0	7	0	0	2	0	9		60	15	0	75
	+12%	+225%	N	-22%	0	0	+100%	0	0%		-65.9%			
EUR-10	20413	13974	5832	*26027	14971	1288	2430	885	2355	402	88577			
	+5.2%	-2.7%	N	+11.4%	+2.5%	-13.3%	+14.2%	+12.5%	+9.4%	-19.1%	+3.7%			
E	523	861	406	156	177	1	101	15	36	0			261	2537
P	33	101	49	25	9	0	4	0	5	0		343		569
EUR-12	20969	14936	6287	26208	15157	1289	2535	900	2396	402		4436	582	96097

* See Table 2.2

Table 2.4 International traffic per relation by hauliers registered in the country of loading
Year 1986 and % evolution on 1985

'000 TONNES

To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10	E	P	EUR-12
D		5581 +7%	2947 +6%	5683 -1%	3935 -9%	429 +4%	291 -6%	13 0%	1174 +3%	47 +9%	20100 +0.5%	497	61	20658
F	4548 -8%		3678 +13%	749 -6%	3643 -3%	204 -5%	1213 -11%	6 +200%	79 -42%	53 -21%	14173 -2.4%	1288	139	15600
I	2393 N	1873 N		347 N	443 N	20 N	236 N	9 N	68 N	50 N	5439 N	502	100	6041
NL	13644 * +10%	3171 +13%	1215 +14%		8063 +1%	88 -22%	526 +0%	4 -20%	446 +9%	15 -17%	27172 * +7.2%	192	32	27396
B	4712 +3%	9319 +5%	877 +11%	4825 -5%		614 +4%	65 +35%	2 +	38 -32%	1 +	20453 +2.3%	245	17	20715
L	603 -18%	273 +44%	36 +16%	142 +95%	528 +14%		21 -48%	0 0	0 0	0 0	1603 +4.7%	0	0	1603
UK	446 +22%	641 +5%	472 +19%	153 -17%	206 -12%	10 +100%		127 +5%	4 -71%	9 0%	2068 +6.6%	85	11	2164
IRL	31 +139%	102 +24%	17 -6%	15 +50%	12 +20%	0 -100%	668 +57%		0 0	0 -100%	845 +50.1%	1	1	847
DK	1749 +0%	241 +13%	234 +13%	121 -2%	79 +10%	0 0	426 -6%	14 0%		27 0%	2891 +1.2%	35	11	2937
GR	300 -7%	36 +6%	120 +18%	60 -20%	17 -11%	0 0	19 -17%	0 0	5 +25%		557 -3.6%	2	0	559
EUR-10	28426 *+1.0%	21237 +5.6%	9596 +10.8%	12095 -2.7%	16926 -2.2%	1365 +2.1%	3465 -10.5%	175 -2.2%	1814 -2.1%	202 -28.6%	95301 +1.2%			
E	638	3638	445	235	140	2	497	3	27	0			592	6217
P	72	140	43	11	19	1	19	0	4	0		266		575
EUR-12	29136	25015	10084	12341	17085	1368	3981	178	1845	202		3113	964	105312

* See Table 2.2

Table 2.2 shows an overall increase of +2.4% of the tonnage in bilateral intra EUR-10 traffic moved in 1986, compared with 1985 (but readers should note the comments Ad b) in 2.2.1 and footnote on Table 2.2).
A large increase was noted for IRL outward; a significant fall for GR inward.
For the majors flows (over 5 million tonnes) the largest increase was on the relation B → D (7% up); the largest decrease on the relation B → NL (5% down).

Tables 2.3 and 2.4 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 2.3 and 2.4 lead to the results of Tables 2.5.

Table 2.5.A Share of the market held by hauliers from EUR-10 on intra EUR-10 international journeys

Member State	1986 IN	+	OUT	:	TOTAL	% change 86/85	Share % 1984	1985	1986
D	20413	+	20100	:	40513	+2.8	21.6	21.9	22.0
F	13974	+	14173	:	28147	-2.6	16.3	16.1	15.3
I	5832	+	5439	:	11271	N	8.3	7.5	6.1
NL	26027	+	27172	:	53199	+9.2 *	26.9	27.1	28.9 *
B	14971	+	20453	:	35424	+2.4	19.0	19.3	19.3
L	1288	+	1603	:	2891	-4.1	(1.3)	1.7	1.6
UK	2430	+	2068	:	4498	+10.6	2.3	2.3	2.4
IRL	885	+	845	:	1730	+28.1	0.8	0.8	0.9
DK	2355	+	2891	:	5246	+4.7	2.9	2.8	2.9
GR	402	+	557	:	959	-10.8	0.7	0.6	0.5
EUR-10	88577	+	95301	:	183878	+2.4	100	100	100

* See footnote tab. 2.2

Table 2.5.A contains the figures on EUR-10 basis for 3 consecutive years, of the market share by Member State of haulier. During this period, the major changes are the steady declines in I, F and GR shares.

Table 2.5.B gives the market share, per Member State of haulier on EUR-12 basis.

Table 2.5.B Share of the market held by hauliers from EUR-12 on intra EUR-12 international journeys

Member State	1986 IN	+	OUT	:	TOTAL	Share % 1986
D	20969	+	20658	:	41627	20.7
F	14936	+	15600	:	30536	15.2
I	6287	+	6041	:	12328	6.1
NL	26208	+	27396	:	53604	26.6
B	15157	+	20715	:	35872	17.8
L	1289	+	1603	:	2892	1.4
UK	2535	+	2164	:	4699	2.3
IRL	900	+	847	:	1747	0.9
DK	2396	+	2937	:	5333	2.6
GR	402	+	559	:	961	0.5
E	4436	+	6217	:	10653	5.3
P	582	+	575	:	1157	0.6
EUR-12	96097	+	105312	:	201409	100

Obviously, because of the extension to E and P, the market share for all other Member States is reduced in comparison to Table 2.5.A, except for F, due to geographical reasons (important traffic with E).

The detail, by transport relation, is given in Table 2.6. Since Table 2.6 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 2.6 from 100%. Example: in 1986 D hauliers have 60% of the traffic from F to D and 42% of the EUR-10 traffic to D.

Note: Italian, Danish and Greek data give no breakdown between Belgium and Luxembourg; in compiling the marginal EUR-10 totals in Table 2.6, the traffic for these 3 Member States is assumed to be with Belgium.

The figures for F hauliers in relation with D, NL and B all show a 3 to 5% drop between 1984 and 1986. Also to be noted is the improvement of the B share in the market with F.

Table 2.6 Percentage share of traffic (in tonnes) held by hauliers from "origin" Member States

Year	To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	E	P	EUR-10/ EUR-12
1984	D		54	55	31	51	-	41	32	43	14			43
1985			56	53	32	51	41	44	48	47	14	/42	/36	44
1986			/57	/56	/28	/49	/45	/38	/33	/45	/19			/42
1984	F	44		55	31	38	-	66	13	28	66			44
1985		43		57	30	35	41	68	5	42	76	/37	/60	43
1986		/40		/66	/27	/33	/54	/62	/9	/28	/73			/42
1984	I	53	50		35	42		64	50	39	61			51
1985		51	43		34	41		63	35	37	54	/63	/65	47
1986		/44	/40		/31	/40		/34	/23	/29	/36			/42
1984	NL	75	68	57		75	-	58	16	63	14			73
1985		75	69	63		76	83	65	11	66	20	/34	/62	73
1986		/75	/71	/61		/76	/82	/61	/6	/66	/21			/73
1984	B	58	64	62	36		-	11	0	27	0			52
1985		56	63	63	39		52	12	0	27	0	/57	/39	52
1986		/54	/67	/64	/39		/53	/17	/9	/18	/5			/53
1984	L	-	-		-	-		-	-					-
1985		42	34		41	58		89	-			/-	/-	46
1986		/36	/40		/59	/59		/78	/-					/45
1984	UK	68	49	48	55	97	-		19	3	61			49
1985		65	52	51	46	94	71		16	9	53	/22	/38	48
1986		/67	/54	/71	/37	/90	/83		/16	/3	/60			/47
1984	IRL	67	97	43	69	100	-	90		0	100			88
1985		57	95	50	77	100	100	90		0	100	/25	/100	87
1986		/72	/90	/59	/88	/100	/-	/91		/-	/-			/88
1984	DK	72	83	76	36	59		99	100		81			73
1985		67	91	69	34	68		100	78		82	/70	/92	70
1986		/67	/92	/66	/33	/75		/98	/100		/84			/69
1984	GR	92	68	26	93	100		86	-	33				59
1985		93	92	45	90	100		96	-	31		/12	/-	77
1986		/91	/74	/100	/90	/100		/86	/-	/36				/88
1986	E	/55	/81	/52	/60	/44	/67	/83	/17	/43	/-		/69	/71
1986	P	/69	/58	/47	/31	/68	/100	/83	/-	/44	/-	/44		/50
1984	EUR-10	60	59	55	33	55	-	63	23	42	38			53
1985	EUR-10	59	58	57	35	54	47	65	19	46	36	/41	/62	52
1986	EUR-12	/58	/63	/62	/32	/53	/52	/61	/17	/44	/33			/52

Table 2.7 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.

Table 2.7 Outward/inward tonnage ratios by country of haulier

Member State of haulier	Ratio OUT/IN 1984	1985	1986
D	.99	1.03	.99
F	1.05	1.01	1.04
I	1.11	1.03	.96
NL	1.06	1.08	1.05
B	1.42	1.37	1.37
L	N	1.03	1.24
UK	.87	.91	.85
IRL	1.02	.72	.94
DK	1.45	1.33	1.23
GR	1.11	1.16	1.39
E	X	X	1.40
P	X	X	.99
EUR-10/12	1.11	1.10	1.10

The results of Table 2.7 show that the overall outward/inward ratio remains stable at about 1.10. The main points to note from this table are the very variable ratios for IRL, the declining ratio for DK and the increasing ratio for GR.

Shares of the road haulage market held by Hire & Reward operators

The results from the Road Statistical Directive give a breakdown between "Hire & Reward" and "Own account" operators. Table 2.8 gives the share, in tonnes, for Hire & Reward hauliers.

Note: The Italian foreign trade data used for 1984 and 1985 does not contain such a breakdown. The L figure for 1985 corresponds with official statistics but must be treated with caution.

The share of Hire & Reward for the whole Community - 82.4% - is known for the first time, due to the availability of preliminary figures from I. The evolution of Hire & Reward share on an EUR-10-I basis over recent years is shown in Table 2.8.A. F and NL show a steady increase of the Hire & Reward share.

Table 2.8.A Share of market held by Hire & Reward hauliers on intra EUR-10 journeys (x '000 tonnes)

Member State	1986 IN	+	OUT	:	TOTAL	Share in % of Hire & Reward 1984	1985	1986
D	16593	+	16441	:	33034	81.3	82.2	81.5
F	11429	+	11460	:	22889	75.0	78.8	81.3
I	5638	+	5350	:	10988	N	N	97.5
NL	22712	+	23407	:	46119	84.6	86.2	86.7
B	9325	+	13902	:	23227	65.8	66.4	65.6
L	871	+	1156	:	2027	N	(43.8)	70.1
UK	1952	+	1799	:	3751	86.2	84.5	83.4
IRL	694	+	680	:	1374	66.7	65.9	79.4
DK	2181	+	2618	:	4799	90.3	90.0	91.5
GR	402	+	557	:	959	100.0	100.0	100.0
Total EUR-10	71797	+	77370	:	149167	78.3	79.1	80.1

Table 2.8.B Share of market held by Hire & Reward hauliers on intra EUR-12 journeys (x '000 tonnes)

Member State	1986 IN	+	OUT	:	TOTAL	Share in % of Hire & Reward 1986
D	17122	+	16983	:	34105	81.9
F	12302	+	12660	:	24962	81.3
I	6093	+	5939	:	12032	97.5
NL	22892	+	23614	:	46506	86.7
B	9409	+	14062	:	23471	65.6
L	872	+	1156	:	2028	70.1
UK	2050	+	1882	:	3932	83.4
IRL	709	+	682	:	1391	79.4
DK	2220	+	2660	:	4880	91.5
GR	402	+	559	:	961	100.0
E	4378	+	6141	:	10519	98.7
P	582	+	575	:	1157	100.0
Total EUR-12	79031	+	86913	:	165944	82.4

2.2.3 Intra EUR-12 international road traffic - tonne-kilometres

The analysis carried out in section 2.2.2 can be repeated for tonne-kilometres (e.g. table 2.9 corresponds to Table 2.2).

Table 2.9 International bilateral intra EUR-12 traffic in tonne-kilometres
Year 1986 and % evolution on 1985 (x mio t-km)

To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10	E	P	EUR-12
D		4800 +6%	5222 N	5762 * +8%	2670 +1%	197 0%	608 +14%	50 +56%	1411 +5%	573 -17%	21293 * +4.8%	2183	406	23882
F	5097 +3%		4822 N	1715 +6%	3537 +4%	100 +6%	1361 -1%	73 +78%	332 -21%	164 -6%	17201 +0.4%	2653	343	20197
I	5629 N	4273 N		1606 N	1498 N	46 N	1196 N	76 N	372 N	102 N	14798 N	1110	316	16224
NL	6222 * +8%	2621 +7%	2877 N		1703 +2%	34 -24%	456 +12%	71 +87%	492 +9%	193 -23%	14669 * +7.9%	925	100	15694
B	3095 +11%	4298 +13%	1757 N	2019 +2%		232 +9%	174 -2%	19 +6%	195 +3%	58 -26%	11847 +8.0%	723	94	12664
L	339 +3%	154 +33%	49 N	75 +34%	169 +9%		15 -38%	0 0	0 0	3 0%	804 +12.9%	13	1	818
UK	531 +23%	809 +7%	1035 N	215 +13%	109 -8%	7 +75%		187 +21%	167 +3%	47 -16%	3107 -0.1%	811	66	3984
IRL	53 +112%	107 +9%	47 N	18 +39%	15 +88%	0 -100%	198 +46%		12 +100%	0 -100%	450 +28.2%	11	3	464
DK	1115 0%	310 +9%	535 N	263 +1%	97 0%	0 0	473 -6%	24 -14%		94 -2%	2911 +0.8%	126	36	3073
GR	761 -5%	135 +30%	77 N	178 -20%	43 -16%	1 0%	68 -8%	0 0	39 +3%		1302 -9.5%	55	0	1357
EUR-10	22842 *+3.6%	17507 +6.0%	16421 N	11851 *+5.7%	9841 +1.5%	617 +6.2%	4549 -7.7%	500 +14.2%	3020 +0.4%	1234 -17.4%	88383 +2.6%			
E	2100	3679	1340	677	547	5	1330	32	157	1			715	10583
P	255	369	196	70	56	3	53	0	28	0		434		1464
EUR-12	25197	21555	17957	12598	10444	625	5932	532	3205	1235		9044	2080	110404

* See Table 2.2

Table 2.10 International traffic per relation by hauliers registered in the country of unloading
Year 1986 and % evolution on 1985 (x mio t-km)

To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10	E	P	EUR-12
D		2080 +8%	2484 N	4321 * +11%	1434 +8%	100 -2%	405 +25%	35 +106%	847 +9%	463 -22%	12169 * +7.8%	1420	268	13857
F	2798 +2%		1643 N	1201 +9%	2256 +11%	42 +24%	550 +26%	71 +73%	248 +7%	56 -7%	8865 +0.2%	1743	165	10773
I	2918 +3%	2471 -1%		1131 +13%	916 +3%	28 +22%	750 +20%	57 -31%	286 +13%	58 -9%	8615 +4.1%	462	125	9202
NL	1225 +7%	798 -4%	1063 N		376 +3%	7 -13%	178 +23%	67 +97%	160 +8%	150 -24%	4024 +6.2%	736	46	4806
B	1316 +11%	1605 +8%	581 N	1210 -2%		94 +1%	142 -12%	16 -11%	157 +15%	56 -28%	5177 +2.8%	348	58	5583
L	193 +6%	79 +32%	16 N	29 -7%	69 +8%		3 0%	0 0	0 0	3 0%	392 +14.0%	13	1	406
UK	153 +14%	299 -2%	258 N	135 +29%	10 +150%	1 0%		134 +25%	164 +11%	17 -32%	1171 -18.7%	656	47	1874
IRL	13 +18%	6 0%	17 N	2 0%	0 0	0 0	29 +71%		12 +100%	0 0	79 +12.9%	8	0	87
DK	288 -1%	21 -22%	137 N	179 +4%	26 -19%	0 0	4 +100%	0 0		15 0%	670 -3.9%	41	4	715
GR	70 +13%	31 +343%	0 N	18 -22%	0 0	0 0	8 +60%	0 0	27 -4%		154 -25.2%	49	0	203
EUR-10	8974 +4.7%	7390 +3.5%	6199 N	8226 *+9.0%	5087 +7.4%	272 +4.2%	2069 +20.3%	380 +25.8%	1901 +9.8%	818 -20.9%	41316 +3.3%			
E	814	689	591	171	291	2	247	26	89	1			192	3113
P	76	131	98	45	17	0	8	0	15	0		235		625
EUR-12	9864	8210	6888	8442	5395	274	2324	406	2005	819		5711	906	51244

* See Table 2.2

Table 2.11 International traffic per relation by hauliers registered in the country of loading
Year 1986 and % evolution on 1985 (x mio t-km)

To / From	D	F	I	NL	B	L	UK	IRL	DK	GR	EUR-10	E	P	EUR-12
D		2720 +4%	2738 +4%	1441 -2%	1237 -6%	97 +2%	202 -3%	15 0%	564 0%	111 +9%	9125 +1.0%	763	138	10026
F	2299 +4%		3179 +11%	514 -2%	1281 -6%	58 -3%	811 -13%	2 +	84 -55%	108 -7%	8336 +0.6%	910	177	9423
I	2711 N	1802 N		475 N	582 N	18 N	446 N	19 N	86 N	44 N	6183 N	648	191	7022
NL	4998 * +8%	1823 +12%	1814 +14%		1327 +2%	27 -27%	277 +6%	4 0%	332 +9%	44 -14%	10646 * +8.5%	189	54	10889
B	1779 +11%	2693 +16%	1176 +9%	809 +9%		138 +14%	32 +88%	3 +	38 -27%	1 +	6669 +12.5%	375	36	7080
L	146 +1%	75 +34%	33 +10%	46 +92%	100 +10%		11 -50%	0 0	0 0	0 0	411 +11.7%	0	0	411
UK	378 +27%	510 +13%	777 +21%	80 -7%	99 -13%	6 +100%		53 +10%	3 -79%	30 -3%	1936 +14.6%	155	19	2110
IRL	40 +186%	101 +10%	30 +7%	16 +46%	15 +88%	0 -100%	169 +42%		0 0	0 -100%	371 +32.0%	3	3	377
DK	827 +0%	289 +13%	398 +13%	84 -2%	71 +9%	0 0	469 -6%	24 -4%		80 0%	2242 +2.4%	85	32	2359
GR	691 -7%	104 +8%	77 +17%	160 -19%	43 -16%	1 0%	60 -14%	0 0	12 +20%		1148 -6.7%	6	0	1154
EUR-10	13869 *+2.9%	10117 +7.9%	10222 +10.0%	3625 -1.1%	4755 -4.1%	345 +7.5%	2477 -22.9%	120 -11.8%	1119 -12.4%	418 -9.1%	47067 +1.9%			
E	1286	2990	749	506	256	3	1083	6	68	0			523	7470
P	180	238	98	25	40	3	45	0	13	0		199		841
EUR-12	15335	13345	11069	4156	5051	351	3605	126	1200	418		3333	1173	59162

* See Table 2.2

Table 2.12.A Tonne-kilometres achieved by country of haulier on international intra EUR-10 traffic (x mio t-km)

Member State	1986 IN	+	OUT	:	TOTAL	% change 86/85	Share % 1984	1985	1986
D	8974	+	9125	:	18099	+2.8	19.9	20.4	20.5
F	7390	+	8336	:	15726	+2.0	17.9	17.9	17.8
I	6199	+	6183	:	12382	N	18.1	16.6	14.0
NL	8226	+	10646	:	18872	+8.7	19.3	20.1	21.4
B	5087	+	6669	:	11756	+10.2	11.9	12.4	13.3
L	272	+	411	:	683	+8.6	0.5	0.7	0.8
UK	2069	+	1936	:	4005	+17.5	4.2	4.0	4.5
IRL	380	+	371	:	751	+28.8	0.6	0.7	0.8
DK	1901	+	2242	:	4143	+5.7	4.6	4.6	4.7
GR	818	+	1148	:	1966	-13.2	3.0	2.6	2.2
EUR-10	41316	+	47067	:	88383	+2.6	100	100	100

Results of Table 2.12.A for 86/85 are similar to Table 2.5.A (tonnes) except that apparently there has been an increase of average trip length of 5 - 10% for hauliers from F, B, L and UK. Looking at the shares 84-86, the results are similar to 2.5.A, except that F hauliers have not lost their share in t-km, due to the increase in average trip length in 1986 compared to 1985.

Table 2.12.B Tonne-kilometres achieved by country of haulier on international intra EUR-12 traffic (x mio t-km)

Member State	1986 IN	+	OUT	:	TOTAL	Share % 1986
D	9864	+	10026	:	19890	18.0
F	8210	+	9423	:	17633	16.0
I	6888	+	7022	:	13910	12.6
NL	8442	+	10889	:	19331	17.5
B	5395	+	7080	:	12475	11.3
L	274	+	411	:	685	0.6
UK	2324	+	2110	:	4434	4.0
IRL	406	+	377	:	783	0.7
DK	2005	+	2359	:	4364	4.0
GR	819	+	1154	:	1973	1.8
E	5711	+	7470	:	13181	11.9
P	906	+	841	:	1747	1.6
EUR-12	51244	+	59162	:	110406	100

Table 2.12.B shows that the E and particularly P share of EUR-12 traffic is much higher in t-km than in tonnes, as one might expect, due to their relatively long distance from the centre of the Community.
It may also be noted that the F share drops, like all the other Member States, in comparison to Table 2.5.A because, although the tonnage of F hauliers to E is disproportionally high - due to geographical reasons - this is not true in t-km.

Table 2.13 Market share held by Hire & Reward hauliers on intra-Community journeys (x mio t-km)

Member State	1986				Share in % of Hire & Reward			
					EUR-12	EUR-10		
	IN	+ OUT	:	TOTAL	1986	1984	1985	1986
D	8732	+ 8964	:	17696	89.0	88.1	88.8	88.3
F	7227	+ 8217	:	15444	87.6	85.5	85.8	87.7
I	6686	+ 6913	:	13599	97.8	N	N	97.6
NL	7886	+ 9650	:	17536	90.7	89.3	90.3	90.6
B	3495	+ 4706	:	8201	65.7	69.0	69.1	66.4
L	208	+ 338	:	546	79.7	N	56.3	79.6
UK	2045	+ 1918	:	3963	89.4	90.2	87.7	89.1
IRL	378	+ 347	:	725	92.6	91.3	91.4	92.3
DK	1857	+ 2124	:	3981	91.2	90.2	89.2	91.1
GR	819	+ 1154	:	1973	100.0	100.0	100.0	100.0
E	5679	+ 7420	:	13099	99.4	-	-	-
P	906	+ 841	:	1747	100.0	-	-	-
Total	45918	+ 52592	:	98510	89.2	85.7	85.6	85.8*

*: EUR-10 - I

In t-km, the share on a EUR-12 basis, 89.2%, is considerably higher than on tonnage basis (82.4% - Table 2.8.B), indicating that Hire & Reward trips are longer on average than own account trips.

Average trip length for all hauliers is given by the division of the total t-km figure by the total tonnage figure. This yields for 1986:
- average trip length of a H & R-trip: 594 km
- average trip length of an o.a.-trip: 335 km

2.3 Cross-trades, an analysis of the multilateral intra EUR-12 international road haulage market in 1986 and estimates for 1987

2.3.1 Introduction

As explained in note a) of Section 2.21, 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-12) or in other specific cases.

The Commission has extensive data on the Community Quota Statistics (a detailed analysis was published in the 1988 Analysis and Forecast 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

As explained in previous Reports, it is more appropriate to examine the share of Community Quota authorizations in all "Hire & Reward" movements in terms of tonne-kilometres as the average distance under a Community Quota authorization is about twice that of all movements. Table 2.14 shows the main results for tonne-kilometres for 1986 and 1987 (the figures not relating to Community Quotas are estimates).

Table 2.14 Intra-Community international road traffic
Breakdown by type of traffic (tonne-kilometres)

	Intra EUR-12	
	1986 (mio)	1987 ('000 mio)
Total bilaterals	110406	116 e
of which own account	-11896	-13 e
Hire and Reward bilaterals	98510	103.1 e
Cross-trades (under Community Quota)	+3401	+5256
Total Hire and Reward	101911	108.4 e
of which		
Total under Community Quota	15537	20864
% of Total Hire and Reward		
Total under Community Quota	15.2%	19.2% e
Cross-trades under Community Quota	3.3%	4.8% e
Cross trades as % of total under Community Quota	21.9%	25.2%

e= estimate

Due to the increase in average number of Community Quota authorizations in 1987 (being 10490.5 - up 41% compared to 1986) there has been a corresponding increase of 34% in the t-km achieved under the Community Quota authorizations, with the result that these licences are now provisionally estimated to hold 19.2% of the total Hire & Reward intra EUR-12 market (in t-km). Avid readers will recall that this percentage was 10.5% in 1984 and 13.6% in 1985, indicating the important role of the Community Quota authorizations in opening up intra-Community traffic to the possibility of cross-trades.

In contrast to recent years, when the proportion of cross-trades under Community Quota had remained very stable (between 21 and 22%), there is a noticeable increase in 1987 to 25%, bringing the proportion of cross-trades under Community Quota as a percentage of total Hire & Reward to (provisionally) 4.8% in 1987, as compared to 2.2% in 1984.

Table 2.15.A 1986 tonne-kilometres international intra-Community
(Hire and Reward only - mio t-km)

Member State of haulier	T-km achieved			
	All movements			Using Comm. Quota authorizat.
	Bilateral	Cross-trade	Total	
D	17696	106	17802	2722
F	15444	616	16060	1853
I	13599 r	40	13639r	1902
NL	17536	1164	18700	1908
B	8201 r	877	9078r	1474
L	546	338	884	445
UK	3963	88	4051	1032
IRL	725 r	53	778r	280
DK	3981 r	90	4071r	1776
GR	1973 r	0	1973r	217
E	13099 r	25	13124r	1549
P	1747 r	4	1751r	380
EUR-12	98510 r	3401	101911r	15537

r= revised from 1986 Annual Report

Table 2.15.B: 1987 tonne-kilometres international intra-Community
(Hire and Reward only - mio t-km)

Member State of haulier	T-km achieved			
	All movements			Using Comm. Quota authorizat.
	Bilateral	Cross-trade	Total	
D	N	89	N	3104
F	17483	800	18283	2850
I	N	35	N	2587
NL	N	1587	N	2753
B	N	1880	N	2309
L	N	484	N	610
UK	6615	93	6708	1224
IRL	N	99	N	393
DK	N	134	N	2053
GR	N	2	N	222
E	N	38	N	2116
P	N	15	N	644
EUR-12	103100 e	5256	108400e	20864

Table 2.16 Percentage of movements by type 1986 and 1987

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	
	1986	1987	1986	1987	1986	1987
D	3.9%	2.9%	15.3%	N	0.6%	N
F	33.2%	28.1%	11.5%	15.6%	3.8%	4.4%
I	2.1%	1.4%	13.9%	N	0.3%	N
NL	61.0%	57.6%	10.2%	N	6.2%	N
B	59.5%	81.4%	16.2%	N	9.7%	N
L	76.0%	79.4%	50.3%	N	38.2%	N
UK	8.5%	7.6%	25.5%	18.2%	2.2%	1.4%
IRL	18.9%	25.2%	36.0%	N	6.8%	N
DK	5.1%	6.5%	43.6%	N	2.2%	N
GR	0%	1.1%	11.0%	N	0%	N
E	1.6%	1.8%	11.8%	N	0.2%	N
P	1.0%	2.4%	21.7%	N	0.2%	N
EUR-12	21.9%	25.2%	15.2%	19.2% e	3.3%	4.8% e

2.4 National traffic

Table 2.17 shows the overall trends in national road haulage over the period 1983 to 1986.
The 4.8% increase of total EUR-10 national traffic 1986 compared to 1985 is much higher than the 2.6% on bilateral intra EUR-10 international traffic (see Table 2.12A); inclusion of cross-trades would increase the total international growth rate to about 3.6% (see footnote in section 2.2.1). Note also that the overall figure for national traffic is some 5 times higher than for intra-Community.

Table 2.17 Tonne-kilometres achieved by each nationality of haulier on national traffic (x mio t-km)

Nationality of haulier	1983	1984	1985	1986	% change 86/85
D	95263	97708	98615	103089	+4.5
F	78186	78648	79094	82610	+4.4
I	103426e	101298e	104941e	111271e	(+6.0)
NL	17106	18123	18189	18981	+4.4
B	9910	10684	10380	10834	+4.4
L	263p	263p	206	239	+16.0
UK	92300	98924	100541	102581	+2.0
IRL	3989	3970	3727	4200	+12.7
DK	7250	7709	8342	8825	+5.8
GR	8029	9540	10352	12539	+21.1
EUR-10	415722	426867	434387	455169	
Annual change		+2.7%	+1.8%	+4.8%	
E	-	-	-	74144	
P	-	-	-	8225e	

Finally, Table 2.18 gives the evolution of the market share held by H&R hauliers in national road transport.

Table 2.18: Market share by Hire & Reward hauliers in national road transport (mio t-km)

Nationality of haulier	1983	1984	1985	1986
D	57.5	56.7	57.0	56.7
F	58.6	56.7	58.0	58.8
I	N	N	N	80.6
NL	62.5	64.9	66.9	66.6
B	45.9	46.1	45.6	46.9
L	N	N	10.7	14.2
UK	63.8	63.9	66.8	67.5
IRL	33.2	36.2	34.1	38.4
DK	68.6	71.7	72.4	74.1
GR	72.4	74.3	66.5	69.7
E				82.7
P				28.5e

Table 2.19 shows the breakdown by NST-chapter of t-km performed on the national markets by each nationality of haulier, 1986 compared to 1985.

Table 2.19 National road traffic, breakdown by NST-chapter

NST	Year	D	F	I	NL	B	L	UK	IRL	DK	GR	E	P	Total*
0	1985	6351	9924	N	2554	1072	5	9821	463	936	1780	N	N	32906
	1986	6479	10851	15208e	2794	1173	6	10284	464	1063	1735	13218	N	34849
														+6%
1	1985	16312	18106	N	5020	2082	22	19208	1059	2323	1444	N	N	65576
	1986	16986	18727	16778e	5181	2347	25	19856	1214	2522	1949	13585	N	68807
														+5%
2	1985	1441	587	N	46	228	4	4294	124	101	128	N	N	6953
	1986	1320	501	465e	67	161	4	3735	167	40	136	1071	N	6131
														-12%
3	1985	6347	4599	N	912	623	25	4296	237	593	1022	N	N	18654
	1986	6858	4752	5215e	1031	762	24	3672	310	452	1058	3350	N	18919
														+1%
4	1985	811	801	N	102	98	4	1204	25	71	192	N	N	3308
	1986	745	916	1874e	110	93	11	1140	34	83	145	1373	N	3277
														-1%
5	1985	4999	3365	N	662	541	4	6133	41	160	327	N	N	16232
	1986	4994	3489	12446e	592	575	5	5754	49	133	658	3595	N	16249
														+0%
6	1985	24399	15753	N	3124	3009	124	17933	868	1971	2971	N	N	70152
	1986	25825	15778	12137e	3325	2760	146	18272	922	2286	4240	15465	N	73554
														+5%
7	1985	575	1941	N	318	317	2	1702	182	160	206	N	N	5403
	1986	522	1952	2463e	342	360	3	1760	256	207	257	1532	N	5659
														+5%
8	1985	8382	4555	N	1122	532	2	6958	81	316	508	N	N	22456
	1986	8540	4552	9414e	1172	583	2	7166	114	325	679	7199	N	23133
														+3%
9	1985	28998	19462	N	4329	1877	13	28992	647	1712	1775	N	N	87805
	1986	30819	21095	35272e	4369	2020	13	30942	670	1712	1681	13756	N	93321
														+6%
All	1985	98615	79094	N	18189	10380	206	100541	3727	8342	10352	N	N	329446
goods	1986	103089	82610	111271	18981	10834	239	102581	4200	8825	12539	74144	9972e	343898
		+4.5%	+4.4%	N	+4.4%	+4.4%	+16%	+2.0%	+13%	+5.8%	+21%	N	N	+4.4%

* Note: the totals given in the right hand column exclude I, E and P

2.5 Total intra EUR-12 traffic

Table 2.20 gives the sums of national and bilateral intra-Community traffic for all M.S. Here we see for instance that for 86/85 the 13.2% drop for Greece on intra-Community transport (Table 2.12A) turns into an overall 15.0% increase.

Table 2.20 Tonne-kilometres achieved in national and bilateral international intra-Community transport for each nationality of haulier (x mio t-km)

Nationality of haulier	1983	1984	1985	EUR-10 1986	EUR-12 1986
D	111425	114488	116220	121188	122979
F	91614	93763	94519	98336	100243
I	118917e	116521e	119258e	123653e	125181
NL	32221	34378	35546	37853	38312
B	18695	20737	21044	22589	22982
L	712p	712p	835	922	924
UK	95749	102435	103950	106586	107015
IRL	4535	4464	4310	4951	4983
DK	11152	11621	12263	12969	13190
GR	10747	12056	12617	14505	14512
					E: 87325
EUR-10	495767	511175	520562	543552	P: 9972e
Annual change		+3.1%	+1.8%	+4.4%	

Table 2.21 shows the relative importance of intra-Community transport per nationality of haulier. The most outstanding figures here are the steadily increasing percentages for NL and B hauliers, who perform half of their total t-km on international transport, and the drop of 11 percentage points for GR hauliers over the last 3 years.

Table 2.21: Importance of international intra-Community transport for each nationality of haulier:

$$\frac{\text{International t-km}}{\text{National t-km + International t-km}} \text{ as \%}$$

Nationality of haulier	1983	1984	1985	EUR-10 1986	EUR-12 1986
D	14.5	14.7	15.1	14.9	16.2
F	14.7	16.1	16.3	16.0	17.6
I	13.0 e	13.1e	12.0 e	10.0	11.1
NL	46.9	47.3	48.8	49.9	50.5
B	47.0	48.5	50.7	52.0	52.9
L	(63.1)	(63.1)	75.3	74.1	74.1
UK	3.6	3.4	3.3	3.8	4.1
IRL	12.0	11.1	13.5	15.2	15.7
DK	35.0	33.7	32.0	32.0	33.1
GR	25.3	20.9	18.0	15.7	13.6
					E: 15.1
EUR-10	16.1	16.5	16.6	16.3	P: 17.5e
Annual difference		+0.4	+0.1	-0.3	

2.6 Traffic with EFTA

For the first time in the series "Europa Transport", figures covering tonnages moved on bilateral traffic between EEC and EFTA Member States are presented.

By comparing the following tables with those relating to intra-Community road transport appearing earlier in this report, the relative importance of these tonnage flows can be appreciated.

2.6.1 Bilateral traffic between Norway and the EEC by road, 1983-1987 ('000 tonnes)

Table 2.22

		To Norway				From Norway			
Hauliers from:		EUR-12 State	Norway	Cross trades	Total	EUR-12	Norway	Cross trades	Total
D/N	83	59	89	41	189	30	119	45	194
	87	98	141	28	267	53	191	31	275
F/N	83	4	24	5	33	1	34	4	40
	87	9	28	7	45	1	58	2	61
I/N	83	3	16	6	25	1	22	2	25
	87	2	30	8	41	1	39	4	44
NL/N	83	31	41	2	74	14	31	2	47
	87	53	70	2	125	16	45	1	62
B/N	83	6	15	4	24	0	10	2	12
	87	6	24	7	37	0	31	2	34
DK/N	83	263	N	N	314	150	N	N	221
	87	N	N	N	400	N	N	N	259

Total bilateral traffic between Norway and the EEC shows an average annual growth of over 8% during the last 4 years.

For all relations shown, the share of N hauliers appears to be significantly larger than that of any other nationality of haulier (except DK).

2.6.2 Bilateral traffic between Sweden and the EEC by road, 1983-1987 ('000 tonnnes)

Table 2.23

		To Sweden				From Sweden			
Hauliers from:		EUR-12 State	Sweden	Cross trades	Total	EUR-12 State	Sweden	Cross trades	Total
D/S	83	261	299	224	784	300	314	278	891
	87	405	455	221	1082	421	432	293	1146
F/S	83	57	59	21	137	58	61	30	150
	87	105	54	49	208	106	73	74	253
I/S	83	8	46	20	75	1	52	27	87
	87	24	47	35	106	23	54	40	117
NL/S	83	229	61	16	307	223	52	14	289
	87	406	66	31	503	340	61	20	421
B/S	83	30	30	33	94	24	31	31	87
	87	62	31	53	145	48	29	66	143
DK/S	83	806	N	N	882	1132	N	N	1341
	87	N	N	N	1028	N	N	N	1512

The average growth over the last 4 years of tonnages moved between Sweden and the EEC is about 7% per year.

Particularly on the relation NL/S (both directions), NL hauliers appear to have three quarters of the market.

2.6.3 Bilateral traffic between Finland and the EEC by road, 1983-1987 ('000 tonnes)

Table 2.24

		To Finland				From Finland			
Hauliers from:		EUR-12 State	Finland	Cross trades	Total	EUR-12 State	Finland	Cross trades	Total
D/SF	83	20	108	48	175	15	105	35	155
	87	36	127	34	197	42	155	44	241
F/SF	83	3	16	14	33	0	30	8	39
	87	5	6	24	36	1	40	13	53
I/SF	83	2	18	9	29	3	32	7	42
	87	2	13	33	47	6	40	21	67
NL/ SF	83	19	19	9	47	12	24	1	37
	87	47	20	12	80	28	29	5	61
B/SF	83	1	10	5	16	0	14	3	17
	87	2	13	15	30	1	14	9	24
DK/ SF	83	57	N	N	91	60	N	N	110
	87	N	N	N	96	N	N	N	130

Average growth of the traffic Finland/EEC is almost 8% per year.

Note the high proportion of cross-trades, particularly on the relation F/SF and I/SF.

2.6.4 Bilateral traffic between Switzerland and the EEC by road, 1983-1987 ('000 tonnes)

Table 2.25

		To Switzerland				From Switzerland			
Hauliers from:		EUR-12 State	Switzer-land	Cross trades	Total	EUR-12 State	Switzer-land	Cross trades	Total
D/CH	83	2056	1870	46	3972	430	938	17	1384
	87	3648	1938	93	5679	679	1014	21	1714
F/CH	83	2001	N	N	3510	484	N	N	988
	87	N	N	N	N	N	N	N	N
I/CH	83	1308	N	N	1848	183	N	N	444
	87	1613	N	N	2845	238	N	N	641
NL/CH	83	275	N	N	N	115	N	N	N
	87	N	N	N	N	N	N	N	N
B/CH	83	94	N	N	N	31	N	N	N
	87	N	N	N	N	N	N	N	N

Available data on bilateral traffic between Switzerland and the Community are too incomplete to give any indications on evolutions.

Transit traffic through Switzerland will be discussed in Section 2.7.1.

2.6.5 Bilateral traffic between Austria and the EEC by road, 1983-1987 ('000 tonnes)

Table 2.26

Hauliers from:		To Austria				From Austria			
		EUR-12 State	Austria	Cross trades	Total	EUR-12 State	Austria	Cross trades	Total
D/A	83	1534	3319	17	4870	852	2903	9	3764
	87	1894	3808	87	5790	1057	3097	55	4208
F/A	83	74	N	N	225	63	N	N	235
	87	97	N	N	287	107	N	N	396
I/A	83	705	N	N	1339	890	N	N	2095
	87	474	N	N	1504	983	N	N	2620
NL/A	83	83	232	31	345	66	197	14	277
	87	162	230	87	479	120	175	50	345
B/A	83	48	164	33	244	27	147	13	186
	87	102	198	54	354	89	168	26	283

Available figures for the tonnages moved indicate an annual growth of about 4.6% over the last 4 years.

On all relations shown, A hauliers have the largest market share.

For data on transit traffic through Austria, see Section 2.7.2.

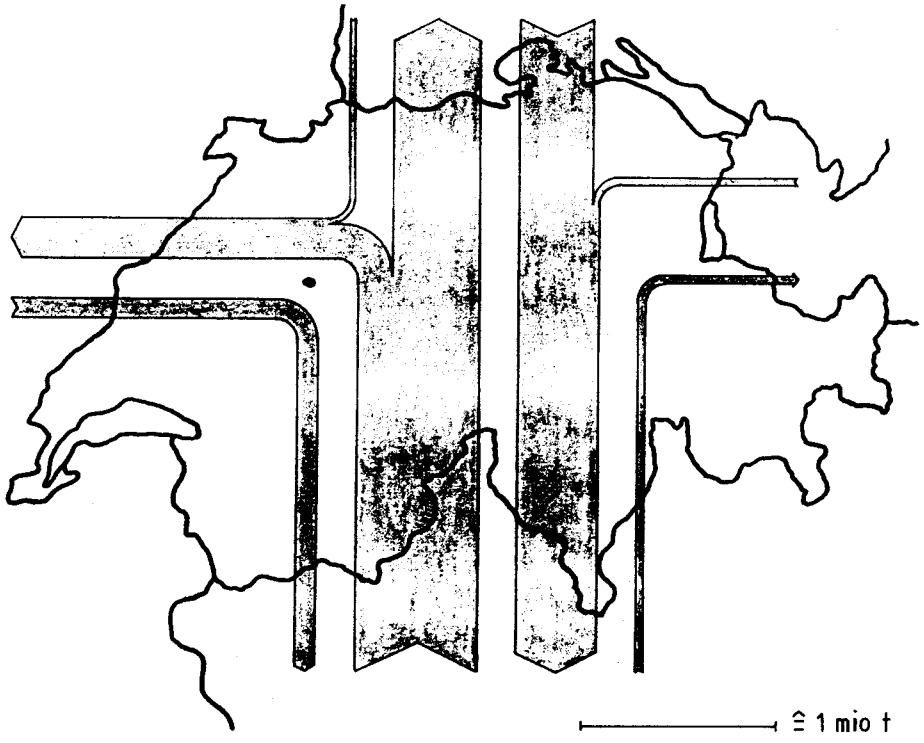
2.7 Transit traffic through non-E.C.-countries

2.7.1 Transit traffic through Switzerland

Table 2.27 Road transit traffic through Switzerland, 1986 compared with 1985 ('000 tonnes)

To / From border	Year	CH/D	CH/F	CH/I	CH/A	Total
D/CH	1985	6	14	311	3	334
	1986	7	11	373	3	394
F/CH	1985	8	5	67	8	88
	1986	7	4	96	9	116
I/CH	1985	356	147	1	23	527
	1986	429	191	1	30	651
A/CH	1985	8	7	22	5	42
	1986	2	7	32	4	45
Total	1985	378	173	401	39	991
	1986	445	213	502	46	1206

Figure 2.2.A: Road transit traffic through Switzerland (1986) - flows over 10000t



In 1986, total road transit traffic through Switzerland increased by 22% to 1.2 mio tonnes, compared to 1985. 90% 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 (24%).

Table 2.28 however shows that in 1986 the share of road haulage only accounts for 10% 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); in 1985 this share was even less (8%).

Table 2.28 Total transit traffic through Switzerland, between German and Italian borders by mode, 1986 compared with 1985 ('000 tonnes)

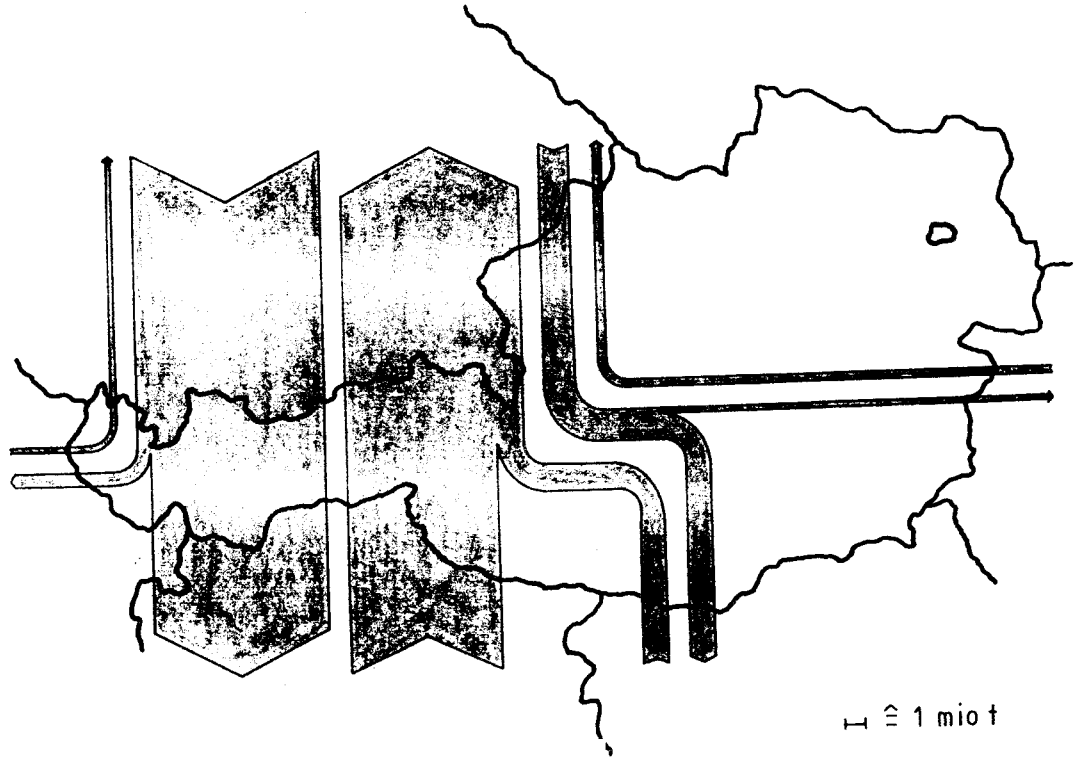
Mode / Direction	Year	Road	Rail	Total
D/CH/I	1985	311	5386	5697
	1986	373	5259	5632
I/CH/D	1985	356	2276	2632
	1986	429	2242	2671
Total	1985	667	7662	8329
	1986	802	7501	8303
	Diff.	+20.3%	-2.1%	-0.3%
Modal split 1986		10%	90%	100%

2.7.2 Transit traffic through Austria

Table 2.29 Road transit traffic through Austria 1986 compared with 1985 ('000 tonnes)

from border \ to border	year	A/D	A/I	A/CH	A/YU + H + CS	Total
D/A	1985	2	7988	464	1460	9914
	1986	1	8319	596	1466	10382
I/A	1985	6736	0	77	62	6875
	1986	7246	0	75	72	7393
CH/A	1985	132	8	8	24	172
	1986	165	9	8	22	204
YU + H + CS/A	1985	1734	128	29	172	2063
	1986	1693	147	40	297	2177
Total	1985	8604	8124	578	1718	19024
	1986	9105	8475	719	1857	20155

Figure 2.2.B: Road transit traffic through Austria (1986) - flows over 100000 tonnes



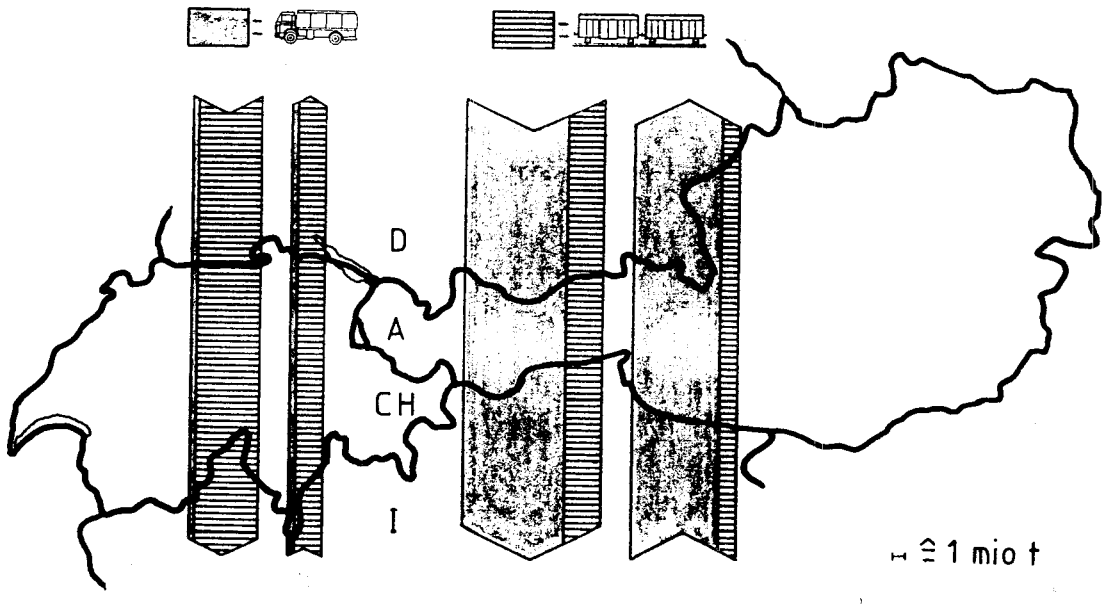
In 1986, total transit traffic using Austrian roads increased by 6% to 20 mio tonnes.
77% of all road transit traffic through Austria flows between the German and Italian borders.

Table 2.30 shows that more than three quarters of total transport between these borders is performed by road haulage, and less than one quarter by railways.

Table 2.30 Total transit traffic through Austria between German and Italian borders by mode, 1986 compared with 1985 ('000 t)

mode / direction	Year	Road	Rail	Total
D/A/I	1985	7988	3161	11149
	1986	8319	2886	11205
I/A/D	1985	6736	1327	8063
	1986	7246	1426	8672
Total	1985	14724	4488	19212
	1986	15565	4312	19877
	Diff.	+5.7%	-3.9%	+3.5%
Modal split 1986		78%	22%	100%

Fig. 2.3: Transit traffic through A and CH, summary



2.8 Cost and price indices

2.8.1 Cost indices

In the following tables, the results are presented of the cost analysis in road haulage firms from D, F, NL, B/L, UK and DK. The tables show the evolution of the total costs and the two main elements of the total costs, namely fuel costs and wages. With a view to simplification, only the indices per January 1st of each year are shown. Half-yearly cost indices are also available, but for these we refer to our more detailed quarterly Market Development reports. The total costs in ECU show an average yearly increase of 2.8% (from 1.1.1982 up to 1.1.1988, all above-mentioned countries combined);fuel costs,on average, show a yearly decrease of 3.2% and wages, on average, rise by 4.8% per year. While labour costs have continuously increased during the period considered, fuel costs have only risen up to 1.1.1985, after which a very significant fall in fuel prices was observed (from 1.1.1985 up to 1.1.1988, fuel costs in ECU, in total, decreased by 27%). The different evolution of labour costs and fuel costs (combined with the evolution of other cost factors) has resulted in a significant increase of the total costs from 1.1.1982 up to 1.1.1986 (yearly average: 4.1%), a decrease in 1986 (-2.1%) and a modest increase in 1987 (+2.4%).

When comparing the above figures in ECU with those based on DM, HFL, DKR, etc., we observe some important differences, due to the changing exchange rates of the currencies during the period considered. The total costs of D hauliers, for instance, has risen, on average, by 3.6% yearly in ECU, but only by 0.7% yearly in DM! In ECU, the highest total costs increases are registered in D, NL, DK and F (+3.6% to +3.0% on average per year), whereas in national currencies the most important increases are noted in F and in the UK (+5.0% and +4.7% on average, per year). The comparative evolution of the total costs is illustrated by graphs 2.4 ad 2.5. For the detailed comparison between fuel costs and labour costs evolution, we refer to tables 2.31 and 2.32.

Table 2. 31 Yearly evolution of total costs, fuel costs and wages per nationality of hauliers, in ECU

Total costs in ECU

	D	F	NL	B/L	UK	DK	All c.
1.1.1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1983	109.0	108.5	108.6	101.8	100.4	110.2	106.4
1.1.1984	112.2	111.3	108.8	101.8	111.7	108.2	109.0
1.1.1985	115.5	120.1	111.0	110.1	111.9	118.4	114.5
1.1.1986	119.0	124.2	117.7	112.8	114.1	117.1	117.5
1.1.1987	119.6	121.1	119.3	112.1	98.0	119.7	115.0
1.1.1988	123.1	118.5	123.0	113.3	107.2	121.3	117.7
1.1.1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1988	102.9	97.9	103.1	101.1	109.4	101.3	102.4
Avg.	+3.6	+3.0	+3.6	+2.1	+1.5	+3.4	+2.8

Fuel costs in ECU

	D	F	NL	B/L	UK	DK	All c.
1.1.1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1983	105.5	111.8	105.3	104.6	103.3	116.6	107.9
1.1.1984	102.5	106.6	103.3	101.2	109.3	104.2	104.5
1.1.1985	109.7	118.7	99.5	105.5	114.8	111.5	110.0
1.1.1986	105.2	114.0	98.2	102.1	121.7	102.1	107.2
1.1.1987	77.7	101.3	74.8	73.8	107.2	86.0	86.8
1.1.1988	82.8	89.8	74.2	73.1	88.9	73.2	80.3
1.1.1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1988	106.6	88.6	99.2	99.1	82.9	85.1	92.5
Avg.	-2.3	-1.3	-4.4	-4.4	-1.5	-4.4	-3.2

Wages in ECU

	D	F	NL	B/L	UK	DK	All c.
1.1.1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1983	111.0	110.0	111.8	99.7	98.7	109.0	106.7
1.1.1984	116.5	116.8	112.0	100.3	109.9	107.9	110.6
1.1.1985	121.0	124.3	115.3	111.7	109.2	117.9	116.6
1.1.1986	127.4	136.5	125.8	114.9	111.7	119.0	122.6
1.1.1987	137.6	137.1	135.6	121.5	101.5	123.9	126.2
1.1.1988	143.5	139.2	141.9	124.1	111.7	134.7	132.5
1.1.1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1988	104.3	101.5	104.6	102.1	110.0	108.7	105.0
Avg.	+6.2	+5.7	+6.1	+3.7	+2.1	+5.2	+4.8

All c.= all countries combined (arithmetical average)
Avg.=average yearly evolution 1.1.1982-1.1.1988

Table 2.32 Yearly evolution of total costs, fuel costs and wages per nationality of hauliers, in national currencies

Total costs in national currencies

	D	F	NL	B/L	UK	DK	All c.
1.1.1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1983	102.4	113.8	102.5	110.2	108.4	111.6	108.2
1.1.1984	103.5	123.7	103.0	114.6	113.1	110.7	111.4
1.1.1985	105.5	132.3	104.3	118.7	119.9	118.6	116.6
1.1.1986	106.0	133.6	107.8	120.6	126.3	117.0	118.6
1.1.1987	102.2	133.2	104.7	116.6	126.1	117.8	116.8
1.1.1988	103.9	133.1	106.5	117.5	131.8	120.7	118.9
1.1.1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1988	101.7	99.9	101.7	100.8	104.5	102.5	101.8
Avg.	+0.7	+5.0	+1.1	+2.8	+4.7	+3.3	+3.0

Fuel costs in national currencies

	D	F	NL	B/L	UK	DK	All c.
1.1.1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1983	99.1	117.2	99.4	113.3	111.5	118.0	109.8
1.1.1984	94.6	118.5	97.8	113.9	110.7	106.6	107.0
1.1.1985	100.2	130.6	93.5	113.8	123.1	111.7	112.2
1.1.1986	93.7	122.6	90.0	109.2	134.7	102.0	108.7
1.1.1987	66.1	111.5	65.6	76.8	107.0	84.7	85.3
1.1.1988	69.9	100.9	64.2	75.8	109.2	72.8	82.1
1.1.1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1988	105.7	90.5	97.9	98.7	102.1	86.0	96.3
Avg.	-5.0	+0.6	-6.6	-3.5	+2.1	-4.4	-2.7

Wages in national currencies

	D	F	NL	B/L	UK	DK	All c.
1.1.1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1983	104.3	115.3	105.5	107.9	106.6	110.3	108.3
1.1.1984	107.6	129.8	106.0	113.0	111.4	110.3	113.0
1.1.1985	110.5	136.8	108.4	120.4	117.0	118.1	118.5
1.1.1986	113.5	146.8	115.3	122.9	123.6	118.9	123.5
1.1.1987	117.1	150.8	119.0	126.4	130.6	122.0	127.7
1.1.1988	121.0	156.4	122.8	128.7	137.3	134.0	133.4
1.1.1987	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1.1.1988	103.3	103.7	103.2	101.8	105.1	109.8	104.5
Avg.	+3.2	+7.8	+3.5	+4.3	+5.4	+5.1	+4.9

All c.= all countries combined (arithmetical average)
Avg.=average yearly evolution 1.1.1982-1.1.1988

Fig. 2.4 Evolution of total cost indices per nationality of haulier in national currencies.

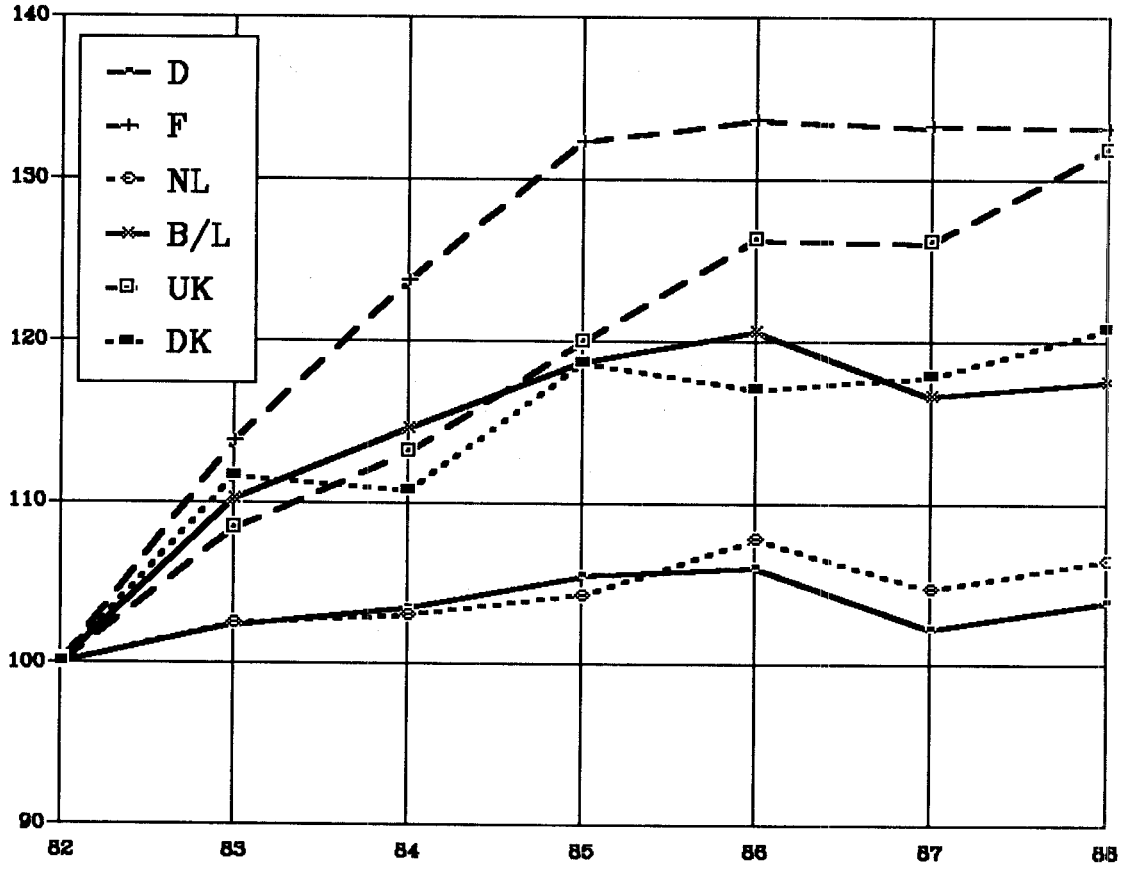
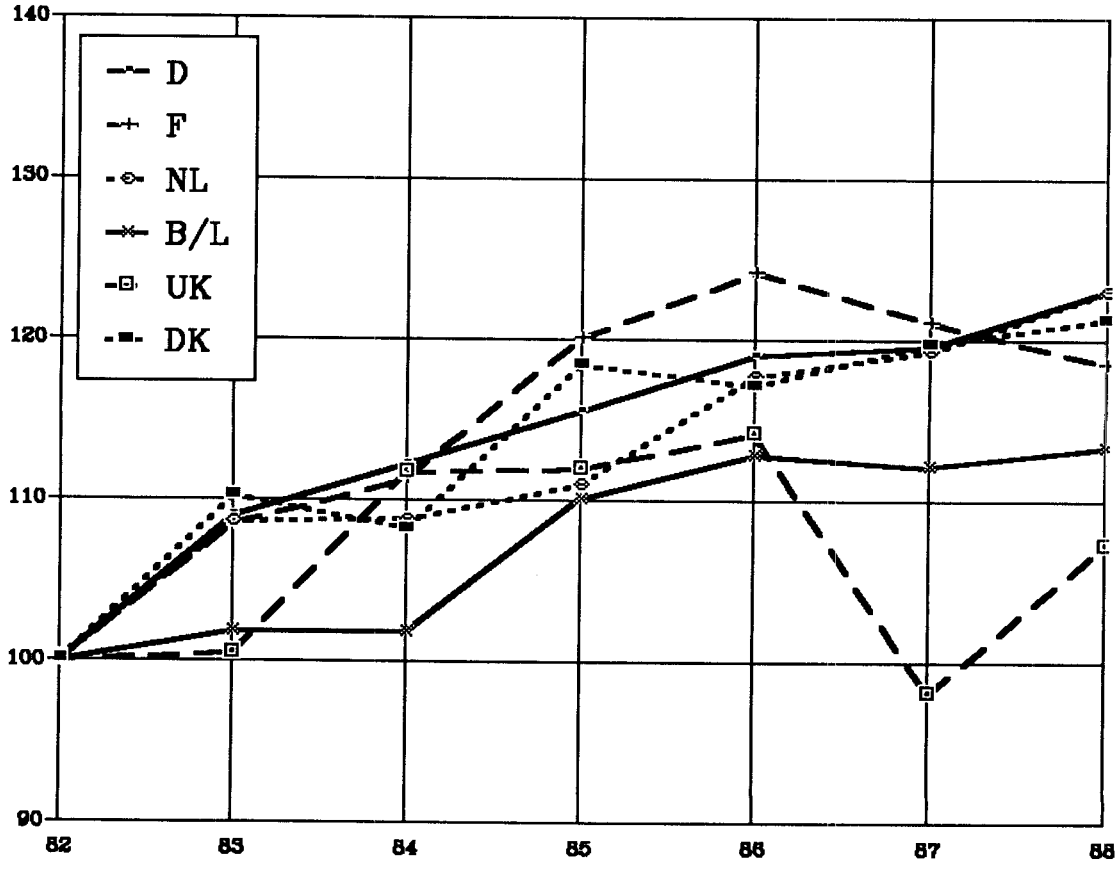


Fig. 2.5 Evolution of total cost indices per nationality of haulier in ECU.



2.8.2 Comparison of absolute cost levels

Of course, the data collected by means of the market observation system only allows a study of the evolution of costs and is not meant to compare absolute cost levels in transport firms of different nationalities. In this context, reference should be made to a report (1) prepared by the NL institute NEA on behalf of the Board of Administrators of the Stichting NIWO in NL. In this report a cost comparison is made between journeys by vehicles from ten different Member States performing international road haulage. The main results of this study are summarized in the following table:

Table 2.33 Cost comparison for a typical journey by an articulated vehicle with a loading capacity of 26 tonnes and a train weight of 40 tonnes, in indices (NL=100); reference date: 1.1.1987
Source: NEA

relation/ (distance)	Cost per driver, per nationality of haulier, in indices								
	D	F	I	NL	B	UK	DK	GR	E
NL/D (500km	99.2	94.1	100.8	100.0	98.0	94.3	100.8	83.6	85.1
NL/F (1000km)	99.3	94.6	101.0	100.0	98.3	94.8	100.7	83.9	85.6

It appears that total costs of D, B, I, DK and NL vehicles are comparable (with small dispersions of 1 to 2% max.), that F and UK vehicles show a total costs level of about 5 to 6% lower than that of NL vehicles and that journeys by E and GR vehicles show total costs that are about 15 to 17% lower than the total costs shown by NL vehicles.

The study also shows that the most important factor in the total costs is "Cost of drivers" (representing 22.6% to 37.3% of the total costs, depending on the nationality of the vehicles), followed by "Fuel costs" (13.6% to 16.4%) and "Depreciation expense" (11.2% to 14.8%).

Of course, the above figures are the outcome of a series of calculations for which many parameters had to be predefined (technical data of the "typical vehicle", composition of the replacement value of the vehicle, method of depreciation, consideration of certain subsidy schemes, etc.). Similar calculations could have been made with a different set of parameters, giving results which might be slightly different from those obtained by the Dutch investigation.

Furthermore, one should bear in mind that in many firms, no proper cost calculation or cost allocation is practised, resulting in a mixture of costs between national and international transport activites, or a higher-than-normal proportion of the fixed costs being attributed to domestic transport. The latter is certainly true in some larger Member States with an extensive and lucrative domestic transport market.

(1) "Cost-price comparison between the countries of the European Community concerning international road haulage", NEA, Rijswijk (NL), 1988

2.8.3 Price indices

The results of the quarterly price surveys, carried out in D, F, I, NL, B/L and GR in 1987 cannot be discussed in detail in this annual report, due to the wealth of information that has been generated and for which we refer to the respective tables in the latest "Market Developments" report.

However, when considering all data collected since 1982 for D, F, I, NL and B/L, a general pattern of road price evolution can be obtained by calculating a series of yearly average price indices per country:

Table 2.34: Yearly evolution of average price indices per country and per nationality of hauliers, in ECU

	D		F		I		NL		B/L		All c.
	own h.	for.h.	own h.	for.h.	own h.	for.h.	own h.	for.h.	own h.	for.h.	all h.
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	105.5	101.0	103.2	104.3	97.7	105.3	103.1	102.9	106.7	102.6	103.2
1984	108.9	106.1	107.6	105.7	105.9	108.3	104.2	106.8	105.3	105.3	106.4
1985	111.2	107.2	112.5	108.1	105.8	111.7	105.1	109.7	109.4	108.2	108.9
1986	117.4	109.8	114.0	111.0	106.4	116.0	109.1	112.8	113.0	112.0	112.2
1987	122.7	111.5	112.6	113.6	108.2	118.3	110.3	111.9	114.3	113.5	113.7
1986	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1987	104.5	101.5	98.8	102.3	101.7	101.9	101.1	99.2	101.1	101.3	101.3
Avg.	+4.2	+2.2	+2.4	+2.6	+1.7	+3.4	+2.0	+2.3	+2.7	+2.6	+2.6

N.B. - All figures obtained by comparing the available quarterly indices with the indices of the corresponding quarters of 1982, then averaged in order to obtain yearly figures and weighted according to the relative importance of all relations considered.
- Italy; for 1987, only one figure was available (third quarter), considered representative for the whole year.
- own h.= own hauliers (own nationality)
for. h.= foreign hauliers (all other nationalities combined)
all c.= all countries combined
all h.= all hauliers combined
- Avg.= average yearly evolution 1982-1987

During the period 1982-1987, road transport prices in ECU have, on average, increased by 2.6% yearly. From 1982 to 1986 the average increase amounted to 2.9% per year; whereas the 1987 figure showed only a moderate increase of 1.3% in comparison with 1986 (1). Most probably, the limited increase of transport prices in 1987 in comparison with the yearly increases observed during the previous years, is a consequence of the favourable evolution of the total costs in 1986 and 1987 (see relating section).

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(1) All general average figures are related only to transport to/from D, F, NL and B/L, executed by hauliers of all these countries

Prices quoted by the different nationalities of hauliers approximately follow the same trend, with two notable exceptions; D hauliers seem to have raised their prices proportionally more than the other European hauliers, and prices quoted by I transport firms apparently show a slower increase than those quoted by the other nationalities. This has resulted in a significant dispersion of the price evolution for transport to/from D, where D hauliers' prices have, on average, increased much more than their competitors' prices; the opposite can be observed for transport to/from I; prices quoted by I hauliers have increased much less than the prices of their competitors for transport to/from I.

The important increase of the D hauliers' prices and the very moderate rise of the I prices, both expressed in ECU, can partially be explained by the evolution of the exchange rate of both countries' national currencies. A comparison of the indices in ECU, shown above, with the indices based on prices in the national currencies, as shown in Table 2.35, is therefore necessary. With regard to D hauliers, for example, we learn that they still succeed in raising their prices in DM on average by 1.3% per year during the period 1982-1987, notwithstanding the rising value of the DM. This could be an indication of the strong (protected?) position of the D hauliers in the market, given the relative stability of the overall share of international traffic to/from D, held by D hauliers (see the relating statistical data in this and the previous Annual Reports). A similar comparison could be made for the other nationalities of hauliers, but the space available in this report does not permit such a detailed analysis. It is, however, remarkable to observe that NL hauliers have, on average, not increased their prices in HFL during the period concerned, possibly in order not to compromise their market position, taking account of the increasing value of the HFL. It should be noted that NL hauliers have, probably as a result, succeeded in increasing their already very large market share in international transport during the period considered.

Table 2.35 Yearly evolution of average price indices per nationality of hauliers, in national currencies

	D own h.	F own h.	I own h.	NL own h.	B/L own h.	all c. all h.
1982	100.0	100.0	100.0	100.0	100.0	100.0
1983	100.8	108.7	99.6	100.1	108.5	103.5
1984	102.5	115.1	110.5	100.5	107.0	107.1
1985	104.1	119.0	115.5	100.9	109.9	109.9
1986	105.1	120.6	117.5	100.2	110.6	110.8
1987	106.9	121.4	122.9	98.4	109.5	111.8
1986	100.0	100.0	100.0	100.0	100.0	100.0
1987	101.7	100.7	104.6	98.2	99.0	100.9
Avg.	+1.3	+4.0	+4.3	-0.3	+1.9	+2.3

Fig. 2.6 Evolution of average price indices per nationality of haulier in national currencies

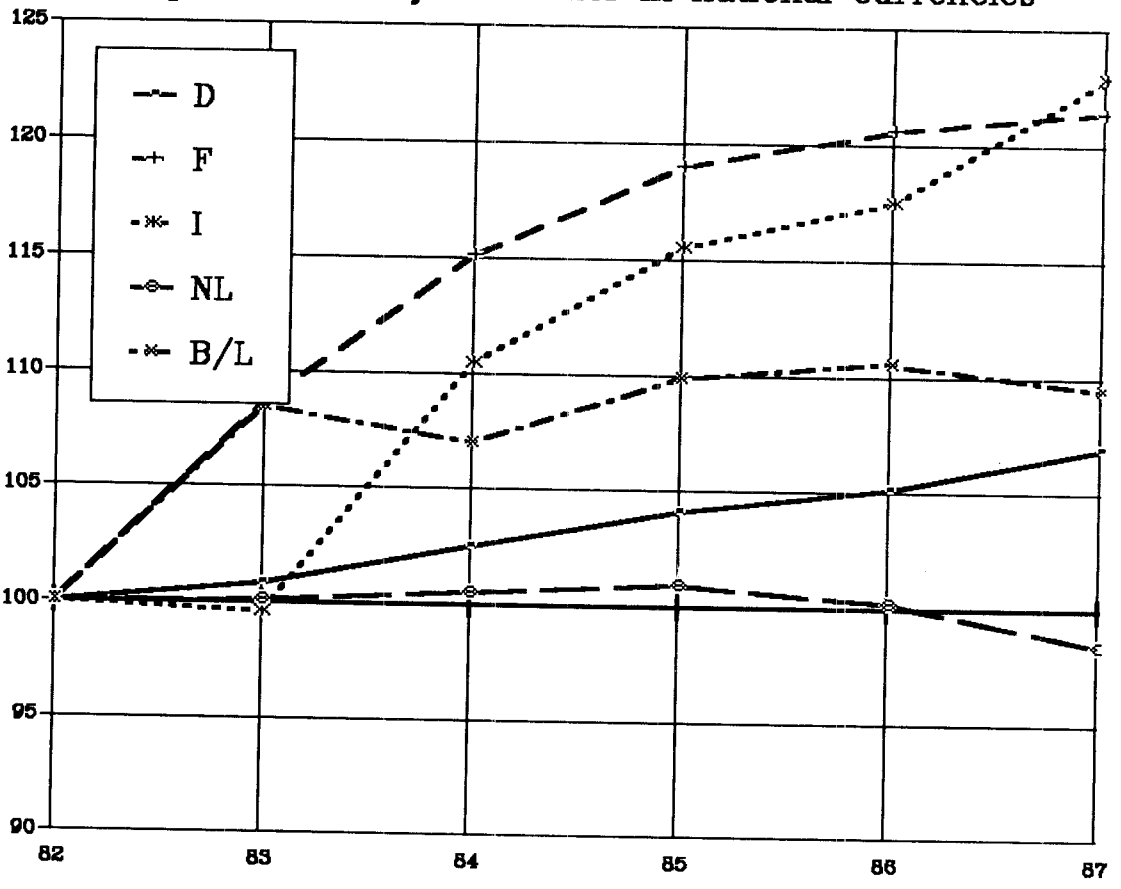
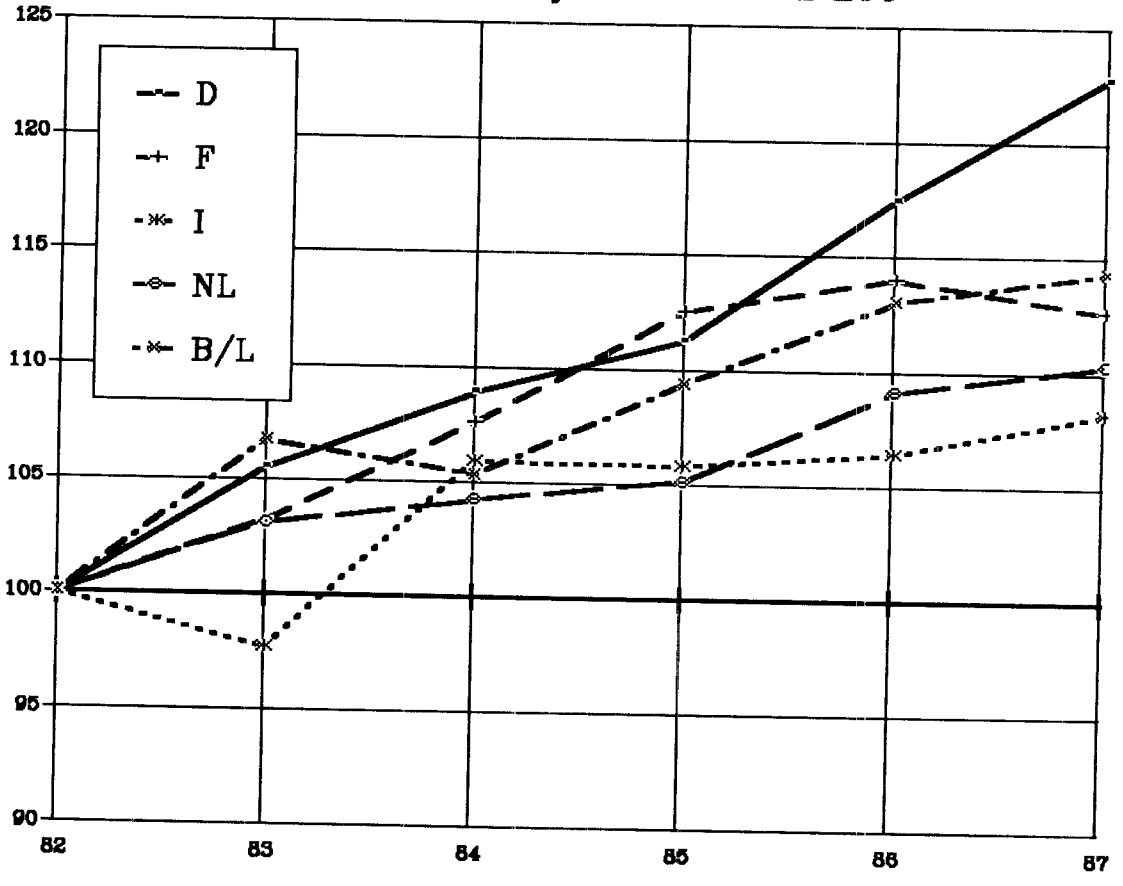
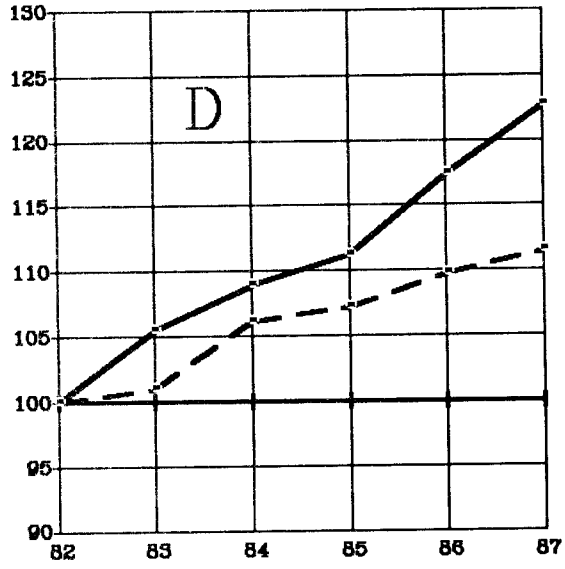


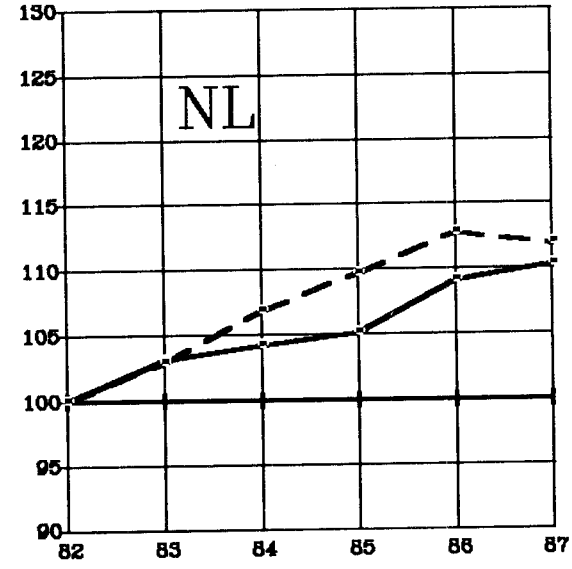
Fig. 2.7 Evolution of average price indices per nationality of haulier in ECU



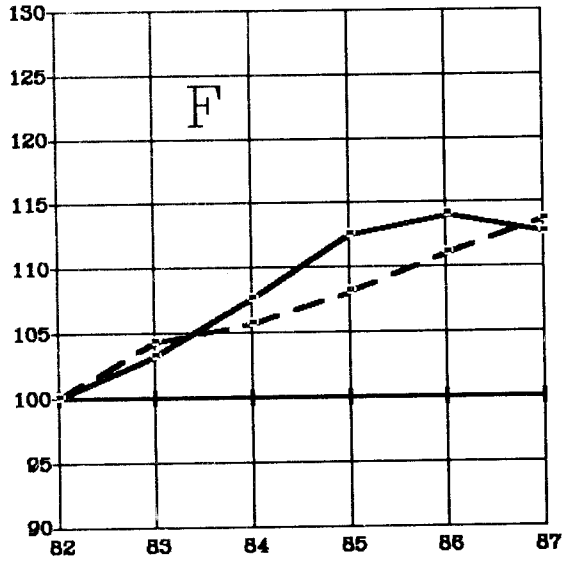
D hauliers ——— foreign hauliers - - -



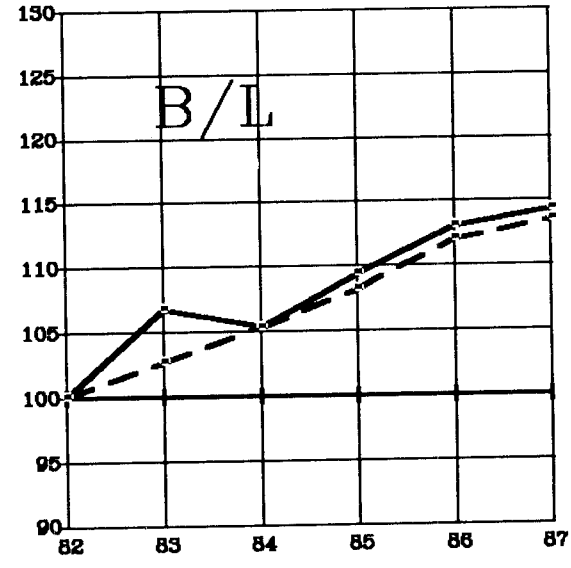
NL hauliers ——— foreign hauliers - - -



F hauliers ——— foreign hauliers - - -



BL hauliers ——— foreign hauliers - - -



I hauliers ——— foreign hauliers - - -

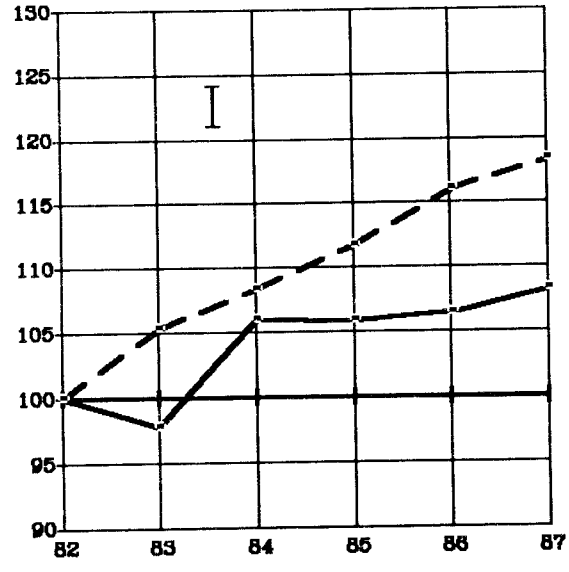


Figure 2.8
Evolution of average price indices per Member State and per nationality of haulier.

(1982 = 100)

2.8.4 Comparison of cost and price evolution

For D, F, NL and B/L, both cost and price indices are available, so that a comparison of the two series of data is possible. For this we refer to figure 2.9.

In ECU, only hauliers from D and B/L have apparently succeeded in keeping the evolution of their prices more or less in line with the evolution of the total costs. In F and in NL, there is a greater gap between prices and total costs.

Perhaps it is more appropriate to study the graphs representing the indices in national currencies. Here we see that D hauliers show a moderate, but constant rise in their prices, in line with the increase of their total costs. Furthermore the decrease of the costs in 1986 has apparently had no influence on the prices, which continue to rise steadily. On the contrary, F, NL and B hauliers have not kept their prices in line with the evolution of the total costs, which rose far more rapidly than prices from 1.1.1982 up to 1.1.1986; after 1.1.1986 however, prices reflect the favourable evolution of the total costs and have clearly a tendency to stagnate or to decrease.

One wonders if F, NL and B hauliers have witnessed a serious decline of their overall profitability, because of the fact that prices have not evolved in the same way as total costs. It should be emphasized, however, that such a conclusion cannot be drawn as the Market Observation System does not provide us with the necessary indications relative to the evolution of productivity in the road haulage industry (1). It falls outside the scope of this report to study the relative national transport statistics that are probably available in some countries and that could give an idea of productivity changes within the transport sector during the period concerned (indicators about the utilization of vehicles, the size of the average fleet per firm, etc.).

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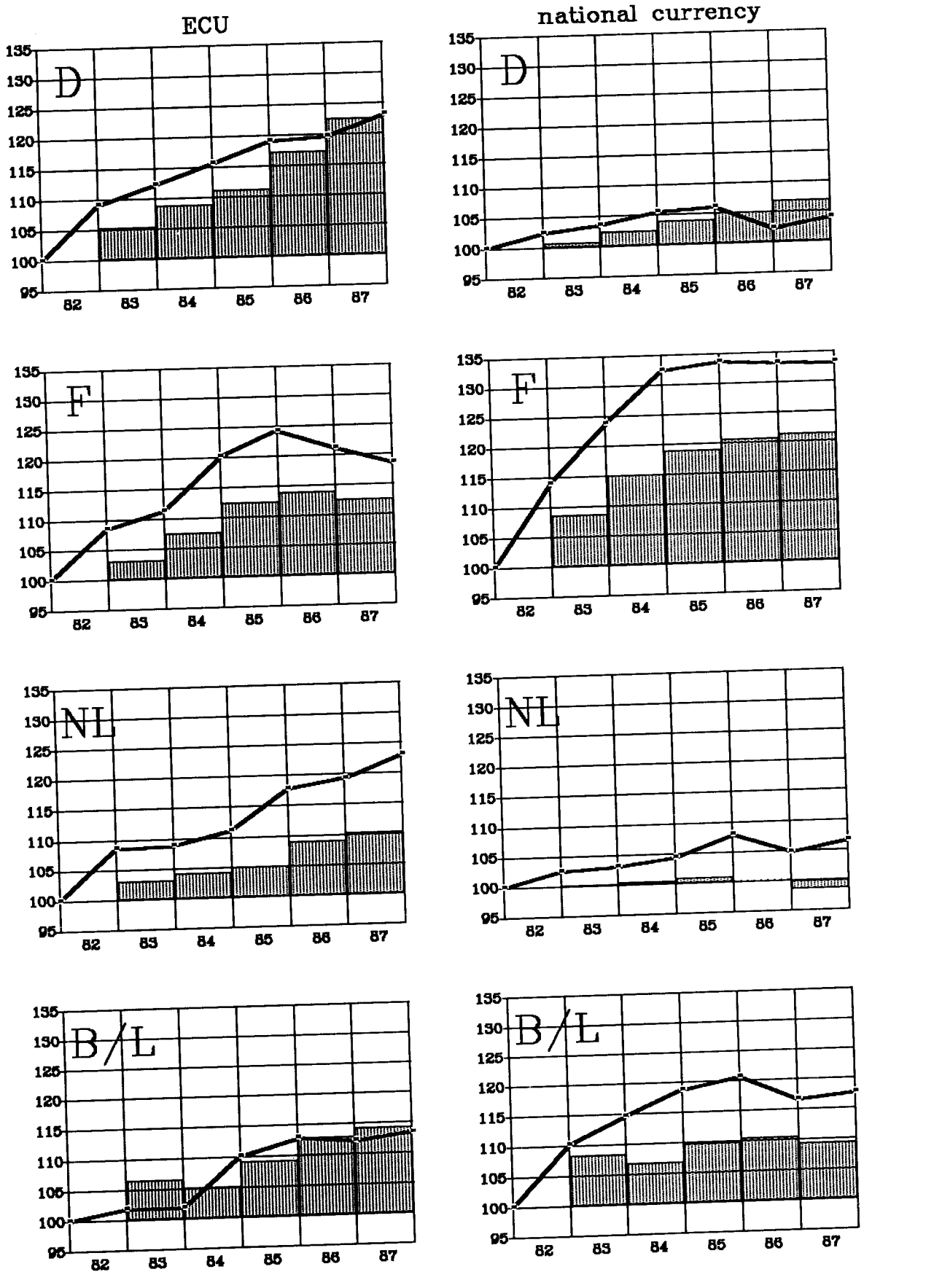
(1) The only indication about productivity that is provided by the Market Observation System is obtained through the transport inquiry surveys, when the opinion of the hauliers is asked about the utilization of their rolling stock. However the data obtained in this way are too general to allow detailed conclusions to be made on the evolution of productivity levels in the road haulage industry.

Fig. 2.9: Evolution of average price indices and total costs indices per nationality of haulier, in ECU and in national currencies

▭ = price indices (1982=100)
.——. = total costs indices (1.1.1982=100)



2.9 TRANSPORT INQUIRY SURVEYS - ROAD

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 (EUR-10, border-crossing transport, E and P not being included in the system).

Unlike real statistical figures, the ones obtained through these surveys merely reflect opinions and only indicate a trend. In this annual report, we have only considered the survey results obtained in 1985, 1986 and 1987, whereby a simplification has been introduced by calculating a yearly average figure, based on the detailed quarterly data which are published in the Market Developments reports. Due to an interruption in the collection of data at the beginning of 1987, no data are available for the first quarter of that year, so it was decided not to compare the average figures for the four quarters of 1985 and 1986 with the averages for only three quarters of 1987, but to calculate also the averages for the last three quarters of 1985 and 1986, in order to allow a more direct comparison between similar periods.

2.9.1 Utilization of rolling stock

Average balance of opinions on the utilization of rolling stock

(figures represent the difference between the % of hauliers indicating a "good or very good" utilization and the % of those indicating a "poor" utilization of their vehicles; all figures are averages, based on the quarterly survey results)

Tab. 2.36

	Avg. 1985		Avg. 1986		Avg. 1987	
	4 Q	last 3 Q	4 Q	last 3 Q	4 Q	last 3 Q
D	+23	+24	+22	+21	n	+14
F	+4	+7	+11	+14	n	+17
I	-4	+9(°)	+11	+21(°)	n	+20(°)
NL	+59	+60	+63	+67	n	+43
B	+49	+50	+43	+47	n	+39
L	+57	+66	+70	+72	n	+63
UK	+58	+57	+73	+69	n	n
IRL	+43	+58(°)	+43	+51(°)	n	+42(°)
DK	+38	+37(°)	+25	+21(°)	n	+14(°)
GR	+3	+5	-19	-13	n	-6
EUR-10	+26	+29	+26	+28	n	+21

Avg. 4 Q= arithmetical average for 4 quarters
Avg. last 3 Q= arithmetical average for the last 3 quarters
n= no data available
(°)= due to the non-availability of some figures for the 1st and the 2nd quarter of 1987 for I, IRL and DK, these averages have been calculated only on the basis of the 3rd and the 4th quarter

The higher the figures are, the better the hauliers consider the utilization of their rolling stock. We see that the Benelux countries and the UK + IRL show the highest utilization indications. It must be emphasized however, that only GR had a negative average figure for 1986 and 1987 (meaning that the number of hauliers indicating a "poor" utilization was higher than those indicating a "good or very good" utilization). All other countries show positive average figures (with one exception: Italy - 4 quarter average for 1985).

The general impression is that the figures translate a decreasing utilization level of the vehicles from 1986 to 1987. Only F shows a slight improvement (and GR a "less bad" situation). One wonders what the reason is for this general negative evolution, as the road haulage industry has increased its activity level and has expanded its share in the total transport market again in 1987 (see Chapter 1 of this report). It is, of course, possible that the European vehicle fleet expanded too quickly during the last years, and that hauliers are now experiencing difficulties in using their newly-created capacity in an efficient way. It could also be an indication of the negative influence on the vehicle utilization through external factors, such as longer delays at frontiers, delays through more severe controls, etc. Finally, it is possible that many hauliers have interpreted the question about rolling stock utilization in a more general way, giving their opinion on their overall turnover, the profitability level, etc.

These results certainly show a general negative evolution, which could merit a further analysis, especially if the same trend should continue in 1988.

2.9.2 Recruitment of drivers

Average % of firms having recruited drivers

(figures are averages based on quarterly survey results)

Table 2.37

	Avg. 1985		Avg. 1986		Avg. 1987	
	4 Q	last 3 Q	4 Q	last 3 Q	4 Q	last 3 Q
D	8	8	7	7	n	7
F	5	5	6	6	n	7
I	19	20(°)	24	26(°)	n	24(°)
NL	38	39	36	37	n	41
B	28	27	27	27	n	31
L	50	47	48	45	n	52
UK	30	29	31	32	n	n
IRL	33	30(°)	35	31(°)	n	29(°)
DK	28	25(°)	24	19(°)	n	17(°)
GR	22	21	22	22	n	23
EUR-10	20	20	21	20	n	19

The general impression of these figures is that the recruitment level has remained more or less stable during the three-year period considered here. Only DK seems to show a yearly decrease of recruitments and the Benelux countries show a significant increase of the % of recruiting firms from 1986 to 1987. It should be emphasized that these data concern all recruitments ("replacement" and "extension" recruitments combined).

As the "replacement" recruitments are likely to be much higher in large haulage firms than in smaller firms, a comparison between the absolute recruitment levels of the different countries would only be meaningful if the data could be related to the size of the vehicle fleets of the firms in the survey samples; such a detailed study does not fall within the scope of this annual report.

2.9.3 Liquidity problems

Average % of firms with liquidity problems

(figures are averages based on quarterly survey results)

Table 2.38

	Avg. 1985		Avg. 1986		Avg. 1987	
	4 Q	last 3 Q	4 Q	last 3 Q	4 Q	last 3 Q
D	19	19	21	22	n	15
F	57	54	43	40	n	34
I	59	49(°)	54	54(°)	n	43(°)
NL	4	4	3	2	n	2
B	20	20	13	12	n	13
L	11	0	3	1	n	1
UK	31	31	24	20	n	n
IRL	41	33(°)	40	37(°)	n	45(°)
DK	8	8(°)	10	10(°)	n	21(°)
GR	56	55	62	60	n	61
EUR-10	41	39	33	32	n	28

During the period observed, GR, I, IRL and F hauliers seem to be most faced with liquidity problems. Hauliers from the Benelux countries apparently suffer less from these problems.

The figures clearly show an overall decline of the number of firms indicating liquidity problems. Only the survey results for GR, IRL and DK indicate an increase of firms faced with these problems.

2.9.4 Investments

Average % of firms having made investments

(figures are averages based on quarterly survey results)

Table 2.39

	Avg. 1985		Avg. 1986		Avg. 1987	
	4 Q	last 3 Q	4 Q	last 3 Q	4 Q	last 3 Q
D	38	40	47	46	n	47
F	30	30	34	33	n	38
I	29	32(°)	33	35(°)	n	39(°)
NL	55	56	57	58	n	56
B	43	41	45	45	n	49
L	48	46	53	49	n	70
UK	69	69	45	43	n	n
IRL	46	40(°)	39	36(°)	n	44(°)
DK	56	55(°)	53	51(°)	n	47(°)
GR	30	30	33	35	n	39
EUR-10	37	38	41	40	n	43

These figures indicate an overall rise in the rate of investments during the three-year period considered. Only the DK survey results show a decreasing number of firms investing in 1986 and 1987.

These data include all investments (replacement and extension investments of all kinds combined). As the replacement investments in vehicles are likely to be much higher in large firms than in smaller firms, a comparison between countries would only be meaningful if the data could be related to the size of the vehicle fleets of the firms in the survey samples; such a detailed study does not fall within the scope of this annual report.

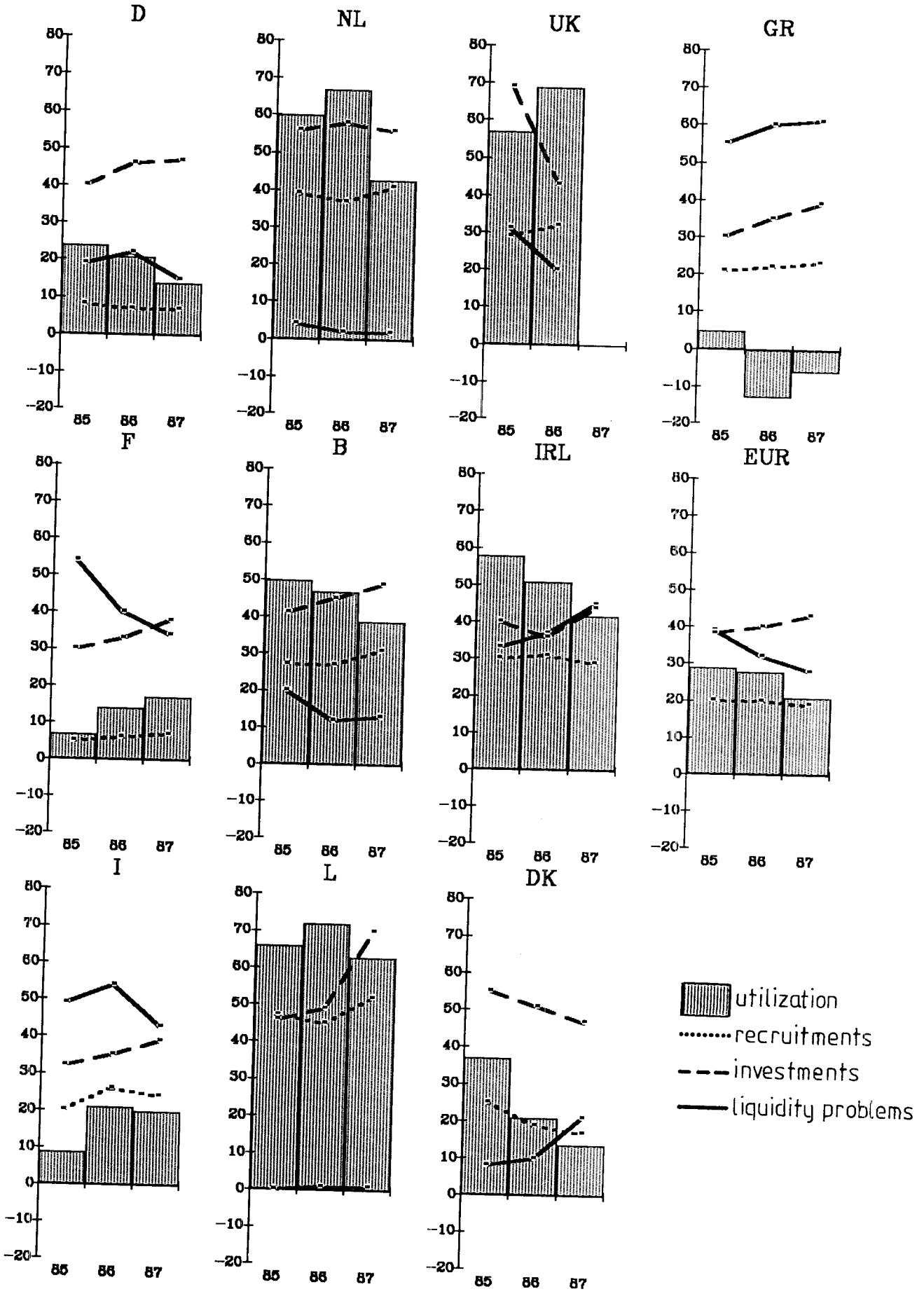
Summary

During the period 1985-1987, in general, liquidity problems have decreased in the road haulage industry and the number of investments has increased, while the overall level of recruitments (of drivers) has remained stable. The only disturbing note is the apparent decrease of the degree of utilization of the European vehicle fleet, which might be an opinion, biased by some external factors affecting the use of the vehicles (e.g. delays at frontiers) or rather the hauliers'opinion on the general turnover or rate of profitability.

The general trends are well expressed in Figure 2.10.

Note: All data refer to % of firms, and are averages calculated on the basis of the last 3 quarters of every year, except I, IRL, DK: last 2 quarters).

Fig. 2.10: Summarized results of the T.I.S.-road (85-87)



CHAPTER 3

INLAND WATERWAYS

3.1 Introduction

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 transport by inland waterways given 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 were submitted by the Institut pour le Transport par Batellerie (ITB-Brussels) and by the Economic Bureau for Road and Waterway Transport (EBW-Rijswijk). Other data concerning France were provided by the Office National de la Navigation (ONN-Paris). The figures for Table 3.16 were provided by IVR-Rotterdam.

The contents of chapter 3 can be summarized as follows:

3.1 Introduction
3.2 International traffic by relation
3.3 Domestic traffic
3.4 Traffic with third countries
3.5 Total traffic on Community network
3.6 Inland waterway transport by market
3.7 Inland waterway transport by flag
3.8 Fleet development and overcapacity
3.9 Transport inquiry survey and waiting days
3.10 Cost and price indices

3.2 International inland waterway transport on a country-by-country basis

Table 3.1 presents tonnage figures for 1986 and 1987 and growth rates for each bilateral relation.

Table 3.1 Inland waterways: tonnes carried, international intra-Community traffic ('000 tonnes)

TO / FROM		D	F	NL	B	L	Total outgoing
D	1986		3204	26950	10779	592	41492
	1987		2901	27124	10920	542	41487
	growth rate %		-9.5	+0.6	+1.3	-8.4	-0.0
F	1986	9008		3906	2575	251	15740
	1987	8960		3406	2358	282	15006
	growth rate %	-0.5		-12.8	-8.4	+12.4	-4.7
NL	1986	74983	4028		26236	315	105562
	1987	70531	3840		26862	249	101482
	growth rate %	-5.9	-4.7		+2.4	-20.1	-3.9
B	1986	9540	3660	15088		42	28330
	1987	9083	3810	14376		30	27299
	growth rate %	-4.8	+4.1	-4.7		-28.6	-3.6
L	1986	624	6	93	57		780
	1987	688	4	51	29		772
	growth rate %	+10.3	-33.3	-45.2	-49.1		-1.0
Total entry	1986	94155	10898	46003	39647	1200	191903
	1987	89262	10555	44957	40169	1103	186046
	growth rate %	-5.2	-3.1	-2.3	+1.3	-8.1	-3.1

Total international intra-Community traffic went down by 3.1% to the level of 1985. All totals of outgoing and ingoing traffic of the Member States showed a decrease, with the exception of imports to Belgium (+1.3%). The biggest fall in number as well as in percentage was noted in German imports (-4.9 mio.t;-5.2%).

3.3 Domestic transport

Table 3.2 presents the national traffic on the network of the five Member States.

Table 3.2 Inland waterways - national traffic EUR-5 ('000 tonnes)

NST	D	F	NL	B	L
0 agricultural) products +)	1340	N	2159	742	0
1 foodstuff and) animal fodder)	2116	N	9364	2191	0
2 solid mineral fuels	11874	N	5775	1722	0
3 petroleum products	13646	N	12320	6847	0
4 ores and metal waste	1552	N	646	2100	0
5 metal products	1582	N	480	826	0
6 crude and manufactured minerals building materials	22495	N	54667	4530	11
7 fertilizers	1441	N	1940	991	0
8 chemicals	4849	N	1704	1994	0
9 miscellaneous articles	449	N	964	47	0
Total 1987	61346	28616	90174	21988	11
Total 1986	65063	29747	82609	20845	23
Growth rate %	-5.7	-3.8	+9.2	+5.5	-52.2

The divergency between the Dutch and German national inland waterway transport market has once again grown in 1987. In 1983 the same, 70 mio.t, both markets had a contradictory development since then, which ended with a Dutch domestic transport market being one third bigger than the German market in 1987. The decreases of the previous years, -2.8% in 1986 and -2.5% in 1985 on the Belgian market, have come to an end. The Belgian domestic transport market shows in 1987 an increase of 5.5%. For the French market no turning point could be observed. It went further down with 3.8%.

3.4 Traffic with third countries

The present edition of the annual report includes for the first time data concerning the exchanges by inland waterways between third countries and Member States. Table 3.3 provides information on the traffic from and to Switzerland and Austria, as well as State-trading countries.

The waterway traffic between Member States and third countries is rather limited in comparison with national and international traffic as a whole. It is carried out at four points:

Basel (F - CH border) Rhine
Passau (D - A border) Danube
Schnackenburg (D - GRD border) Mittellandkanal
Rühen (D - GDR border) Elbe

Furthermore, one should make a clear distinction between ingoing traffic and outgoing traffic. In the first case, the European State-trading countries generate 83% of the total, and in the second case only 12%. Within this group, the first place is occupied by the GDR, the only country to exceed a one million tonne volume.

Ingoing (26%) and outgoing traffic (74%) show a significant imbalance in the foreign trade by waterways of the Member States. This is mainly due to the Rhine exports towards Switzerland which represent 80% of outgoing traffic and almost 66% of total traffic with third countries.

Table 3.3: Ingoing and outgoing flows with third countries

	Ingoing EUR-12				Outgoing EUR-12			
	Vol.86 by 1000t	Vol.87 by 1000t	Diff. 87-86 %	Market share %	Vol.86 by 1000t	Vol.87 by 1000t	Diff. 87-86 %	Market share %
CH	502	356	-29.1	9.6	7601	8631	+13.5	80.0
A	340	279	-17.9	7.5	772	861	+11.5	8.0
YU	316	368	+16.5	9.9	19	34	+78.9	0.3
SU	91	49	-46.2	1.3	41	68	+65.9	0.6
DDR	1363	1287	-5.6	34.5	755	634	-16.0	5.9
PL	326	301	-7.7	8.1	20	39	+95.0	0.4
CS	418	412	-1.4	11.1	596	431	-27.7	4.0
H	383	471	+23.0	12.6	12	33	+175.0	0.3
R	158	128	-19.0	3.4	9	25	+177.8	0.2
BG	88	74	-15.9	2.0	26	35	+34.6	0.3
Total State-trading	3143	3090	-1.7	82.9	1478	1299	-12.1	12.0
Total third countr.	3985	3725	-6.5	100.0	9851	10791	+9.5	100.0

3.5 Total traffic on Community network

Table 3.4: National and international transport activity by network ('000 tonnes)

	D *	F *	NL *	B *	L *	Total **	Growth rate %
1983	212353	66085	214347	87105	1997	384550	
1984	223966	63255	221298	94227	2128	396637	+3.1
1985	210401	59353	221479	89439	1761	380443	-4.1
1986	215246	58486	238116	91288	2021	397230	+4.4
1987	207548	56560	240671p	90956	1913	395061p	-0.5
Growth rate 87/83 %	-2.3	-14.5	+12.3	+4.4	-4.2	+2.7	
Growth rate 87/86 %	-3.6	-3.3	+1.1	-0.4	-5.3	-0.5	

* EUR 5: Import + export + national transport
** EUR 5: Total national transport + total export

During the period 1983-1987 the total activity improved by 2.7%. But one must take into account that 1983 is considered to be the worst year in the history of inland waterway transportation. Nevertheless, the French market was reduced by 14.5% since 1983 and in t-km it went down even further (22.1%). All relations show a reduction in both tonnes and in tonne-kilometres in comparison with the previous year, with the exception of NL in tonnes (+1.1%). So, 1987 was not a good year for the inland waterway transport market.

(9)

Table 3.5: National and international activity* by network (mio t-km)

	D	F	NL	B	L	Total	Growth rate %
1983	49085	9447	32227	4934	272	95965	
1984	51996	8880	33320	5200	289	99686	+3.9
1985	48183	8394	32377	5015	304	94274	-5.4
1986	52185	7767	34438	5156	290	99836	+5.9
1987	49721	7370	33877p	5056	N	N	
Growth rate 87/83 %	+1.3	-22.1	+5.1	+2.5	N	N	
Growth rate 87/86 %	-4.7	-5.1	-1.7	-2.0	N	N	

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

N.B.: As the national statistics used in table 3.5 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 Belgian transport statistics but much more to the Dutch.

3.6 Inland waterway transport by market

3.6.1 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).

3.6.2 Rhine

On account of relatively good hydraulics recorded on the Rhine over the year, it was possible to load 100% on the Rhine over a long period of the year as is shown in figure 3.1. However, the traffic registered a decline of 3.1% from one year to the next, due partially to the harsh winter of 1986/87, already referred to, which disturbed the waterway transport over several weeks. Figure 3.1 gives a picture of the water level on the Rhine in 1987 on the scale of Kaub and Ruhrort. The white parts represent periods with restrictions, of which, in 1987, there were hardly any.

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, to a lesser extent, France. Table 3.6 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) from the year 1983. A special reference has been made to the year 1979 because that year is considered by the CCR as the last year with a sound transport market.

Table 3.6: Traditional Rhine traffic ('000 tonnes and mio t-km)

	'000 tonnes	differ.	growth rate	mio t-km	differ.	growth rate
1983	187691			35095		
1984	198576	+ 10885	+5.8	37307	+2212	+ 6.3
1985	187731	- 10845	-5.5	34564	-2743	- 7.4
1986	194348	+ 6617	+3.5	38187	+3623	+10.5
1987	187955	- 6393	-3.3	36754	-1433	- 3.9
1987/ 1979		- 17518	-9.3		- 18	0

The transport volume of the Rhine's traditional traffic went down from 194.3 mio.t to 188.0 mio.t in 1987. So, in spite of relatively good hydraulics recorded on the Rhine over the year, the decline reached almost 3.3% from one year to the next; this is partially due to the harsh winter of 1986/1987 which clearly disturbed the waterway transport over several weeks.

During the period 1979-1987 the tonnes carried by waterways decreased by 18 mio.t showing a decline of 9.3%. After 1979, which was the best year for the Rhine waterway traffic, with the exception of 1974 which constituted the highest record ever registered, the decrease has been practically continuous with the exception of 1984 and 1986.

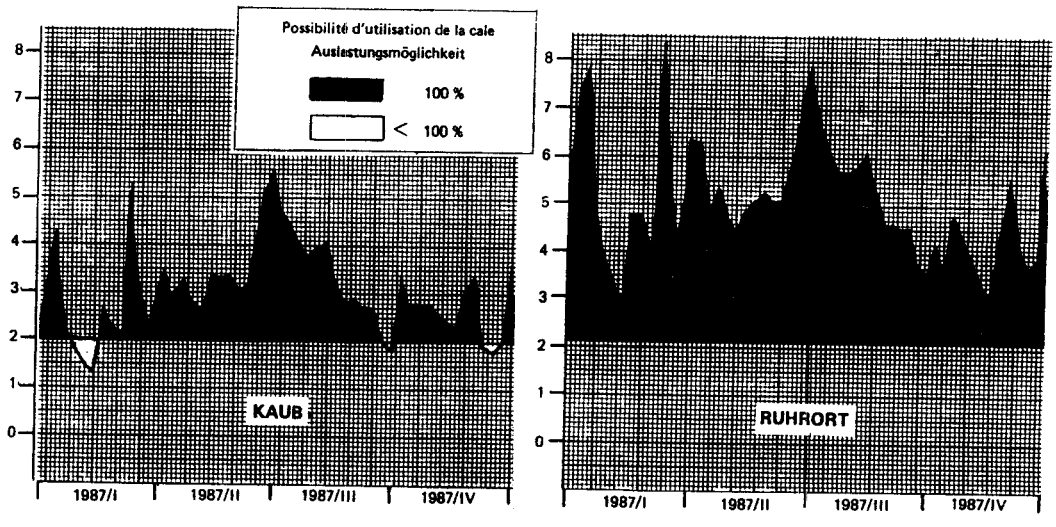
In tonne-kilometres, the development over the last few years has been less dramatic. In 1987, the decline of 3.9% contributed to returning the traffic to the 1979 level.

If the traffic on the Dutch part of the Rhine is added to the traditional Rhine traffic, one gets the results for total Rhine traffic.

Table 3.7: Total Rhine traffic ('000 tonnes)

	Traditional Rhine traffic	Dutch Rhine traffic	Total Rhine traffic	Difference	Growth
1983	187691		264153		
1984	198576	76442	275018	+10865	+4.1
1985	187731	80162	267893	- 7125	-2.6
1986	194348	91380	285728	+17835	+6.7
1987	187955	88475	276430	- 9298	-3.3
1987/ 1979	- 17518	+ 6713		-10805	-3.8

Figure 3.1



Moreover, table 3.8 below presents a repartition of the volumes transported via the Rhine by bilateral intra-Community relation.

Table 3.8: Intra-Community Rhine traffic by bilateral relation ('000 tonnes)

To / From	D	F	NL	B	L	Total
D	-	2768	27023	10655	429	40875
F	8863	-	2639	1146	17	12665
NL	68555	2709	-	15342	237	86843
B	8861	881	8598	-	31	18371
L	595	0	0	51	-	646
Total	86964	6358	38260	27194	714	159490

The traffic registered at the Dutch/German border at Emmerich/Lobith is another particularly significant indicator of the level of activity of the international Rhine navigation. Tables 3.9 and 3.10 present a separate analysis of the traffic by commodity group and by direction.

Table 3.9: International Rhine traffic passing Emmerich/Lobith upstream ('000 tonnes)

Commodity group	1986	1987	Differ.	Growth %
0. Agricultural products	2268	2007	-261	-11.5
1. Articles of food and fodder	6320	5954	-326	-5.8
2. Coal	6345	5980	-365	-5.8
3. Oil products	27049	24608	-2441	-9.0
4. Ore	33985	32915	-1070	-3.2
5. Steel products	4333	3491	-842	-19.4
6. Sand, gravel	3193	3053	-140	-4.4
7. Fertilizer	2711	2791	+80	+2.9
8. Chemical products	5127	5825	+698	+13.6
9. Machinery, etc.	1182	1131	-51	-4.3
Total	92513	87755	-4758	-5.1

Table 3.10 International Rhine traffic passing Emmerich/Lobith downstream ('000 tonnes)

Commodity group	1986	1987	Differ.	Growth %
0. Agricultural products	2572	2121	-451	-17.5
1. Articles of food and fodder	1600	1988	+388	+24.3
2. Coal	3152	2695	-457	-14.5
3. Oil products	543	749	+206	+37.9
4. Ore	779	1347	+568	+72.9
5. Steel products	5659	5679	+20	+0.4
6. Sand, gravel	21565	20936	-629	-2.9
7. Fertilizer	1848	2117	+269	+14.6
8. Chemical products	3871	4440	+569	+44.6
9. Machinery, etc.	2704	2639	-65	-2.4
Total	44293	44712	+419	+1.0

In traffic development one should differentiate between downstream and upstream traffic. The upstream transport, two thirds of the total, reached a relatively high figure in 1986 (92.5 mio.t). This fell to 87.8 mio.t in 1987, thus showing a decline of 5.1%. One should note in this case the consequences of the downturn in the steel industry, and therefore in ore and metal waste, the most important commodity group, along with petroleum products of the upstream transport. Transport of NST 4 shows a decrease by 1.1 mio.t (-3.2%). Since 1979, this loss has amounted to 4.8 mio.t (-12.6%). The petroleum products traffic decreased by 2.4 mio.t in 1987 (9.0%), after the decline by 4.7 mio.t (22.0%) recorded the previous year.

On downstream traffic however, a slight increase by 1.0% for a transport volume of 44.7 mio.t was recorded. Sand and gravel (NST 6) which generates 47% of the traffic, decreased by 0.6 mio.t (2.9%). The other significant commodity groups for this stream either remain stable or show a slight increase with the exception of coal transport (NST 2) which decreased by 14.5% (-0.5 mio.t) and carried on the decline which began several years earlier (-3.4 mio.t, that is -55.6% in comparison with 1979).

3.6.3 North-South

The North/South market consists of a network of rivers and canals west of the Rhine between the Netherlands, Belgium and France. The market situation changed during the previous year as follows; the total of 48,300.00 tonnes in 1986 decreased by 2,0% ending up with a total of 47,343.00 tonnes in 1987.

To follow the evolution of this traffic this report shows the average number of waitings days on the bourse. On the regulated part of the North-South market the balance or imbalance between the demand and the capacity time available is reflected in more or less waiting time. This is 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 of the activities on that part of the market. In 1987 each relation, with the exception of the B/NL relation, shows an increase of the yearly average in number of waiting days.

For opinions and waiting days see 3.9.3 and Table 3.18 of this report. For an analysis of cost and prices of the North/South market see 3.10.5 of this report.

3.7 Inland waterway transport by flag

Sufficient data is not yet available in order to be able to determine the share of the fleet of each of the Member States in inland waterway transport in 1987. Therefore, data from 1986 (1), based on tonnes carried, are presented here in order to give an insight into traffic on each of the inland waterway transport markets.

3.7.1 Flag shares on national and international markets

In table 3.11 flag shares are given for national and international transport, ingoing and outgoing traffic and total traffic, including transit traffic of Belgium/Luxembourg, the Federal Republic of Germany, France and the Netherlands. In addition to the traffic shares of each country the share is given for other carriers. Under this heading vessels of Swiss and Eastern bloc nationalities are the most important.

Table 3.11 Inland waterways; national and international traffic in mio t-km, share by nationality of the vessel, 1986 (%)

Network	Nationality of the vessel	National traffic mio t-km	%	International traffic mio t-km	%	Total traffic (including transit) mio t-km	%
D	D	12014	89.3	12294	40.0	25010	47.9
	F	17	0.1	569	1.9	1065	2.0
	NL	910	6.8	12668	41.2	17285	33.1
	B	118	0.9	1811	5.9	2838	5.5
	L	4	0.0	68	0.2	86	0.1
	Other	395	2.9	3280	10.7	5872	11.3
	Total	13459		30717		52185	
F	D	22	0.5	427	14.9	606	7.8
	F	4053	48.4	823	28.6	4889	63.0
	NL	5	0.1	567	19.7	790	10.2
	B	11	0.3	845	29.4	892	11.5
	L	0		7	0.3	8	0.1
	Other	28	0.7	204	7.1	581	7.5
	Total	4118		2374		7767	
NL	D	6	0.1	5022	23.7	6472	18.8
	F	9	0.1	374	1.8	627	1.8
	NL	7138	98.3	12140	57.3	21819	63.4
	B	66	0.9	2090	9.9	3419	10.0
	L	-		7	0.0	12	0.0
	Other	45	0.6	1539	7.3	2072	6.0
	Total	7264		21174		34438	
B	D	7	0.5	144	4.7	153	3.0
	F	7	0.4	219	7.2	377	7.3
	NL	145	8.8	1275	41.6	1556	30.2
	B	1457	88.9	1327	43.4	2965	57.5
	L	1	0.1	2	0.1	4	0.1
	Other	21	1.3	79	2.6	100	1.9
	Total	1639		3059		5156	
L	D	-	-	3		101	34.8
	F	-	-	0		19	6.6
	NL	-	-	2		105	36.2
	B	-	-	1		46	15.9
	L	1	-	0		6	2.0
	Other	-	-	1		13	4.5
	Total	1	-	7		290	

3.8 Fleet developments and overcapacity

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.

3.8.1 Total fleet

Table 3.12 shows the size of the total fleet of all Member States - in number of vessels and carrying capacity between 1.1.1979 and 1.1.1988.

Table 3.12 Fleet developments: total fleet in number of vessels and carrying capacity ('000 tonnes)

		1.1. 1979	1.1. 1987	1.1. 1988	1988/1979 growth rate (%)	1988/1986 growth rate (%)
D	:vessels	4230	3103	3063	-27.6	-1.3
	carrying capacity	3859	3265	3249	-15.8	-0.5
F	:vessels	5525	4599	4296	-22.2	-6.6
	carrying capacity	2618	2229	2092	-20.1	-6.1
NL	:vessels	6631	6267	6216	-6.3	-0.8
	carrying capacity	4840	5552	5649	+16.7	+1.7
B	:vessels	3321	2372	2214	-33.3	-6.7
	carrying capacity	1955	1715	1648	-15.7	-3.9
Total	:vessels	19707	16341	15709	-19.9	-3.4
	carrying capacity	13272	12761	12638	-4.8	-1.0

In 1987 the capacity of the fleet went down slightly (-1.0%), which brought the capacity to the level of -4.8% compared to 1979.

3.8.2 Rhine fleet

Table 3.13 presents the situation of the Rhine fleet - in number of vessels and carrying capacity - at various dates, in general and by flag.

On certain points differences will be noted between the development of the total fleet and the Rhine fleet. Indeed, while the total fleet has decreased in carrying capacity the Rhine fleet went up in the same period by 1.032 mio.t (+10.9%). However, the corresponding number of ships had declined by 587 units (-5.0%).

Table 3.13 Development of the Rhine fleet by number of vessels and carrying capacity ('000 tonnes)

		1.1. 1979	1.1. 1987	1.1. 1988	1988/1979		1988/1987	
					Diff.	Growth %	Diff.	Growth %
D	Vessels	3156	2642	2630	-526	-16.7	-12	-0.5
	Carrying capacity	3245	2985	2290	-255	-7.9	+5	+0.2
F	Vessels	823	°908	°908	+85	+10.3		
	Carrying capacity	480	473	473	-7	+1.5		
NL	Vessels	5575	5665	5669	+94	+1.7	+4	+0.1
	Carrying capacity	3879	5120	5196	+1317	+34.0	+76	+1.5
B	Vessels	1727	1594	1613	-114	-6.6	+19	+1.2
	Carrying capacity	1304	1320	1367	+63	+4.8	+47	+3.6
Total *	Vessels	11672	11103	11085	-587	-5.0	-18	-0.2
	Carrying capacity	9475	10419	10507	+1032	+10.9	+88	+0.8

(*) Swiss fleet included
(°) Level 1.1.1986

Table 3.14 Flag shares of the Rhine fleet

	1.1.1979	1.1.1987	Difference
D	34.2%	28.5%	-5.7%
F	5.1%	4.5%	-0.6%
NL	40.1%	49.5%	+9.4%
B	13.8%	13.0%	-0.8%

The part of the total fleet with a Rhine certificate has considerably increased since 1979.

Numerous shipowners, especially in the Netherlands, Belgium and Germany have asked for and obtained a Rhine certificate (see Table 3.15).

Table 3.15 Part of the total fleet with a Rhine certificate in tonnes

	1.1.1979	1.1.1988	Difference
D	84.1%	92.0%	+7.9%
F	18.3%	21.2%	+2.9%
NL	84.1%	92.0%	+7.9%
B	66.7%	83.0%	+16.3%

Table 3.16 presents a recent annual development of the Rhine fleet according to origin of change: new building, demolishing, selling and buying abroad, new or expired Rhine certificates in the year 1987.

Scrapping: The balance of new building and scrapping was, for the total of the Rhine fleet in 1987, -90,323 tonnes. Most was scrapped from the Dutch fleet (194,423 tonnes) followed by the German fleet (71,085 tonnes). Belgium and Switzerland had a positive balance i.e. more ships were built than demolished. 73 newly built ships joined the Rhine fleet of which 24 were motorvessels, 21 ships for liquid cargo and 27 push barges. This amount, 21 tankers of a total of 73, is relatively high but can be explained as an aftermath of the high price for liquid cargo transport in 85/86.

Change of flag: Although the total Rhine fleet has almost not altered as a result of imports and exports, the internal changes between the several fleets were considerable on that point. More than 50 ships went from the Belgian and Swiss fleet to the Dutch fleet.

211,827 tonnes were added to the Rhine fleet as a result of existing ships getting a Rhine certificate. This emphasizes the fact that the different markets (Rhine, N/S, domestic) are linked together and that the problem of overcapacity can only be solved if the inland waterway transport market is treated as one unit.

The total of the Rhine fleet went down in 1987 with 45 ships having a carrying capacity of 163,616 tonnes.

Table 3.16 Breakdown Rhinefleet developments 1987 in tonnes and number of ships

	D	F	NL	B	L	CH	Total
1.new building	(9) 21,580	(2) 1.666	(49) 116,553	(9) 31,011	0	(4) 11,125	(73) 181,935
scrapping	(93) 71,885	(5) 1,845	(249) 194,423	(9) 4,105	0		(356) 272,258
balance	(-84) -50,305	(-3) -179	(-200) -77,870	(0) 26,906	0	(4) 11,125	(-283) -90,323
2.change of flag							
import	(20) 31,436	0	(68) 94,518	(2) 2,865	0	(1) 359	(91) 129,178
export	(26) 33,019	0	(9) 10,311	(29) 41,964	0	(28) 45,488	(92) 130,782
balance	(-6) -1,583	0	(59) 84,207	(-27) -39,099	0	(-27) -45,129	(-1) -1,604
3.change of capacity							
increase	(49) 80,325	(4) 1,793	(20) 53,145	(9) 12,819	0	(8) 13,337	(90) 161,419
decrease	(73) 70,501	(1) 826	(25) 30,061	(7) 5,960	9	(7) 10,446	(113) 117,803
balance	(-24) 9,824	(3) 967	(-5) 23,084	(2) 6,859	-9	(1) 2,891	(-23) 43,616
4.Rhine certificate							
new	(102) 95,580	0	(302) 239,381	(103) 113,455	0	(6) 7,564	(513) 455,980
expired	(140) 140,596	(27) 20,029	(60) 50,499	(13) 15,784	0	(11) 17,145	(251) 244,053
balance	(-38) -45,016	(-27) -20,029	(242) 188,882	(90) 97,771	0	(-5) -9,581	(262) 211,827
Total balance	(-152)-87,080	(-27) -19,241	(96) 218,303	(65) 92,337	-9	(-27) -40,694	(-45)-163,616

3.8.3 Overcapacity

A structural imbalance between supply and demand is causing serious problems in inland waterway transport in the Community today.

There is nothing new about this overcapacity; it has been observed on and off, with varying intensity, over the last ten years. However, a series of indicators, such as the growing queue of vessels awaiting cargo, journey times and fast-falling rates suggest that over the last few years structural overcapacity has become particularly severe (see table 3.18 and Fig. 3.4).

There are many reasons for this situation. Beyond doubt, the most important is the changing pattern of demand on the inland waterway market. The combined effect of the contraction of the coal industry, the steel crisis, the decline in the building industry and the switch to new sources of energy has greatly depressed the inland waterways. Against this, the upturn on a few other markets, such as in container transport, has been too small to offset these traffic losses. In addition, the undertakings themselves have made wrong decisions and misplaced investments, either because they have not been fully informed about the markets and market trends or because of over-optimistic interpretation of the economic forecasts.

Overcapacity is particularly marked in the fleets of the Member States with linked inland waterway networks - Belgium, France, Germany, Luxembourg and the Netherlands. It is difficult to quantify the impact of the current overcapacity; figures from the industry and the Member States concerned suggest that surplus capacity is now about 20% of the combined tonnage of these five countries' fleets.

Since it is beyond the means of the inland waterway industry to reduce this structural overcapacity by itself, the Member States concerned have taken measures to remedy the problem, based, inter alia, on the 1968 Commission recommendation on the subject (1). National schemes to scrap inland waterway vessels have been conducted in Belgium, France, Germany and the Netherlands. Since 1969, when the German scrapping scheme started, these measures - varying in length, aims and success - have removed around 9,400 vessels with a deadweight capacity of over 4 million tonnes from the inland waterway transport market. Since the onset of the latest crisis in 1980 a total of 2,230 vessels with a combined deadweight capacity of around 1 million tonnes have been scrapped. Scrapping schemes are still operative in Germany and the Netherlands, and France has a government programme for buying vessels (for scrapping in 1987 see table 3.16, point 1).

(1) Commission Recommendation of 31 July 1968 to the Member States on structural improvements to the market in the carriage of goods by inland waterway (OJ No L 218, 4.9.1986)

Despite the large number of vessels scrapped, the post-1980 national scrapping schemes have failed to make sufficient inroads into structural overcapacity. The primary reason has been the persistent decline in demand combined with the entry into service of new, more productive capacity, particularly between 1978 and 1981. Secondly, the modernization of transport and handling technology and improvements to the inland waterway infrastructure in recent years have boosted vessel performance without any proportionate growth in traffic. One other important factor is the long service life of the vessels: in several cases, vessels over 60 years old are still taking a share of the traffic. As a result, the fleet can only slowly shed capacity. Consequently, scrapping schemes are needed to allow faster adjustment of supply to demand.

Two other factors help to explain the failure of the post-1980 scrapping schemes to end structural overcapacity. Firstly, the programmes have not been synchronized in every Member State concerned. Given the lack of any firm dividing-line between the national inland waterway networks, the result has been that overcapacity in the countries without a scrapping scheme has cancelled out some of the gains made elsewhere. Secondly, the national scrapping schemes did too little to curb new investment in the vessel categories suffering from overcapacity, while a scrapping scheme was in operation.

To take account of these last two factors and rapidly reduce structural overcapacity, the Commission has made a proposal for a Council regulation on structural improvements in inland waterway transport (1).

The Commission proposes a two-part system entailing:

(i) measures to coordinate the national scrapping schemes by harmonizing some of the basic principles and procedures throughout the Community;

(ii) arrangements to prevent the impact of a coordinated scrapping scheme from being cancelled while it is still in operation by the bringing into service of extra vessels.

The system proposed is based on national scrapping funds, some already in place, others yet to be set up, in the Member States particularly concerned with inland waterway transport.

National scrapping funds will operate in the Member States whose inland waterways are linked to those of another Member State and if the tonnage of its fleet is above 100,000 tonnes. Belgium, France, Germany and the Netherlands are particularly concerned. The Luxembourg authorities will not introduce a special scrapping fund for their small fleet. Instead, Luxembourg carriers will be required to register with one of the other funds of their choice.

(1) COM(88)111 final

The same treatment can be extended to any inland waterway undertakings from Member States other than these five which carry goods on the inland waterways linking the five. They too should be required to contribute to one of the scrapping funds set up.

The public authorities in the Member State where the scrapping fund is set up will administer the fund, with the resources at their disposal. Each Member State concerned will involve the organizations representing inland waterway carriers in its country in the administration of its fund.

The second part of the Commission's proposal consists of measures to curb investment in extra vessels in the course of the coordinated scrapping scheme. However, in order to avoid totally blocking access (for new entrants) to the inland waterway transport market or placing a quota on fleets, as a general rule the "old for new" system could be used. This implies that during the coordinated scrapping scheme's life, carriers who wish to bring into service extra capacity (whether newly-built vessels, vessels from non-Community countries or vessels from waterways not covered by the Regulation) would;

(a) either have to scrap tonnage equivalent to the new vessel without, however, receiving the scrapping premium;

(b) or, if they decide not to scrap tonnage, have to pay a special contribution into the fund.

In cases of serious, persistent structural overcapacity, the tonnage to be scrapped (a) and the special contribution (b) could be increased to up to double the original value.

In addition, Member States must refrain from granting aid to stimulate investment in additional capacity during the life of the coordinated scrapping scheme. The Commission shall watch the situation in the course of exercising its competence by virtue of article 93 of the Treaty. It will make a declaration on this question when the Council adopts the Regulation.

3.9 Transport inquiry survey and waiting days

3.9.1 Introduction

The results of the opinion surveys carried out among waterway operators on the Rhine and the North/South network give an 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 shipowning companies and cooperatives of private operators.

On the North/South market, the Institut pour le Transport par Batellerie (ITB-Brussels) and the Economic Bureau for road and waterway transport (EBW-Rijswijk) collect information from 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.

3.9.2 Rhine

The Rhine traffic based on tonnes started the year with a rather poor first quarter (-5.1%). This negative development intensified very clearly in the second quarter, since the decrease reached 13.9%. The decreasing trend in Rhine traffic changed in the third quarter and it was possible to record a growth rate of 8.3% in the fourth quarter. The total balance of opinions on transport benefit and utilization of capacity published in the quarterly reports in the market development clearly show this development which is confirmed by the quarterly statistics below.

Table 3.17 Traditional Rhine traffic ('000 tonnes and mio t-km

	'000t 1986	'000t 1987	Change %	mio t-km 1986	mio t-km 1987	Change %
quarter						
1	43185	40990	-5.1	8419	7960	-5.5
2	54818	47214	-13.9	11191	8894	-20.5
3	50812	50456	-0.7	10183	10297	+1.1
4	45533	49295	+8.3	8394	9603	+14.4
	194348	187955	-3.3	38187	36754	-3.9

In t-km, trends are accentuated in the case of increases and decreases. The increase recorded in the fourth quarter (+14.4% in comparison with the corresponding period in 1986)is explained by the fact that the low water levels which had disturbed the long-distance transport conveyed by mid-Rhine in the preceding year did not prevail again in 1987.

The freight rates remain at a very low level and did not benefit this year from a period of low water. The persistent fall in prices, especially in tankshipping, indicate that the recovery of the fourth quarter did not cause a real increase in the freight rates; this, and the lack of prospects for a lasting growth in the different commodity groups transported by Rhine waterways, constitute factors which justify the lack of optimism in the future for the contractors in this economic sector.

3.9.3 North/South

Waiting time on the bourses is one of the best indicators of activity on the North/South markets for day bulk cargo.

On that regulated part of the North/South market where there is a fixed price the balance or imbalance between demand of transport and the capacity available is reflected in more or less waiting time on the bourses, in contrast with the free market where the price is the reflection of the balance between demand and supply.

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 NL/B relation.

Table 3.18 shows the evolution of waiting days by traffic relation.

For the yearly average in each relation the year 1987 isn't very much different from the previous year, which means that the market situation has not improved. For some relations even the contrary is true. For, with the exception of the B/NL relation, each relation shows a slight increase of the yearly average in number of waiting days. The F/B + NL relation again established in 1987 a record in the downward trend and went from 25.8 days in 1986 to 27.8 days in 1987.

The general feeling of the transporters about the market situation (balance of opinions on demand utilization of capacity and forecast of activity) which was still moderately optimistic in 1986, changed rapidly in the beginning of 1987, when the results of the inland waterway transport activity did not match the expectations. During the first quarter of 1987 most of the fleet was temporarily immobilized as a result of the severe frost in January. The second quarter was characterized as a period with favourable weather conditions which allowed all ships to load to their maximum capacity. As the demand for transport stayed the same, fewer ships were needed, which had a negative effect on the freight price on the free market. So ships turned from the free market to the regulated market which was already struggling with overcapacity.

Added to this was the fact that on the F/B+NL relation all ships returned from France empty, and even French ships could get no return load. It will become clear that the first half of 1987 was rather bad for the N/S inland navigation market. During the third quarter no improvement was observed. The normal seasonable collapse of economic activity during the holiday period made things even worse.

The fourth quarter was considered to be reasonable. During that period the demand for transport went up but it was not until the end of the year that some improvements became evident. These improvements, plus the favourable weather conditions, made the opinions about the first quarter of 1988 less pessimistic.

Table 3.18
Quarterly average of waiting days in international N/S traffic by traffic relation

Traffic relation		Q1	Q2	Q3	Q4	Yearly average
1) NL -- F	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	14.7	23.3	13.0	15.7
	1988	23.6				
2) NL -- B	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	12.3	16.4	10.1	11.7
	1988	13.3				
3) B -- B+F	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	8.4	11.4	8.3	9.6
	1988	9.9				
4) B --- NL	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	7.6	10.0	6.5	8.4
	1988	8.5				
5) F -- B+NL	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	28.7	31.7	19.9	27.8
	1988	20.2				

3.10 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 were made.

All indices are on the basis 1.1.1979 = 100. This year was 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 analyzed here, have already been presented in the quarterly reports N° 26 and 28.

3.10.1 Methodology

Cost developments are presented by means of indices, based on detailed cost calculations and for the goods transport with different shiptypes on transport relations within the EC area that are relevant for the ship type in question.
The calculations per transport relation are carried out separately for a ship of each nationality, as long as the ship type forms a substantial part of that nation's fleet.

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 total costs of a ship move are divided into the following main categories;

1) labour cost
2) capital cost
3) fuel cost
4) other costs

Only fuel cost is treated as a variable cost. The other categories are regarded as fixed costs. The annual fixed costs are divided by the annual operating hours; different annual operating hours are assumed for each ship type. The specific ship move is then charged for the costs per operating hour, multiplied by the total length of the trip times.

The following figures are in use for the annual operating hours for each ship type:

A: 350 tonnes - 3,400 hours
B: 600 tonnes - 3,500 hours
C: 1,200 tonnes - 3,600 hours
D: push barge convoy - 7,200 hours

On waiting days the following assumptions were made :

Rhine, sand/gravel N/S: 1 day
N/S: 10 days

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, which consist of most of the big shipowner companies and some cooperatives of small operators. These organizations are responsible for 50 to 60% of the total tonnage moved.

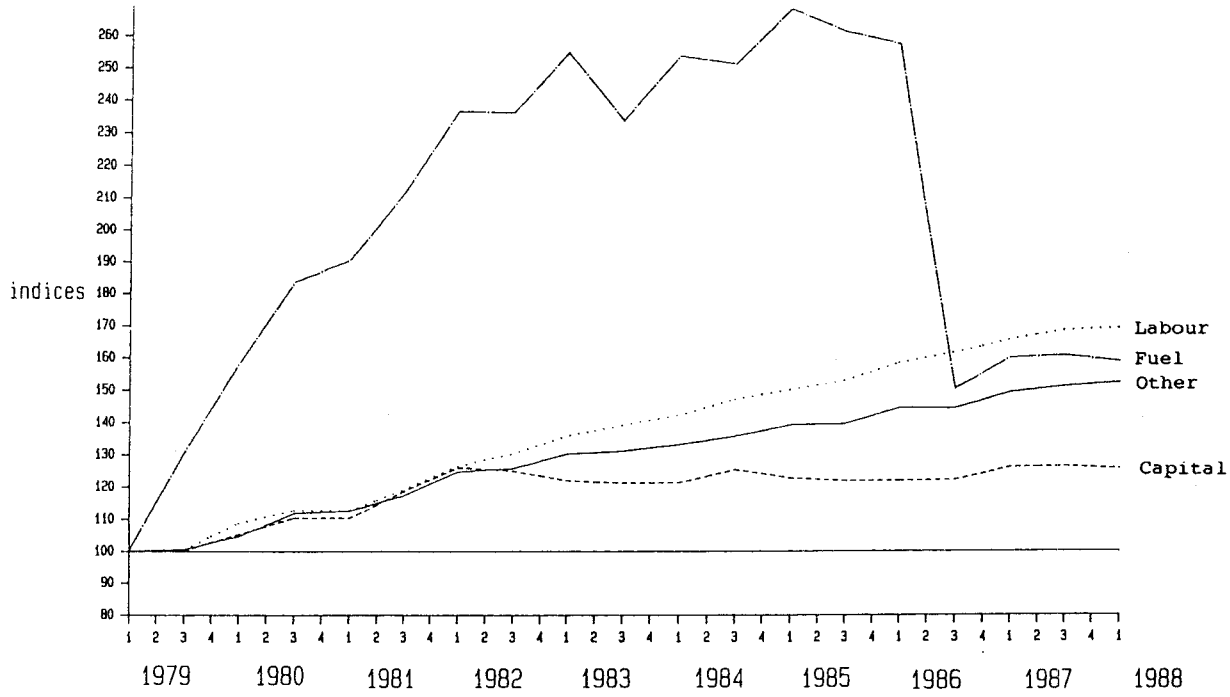
Price indices for international North-South traffic are collected by EBW (Rijswijk) and ITB (Brussels). The information is obtained from both shippers and transporters. Some 200 mainly small transport firms provide information for this part of the market observation system.

3.10.2 Overall cost development by market (in ECU)

After the fall of oil prices at the end of 1985 and in the beginning of 1986 fuel costs stayed more or less at the same level, no longer dominating the development of the total costs. Labour costs and other costs are still steadily growing cost components. Consequently total costs have increased simultaneously.

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

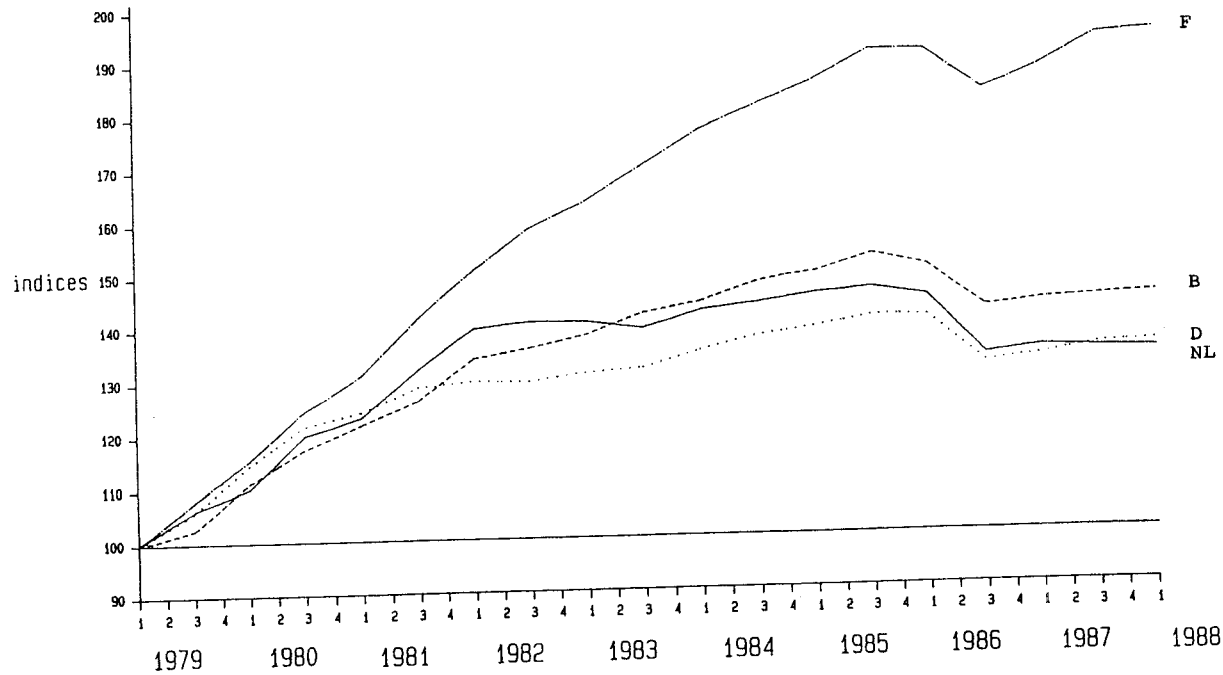
Figure 3.2 Overall cost indices by element (Rhine + North/South) in ECU



3.10.3 Total cost development by flag in national currency

If costs are monitored in national currency, significant differences appear between cost developments by flag, mainly due to differences in inflation rates in the period 1979-1984. However, in 1986 the evolution in all Member States concerned was about the same, that is, a decrease of total costs during the first three quarters and an upgoing line in the last quarter of 1986 and the first quarter of 1987. Later on the total costs stabilized for the Netherlands at 134. For the other countries total costs went up further but less strongly than before.

Figure 3.3 Overall cost indices in national currency

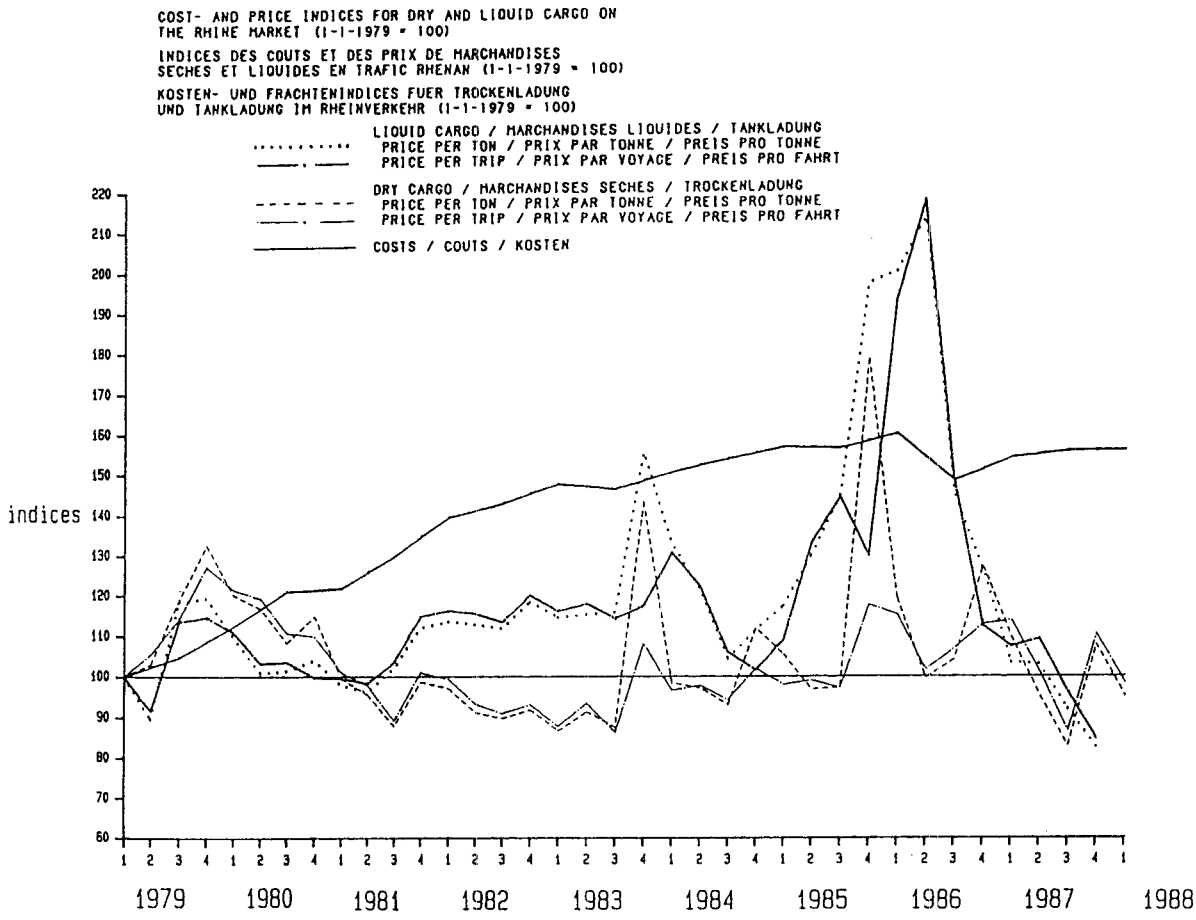


However, there is a second factor that has to be taken into account. Reduced load factors imply that more ships are needed to keep the normal cargo flow going. So an increase in demand is felt in the market which causes a further upward pressure on prices. Consequently, not only prices per tonne, but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

In figure 3.4 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.

The cost/price ratio of 1979 has been chosen as the reference point, because this year is considered as a year with equilibrium between demand and supply on the Rhine market.

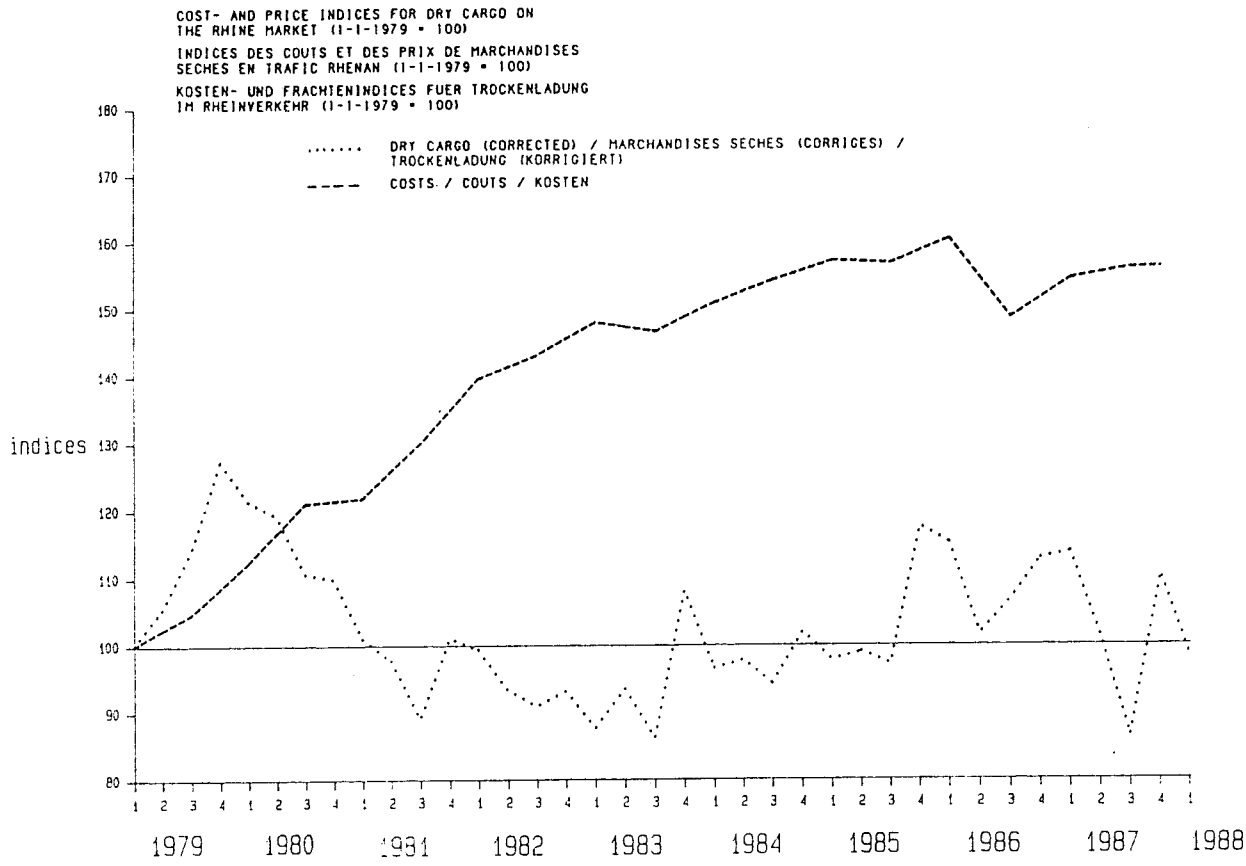
Figure 3.4 Cost and price developments for Rhine traffic in ECU



One can clearly see the dramatic fall in 1987 in the transport price for liquid cargo after the boom in 1986. The extreme high price in 1986 inspired some transporters to invest in new building, only to add to the already existing overcapacity in 1987 when the market had collapsed. Fig. 3.4 speaks for itself. Never was the difference between cost and price indices as big for liquid cargo as at the end of 1987.

The price for dry cargo had its lowest point in the beginning of the third quarter of the year and a little uplift after that, but for the liquid cargo price it was downwards from beginning to end.

Fig. 3.5



Most significant for the development on the free market is the price per trip for dry cargo in comparison with the costs. Figure 3.5 gives a closer look at the price per trip for dry cargo and the costs. It illustrates clearly the structural problem of the inland waterway transport industry. Since 1979 the steadily rising costs, with the prices remaining the same, have eroded the economic position to a serious extent.

Table 3.19 Cost indices by elements and by market 1.1.1986, 1.1.1987, 1.1.1988 in ECU (1.1.1979=100)

Market	Cost elements	1.1.1986	1.1.1987	1.1.1988
Overall	wages	158	166	169
	capital	122	126	126
	fuel	258	160	159
	other costs	145	150	152
	total costs	155	151	153
Rhine	wages	160	169	173
	capital	126	132	130
	fuel	263	167	164
	other costs	148	153	156
	total costs	160	154	156
North/South	wages	156	161	163
	capital	115	118	118
	fuel	250	150	150
	other costs	139	144	147
	total costs	147	146	148

The total costs on the Rhine and N/S market developed in 1987 along the same lines. Wages went up faster on the Rhine than on the N/S. While capital and fuel costs went down on the Rhine they remained the same on the N/S market.

In the following table cost increases in 1987 are broken down by nationality of the carrier.

Table 3.20 Total cost indices by nationality of the carrier in national currency (1.1.1979=100)

	D (DM)	F (FF)	NL (HFL)	B (BF)
1.1.1986	140	190	144	150
1.1.1987	133	186	134	142
1.1.1988	135	194	134	144
Increase 1987	1.5%	4.3%	0%	1.4%

A registration of costs and prices in national currency includes so many monetary factors 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.

3.10.4 Cost developments by ship type (in ECU)

Table 3.21 Cost indices (total costs) by ship type in ECU

Year	350 tons	600 tons	1200 tons	pushed units
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
1.1.1987	151	143	150	160
1.7.1987	152	145	152	160
1.1.1988	153	145	152	160

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 cost developments over the years were relatively small. During the last half of 1987 there was only a minor cost increase for the smallest vessels. For the other vessels the costs stayed at the same level. Table 3.22 gives a closer look at the fluctuations of the cost components for the different ship types during 1987.

Table 3.22 Cost development by element and ship type in ECU in the year 1987

Indices per 1.1.1987 (1.1.1979=100)
and per 1.1.1988

LOADING CAPACITY	COST ELEMENT									
	LABOUR COSTS		CAPITAL COSTS		FUEL COSTS		OTHER COSTS		TOTAL COSTS	
	1.1.87	1.1.88	1.1.87	1.1.88	1.1.87	1.1.88	1.1.87	1.1.88	1.1.87	1.1.88
350 T	167	169	114	115	159	159	144	147	151	153
600 T	152	155	121	121	140	140	144	147	143	145
1200 T	166	170	128	127	161	159	150	153	150	152
PUSH TOW *	166	171	147	144	165	162	159	163	160	160

3.10.5 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 tonne, which is a compensation to keep the revenues per trip at the agreed level. Therefore, prices per tonne will show an upswing in this situation while prices per trip will remain the same.

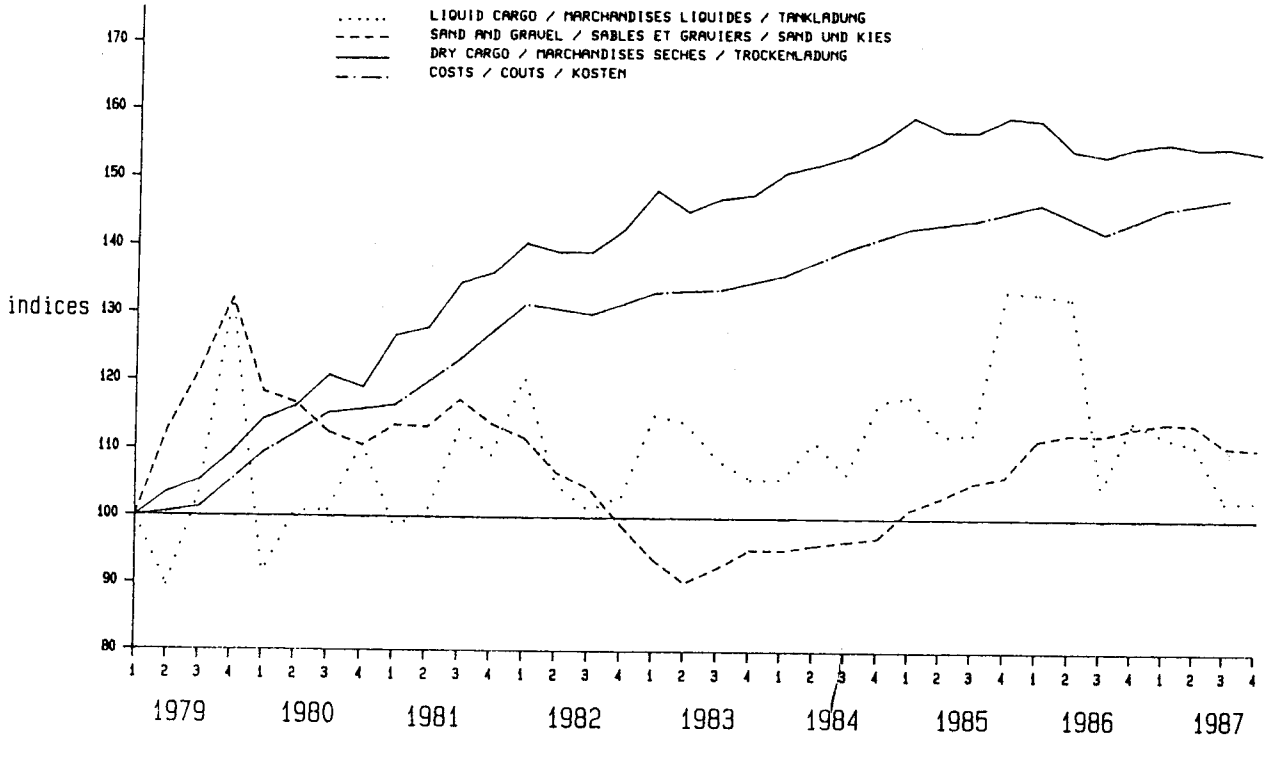
b) North-South market

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 transport flows 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 3.6 Cost and price developments for international North/South traffic, in ECU.



Prices in the free segment of the North-South market show roughly, though to a less extreme extent, the same pattern as on the Rhine. The recovery of the market since the lowest point in 1983, in other words the tendency of the prices to rise slightly more than the costs, came to an end in the second half of 1987. Prices went down while costs rose.

Prices in liquid cargo showed a similar fall since the second half of 1986 as on the Rhine, and like on the Rhine reached its lowest point ever at the end of 1987.

CHAPTER 4

RAIL

Contents

The contents of Chapter 4 can be summarized as follows:

4.1 Intra EUR-12 international rail traffic in 1987

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4.3 National rail traffic

4.4 Rail traffic with third countries

4.5 Use of Community rail network

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4.1 Intra EUR-12 international rail traffic in 1987

4.1.1 Introduction

The statistical data presented in this chapter have been supplied by the Statistical Offices of the 12 Member States. They correspond to those supplied under Statistical Directive 1177/80 to the Statistical Office of the European Community (Eurostat).

Tonnage data for international traffic is based on "tonnages received" from Directive Table 5A where possible, but for 1987, a number of Member States have still not submitted their annual tables to Eurostat and it has been necessary to make use of the simpler monthly data (Table 8) which has no commodity breakdown. There is a further difficulty with UK where no "country of origin" is given in Table 8 so that it has been necessary to make estimates assuming that the growth between 1986 and 1987 has been the same for each "country of origin". It has also been necessary to make estimates from partner Member State data for UK, E and P prior to 1986.

4.1.2 Total intra EUR-12 tonnages, 1987

International rail transport between the 12 Member States fell 1.2% in 1987, a much better performance than the previous year when tonnage fell by over 10%.

Despite this improved performance the share of rail continued to fall because total intra EUR-12 tonnages for all 3 modes continued to rise.

4.1.3 Intra EUR-12 tonnages by relation, 1987

Table 4.1 gives the tonnages (in thousands) for each relation for 1987 together with the corresponding figures for 1986 and the percentage changes. Readers should note that Belgium and Luxembourg have been separated in contrast to previous Annual Reports. As noted in the introduction, the tonnages are based on the "tonnages received" basis rather than the "tonnages despatched" basis. Because of the simple method that has had to be used to obtain the figures in the "UK column" it is inappropriate to calculate the percentage changes (these are thus marked N).

Table 4.1 Volume of intra-Community traffic by rail ('000 tonnes) - 1986 & 1987

FROM	TO	D	F	I	NL	B	L	UK e (1987)	IRL	DK	GR	E	P	EUR12 total traff outw.
	1986		4841	5369	1573	3175	1646	87	-	837	52	499	8	18087
D	1987		4414	6152	1236	3482	1517	82	-	649	42	481	11	18066
			-9%	+15%	-21%	+10%	-8%	N	-	-22%	-19%	-4%	+38%	-0.1%
	1986	3455		6308	368	4304	283	243	-	125	12	262	29	15389
F	1987	3613		5924	839	4245	322	230	-	121	7	347	47	15695
		+5%		-6%	+128%	-1%	+14%	N	-	-3%	-42%	+32%	+62%	+2.0%
	1986	2269	1691		430	1008	2	44	-	90	24	27	18	5603
I	1987	2229	1528		391	1052	1	42	-	130	17	29	23	5442
		-2%	-10%		-9%	+4%	-50%	N	-	+44%	-29%	+7%	+28%	-2.9%
	1986	3823	1357	557		917	21	21	-	14	4	4	0	6719
NL	1987	3981	1346	588		953	17	20	-	8	4	4	0	6921
		+4%	-1%	+6%		+4%	-19%	N	-	-43%	0%	0%	-	+3%
	1986	2495	4706	1174	1876		3846	21	-	63	7	31	0	14220
B	1987	2534	4301	1444	1704		3346	20	-	65	3	24	1	13442
		+2%	-9%	+23%	-9%		-13%	N	-	+3%	-57%	-23%		-5.5%
	1986	825	461	111	78	1351		3	-	3	0	-	-	2833
L	1987	689	344	131	72	1189		3	-	20	0	8	1	2457
		-16%	-25%	+18%	-8%	-12%		0	-	+567	-	-	-	-8.7%
	1986	110	52	192	2	36	-		-	0	-	22	19	434
UK	1987	99	64	206	2	2	7		-	1	0	23	14	418
		-10%	+23%	+7%	0	-94%	-		-	-	-	+5%	-26%	-3.7%
	1986	-	-	1	-	-	-	-		-	-	-	1	2
IRL	1987	-	-	-	-	-	-	-		-	-	-	-	-
		-	-	-	-	-	-	N		-	-	-	-	-
	1986	432	38	106	4	24	0	2	-		1	4	0	611
DK	1987	448	31	148	8	22	0	2	-		0	1	-	660
		+4%	-18%	+40%	+100%		-	N	-		-	-75%	-	+8.0%
	1986	55	3	2	6	11	2		-	0		-	-	82
GR	1987	45	8	3	2	12	2	-	-	0		-	-	72
		-18%	+167%	+50%	-67%		0	N	-	-		-	-	-12.2%
	1986	332	193	38	36	109	0	117	-	12	2		211	1049
E	1987	309	166	29	18	59	0	111	-	12	0		256	960
		-7%	-14%	-24%	-50%		-	N	-	0	-		+21%	-8.5%
	1986	8	18	6	-	1	-	-	-	0	-	194		227
P	1987	6	17	1	-	0	-	-	-	0	-	298		322
		-25%	-6%	-83%	-	-	-	N	-	-	-	+54%		+41.9%
EUR-12 total traf. entry	1986	13804	13361	13863	4373	10937	5800	540	-	1145	101	1043	286	65254
	1987	13951	12219	14626	4272	11017	5212	511	-	1005	74	1215	352	64454
		+1.1%	-8.6%	+5.5%	-2.3%	+0.7%	-10.1%	-5.4%	-	-12.2%	-26.7%	+16.5%	+23.1%	-1.2%

The 11 majors flows (those over 2 million tonnes) all occur on the relations between D, F, I, NL, B and L. For these major flows, the largest observed increase in 1987 was D ⇒I (up 15%) followed by D ⇒B (up 10%); the major falls occurred for B ⇒L (down 13%) and B ⇒F (down 9%).

The intermediate flows (those between 0.5 and 2 million tonnes) also all occur on the relations between D, F, I, NL, B and L, except for that between D and DK. A very large increase was observed for F ⇒NL (up 128%) and a large increase for B ⇒I (up 23%); D ⇒DK and D ⇒NL showed sharp falls (down 22% and 21% respectively).

4.1.4 Development of inward tonnages for each Member State, 1983-1987

Table 4.2 shows the evolution over 5 years of international intra EUR-12 rail traffic on the basis of inward tonnages for each Member State (figures for 1986 and 1987 are also shown in Table 4.1), the same figures are shown graphically in Figure 4.1.

Member State of destination	1983	1984	1985	1986	1987	% Annual change 86/83	87/86
D	13173	13743	14616	13804	13951	+1.6%	+1.1%
F	14628	15854	15247	13361	12219	-3.0%	-8.5%
I	12413	15713	15501	13863	14626	+3.8%	+5.5%
NL	4294	4951	4813	4373	4272p	+0.6%	-2.3%p
B	10895	12873	13694	10937	11017	+0.1%	+0.7%
L	4003	5538	6067	5800	5212	+13.2%	-10.1%
UK	543e	680e	578e	540	495p	-1.2%	-8.3%p
IRL	0	0	0	0	0	-	-
DK	923	914	1167	1145	1005	+7.5%	-12.2%
GR	135	151	148	101	74	-9.2%	-26.7%
E	763e	825e	803e	1043	1215	+10.9%	+16.5%
P	260e	247e	178e	286	352p	+3.2%	+23.1%p
EUR-12	62030	71489	72812	65254	64438p	+1.7%	-1.2%
% Change	+15.2%	+1.8%	-10.4%	-1.2%			

Figure 4.1 : International intra EUR-12 traffic ('000 tonnes)

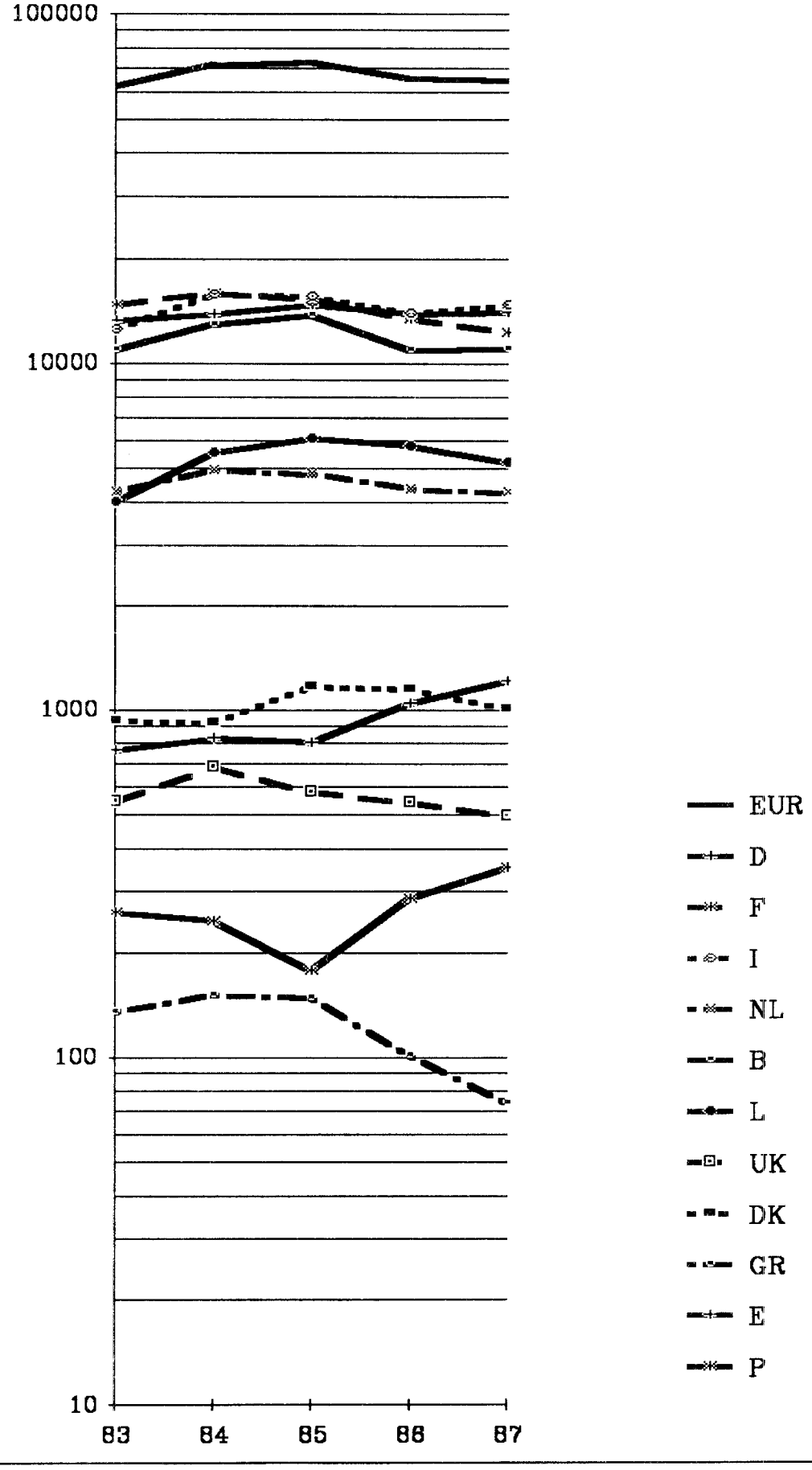


Table 4.2: International intra EUR-12 traffic (in '000 tonnes)

Member State of destination	1983	1984	1985	1986	1987	% Annual change 87/83	% Annual change 87/86
D	13173	13743	14616	13804	13951	+6%	+1.1%
F	14628	15854	15247	13361	12219	-16%	-8.5%
I	12413	15713	15501	13863	14626	+18%	+5.5%
NL	4294	4951	4813	4373	4272p	-1%	-2.3%
B	10895	12873	13694	10937	11017	+1%	+0.7%
L	4003	5538	6067	5800	5212	+30%	-10.1%
UK	630e	676e	642e	540r	511e	-19%	-5.4%
IRL	0	0	0	0	0	-	-
DK	923	914	1167	1145	1005	+9%	-12.2%
GR	135	151	148	101	74	-45%	-26.7%
E	763e	825e	803e	1043	1215	+59%	+16.5%
P	260e	247e	178e	286	352p	+35%	+23.1%
EUR-12	62117	71485	72876	65254	64454p	+4%	-1.2%
% Change		+15.1%	+1.9%	-10.5%	-1.2%		

The main features of Table 4.2 and Figure 4.1 are:

(i) 4 Member States (D, F, I and B) account for 80% of all inward tonnages

(ii) Increases for all Member States from 1983 to 1984 except DK

(iii) Declines for all Member States from 1985 to 1986 except DK (decline in 1987 rather than 1986) and E.

4.2 Intra EUR-12 international rail traffic broken down by NST Chapter

Despite the overall fall of 1.2% from 1986 to 1987, increases were observed for some NST Chapters, namely NST 1 (foodstuffs and animal fodder), NST 3 (petroleum products), NST 6 (crude and manufactured minerals, building materials), NST 8 (chemicals) and NST 9 (miscellaneous articles). The increases (based on 9 Member States only, but accounting for 92% of intra EUR-12 traffic) were 7, 8, 9, 6 and 2% respectively.

The overall decline was due to falls in the "traditional" goods carried by the railways, NST 0 (agricultural products), NST 2 (solid mineral fuels), NST 4 (ores and metal waste), NST 5 (metal products) and NST 7 (fertilizers) where the falls (again based on 9 Member States) were 4, 15, 3, 2 and 15% respectively.

These changes are shown in the right hand column of Table 4.3 which also shows the relative importance of the different NST Chapters. In 1986 (the last year for which data are available for all 12 Member States), NST 9 (23%) and NST 5 (22%) were by far the most important groups, NST 2 accounting for under 11% (much less than for national transport - see below).

Table 4.3 also shows the intra EUR-12 traffic broken down by Member State of destination as well as NST Chapter for 1986 and 1987 (1987 figures not available for NL, UK and P). The largest increases (in '000 tonnes) in 1987 were NST 6 to I (up 517 to 1821), NST 4 to D (up 454 to 3271) and NST 9 to I (up 319 to 5095); the largest falls were NST 2 to F (down 567 to 2007), NST 2 to L (down 381 to 1380), NST 4 to L (down 361 to 1713), NST 5 to B (down 313 to 3402) and NST 7 to F (down 308 to 1153).

Table 4.3 Rail Intra EUR-12 - NST-breakdown by Member State of destination - 1986 & 1987 ('000 tonnes)

NST	D	F	I	NL	B	L	UK	IRL	DK	GR	E	P	EUR-12
0 1986	1233	409	1672	156	504	17	114	-	168	7	165	42	4487
1987	1107	441	1544	N	531	20	N	-	93	3	267	N	N
													-4%
1 1986	586	352	379	92	1265	0	155	-	99	0	5	29	2962
1987	597	275	337	N	1573	0	N	-	70	2	15	N	N
													+7%
2 1986	567	2574	215	635	1125	1761	3	-	14	0	7	-	6901
1987	490	2007	283	N	1124	1380	N	-	19	-	4	N	N
													-15%
3 1986	251	351	313	78	16	771	2	-	9	-	-	0	1791
1987	269	328	356	N	15	875	N	-	7	0	-	N	N
													+8%
4 1986	2817	785	2089	47	334	2074	0	-	1	0	6	0	8153
1987	3271	640	1987	N	284	1713	N	-	5	-	2	N	N
													-3%
5 1986	2950	3829	2265	283	3715	693	82	-	146	1	197	46	14207
1987	2863	3865	2341	N	3402	755	N	-	145	0	202	N	N
													-2%
6 1986	675	307	1304	1563	299	372	46	-	89	2	5	9	4669
1987	576	258	1821	N	230	354	N	-	86	0	9	N	N
													+9%
7 1986	434	1461	91	3	131	56	4	-	116	-	2	1	2298
1987	486	1153	85	N	140	50	N	-	18	-	5	N	N
													-15%
8 1986	1437	904	758	390	989	12	49	-	95	9	42	18	4702
1987	1473	1025	777	N	1044	10	N	-	95	7	72	N	N
													+6%
9 1986	2854	2390	4776	1127	2559	45	87	-	409	82	614	140	15083
1987	2819	2228	5095	N	2672	54	N	-	467	62	639	N	N
													+2%
All 1986	13804	13361	13863	4373	10937	5800	540	-	1145	101	1043	286	65254
goods 1987	13951	12219	14626	4272	11017	5212	N	-	1005	74	1215	352	N
													-1.2%

Table 4.4 Rail intra EUR-10 - breakdown by NST, 1983 to 1986 ('000 t)

NST	1983	1984	1985	1986	% change 86/83
0	5060	5837	5250	3767	-26%
1	2435	2435	3006	2898	+19%
2	8218	9650	8567	6894	-16%
3	1892	1649	1895	1791	-5%
4	7784	9821	10169	8147	+5%
5	11975	14510	15355	13948	+16%
6	4229	5100	5187	4635	+10%
7	2501	2759	2722	2293	-8%
8	4045	4308	4753	4625	+14%
9	11720	12997	13884	14055	+20%
Total	59858	69066	70788	63054	+5.3%

(Note: Figures prior to 1986 include estimates for traffic "to UK".)

It is also interesting to look at NST Chapter changes over a longer period than the one year covered in Table 4.3, but this can only be done on a EUR-10 basis as it is not realistic to carry through the estimation procedure used for "E and P total tonnage" to a commodity breakdown; the results are shown in Table 4.4. The results show that the main growth has been in NST 9 (up 20%), NST 1 (up 19%), NST 5 (up 16%) and NST 8 (up 14%); the greatest losses in NST 0 (down 26%), NST 2 (down 16%) and NST 7 (down 8%); the results are broadly in line with those for 1986 to 1987 given above, i.e. the "traditional" goods carried by the railways have been in decline since 1983.

4.3 National rail traffic

Table 4.5 shows that from 1983 to 1985 national rail traffic for EUR-10 remained stable at just over 550 mio tonnes except for the dip in 1984 due to the UK miners strike. Subsequently there was a sharp fall in 1986 of 5% and a smaller fall of 2.5% in 1987. (The sharp fall in 1986 was matched by an even larger fall of international traffic - see above.)

Taking the period 1983 to 1987 as a whole, only I showed an increase. F national traffic declined steadily over the whole period losing over 17%, accounting for more than half of the loss of national traffic on the Community networks.

A breakdown of national traffic by NST Chapter is given in Table 4.6. The overall change from 1986 to 1987 (-2.3%) is slightly different from Table 4.4 due to the absence of NST breakdown for NL, UK and P for 1987 and is based on the other 9 Member States only (as are all the %'s in the right hand column). Only NST 9 (miscellaneous articles) up 3% and NST 1 (foodstuffs and animal fodder) up 1% showed positive gains; NST 3 (petroleum products) and NST 2 (solid mineral fuels) showing losses of 6% and 5% respectively. In national markets NST 2 (with 30% of the market) predominates and the sharp fall (down 5%) accounts for most of the change of the total, i.e. "all products - NST 2) were almost stable from 1986 to 1987.

Table 4.5 Rail - National ('000t)

	1983	1984	1985	1986	1987
D	222176	237890	238935	228267	219976
F	121473	118616	114292	104027	100638
I	16932	17895	17221	16695	18618
NL	5689	5874	5529	5274	5178p
B	32247	34552	34426	29750	31359
L	3377	3309	2539	2521	2567
UK	146347	79642	139322	137089	132361p
IRL	3320	3382	3379	3126	3014
DK	2304	2392	2351	2398	2088
GR	1308	1530	1205	1235	918
E	X	X	X	25028	24318
P	X	X	X	4690	4980p
EUR-10	555174	505081	559199	530381	516717p
EUR-12	X	X	X	560099	546015p

Table 4.6 Rail - National - Breakdown by NST ('000t)

NST		D	F	I	NL	B	L	UK	IRL	DK	GR	E	P	EUR-12
0	1986	7059	9430	1225	457	555	44	525	162	141	344	2191	692	25016
	1987	6677	10033	1320	N	591	46	N	149	126	300	1952	N	N
														+0%
1	1986	2929	9682	1384	280	257	15	848	216	780	11	804	230	17436
	1987	2673	10384	1408	N	200	11	N	208	674	23	711	N	N
														+1%
2	1986	68980	11213	417	13	10212	33	72558	0	167	340	3240	267	167440
	1987	66867	9683	436	N	9824	17	N	0	129	122	2455	N	N
														-5%
3	1986	19567	10138	476	855	506	58	9983	78	43	187	2331	569	44791
	1987	18111	9498	489	N	514	59	N	66	42	192	2403	N	N
														-6%
4	1986	31761	7955	2168	24	8348	217	10033	555	38	0	4956	326	66381
	1987	31242	7059	2095	N	9426	140	N	487	34	0	3934	N	N
														-3%
5	1986	39373	13287	4309	47	7152	931	6403	12	19	26	2339	87	73985
	1987	37145	12004	5447	N	8007	819	N	17	14	2	2328	N	N
														-2%
6	1986	22373	17136	1779	436	826	1109	22753	829	132	2	3913	16479	72935
	1987	21189	17583	1876	N	714	1360	N	792	113	2	3866	N	N
														-1%
7	1986	6394	5440	394	1230	200	40	976	272	194	162	1032	357	16691
	1987	6722	5034	377	N	230	74	N	234	180	141	892	N	N
														-2%
8	1986	11516	8010	752	892	415	2	1971	227	191	62	1220	150	25408
	1987	11473	7980	764	N	451	0	N	248	172	52	1298	N	N
														+0%
9	1986	18318	11736	3791	1040	1277	70	11039	775	690	100	3002	365	52203
	1987	17877	11379	4405	N	1404	39	N	813	606	82	4479	N	N
														+3%
All goods	1986	228267	104027	16695	5274	29750	2521	137089	3126	2398	1235	25028	4690	560099
	1987	13951	100638	18618	5178	31359	2567	132361	3014	2088	918	24318	4980	N
														-2.3%

Table 4.7 Rail: National EUR-10 - breakdown by NST 83-86

NST	1983	1984	1985	1986	% change 86/83
0	20452	21613	21817	19944	-2%
1	16645	15910	16119	16402	-1%
2	180177	126940	174438	163934	-9%
3	45509	43565	42703	41892	-8%
4	67786	66620	67921	61099	-10%
5	71633	76045	78476	71557	-0%
6	60650	61412	66490	67376	+11%
7	17606	18020	17081	15302	-13%
8	24057	24958	24460	24038	-0%
9	50656	49999	49692	48839	-4%
Total	555174	505081	559199	530381	-4.5%

An analysis of NST Chapter changes over a longer period (1983-1986) is given on EUR-10 basis in Table 4.7. The only growth recorded in this period was for NST 6 (up 11%); the major loss was for NST 2 (down 9%) this group being so important that it accounted for 16 out of the 25 million tonnes loss for all goods from 1983 to 1986. Other important losses occurred for NST 4 (down 10%) and NST 7 (down 13%). These changes are somewhat different from those observed for international intra EUR-10 traffic discussed in Table 4.4.

4.4 Rail traffic with third countries

This report includes, for the first time, details of rail traffic between EUR-12 and third countries; data for 1987 is not fully available for all Member States and is thus provisional.

The total rail traffic with third countries (59 million tonnes in 1987) is almost as large as the tonnage between Member States (64 million tonnes in 1987). This is in contrast with road haulage where intra EUR-12 tonnage is some 5 times greater than tonnages with third countries. The difference is essentially due to the importance that rail transport plays in the Alpine region and the State-trading countries.

Details of rail traffic with third countries are given in Table 4.8. Inward traffic is some 25% higher then outward traffic and the major flows are with DDR (15 mio tonnes), CH (12 mio tonnes), A (11 mio tonnnes) and CS (6 mio tonnes).

Table 4.8 Rail traffic with third countries ('000 tonnes)

Third country	To EUR-12		From EUR-12	
	1986	1987 (prov)	1986	1987 (prov)
N	41	43	199	165
S	2922	2822	1790	1966
SF	61	50	26	19
CH	4176	4735	7903	7338
A	4799	5361	5424	5582
YU	1342	1777	2712	2461
TR	0	1	12	18
SU	1	0	0	0
DDR	10587	10535	4411	5157
PL	778	761	560	499
CS	5311	4979	1233	1037
H	1186	1225	1160	1103
R	565	470	231	113
BG	156	234	541	454
Others	23	0	15	14
Total	31947	33173a	26218	25976b
of which State-trading	19926	19983	10848	10825

a) Total includes estimated 178,000 tonnes third countries to UK
b) Total includes estimated 48,000 tonnes from UK to third countries

4.5 Use of Community Rail Networks

To examine the use of the different rail networks in the Community it is easier to work with tonne-kilometres rather than tonnes since this avoids double-counting when Community totals are required.

Table 4.9 shows, for each national network, the tonne-kilometres performed for different types of traffic, national, inward, outward and transit in 1986; furthermore, the inward, outward and transit are subdivided according to whether Member States or non-Member States are concerned.

The main results for the whole Community network are (in mio t-km) as follows:

National	110810	65.5%
Inward	22114	13.1%
Outward	26800	15.8%
Transit	9426	5.6%
Total	169149	100%

For the international traffic on the Community network:

Between 2 M.S.	36812	63.1%
Between M.S. and non M.S.	20978	36.0%
Between 2 non M.S.	549	0.9%
Total International	58339	100%

Table 4.9 also shows;

- Almost 65% of rail traffic occurs on either the D or F network.

- Transit traffic is only important on the D, B, L, DK and (to a lesser extent) the F network (this is due to size of the M.S. and its geographical position).

A further analysis has been carried out for international intra EUR-12 traffic for 1986 and is presented in a matrix form in Table 4.10. It should be stressed that Table 4.9 combines Table 6AZ of the Eurostat publications (t.km on the networks of the origin or destination M.S.) with Table 6B (t-km on the network(s) of any M.S. transitted). As mentioned in Table 4.9 data for transit traffic for E is not available; in Table 4.10 this reduces the entries in the P row (and column) except for the relation between P and E.

Table 4.10 shows that it is F $\geqslant$I traffic which has the largest use of the Community network (4,998 mio t-km or 13.6% of the Community total), the second largest being D $\geqslant$I traffic (3,373 mio t-km). The table also shows the considerable imbalance in I traffic (10,536 mio t-km inwards, 5,524 outwards).

Table 4.9 Use of national networks by type of journey, 1986 (mio t-km)

Network	National	Inward		Outward		Transit				Total
		From another Member State	From a non M.S	To another M.S.	To a non M.S.	M.S. to M.S	M.S. to non M.S.	non M.S. to M.S.	non M.S. to non M.S	
D	36433	3643	3866	4789	5838	1023	1832	1509	496	59429
F	34763	4341	646	6166	1096	2273	713	82	0	50080
I	7043	3500	1853	2198	1243	7	66	77	28	16015
NL	1032	805	82	927	204	13	0	0	-	3063
B	2270	1643	100	2275	406	667	29	33	-	7423
L	96	220	0	142	3	122	18	2	-	603
UK	17748	160	59	168	18	-	-	-	-	18153
IRL	574	-	-	-	-	-	-	-	-	574
DK	627	197	249	119	59	-	269	141	25	1686
GR	291	41	119	8	218	-	-	-	-	677
E	8795	477	14	723	128	N	N	N	-	10137a
P	1137	96	2	68	4	-	-	-	-	1307
EUR-12	110810	15124	6990	17583	9217	4105	2928	1843	549	169149

(a) excluding transit

Table 4.10 International intra EUR-12 traffic, 1986 (in mio t-km on Community network

TO / FROM	D	F	I	NL	B	L	UK	IRL	DK	GR	E	P	EUR-12
D	0	2537	3373	528	1205	429	80	-	506	58	409	13	9138
F	2068	8	4998	248	1731	34	260	-	179	20	223	18	9787
I	1952	1730	0	363	854	2	419	-	120	17	42	25	5524
NL	1432	659	505	3	181	9	10	-	15	8	4	0	2826
B	1122	1819	1179	610	0	991	11	-	61	31	17	0	5841
L	340	150	76	21	348	-	2	-	3	1	0	-	941
UK	117	79	235	1	20	-	-	-	0	0	43	37	532
IRL	-	-	-	-	-	-	-	-	-	-	-	-	-
DK	270	44	114	4	22	0	2	-	-	2	6	0	464
GR	25	3	1	6	11	0	4	-	0	-	-	-	50
E	540	324	47	55	107	0	239	-	30	4	-	160	1506
P	14	18	8	-	1	-	-	-	0	-	164	-	205
EUR-12	7880	7371	10536	1839	4480	1465	1027	-	914	141	908	253	36814

Table 4.11 Use of the Community rail network for intra-Community journeys, 1983-1986 (mio t-km)

	Intra EUR-10				Intra EUR-12
	1983	1984	1985	1986	1986
National	103406	100787	104392	100878	110810
Inward + Outward	28735	32545	33325	30812	32707
Transit	3176e	3620	3692	3453	4105
	135317	136952	141409	135143	147622

Table 4.11 shows that, over the period 1983 to 1986, the use of the EUR-10 rail network for intra-Community journeys (national, international, inward + outward and transit) first increased, but then in 1986 returned to almost exactly the same level as 1983. This is in contrast with the tonnage pattern in Table 4.7 where there was a large drop in 1984 (UK miners strike - which has a large effect on tonnes but relatively less on t-km) and there is a drop of 3.5% from 1983 to 1986.

4.6 Rail price indices

4.6.1 Introduction

At the moment price surveys are conducted in D, F, I, NL and B. 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 tariff in francs. They take no account of the reductions granted, which are sometimes substantial.

4.6.2 Price developments by relation

Price trends in 1987 are summed up in Table 4.12. The price indices in the table are based on 31 December 1981 equals 100.

Table 4.12 Price trends in 1987

Relation	Index		Increase (%) in 1987
	31.12.1986	31.12.1987	
D → F	130	130	0
D → I	127	142	12
D → NL	116	117	0
D → B	128	128	0
F → D	133	133	0
F → I	158	173	10
F → NL	137	137	0
F → B	148	148	0
I → D	117	131	12
I → F	155	N	N
I → NL	142	N	N
I → B	155	N	N
NL → D	117	118	1
NL → F	124	124	0
NL → I	129	142	11
NL → B	142	144	2
B → D	126	126	0
B → F	147	147	0
B → I	149	163	10
B → NL	135	139	3

The biggest price increases (10% and more) were on the traffic with I (particularly from and to D and from NL). Prices also rose by 3% on the traffic from B to NL.

CHAPTER 5

COMBINED TRANSPORT

5.1 Container transport 1987

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 railway 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 intra-Community transports of containers by rail as they are collected through the Statistical Directive Rail.

5.1.1 With a total traffic volume of 924,798 TEU, the 1987 results show an increase of 4.3 percent over the preceding year, thus exceeding the record of 904,803 TEU which was set in 1985. Loaded traffic increased by 5.9 percent, and empty traffic fell by 0.8 percent. Some comparative figures are given below by way of elucidation.

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

Year	Traffic	In/Decrease	Growth rate
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%
1987	924,798	+ 37,715	+ 4.3%

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

Year	Traffic	In/Decrease	Growth rate
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%
1987	794.3	+ 38.7	+ 5.2%

(*) TEU: Twenty feet equivalent unit.

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

Year	Maritime traffic		Continental traffic		UK + Ireland		USSR	
	Number	%	Number	%	Number	%	Number	%
1984	478,500	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
1987	495,750	53.6	380,250	41.1	31,250	3.4	17,500	1.9

Table 5.3.A

		1987	87/86
Maritime containers	loaded	394,138 TEU	+1.6%
	empty	101,706 TEU	-2.2%
Continental	loaded	266,543 TEU	+17.4%
	empty	113,745 TEU	+1.1%
Others (transits, direct. G.B.)		48,566 TEU	-12.8%

Maritime traffic. Traffic to and from the ports remains, in terms of both volume and revenue, the most important container traffic. The loaded container traffic in this sector establishes a new record high with 394,138 TEU, an increase of 1.6% over 1986. On the other hand there was a slight drop of 2 percent in the volume of empty containers transported. This development reflects the improvements in balance and container management that have taken place in the containerised shipping lines in the past few years.

Continental traffic. In the year under review continental traffic amounted to 380,288 TEU, with loaded traffic accounting for 266,543 TEU (+17%) and empty traffic for 113,475 TEU (+1.1%). The percentage of loaded traffic was 70% as against 67% in the previous year, a development considered favourable.

Others. The two other sectors of the containermarket are direct traffic with Great Britain and Eire and traffic with or via the USSR, which together account for 5.3% of TEU volume. Both sectors showed a decline the total of which was -12.8%. We attribute these downward movements to structural market factors.

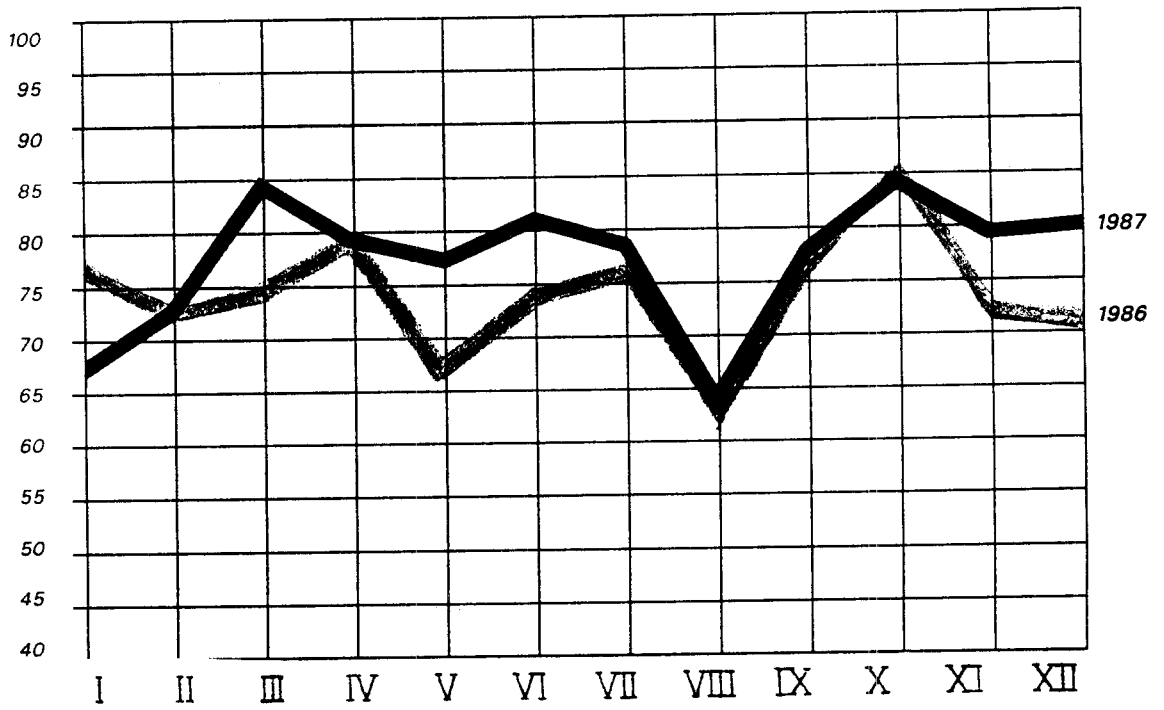
Table 5.4

From	To	D	F	I	NL	B	L	UK	IRL	DK	GR	E	P	Third countr.	Total
	86	24378	8755	30108	13685	7877	142	104	0	28349	1688	1302	13	49556	174825
D	87	24841	6493	33141	13912	8787	173	108	0	27101	1726	673	184	67206	184345
	87/86	+2%	-26%	+10%	+2%	+12%	+22%	+4%		-5%	+2%	-48%		+35%	+5%
	86	5002	13967	30276	5190	14101	7	365	0	3283	233	8437	47	11441	92349
F	87	6256	14610	25845	3439	15555	12	305	0	3573	475	2855	76	10946	83947
	87/86	+25%	+5%	-15%	-34%	+10%		-16%		+9%	+104%	-66%	+61%	-4%	-9.1%
	86	37652	26799	0	22367	23794	24	21451	4	4205	8	395	10	22598	159307
I	87	38824	28182	0	18731	27370	48	20386	0	5476	4	274	0	27874	167169
	87/86	+3%	+5%		-16%	+15%		-5%		+30%	-50%	-31%		+23%	+4.9%
	86	29312	3967	24298	30	24421	268	0	0	1188	463	564	2	18241	102754
NL	87	31498	2175	22781	2	27147	283	0	0	926	893	428	0	20764	106897
	87/86	+8%	-45%	-6%		+11%	+6%			-22%	+93%	-24%		+14%	+4%
	86	10003	13004	25555	27707	1	15	0	0	1301	1659	374	0	14096	93715
B	87	12619	13420	34262	24126	0	24	0	0	1111	3005	656	3	17816	107042
	87/86	+26%	+3%	+34%	-13%					-15%	+181%	+75%		+26%	+14.2%
	86	42	87	0	840	0	0	0	0	0	28	54	0	99	1158
L	87	66	14	9	1162	259	0	0	0	0	11	181	0	23	1734
	87/86	+57%			+38%										+49.7%
	86	221	311	10164	10	17	0	0	0	0	0	0	0	102	10825
UK	87	156	229	9836	0	1	0	0	0	0	0	16	0	179	10417
	87/86	-30%	-26%	+3%										+76%	-3.8%
	86	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRL	87	19	0	0	0	0	0	0	0	0	0	0	0	0	19
	87/86														
	86	24185	2979	4705	244	936	0	0	0	0	2	208	0	791	34485
DK	87	23166	2563	5367	427	847	0	0	0	0	2	337	0	3079	35788
	87/86	-4%	-14%	+14%	+175%	-10%						+62%		+289%	+3.8%
	86	1307	204	14	319	843	120	9	0	0	0	0	0	593	3409
GR	87	863	415	90	246	1203	85	0	0	0	0	0	0	524	3426
	87/86	-34%	+103%		-23%	+43%	+31%							-12%	+0.5%
	86	958	6287	125	500	582	0	0	0	164	0	3	980	706	10325
E	87	529	2966	178	463	389	33	3	0	75	0	5	1776	1130	7547
	87/86	-45%	-53%	+42%	-7%	-33%				-54%			+81%	+60%	-26.9%
	86	0	20	4	0	0	0	0	0	0	0	1052	0	6	1082
P	87	4	66	2	0	0	0	0	0	0	0	1420	0	10	1492
	87/86											+35%			+37.9%
Third	86	61601	11322	30217	15800	14096	99	691	2	1783	536	421	27	64935	201530
countries	87	66732	10946	27874	20764	17816	23	70	0	3079	241	1130	10	67688	216373
	87/86	+8%	-3%	-8%	+31%	+26%				+73%	-55%			+4%	+7.4%
	86	194661	87702	155466	86692	86668	675	22620	6	40273	4617	12830	1079	172563	887083
Total	87	195573	82079	159385	83272	99374	681	20872	0	41341	6357	7975	2049	217239	926196
	87/86	+0.5%	-6.4%	+2.5%	-3.5%	+14.7%	+0.9%	-7.7%		+2.7%	+37.7%	-37.8%	+89.9%	+25.9%	+4.4%

In table 5.4 the total amount of 926.196 TEU of 1987 and the total amount of 887.083 TEU of 1986 are divided over EUR-12 and third countries with growth rates in %.

5.1.3 Monthly development of container traffic 1987 compared with '86 (in 1000 TEU)

Fig. 5.1



The monthly traffic figures reflect the evenly sound development over the whole year. Seasonal swings remained within the expected limits and there were no major traffic disruptions.

5.1.4 Figures are also available from the Council statistical rail directive. The figure 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 the figures of 1986 of EUR-12 and the figures of 1987 from Germany, France, Italy, Belgium, Luxembourg, Ireland, Denmark, Greece and Spain are published.

Table 5.5 National, international and transit traffic by container 1986

Country		national		international				Transit		Total	
				loading		unloading					
		number	('000) ton	number	('000) ton	number	('000) ton	number	('000) ton	number	('000) ton
Germany	loaded empty	349562 218051	4243	90982 40162	1401	99933 46114	1389	92385 21534	1324	632862 325861	8357
France	loaded empty	224737 184623	3398	37138 12271	671	31989 18413	566	57182 3294	1224	351046 218601	5860
Italy	loaded empty	158501 91181	2175	103582 43256	2078	135381 15257	2723	79 196	1	397543 149890	6978
Nether-lands	loaded empty	52100 25500	936	56700 18100	1052	52600 13900	968	- -	-	161400 57500	2956
Belgium	loaded empty	60892 37167	1000	61049 24794	1174	75553 12708	1301	5105 2750	92	202599 77419	3567
Luxem-bourg	loaded empty	1691 1675	37	811 216	18	339 551	6	-		2841 2442	61
United Kingdom	loaded empty	751601 55130	10168	0 0	0	0 0	0	0 0	0	751601 55130	10168
Ireland	loaded empty	63000 36000	1178	- -	- -	- -	- -	- -	- -	63000 36000	1178
Denmark	loaded empty	34321 9811	461	21244 2221	299	21126 6582	229	5820 1000	77	82511 19614	1066
Greece	loaded empty	- -	- -	2479 844	39	3782 79	65	- -	- -	6261 923	105
Spain	loaded empty	139200 82290	2232	17149 5709	224	12696 9285	170	4	0	169043 97337	2626
Portugal	loaded empty	3663 7422	61	2348 4769	39	247 492	4			6258 12683	103

Table 5.6 National, international and transit traffic by container 1987

Country		national		international				Transit		Total	
				loading		unloading					
		number	('000) ton	number	('000) ton	number	('000) ton	number	('000) ton	number	('000) ton
Germany	loaded	387326	4664	94393	1481	98757	1411	97576	1395	678052	8952
	empty	233833		37936		46329		24770		342868	
France	loaded	214648	3322	43752	754	38726	687	61211	1383	358337	6146
	empty	184705		12268		15728		6616		219317	
Italy	loaded	179093	2626	118402	2185	166112	3174	108	2	463715	7987
	empty	95119		42753		15508		24		153404	
Belgium	loaded	66980	1088	59697	1213	78941	1446	6119	97	211737	3844
	empty	42350		30522		10523		3120		86515	
Luxem-bourg	loaded	2113	46	1327	30	281	6			3721	82
	empty	2117		114		945				3176	
Ireland	loaded	61000	1196	-	-	-	-	-	-	61000	1196
	empty	36000	-	-	-	-	-	-	-	36000	
Denmark	loaded	32600	415	22795	293	23357	234	3716	41	82468	982
	empty	9451		1526		4804		416		16197	
Greece	loaded	-	-	2251	45	4815	83	-	-	7066	128
	empty	-		457		108		-		565	
Spain	loaded	182045	2987	15364	202	13084	161	2	-	210495	3350
	empty	111956		6061		4011		260		122288	

Table 5.7 National, international and transit traffic by container - growth rate 87/86 in %

Country		national		international				Transit		Total	
				loading		unloading					
		number	('000) ton	number	('000) ton	number	('000) ton	number	('000) ton	number	('000) ton
Germany	loaded	11	10	4	6	-2	2	6	5	7	7
	empty	7		-6		0		15		5	
France	loaded	-4	-2	18	12	21	21	7	13	-2	5
	empty	0		0		-15		200		0	
Italy	loaded	13	21	14	5	23	17	37	100	17	15
	empty	4		-1		2		-88		2	
Belgium	loaded	10	9	-2	3	4	11	20	5	5	8
	empty	14		23		-17		13		12	
Luxem-bourg	loaded	25	24	64	67	-17	0			31	34
	empty	26		-47		72				30	
Ireland	loaded	-3	2	-	-	-	-			-3	2
	empty	0		-		-				0	
Denmark	loaded	-5	-10	7	-2	11	2	-36	-47	-1	-8
	empty	-4		-31		-27		-58		-17	
Greece	loaded	-	-	-9	15	27	28			13	22
	empty	-		-46		37				-39	
Spain	loaded	31	34	-10	-10	3	-5	-50	-	25	28
	empty	36		6		-57		-		26	

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 (27%) 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 12%. There, whole lorries are driven up onto special very flat wagons under their own power. The driver accompanies the transport in a sleeping car.

Table 5.8 shows the development of the above-mentioned technologies during the years 83-87 (%).

	SEMI	SB	RM
1983	34	57	9
1984	29	61	10
1985	26	63	11
1986	27	62	11
1987	27	61	12

The fall in use of the semi-trailer was temporarily stopped during 1986/87 by S-COMBI joining the UIRR. In the long run, the trend is in favour of swap bodies. The growth in the "Rolling Motorway" is due to their use in trans-Alp traffic.

Table 5.9 Number of dispatches in international piggy-back transport by Country and Company of dispatch.

		Dispatches					Growth rate
Country	Company	1983	1984	1985	1986	1987	1987/1986
D	Kombiverkehr	66,650	77,600	87,500	106,000	116,700	+10.1%
F	Novatrans	33,556	35,045	39,803	43,482	52,800	- 4.0%
I	Cemat	9,607	11,723	11,989	15,089	20,100	+33.1%
NL	Trailstar	5,445	4,887	5,588	6,187	6,500	+ 4.8%
B	T.R.W.	13,075	13,810	15,161	17,193	17,500	+ 1.7%
DK	Kombi-Dan	-	-	-	1,024	2,500	+150.0%
Third countries							
A	Oekombi	-	11,244	16,623	23,033	29,100	+26.5%
CH	Hupac	28,856	30,783	36,907	39,650	42,100	+ 6.1%
S	S-Combi	-	-	-	2,700	1,200	-55.6%
Total		165,799	196,873	223,163	265,896	288,500	+ 8.5%

The quadrupling of international traffic in the past ten years shows that piggyback transport offers a genuine alternative to road transport, especially over long distances. The creation of new piggyback companies has helped exploit new markets.

Table 5.10 Two thirds of all piggyback traffic is domestic, mainly in the Federal Republic of Germany, France and, increasingly, in Sweden and Italy. Some consignments do cross borders during road transport at either end.

Company	Consignments '87	+/- in %
Kombi-verkehr	321,000	- 1.1%
Novatrans	149,300	+ 9.4%
S-Combi	69,400	+23.9%
Cemat	37,400	+32.6%
Ökombi	17,400	+ 3.6%
Hupac	7,400	+ 5.7%
Kombi-Dan	1,400	+154.6%
T.R.W.	200	-
Total	603,500	+ 5.9%

Table 5.11 The transport services of the UIRR companies have quadrupled in ten years. Today, 3,600 road units are transported piggyback every day over an average of 910 km in international traffic and 610 km in domestic traffic.

National (Nat.) and International (Int.) traffic in thousand mio t-km:

Year	Int.	Nat.	Total
1983	4.2	5.2	9.4
1984	4.6	5.6	10.2
1985	5.2	5.8	11.0
1986	5.8	6.7	12.5
1987	6.6	6.8	13.4

Kombiverkehr (W. Germany) transports 2,200 piggyback consignments every day of which one third is foreign or transit traffic. The growth rate of this, a good 10%, was again higher than that of national traffic. The "Rolling Motorway" even achieved an international growth rate of over 30% for the third year in succession.

Novatrans (France) achieved an increase of 6% in traffic of which domestic traffic increased disproportionately well, despite a strike by the French railways.

Cemat (Italy) in 1987 for the first time, were able to increase their traffic by over 30% and also reach a total of one thousand million tkm for internal traffic.

Trailstar (Netherlands) mainly transports goods from Rotterdam and Venlo to Northern Italy. During 1988, the new Ede central piggyback terminal will be brought into use.

TRW (Belgium) concentrates on Italian traffic, which represents around 70% of their business. 80% of the consignments move over the southern border in transit through France, and around 20% into or through West Germany. 50% of all TRW's traffic is processed through its largest terminal in the port of Antwerp. A further 20% of traffic passes through the ferry ports of Ostend and Zeebrugge and is transported across the Channel to Great Britain. After a moderate growth of 3% in 1987 (strikes at SNCF and the British ferries), the first half of 1988 showed a growth rate in two figures.

Kombi-Dan (Denmark) more than doubled its traffic in the second financial year after formation.

5.2.2 Data from the Rail Statistical Directive for 1987 are available for the countries Germany, France, Italy, Belgium and Denmark (see Table 5.13).

Table 5.12 shows the figures of 1986 and Table 5.14 gives the comparison between 1987/86.

Table 5.12 Rail/road 1986

Country	National		International				Transit		Total	
			Loading		Unloading					
	number	1000 tons	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
NL	-	-	7400	196	7200	115	5400	105	20000	416
B	458	8	14223	454	12857	372	190	4	27728	838
DK	357	7	-	3	-	9	-	-	357	18

Table 5.13 Rail/road 1987

Country	National		International				Transit		Total	
			Loading		Unloading					
	number	1000 tons	number	1000 tons	number	1000 tons	number	1000 tons	number	1000 tons
D	312312	4230	105174	2222	103751	1766	16625	367	537862	8586
F	149339	2237	19490	393	22118	446	44407	895	235354	3970
I	10447	264	50629	1451	52445	1557	70	2	113591	3274
B	518	11	14681	480	13516	393	77	2	28793	885
DK	-	-	-	25	-	23	-	-	-	48

Table 5.14 Rail/road growth rate 1987/86 in %

Country	National		International				Transit		Total	
			Loading		Unloading					
	number	1000 tons	number	1000 tons	number	1000 tons	number	1000 tons	number	1000 tons
D	-1	-5	8	13	8	14	16	18	3	4
F	11	4	-40	-42	-31	-37	127	50	8	-4
I	7	8	-13	-6	-4	-6	-	-	-7	-5
B	13	38	3	6	5	6	-59	-50	4	6
DK	-	-	-	-	-	-	-	-	-	167

CHAPTER 6

INTERNATIONAL INTRA EUR-10 TONNAGES (1983-1986) BY 10 COMMODITY GROUPS AND BY MODE

6.1 Introduction

Analysis by separate commodity groups (10 NST Chapters) has generally been carried out in the chapters relating to each mode of transport, especially for rail and inland waterways where changes from one year to another can be explained by changes in certain key industries. An analysis for all modes was presented in the 1985 Annual Report (Chapter 6), but here the emphasis was on a finer sub-division to the 24 NST groups and the analysis only referred to one year, 1984.

While it has been possible to assemble intra EUR-12 matrices for each mode from miscellaneous sources from 1983 onwards, it has only been practical to do this for all commodities combined. Detailed analysis at commodity group level can only be easily carried out based on data supplied under the three Statistical Directives. It therefore follows that it is necessary to limit this commodity analysis to intra EUR-10 movements.

The time series presented here relates 1983 to 1986. As elsewhere in this report, 1986 is a "pivotal" year when a switch has to be made from EUR-10 to EUR-12 and future analyses of commodity groups on an EUR-12 basis will start from 1986.

Note that:

a) Road Tonnages relate to bilateral movements only. Tonnages for Italian hauliers (see Chapter 2) have been split among the 10 NST Chapters pro rata to the tonnages carried by all bilateral partners obtained from the Road Directive.

b) Rail Tonnages reported in the inward direction are used for all Member States.

c) Inland waterways Tonnages reported in the inward direction are used.

d) General Due to revisions in the data and the method of estimating the commodity split for Italian hauliers there are small differences for 1984 compared to that published in the 1985 Annual Report.

6.2 Intra EUR-10 tonnages by 10 NST-Chapters (3 modes combined) 1983-1986

Table 6.1 gives the development of the different commodity groups according to the main classification of the NST (10 Chapters). The totals for all commodities combined are different from those given in Chapter 1 because they refer to EUR-10; further, the figures for road only relate to bilateral movements.

The results of Table 6.1 show from 1983 to 1986:

- substantial steady growth of NST 8 (chemical) and NST 9 (miscellaneous articles), up 20% and 18% respectively;
- considerable growth of NST 4 (ores and metal waste) and NST 5 (metal products), up 15% and 10% respectively, but 1986 tonnages considerably lower than 1984 and 1985, i.e. there were large increases from 1983 to 1984;
- average growth of NST 1 (foodstuffs and animal fodder) and NST 3 (petroleum products), up 9% and 7% respectively;
- marginal growth of NST 0 (agricultural products), up 2%;
- small falls of NST 2 (solid mineral fuels), NST 6 (crude and manufactured minerals, building materials) and NST 7 (fertilisers), down 4%, 2% and 4% respectively.

Table 6.1 Intra EUR-10 tonnages by NST-Chapters (3 modes combined)

NST	1983	NST-Chapter as % of total	1984	NST-Chapter as % of total	1985	NST-Chapter as % of total	1986	NST-Chapter as % of total	86/83 %
0	33786	8.3	35222	8.1	36404	8.3	34535	7.9	+2.2
1	40728	10.0	41275	9.5	44182	10.1	44250	10.1	+8.6
2	21765	5.4	24530	5.7	22249	5.1	20886	4.8	-4.0
3	37562	9.2	36108	8.3	36259	8.3	40109	9.1	+6.8
4	43375	10.7	52413	12.1	53688	12.3	49700	11.3	+14.6
5	36268	8.9	41653	9.6	42395	9.7	39986	9.1	+10.3
6	83962	20.7	84916	19.6	79877	18.3	82156	18.7	-2.2
7	11871	2.9	12091	2.8	11844	2.7	11371	2.6	-4.2
8	38026	9.4	41526	9.6	43090	9.9	45756	10.4	+20.3
9	59196	14.6	63961	14.7	67269	15.4	70088	16.0	+18.4
0 - 9	406536	100.0	433695	100.0	437265	100.0	438838	100.0	+7.9

6.3 Intra EUR-10 tonnages by 10 NST Chapters and by mode, 1983-1986

The development of the different commodity groups (10 NST Chapters) by mode over the period 1983 to 1986 is given in detail in Table 6.2. The following summary shows, for each mode, those NST Chapters where the mode has increased its share of the market between 1983 and 1986.

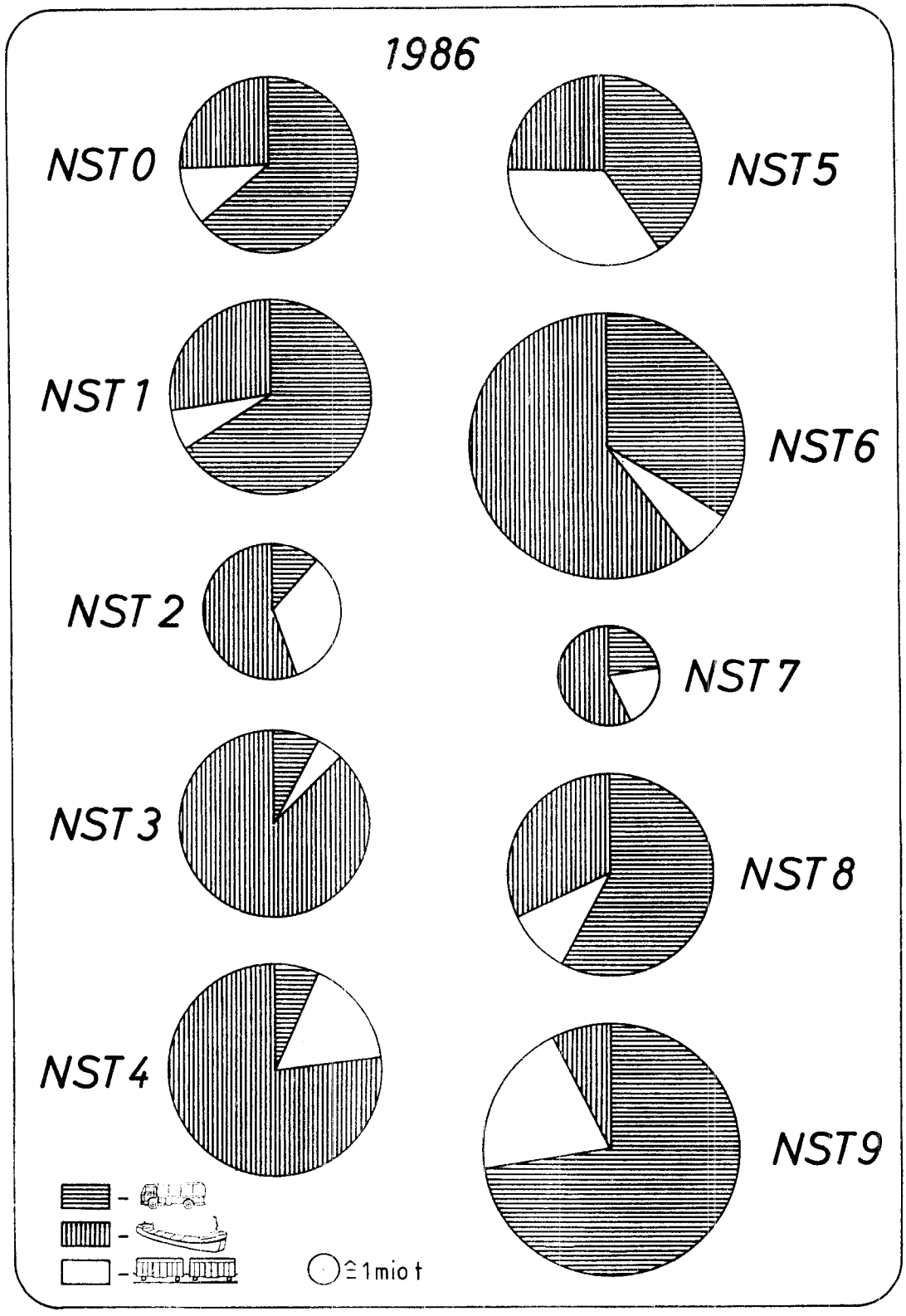
	NST Chapters
Road	0, 1, 2, 3, 4, 5, 7
Inland waterway	4, 6, 8, 9
Rail	1, 5, 6, 9

Table 6.2 International intra EUR-10 traffic, 3 modes, breakdown by NST-categories 1983-1986 ('000 tonnes)

NST	Year / Mode	1983	1984	1985	1986	86/83 %
0	Road	19175	20026	21371	21946	+14.5
	I.W.	9551	9359	9783	8822	-6.2
	Rail	5060	5837	5250	3767	-25.6
1	Road	25494	26248	28458	29198	+14.5
	I.W.	12799	12592	12718	12154	-4.6
	Rail	2435	2435	3006	2898	+19.0
2	Road	1978	2620	2552	2380	+20.3
	I.W.	11569	12260	11130	11612	+0.5
	Rail	8218	9650	8567	6894	-16.1
3	Road	2169	2208	2438	3183	+46.7
	I.W.	33501	32251	31926	35135	+4.9
	Rail	1892	1649	1895	1791	-5.3
4	Road	2725	3062	3021	3316	+21.7
	I.W.	32866	39530	40498	38237	+16.2
	Rail	7784	9821	10169	8147	+4.7
5	Road	14119	15563	15767	16139	+14.3
	I.W.	10174	11580	11273	9899	-2.6
	Rail	11975	14510	15355	13948	+16.5
6	Road	31268	30701	29325	27877	-10.8
	I.W.	48465	49115	45365	49644	+2.5
	Rail	4229	5100	5187	4635	+9.6
7	Road	2317	2370	2379	2560	+10.5
	I.W.	7053	6962	6743	6518	-7.6
	Rail	2501	2759	2715	2722	-8.3
8	Road	23429	24846	25957	26501	+13.1
	I.W.	10552	12372	12380	14630	+38.8
	Rail	4045	4308	4753	4625	+14.3
9	Road	43687	46508	48372	50779	+16.2
	I.W.	3789	4456	5013	5254	+38.9
	Rail	11720	12997	13884	14055	+19.9
0-9	Road	166359	174152	179648	183879	+10.5
	I.W.	180319	190477	186829	191905	+6.5
	Rail	59858	69066	70788	63054	+5.3

The results for 1986 are also shown graphically in Figure 6.1 where the areas of the circles for each NST Chapter are pro-rata to the tonnages. Each circle is divided pro-rata to the modal split between road, rail and inland waterway. This presentation enables the relative importance of different commodity groups to each mode to be easily seen.

Fig. 6.1



SOURCES

(a) Road Opinion Survey

B Institut du Transport routier
DK Danmark 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 Stichting NEA
UK Department of Transport

(b) Road Cost Survey

D Bundesverband des Deutschen Güterfernverkehrs (BDF) e.V.
F Comité national routier
NL Stichting NEA
B Instituut voor Wegtransport
L Fédération des Commerçants du Grand-Duché
UK Road Haulage Association Ltd.
DK Landsforeningen Danske Vongmaend

(c) Road Price Survey

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

(d) Inland Waterway Opinion Survey

Rhine — Commission Centrale pour la Navigation du Rhin
North-South — B Institut pour le Transport par Batellerie
NL Stichting NEA

(e) Inland Waterway Cost Survey

NL	Stichting NEA
	in collaboration with :
F	Office national de la navigation
B	Institut pour le transport par Batellerie
D	Bundesverband der deutschen Binnenschiffahrt

(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-Bundesamtes und der Bundesanstalt für den Güterfernverkehr
F	Ministère des Transports - Service des Transports routiers
I	Ministerio 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	Danmark Statistik
GR	Ethniki Statistiki Ypiresia
E	Ministerio de Transportes, Turismo y Communicaciones
P	Ministerio dos Transportes e Comunicaçoes
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

(j) Rail Tonnages

SOEC (Luxembourg) - Directive 80/1177

(k) Rhine fleet developments

Internationale Vereinigung des Rheinschiffsregisters (IVR)

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