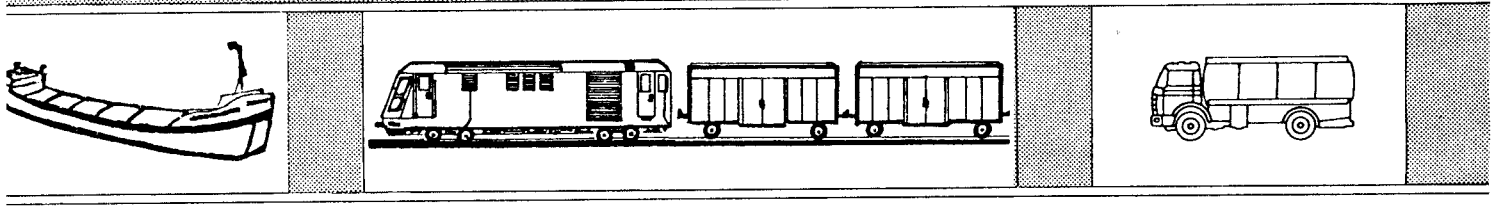
EUROPEAN COMMUNITIES

EUROPA TRANSPORT



OBSERVATION OF TRANSPORT MARKETS

ANNUAL REPORT
1981

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PRESENTATION OF THE 1981 ANNUAL REPORT

The EUROPA TRANSPORT publications, which report the results of the Observation of the Transport Market System, have been restructured for 1982. Under the umbrella title of EUROPA TRANSPORT, the following three reports are published:

- Analysis and Forecasts
- Annual Report
- Market Developments.

The contents of this Annual Report are as follows:

CHAPTER 1: GENERAL MARKET ASSESSMENT AND PROSPECTS

1.1. The gloomy economic atmosphere which characterized 1981 inevitably had repercussions on international transport within the Community. These repercussions were deeper and, in particular, more prolonged than had been expected, making 1981 a much more difficult year for international transporters than had been forecast. At Community level, the economic downturn affected the performance of all modes of transport to a greater or lesser extent. The greatest extent being for rail, where the tonnages moved between Member States(1) were down 7.6% on 1980; the lesser extent, in tonnage terms, being road haulage down 0.9% and in between inland waterways at - 3.7 The net effect of all this was that the total tonnage moved between the Member States was 3.3% down on 1980, so that the total tonnage was just over 400 million tonnes. It must also be borne in mind that 1980 itself was already a bad year, recording a 0.9% fall in tonnage on 1979.

1.2. Table 1.1: Annual EUR-7 tonnage flows by mode of transport (mio.t)

Mode \ Year	1981	1980	1979	1978
Road	154.53	155.89	152.03	140.80
Rail	67.03	72.53	79.72	65.85
I.W.	182.30	189.30	189.67	187.83
Total	403.86	417.72	421.42	394.48

1.3. Table 1.2: Annual growth rates - EUR-7 tonnage flows

(%)

Mode \ Year	1981/1980	1980/1979	1979/1978
Road	- 0.9	+ 2.5	+ 8.0
Rail	- 7.6	- 9.0	+ 21.1
I.W.	- 3.7	- 0.2	+ 1.0
Total	- 3.3	- 0.9	+ 6.8

(1) For statistical reasons restricted to EUR-7, i.e. Germany, France, Italy, the Netherlands, Denmark and the Belgium/Luxembourg Economic Union.

1.4. On the brighter side, the sharp downturn that first hit the transport market in mid-1980, bottomed out in the spring of 1981. Since then the recovery has been very gradual, but progressive, so that each set of quarterly figures through 1981 were better than the previous quarter. For the last quarter of 1981 the tonnage growth rates compared with the corresponding period of 1980 were + 4.2, - 4.6 and + 0.8% for road, rail and inland waterways respectively - all being much better than the annual figures.

1.5. Table 1.3: 1981 quarterly tonnage growth rates by mode of transport

(%)

Mode \ Year	Q1 1981/Q1 1980	Q2 1981/Q2 1980	Q3 1981/Q3 1980	Q4 1981/Q4 1980
Road	- 8.3	- 1.0	+ 2.0	+ 4.2
Rail	- 16.3	- 11.1	- 5.7	- 4.6
I.W.	- 9.9	- 7.1	- 3.0	+ 0.8
Total	- 10.5	- 5.6	- 1.6	+ 1.2

1.6. Modal developments

1.6.1. Road haulage returned the best results in comparison with rail and inland waterways during 1981, with its tonnage level falling by 0.9% compared with 1980. It was able to achieve this due to its flexibility and because of the structure of the goods it carries. Its flexibility in weak markets has often had to be translated into lower prices with the resulting effects on profits.

With regard to traffic flows, it would appear that French and Belgian hauliers (with the exception of transport from Italy) had a particularly hard time during 1981, with the worst case being traffic from France to Belgium, which was down 10% on 1980. On the positive side, road haulage to and from Denmark, Greece and, due to an enormous surge in the last quarter, the United Kingdom reported increases in traffic volumes, the respective percentages being 5%, 26% and 10%.

1.6.2. Rail traffic showed some positive signs of a recovery towards the end of 1981 limiting its tonnage decrease to 7.6% which, however, put its carryings back almost to the very low level of 1978. The structure of the goods rail carries is dominated by heavy industry, i.e. coal and coke, ores and semi-finished metal products. It was due to larger than average falls in tonnages of these goods that caused the international rail tonnages to fall back as far as they did. However, despite the fact that forecasts for the iron and steel industry are pessimistic for 1982, increases in some flows of NST 2, 4 and 5(2) were recorded during the last quarter of 1981, showing that perhaps finally the decrease in the carryings of these goods classes had bottomed out.

With regard to traffic flows during 1981, all French outward flows were very bad and all flows into Germany and Italy were little better. On the other hand, and with the exception of traffic from France, Dutch inwards flows increased in tonnage.

1.6.3. Inland waterways tonnage decreased by 3.7% in 1981 against 1980 and this level of decline was for the most part mirrored in the figures recorded for flows between individual Member States. Only one flow increased its tonnage during the year, namely Germany to Belgium/ Luxembourg, whilst at the same time only two flows declined by more than 10%, Germany to France at -17% and the Netherlands to France at - 24%. The reason for the sharp fall in traffic from Germany to France are hard to discern: all goods categories with the exception of the small fertilizer market recorded negative growth rates. On traffic from the Netherlands to France, the 24% fall was mostly attributable to the 50% decrease in third country origin coal transshipped in Rotterdam. The shipments of this coal had in fact increased nearly three-fold during 1980 and therefore when this fact is considered, the decrease comes more into line with falls on other relations.

(2) The NST classifications are given on page 8

1.7. Modal split

Table 1.4 shows annual modal split development since 1978 with the forecast for 1982. What is noticeable is the advance of road at the expense, ultimately, of inland waterways; 1979 was an exceptionally good year for railways.

Table 1.4: Modal split development

(%)

Year	Road	Rail	I.W.	Total
1978	35.7	16.7	47.6	100
1979	36.1	18.9	45.0	100
1980	37.3	17.4	45.1	100
1981	38.3	16.6	45.1	100
1982	38.8	16.3	44.9	100

1.8. Forecasts for 1982

Forecasts for the three modes of transport for 1982 have been presented already in the report "Analysis and Forecasts" earlier this year. Since the underlying economic conditions have not changed compared to the assumptions made in the report cited, the global figures of the forecast have not been revised.

To remind the reader of the forecasts published in the report "Analysis and Forecasts", a summary of the most important figures is given below.

(million t.)

Year / Mode	1981	1982	Growth Rate in %	EUR-9 1982
Road	154.53	157.47	+ 1.9	167.90
Rail	67.03	66.36	- 1.0	67.45
I.W.	182.30	182.12	- 0.1	182.12
Total	403.86	405.95	+ 0.5	417.47

The forecasted growth rates for 1982 are very different for the three modes of transport. The growth rate for railways shows the lowest of all modes. Inland waterway transport remains constant in 1982. The long-term trend of road transport to increase its share in total transport is not offset.

NST Classification

NST 0 - Agricultural products and live animals

NST 1 - Foodstuffs and animal fodder

NST 2 - Solid mineral fuels

NST 3 - Petroleum products

NST 4 - Ores and metal waste

NST 5 - Metal products

NST 6 - Crude and manufactured minerals, building materials

NST 7 - Fertilizers

NST 8 - Chemicals

NST 9 - Machinery, transport equipment, manufactured articles and miscellaneous articles.

CHAPTER 2: ROAD

2.1. Market

2.1.1. Introduction

Although there was a gradual recovery in international road transport between Member States towards the end of 1981, total intra EUR-9 tonnage is estimated to have fallen by 0.9% as compared to 1980. By contrast, traffic between Greece and the rest of the Community increased by 26% in 1981, the first year of Greece's adhesion to the Community.

Even within EUR-9, however, developments were not uniform. Road traffic in the central part of the Community (Germany, France, the Netherlands, Belgium and Luxembourg), which accounts for about 75% of intra-Community tonnage was weak, with falls of generally 1 to 2% on most relations; principal exceptions were the relation France to Belgium/ Luxembourg, which showed a fall of 10%, and the Netherlands to Belgium/ Luxembourg, which showed a rise of 8%. Traffic from Italy by road advanced by 4%, but traffic to Italy was stagnant. Outward traffic from the United Kingdom also increased (+ 5%), but inward traffic increased much more strongly by almost 15%, presumably due to the strength of sterling. Danish inward traffic also advanced substantially (by almost 10%), but outward traffic was unchanged. The balance between inward and outward Irish traffic (excluding the United Kingdom) changed dramatically, with inward traffic increasing by 50% and outward traffic falling by 20%.

2.1.2. Analysis by country of haulier

German hauliers

As often happens when the profitable German domestic market is depressed (long-distance professional transport fell by 2.7% in 1981), German hauliers switched to the international markets, increasing their share of outward tonnage from 37.9 to 38.5% and registering an even greater increase in the reverse direction, up from 37.5 to 38.8%.

Taken together with the fact that German outward traffic by road actually rose by 1.0%, while inward fell by 1.2%, the tonnages carried by German hauliers increased by 2.3% for both outward and inward traffic (15.6 to 15.9 and 17.2 to 17.6 mio.t respectively), i.e. considerably better than the Community average.

French hauliers

1981 was a very bad year for French hauliers. Not only was the 5% reduction in outward French traffic only marginally offset by a 1% increase in the inward flows, but French hauliers' share of the market fell by 2 to 5% on all the principal relations. Total carryings by French hauliers thus fell by about 5%. This result is thought to be mainly due to a more rapid increase of costs in French francs than competitors; compensation for this was only obtained at the end of 1981, when the French franc was devalued.

The results of the Business Opinion Survey are consistent with the above, the decline of activity for French hauliers being more severe than any other Member State.

Italian hauliers

From the limited information available, there appear to have been no important changes in the market share held by Italian hauliers. Total traffic to Germany was strong (+ 5%) and the Italian hauliers' share unchanged. Italian hauliers in the Business Opinion Survey were even more pessimistic in 1981 than in 1980.

Dutch hauliers

The Dutch share of the market with France improved almost 4% in 1981, while that with Italy was unchanged overall; the Dutch share of the Danish market declined. Data for the important German market shows that the Dutch share of traffic from Germany increased by about 1%; however, in the reverse direction, the results are less consistent, with the Dutch results showing a decline of 1% but the German results showing virtually no change. The Dutch results must be treated with some caution, especially outward traffic, because of the high proportion of "nationality unknown". Data for the Belgian market is not available.

Taken as a whole, Dutch hauliers seem to have come through the generally poor situation of 1981 reasonably well. This is borne out by the replies to the Business Opinion Survey, where the Dutch hauliers showed the greatest improvement in activity levels as compared with 1980.

Belgian and Luxembourg hauliers

The total market declined by 1.5%, and according to non-Belgian sources, the Belgian share has been under pressure in their relation with Germany, whereas the Luxembourg share has improved slightly on their relation with Germany. In the case of the relation with France, the information available is based on foreign trade statistics which do not separate Belgium and Luxembourg; on this relation, the share of Belgian and Luxembourg hauliers improved by 3 to 4% in 1981, but inward traffic to Belgium and Luxembourg was very weak, falling by 10%. Information of the market share on other relations is not available.

From this limited information, it appears that 1981 was quite a difficult year for Belgian and Luxembourg hauliers; this is consistent with the results obtained in the Business Opinion Survey.

United Kingdom hauliers

Despite a strong upsurge of international road traffic (ro-ro) accompanied traffic in the last quarter of 1981, there was a small decline (under 2%) in the number of such vehicle movements by United Kingdom hauliers (174.000 against 177.000). As the total market increased from 307.000 to 323.000 movements (i.e. up 5%), the UK share fell to 54% compared with 58% in 1980 (presumably due to the strength of sterling). Unaccompanied trailers showed an even greater rate of expansion (up 14%), but the nationality of these trailers is unknown. Total movements thus increased by over 9%.

Other information suggests that whereas the outward tonnage increased by about 5%, inward tonnage into the UK increased much more strongly, at about 15%.

This generally positive result is supported by the results from United Kingdom hauliers in the Business Opinion Survey.

Irish hauliers

Information from non-Irish sources indicates a large change in the inward/outward balance to continental destinations (inward from Germany, Belgium/Luxembourg, France and Denmark up 0.12 to 0.18 mio.t, while outward declined from 0.21 to 0.17 mio.t).

These trends were supported by the qualitative results available from a panel of Irish hauliers, which show a very depressed market for outward traffic, but little difficulty in obtaining back-hauls.

Danish hauliers

Information from non-Danish sources enables the share of Danish hauliers to be examined on the relations with Germany, France and the Netherlands, which account for about 80% of Danish intra-Community flows. Inward traffic from Germany increased strongly (+ 12%) and despite a loss of market share, Danish hauliers registered a 7% increase in tonnage; traffic to Germany was almost unchanged. Danish hauliers increased their share of the much smaller inward markets from France and the Netherlands by 3-4%, but their share of the more stagnant outward markets was unchanged.

Danish hauliers thus had a successful year in tonnage terms, a result borne out by the Business Opinion Survey, where the Danish hauliers were the most optimistic in 1981.

Greek hauliers

The Greek market was very strong in 1981, with inward and outward traffic rising by 30% and 23% respectively. The Greek share in 1981 was 65% for inward and 64% for outward traffic. The Greek share of the German market (which accounts for over 50% of Greek intra-Community traffic) was over 70%, but other evidence suggests that this was even higher in the previous year. Greek hauliers have a very strong share of the markets, with Belgium (87%), the Netherlands (67%) and Italy (64%), but weaker shares in the markets with Denmark (25%), the United Kingdom (36%) and France (44%).

2.1.3. Shares of the road haulage market held by different Member States

The previous section examined hauliers' activity levels in 1981 as compared to the previous year, but this does not answer the question as to the shares held by different Member States in the intra-Community market. Unfortunately, the data available for 1981 does not allow such percentage shares to be calculated. The most recent comparable data relates to that collected in the road Statistical Directive for 1979, which has the advantage that data on t-km as well as tonnes is available. Later data is not yet available.

From this source, 1979 data is available for Germany, France, the Netherlands, Belgium, Luxembourg, the United Kingdom and Denmark, but not Italy or Ireland or Greece,(which was not a member of the EEC at that time).

The market shares, both in terms of tonnes and t-km, are shown in Table 2.1. The figures only relate to flows between the seven Member States concerned.

Table 2.1: Shares of the market held by hauliers from Germany, France, the Netherlands, Belgium, Luxembourg, the United Kingdom and Denmark on journeys between these Member States.

Country of haulier	Share of market	
	in tonnes	in t-km
D	22	21
F	19	25
NL	31	27
B	19	14
L	2	1
UK	3	6
DK	4	6
TOTAL	100	100

2.1.4. Shares of the road haulage market held by own account operators

The results from the Road Statistical Directive also give a breakdown into "hire and reward" and "own account" operators. Table 2.2. gives the share, in tonnes and t-km for own account hauliers. Once again the absence of data from Italy, Ireland and Greece confines the analysis to journeys between the other seven Member States.

Table 2.2: Share of market held by own account operators on journeys between Germany, France, the Netherlands, Belgium, Luxembourg, the United Kingdom and Denmark.

Journeys to and from	Share of market	
	in tonnes	in t-km
D	21	14
F	26	18
NL	19	15
B	28	25
L	33	21
UK	8	9
DK	14	17
AVERAGE	23	17

2.1.5. Special analysis subdividing NST 6 (building materials) from other goods.

In the next section it will frequently be seen that NST 6 behaves in quite a different way to other product groups. In fact, NST 6 traffic is generally quite different from other traffic, being mainly very short distance and dependent on major construction works, e.g. motorways, and where back-hauls are not normally sought. Such a market can be expected to be particularly volatile, and, because it is so large, may lead to misinterpretation if it is not considered separately.

For the 5 principal two-way relations considered in the next section, a summary has been drawn up showing for each of the 10 directional flows the split between NST 6 and the remaining goods classes. This is shown in Table 2.3.

The results show that, for these 10 directional flows which cover about 70% of the total road market, that there was a considerable difference between NST 6, which fell on average by 9.8%, and other goods which rose on average by 1.9%, i.e. there was positive growth in 1981 if one excludes the exceptional NST 6 group, which accounts for 27% of the market.

Examining individual relations, changes in NST 6 in 1981 varied from - 42 to + 3, while for other goods changes varied from - 4% to + 10, showing that the substantial NST 6 markets were more volatile.

Table 2.3: Subdivision of NST 6 (building materials) from other goods on the 5 principal two-way relations, 1981.

Relation	NST 6		Other Goods		Total	
	tonnes (000s)	% change from 1980	tonnes (000s)	% change from 1980	tonnes	% change from 1980
D ⟶ NL	5 338	- 9	10 902	+ 4	16 240	- 1.0
NL ⟶ D	1 956	- 7	12 348	- 1	14 304	- 2.2
B+L → F	5 720	- 6	9 058	+ 6	14 778	+ 0.8
F ⟶ B+L	1 814	- 42	8 223	+ 3	10 037	- 9.6
NL ⟶ B+L	4 845	+ 3	7 959	+ 10	12 804	+ 7.5
B+L → NL	3 712	- 9	6 456	0	10 168	- 3.3
F ⟶ D	3 070	- 7	8 160	- 1	11 230	- 2.9
D ⟶ F	1 189	- 4	7 074	+ 3	8 263	+ 1.8
B+L → D	1 445	- 3	7 541	- 4	8 986	- 4.2
D ⟶ B+L	1 990	- 19	6 544	+ 1	8 534	- 4.4
TOTAL	31.079	- 9.8	84.265	+ 1.9	115.344	- 1.6

2.1.6. Analysis for five principal relations

Out of the 45 possible two-way flows between the 10 Member States, 5 have flows of more than 15 mio.t, 1 has 9-15 mio.t, 4 have 2.5-9 mio.t and 35 have less than 2 mio.t. An analysis in greater depth is presented for the 5 principal two-way relations. This detailed analysis makes use of the most convenient sources available, namely French customs statistics, Belgian and Luxembourg foreign trade and German transport statistics.

Germany to the Netherlands

This is the largest market, with over 30 mio.t (almost 20% of the total for all 45 relations). 1981 was a weak market, with traffic declining by 1.6%.

In the dominant direction, Germany to the Netherlands, traffic fell by only 1.0% to 16.2 mio.t, and Dutch hauliers actually increased their tonnage marginally. German hauliers' tonnage fell by 3.5%. The fall in the Germany to the Netherlands direction can be explained by the weakness in the construction sector, NST 6 accounting for 33% of the market, which fell by 0.56 mio.t. Ignoring NST 6, tonnage actually rose by 0.40 mio.t, the main beneficiaries being NST 1 and NST 8 (both up 0.25 mio.t).

The difference in the performance of the German and Dutch hauliers cannot be explained by over-concentration of the German hauliers in the NST 6 market, since their share of this market is approximately the same as the total market, i.e. about 30%.

In the Netherlands to Germany direction, traffic fell by 2.2% to 14.3 mio.t, but in this case the German hauliers' fall (2.5%) was only marginally larger than the Dutch hauliers (2.0%).

Ignoring NST 1, which actually rose by 6% or 0.17 mio.t, the remainder declined by 0.48 mio.t, half of which can be explained by falls in NST 6 (0.15 mio.t) and NST 0 (0.11 mio.t). It thus seems that hauliers from both countries were making more efforts to obtain back-hauls.

France to Belgium/Luxembourg

This is the second largest market with almost 25 mio.t. The directional flows are very unbalanced, 60% being in the direction Belgium/Luxembourg to France. In 1981, the flow in the dominant direction rose by less than 1%, but the flow in the France to Belgium/Luxembourg direction fell by 10%. The flows were thus more unbalanced than in the previous year, when 57% was in the Belgium/Luxembourg to France direction.

In the Belgium/Luxembourg to France direction, NST 6 (accounting for 39% of the market) declined by 0.38 mio.t, but this was compensated by a 20% rise in NST 1 (up 0.22 mio.t) and 5% rise in NST 8 (up 0.14 mio.t). French hauliers' share of the market fell from 48% to 44%, their share falling from 50% to 46% in the important NST 6 market and from 49% to 43% in the NST 5 market (9% of the total market).

In the France to Belgium/Luxembourg direction, the substantial fall can be explained entirely by NST 6, which fell by 42% to 1.81 mio.t. This fall is thought to be mainly due to completion of a section of motorway. Movements on NST 6 thus fell from 28% to 18% of the total market. French hauliers were particularly squeezed in this declining market, their share falling from 49% to 40%.

If one excludes NST 6, traffic in the France to Belgium/Luxembourg direction actually rose by 0.23 mio.t (or nearly 3%). However, the French hauliers' traffic actually declined marginally so that their share of the market fell from 49% to 40%.

Most of the increase can be explained by a buoyant NST 0, up 6% or 0.15 mio.t. In this market, French hauliers almost maintained their share. However, in the important NST 1 market, up 3.5% or 0.06 mio.t, French hauliers' carryings fell by 0.04 mio.t and their share declined from 40 to 36%.

Belgium/Luxembourg to the Netherlands

This market has a total size of 23 mio.t, and is the largest market to show an increase in 1981, up over 2%. Belgium/Luxembourg outwards traffic actually fell by 3.3%, while inward traffic rose by 7.5%, increasing the imbalance between inwards and outwards so that Belgium and Luxembourg inwards rose from 53% to 56% of the market. No information is available for 1981 by nationality of haulier, but data from the Statistical Directive for 1979 indicate that Dutch hauliers have about 70% of the market.

In the Netherlands to Belgium/Luxembourg direction, tonnages increased by 0.90 mio.t. There was a large increase in NST 3, which doubled from 0.54 to 1.15 mio.t, mainly due to an enormous increase in heavy fuel oils (NST 3, 2, 7) which increased from 0.08 to 0.63 mio.t, to the detriment of flows by inland waterway. Other substantial increases were NST 1 (1.65 mio.t, up 0.20 mio.t) and NST 6 (4.84 mio.t, up 0.15 mio.t). The small NST 2 market fell sharply (0.35 mio.t, down 0.12 mio.t).

In the Belgium/Luxembourg to the Netherlands direction, tonnages fell by 0.34 mio.t. This could be attributed to a decline of 0.35 mio.t in NST 6 (down to 3.71 mio.t). Other notable changes were NST 1 (up 0.19 mio.t at 1.75 mio.t) and NST 8 (up 0.11 mio.t at 0.91 mio.t).

Germany to France

This market of almost 20 mio.t was virtually unchanged in total in 1981. The dominant flow, France to Germany, actually fell by 0.34 mio.t, being partially offset by an increase of 0.15 mio.t in the reverse direction. In 1981, the France to Germany tonnage was 58% of the total market. The share of French hauliers fell in both directions, by 2% for France to Germany and by 5% for Germany to France (according to German sources, German hauliers' share rose by 3.2% for France to Germany and by 3.9% for Germany to France).

In the dominant direction, France to Germany, NST 6 tonnage falling by 0.25 mio.t to 3.07 mio.t accounted for most of the total fall of 0.34 mio.t, other product groups showed little change. French hauliers' share of the important NST 0 and 1 market (23% of the total) fell from 56% to 53% and of NST 8 (12% of the total market) fell from 57% to 53%.

In the Germany to France direction, the main group to advance was NST 9, which increased by 0.15 mio.t to 2.70 mio.t. French hauliers' share of this market fell from 48% to 44%,so their tonnage in NST 9 actually declined, while in NST 5 their share also fell from 45% to 40% (0.48 to 0.42 mio.t).

Germany to Belgium/Luxembourg

This market of 17.5 mio.t declined in 1981 by almost 2% according to German sources and by over 4% according to Belgian and Luxembourg sources.

The Belgium/Luxembourg to Germany flow dominates marginally (52-53% of total flow) and this fell by 2.3% according to German sources (4.2% according to Belgian and Luxembourg sources). The smaller Germany to Belgium/Luxembourg flow fell by 1.3% according to German sources (4.4% according to Belgian and Luxembourg sources).

The German hauliers improved their share of the Belgium/Luxembourg to Germany market (up from 37.9 to 39.5%), according to the German source, while in the reverse direction their share was virtually unchanged. In the Luxembourg market, the German hauliers' share fell by almost 2% in each direction.

The falls by NST chapter in the dominant direction were, based on the Belgian and Luxembourg sources, exceptionally uniform and do not merit any special remark. In the reverse direction, Germany to Belgium/ Luxembourg, there was a considerable fall of 0.45 mio.t in NST 6, or almost 19%, but no major changes in other products.

2.2 Transport surveys

2.2.1 Introduction

The main purpose of transport surveys is to find out rapidly how road hauliers have seen the level of their intra-Community freight transport activity develop during a particular quarter. The surveys also provide very useful data on the economic factors affecting a firm's situation and in this respect constitute a valuable source of information.

Since, for the purposes of an annual report, the available statistical information is more suitable than the qualitative results of the surveys when it comes to analyzing the trend in transport operations and hence in firms' activity, this section will concentrate on the trends in the economic factors.

The results for 1981 cover surveys carried out in the Community of the Nine (EUR 9). The results for Greece will be included in the next report.

The situation in respect of 1980 was as follows:

1st quarter: EUR 9, less Ireland and the United Kingdom,

2nd quarter: EUR 9, less the United Kingdom,

3rd and 4th quarters: EUR 9.

No questions concerning the nature of the goods transported were included, in order to keep the information within manageable proportions and avoid jeopardizing the smooth operation of the surveys.

2.2.2 Transport activity

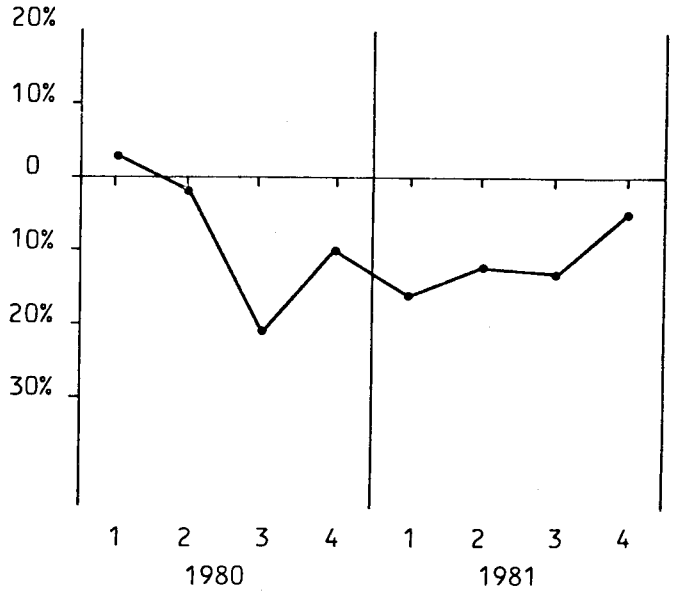
The situation on the market for the carriage of goods by road between Member States as seen by the hauliers replying to the questionnaire - a situation characterized in 1980 by a progressive decline in the level of activity - developed more favourably in 1981, although the level of activity in some countries was still far from satisfactory (see Figure 2.1).

During the first half of 1981 the market was hesitant, although there were some bright features in prospect.

The expected upturn in activity took place during the second half of 1981, notably in the last quarter.

Figure 2.1: Change in the level of firms' activity, expressed as an aggregate balance of opinions (percentage difference between numbers expressing opposite views)

Source: Non-weighted results of the surveys



On some bilateral links, traffic does not always seem to be equally shared between the operators of the two countries concerned. Thus, the share of traffic transported by German hauliers over links between Germany and France or Italy is greater than that of their French and Italian counterparts.

The same applies to Dutch hauliers with regard to the links between the Netherlands and France, Italy, Germany, Luxembourg and Belgium.

As regards the BLEU's transport links with Germany, France and Italy, the share of traffic carried by Belgian or Luxembourg hauliers appears to be greater than that carried by their German, French or Italian counterparts.

French and Italian hauliers' shares of activity between France and Italy appear to be stable.

These observations, based on the results for export/import traffic supplied by the hauliers questioned, are subjective but are confirmed by the analysis of the statistical data (see Section 2.1).

The assessment of activity carried out does not differ fundamentally for small, medium or large firms.

In some countries, the effects of seasonal variations in activity are more significant for large than for small or medium firms.

The subjective nature of the basic data here causes the results for international transport activity to be suitable only for several deductions and not for measuring the trend. In conclusion, it should also be remembered that the first quarter of 1982, while disappointing, should only moderate the effects of the recovery and not jeopardize the tendency towards expansion which began around the middle of 1981.

2.2.3 Analysis of economic indicators

At this point, a detailed analysis of the indicators which are more specifically economic in nature - recruitment of drivers, liquidity difficulties and investment - is warranted.

2.2.4 Recruitment

The average percentage of firms declaring they had recruited drivers fell from 16% in 1980 to 12% in 1981.

The average percentage for 1981 by category of firm was as follows (1980 figure in brackets): small firms 6% (9%), medium-sized firms 13% (18%), large firms 24% (29%).

It is to be expected that large firms should be more concerned than firms in the other two categories with driver recruitment, since they have a higher turnover of staff as a whole, and of drivers in particular.

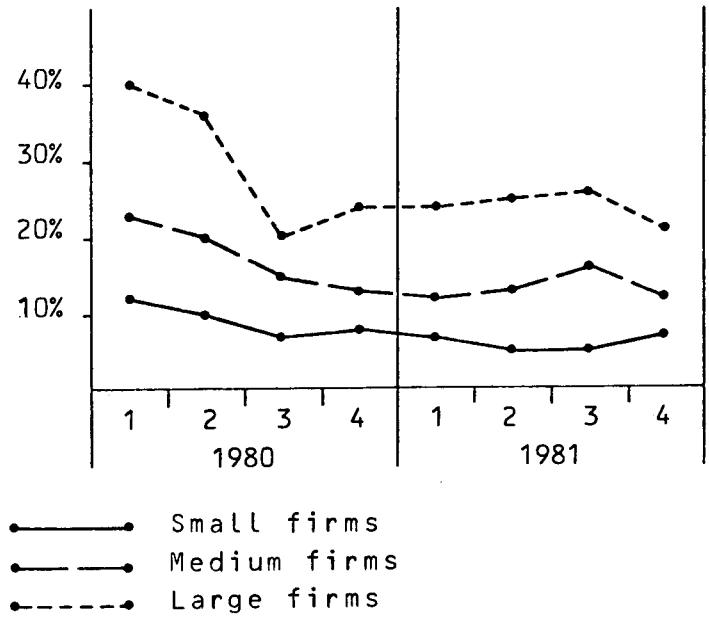
Taken as a whole these results prompt the following initial comments:

(a) the proportion of firms stating they had recruited drivers - already not very high in 1980 - fell by 4% in 1981;

(b) the average annual percentage of firms recruiting differs greatly from one category to another - an observation which is confirmed by the quarterly results (see Figure 2.2);

(c) the proportion of firms stating they had recruited in 1981 was down on the previous year in all three categories

Figure 2.2: Percentage change in number of firms stating they had recruited drivers, by category of firm



The overall percentages quoted above (16% in 1980 and 12% in 1981) provide an average figure only for the whole of each year. A review of the quarterly data, however, and comparison of these with the results by transport activity lead to the following conclusions:

(4)

(i) the fall in the level of activity during 1980 led to a fall in the percentage of firms recruiting drivers too (this decline was more noticeable in the large-firm category).

Despite the lack of data on the type of recruitment which took place, it is probable that the drivers recruited were replacements rather than extra staff;

(ii) the numbers which firms had on their books enabled them to meet the slight upturn in activity during the fourth quarter of 1980;

(iii) the percentage of recruitments was very slightly down (i.e., almost stable) in the first half of 1981 - a period itself of stable activity, seasonal variations apart;

(iv) the third quarter of 1981 was distinguished by a slight upturn in the rate of recruitment in the medium-firm category, while small and large firms maintained the level of the previous quarters;

(v) the revival of activity in the fourth quarter of 1981 does not seem to have encouraged firms to go on recruiting, since a fall in the percentage of recruitments by medium and large firms was recorded;

(vi) the results for the first quarter of 1982 show an increase in the percentage of medium and large firms stating they had recruited. This is a positive development which augurs well for the future.

The percentage of firms stating they had recruited drivers has been fairly low in the last two years, especially in 1981. There are a number of reasons why this should be so, including the burden of social costs and the sombre economic climate in the transport industry.

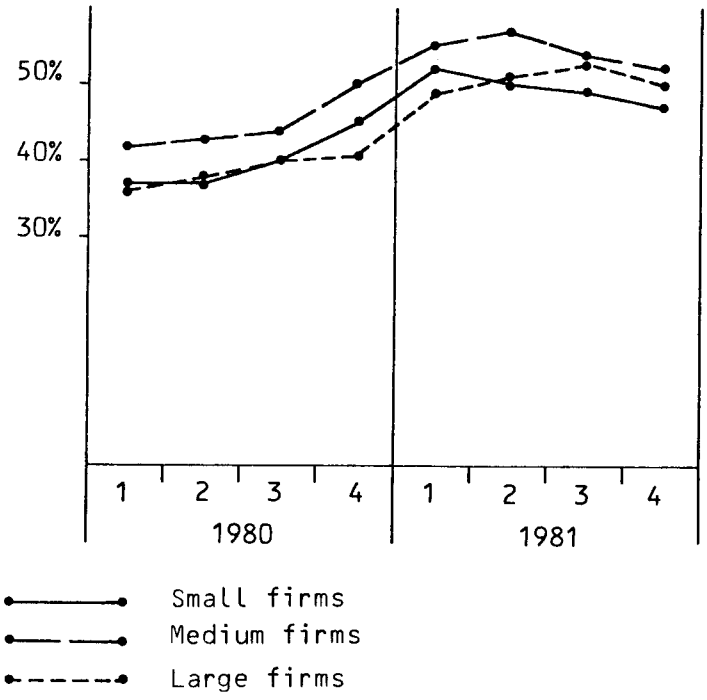
In view of the general conditions on the labour market it is not surprising that a high percentage of firms which actually recruited drivers (65% in 1980 and 77% in 1981) thought that it was easy and/or normal to do so.

2.2.5 Liquidity

1981 was generally a fairly gloomy year as regards firms' liquidity (see Figure 2.3).

As can be seen, the average annual percentage of firms stating they had had liquidity difficulties was 51% in 1981 compared with 41% in 1980.

Figure 2.3: Percentage change in number of firms stating they had had liquidity problems, by category of firm



The medium-sized firms constitute the category most affected by liquidity problems (annual average = 45% in 1980 and 55% in 1981).

In the same two-year period, it was in the large-firm category that the average annual percentage increase in firms with liquidity problems was the greatest (39% in 1980, 51% in 1981).

Liquidity problems have very different repercussions from one Member State to another. Expressed as an average annual percentage (i.e., all categories of firm together), liquidity problems were encountered in 1981 by 69% of Italian, 64% of French, 58% of British, 42% of German, 31% of Belgian, 27% of Danish and, finally, 17% of Dutch hauliers.

One reason which might explain this large difference is the diversity in the Member States' respective taxation policies. It is also likely that inflation - the rate of which differed considerably from one country to another - also affected firms' liquidity positions.

Among the reasons most frequently quoted by hauliers themselves were: increased costs, tariffs out of step with cost trends and longer delays in payment.

2.2.6 Investment

Many lessons can be drawn from the results relating to both general and rolling-stock investment by transport firms. Firms' investment policy is a significant economic indicator for this sector of activity.

Indeed, one might even say that investment, in view of its links with a firm's activity, driver recruitment and liquidity and its effect on the evaluation of capacity utilization, acts as a barometer of that firm's economic health.

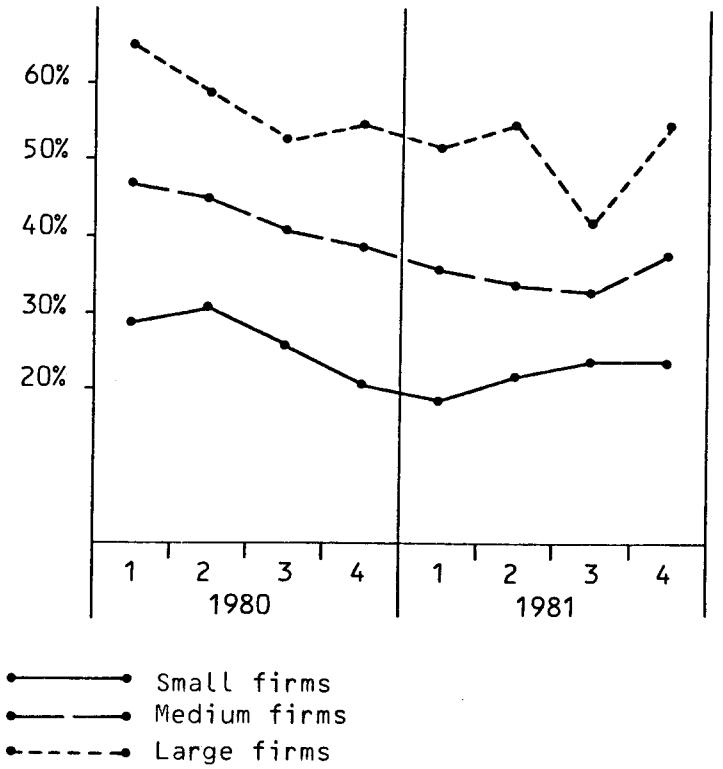
If such is the case, one is forced to admit that the barometer was falling in 1981. The surveys carried out in 1981 show that the average annual percentage of firms which invested was 32% as opposed to 38% in 1980.

The largest percentage of firms investing annually was found in the large-firm category (58% in 1980, 51% in 1981). Next came medium-sized firms (43% in 1980, 35% in 1981) and lastly small firms (27% in 1980, 22% in 1981).

As with driver recruitment, the percentage of large firms stating each quarter that they had carried out investment was higher than in the case of medium-sized and particularly of small firms (see Figure 2.4).

These figures show, that while the percentage of firms investing fell in 1981 in all three categories, the decline was greater in small and medium-sized firms (- 19%) than in large ones (- 12%).

Figure 2.4: Percentage change in number of firms stating they had invested, by category of firm



Scrutiny and analysis of these results show that they are consistent with those for activity, liquidity, driver recruitment and even capacity utilization.

Investment other than that in rolling stock represented 13% of the total in 1981 as in 1980.

If one considers rolling-stock investment only, it will be seen that the proportion intended for the purchase of new vehicles fell from 30% in 1980 to 24% in 1981. As a whole, this type of investment declined progressively, in percentage terms, throughout the two-year period: 31% at first quarter 1980, but 22% at fourth quarter 1981.

For 1981, the situation with regard to each category of firm was as follows:

(a) Small firms : 26% of investment was devoted on average each quarter to buying replacement rolling stock.

Trend: general tendency is slightly down, except for the third quarter which was better than the others.

(b) Medium-sized firms: the average proportion devoted each quarter by this category to expanding the fleet of vehicles was 20%.

Trend: general tendency was slightly down, except for the third quarter which was better than the others.

(c) Large firms : on average, 28% of investment each quarter was intended for the purchase of new vehicles.

Trend: general tendency slightly up.

To sum up, the haulage firms questioned appear, since the second quarter of 1981, to be moving towards a recovery in investment, having gradually reduced their rolling-stock investment (which enabled them to come to terms with the fall in activity already noted). Slight and hesitant though this recovery is, there are signs of a coming improvement in the short-term economic climate of the transport sector.

2.3. Prices

2.3.1. Introduction

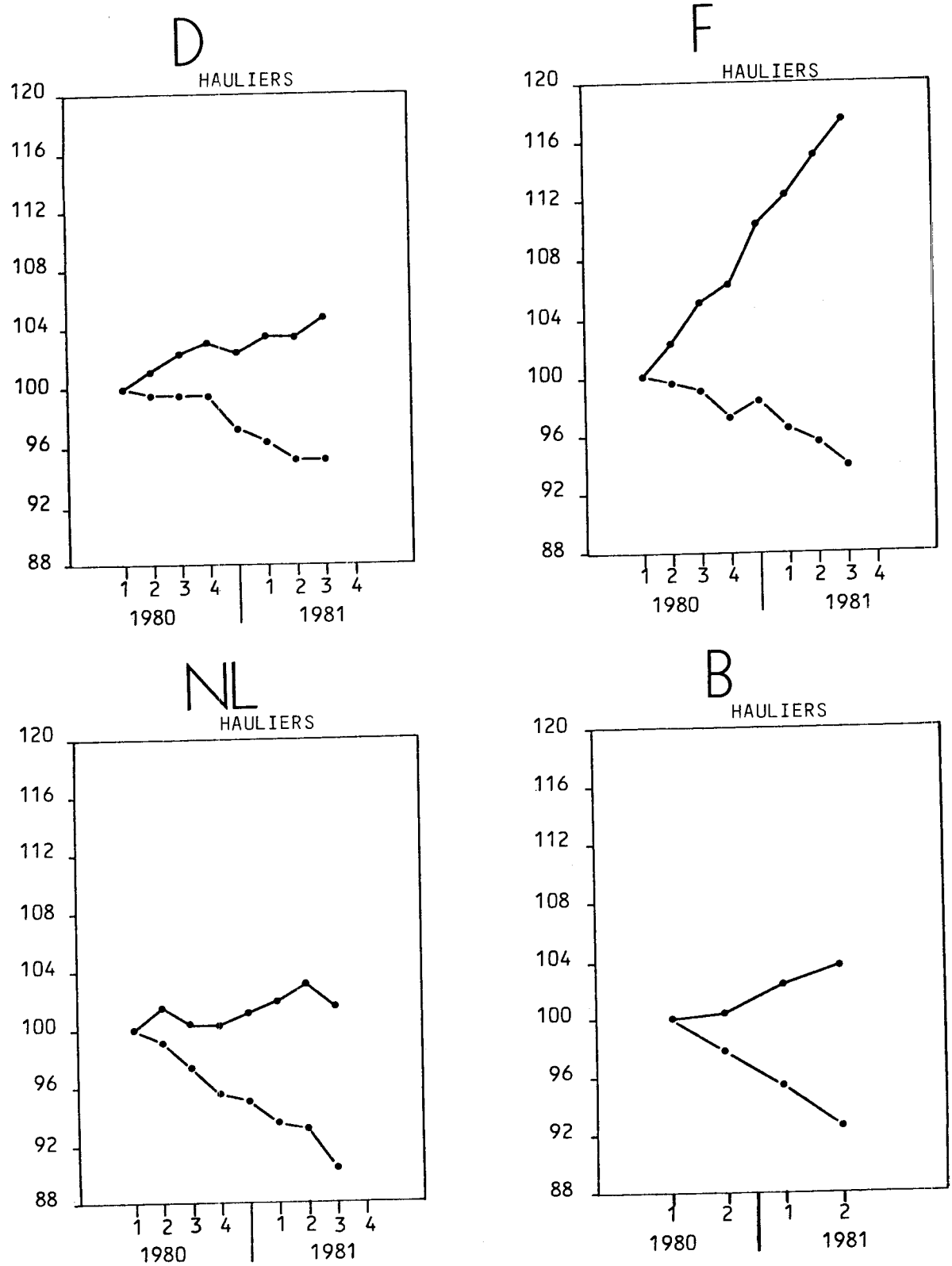
The results discussed below are the first to be published in the series of Market Observation reports. A feasibility study carried out in 1979 demonstrated the technical advantages of a central analysis of data collected in Member States. Suitable data was already being collected in the Netherlands and Germany (although the results presented here make use of published German data as the German data is only just being integrated into the central system). New surveys have been started in France, Italy, Belgium and Luxembourg, while pilot surveys have been carried out in the United Kingdom and are under discussion elsewhere. These new surveys are providing extensive data on about 4.000 journeys by "hire and reward" hauliers each quarter in each Member State. This permits not only the calculation of general indices but also sub-indices relating to goods class, tonnage class and distance band, as well as comparisons with tariff levels. This first analysis concentrates on general indices and sub-indices relating to goods class; other aspects will be examined later.

2.3.2. Overall results

Prices continued to be weak in 1981, the observed small absolute increases being less than general increases in costs. The solid lines in Figure 2.5 show the evolution of average prices for German, French, Dutch and Belgian hauliers based on data for the relations between these four Member States and the relations with Italy - data on Italian hauliers is only available for the second half of 1981 which is too short a period to show the evolution.

As work on harmonized cost indices, has only just started, the retail price index in each of the four Member States has been used as a proxy for cost increases. The broken lines in Figure 2.5 show the evolution of real prices (absolute prices adjusted for changes in the retail price indices). Whereas the fall in real prices in 1980 had been less for German and French hauliers than Dutch and Belgian hauliers, all hauliers registered a fall of about 5% in real prices in 1981.

FIGURE 2.5. OVERALL RESULTS FOR D, F, NL AND B HAULIERS



INDICES AT CURRENT PRICES (IN NATIONAL CURRENCIES) RELATIONS WITH D, F, NL, B AND I

INDICES AT CONSTANT PRICES (Q1/80 = 100, EXCEPT B, H 1/80 = 100) (USING RETAIL PRICE INDEX AS DEFLATORS)

2.3.3. Developments in prices by relation

Figure 2.6 shows the development of the prices of German, French, Dutch and Belgian hauliers on the relations between them. To compare the prices for hauliers of different nationalities, it is necessary to work in a common exchange rate, and this has been done by converting the average prices received by hauliers to EUA, by using the average exchange rate for the period concerned. The relative increase in the prices of French hauliers on each relation (about 10% in mid-1981 compared with the first quarter of 1980) is clearly seen, while the relative prices of German, Dutch and Belgian hauliers only changed marginally in 1980 and 1981. The relative increase of the French hauliers' price is thought to be due to a higher inflation rate which was partially compensated by changes in exchange rates during the fourth quarter of 1981. It should be stressed that the results in Figure 2.6 cannot be used to compare the absolute prices changed by hauliers, but only changes in relative prices since the beginning of 1980.

Average prices, expressed in EUA, for traffic on relations to Italy are shown in Figure 2.7, but only a limited analysis is yet possible, as there is only data for the last two quarters of 1981 for Italian hauliers. These preliminary results indicate a relative fall in the prices of Italian hauliers in the fourth quarter of 1981.

2.3.4. Relationship between price changes and volume changes

Whereas in the manufacturing sector reductions in prices would normally boost sales, the fact that transport demand is a derived demand means that prices tend to rise and fall as demand rises and falls due to short-run inelasticity of transport supply. Figure 2.8 shows the interrelation between price changes (real prices weighted by the shares of the hauliers concerned) and volume changes. Because of the seasonal fluctuations of volume - high in the second and fourth quarters, low in the first and third quarters - the analysis is shown on a half-yearly basis.

The results show a steady fall of real prices for each relation examined and a weak relationship with volume changes. A longer time series is needed for a deeper analysis.

5)

FIGURE 2.6. PRICE DEVELOPMENT IN RELATIONS BETWEEN D, F, NL AND B

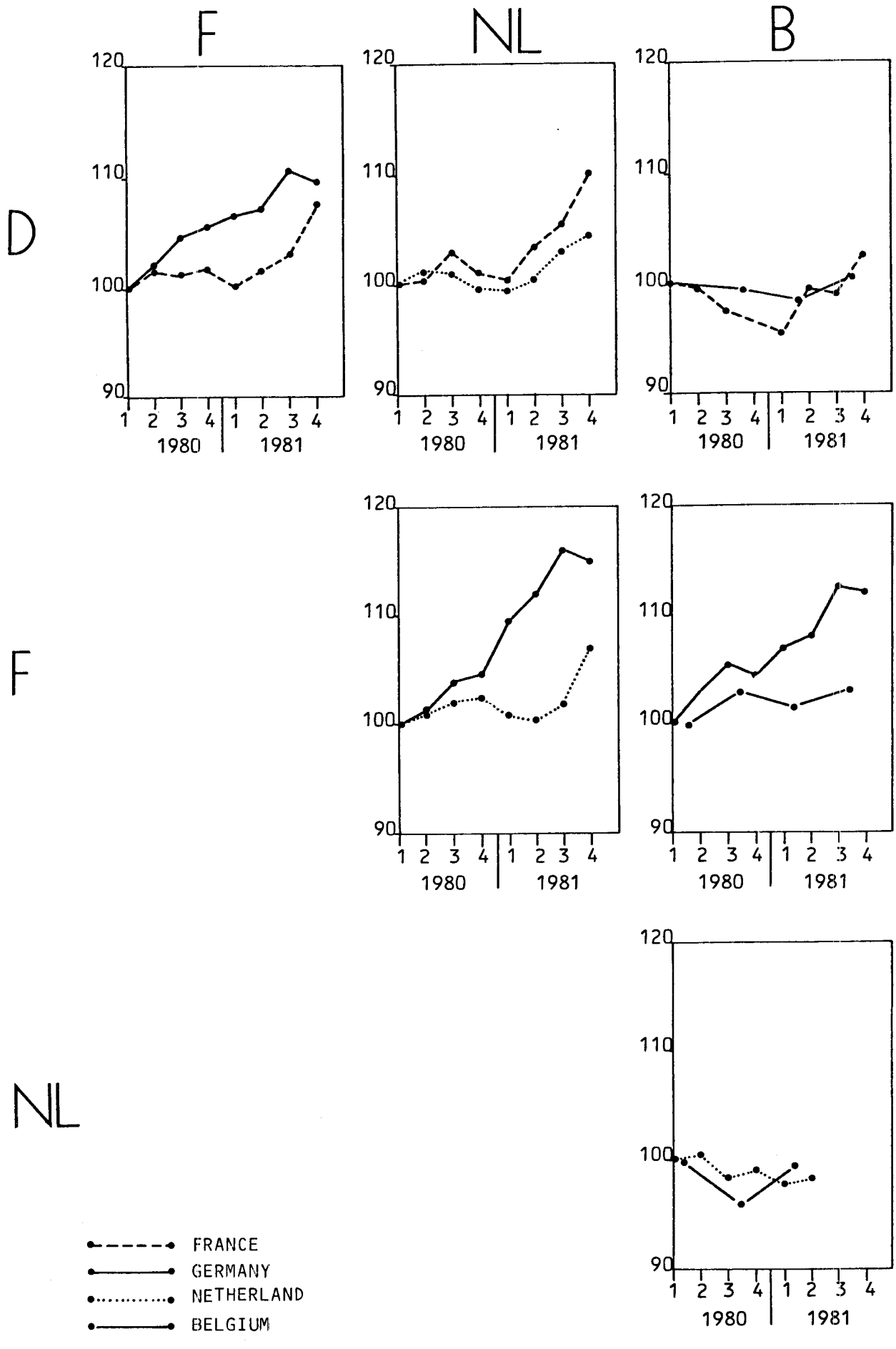


FIGURE 2.7. PRICE DEVELOPMENT IN RELATIONS WITH ITALY

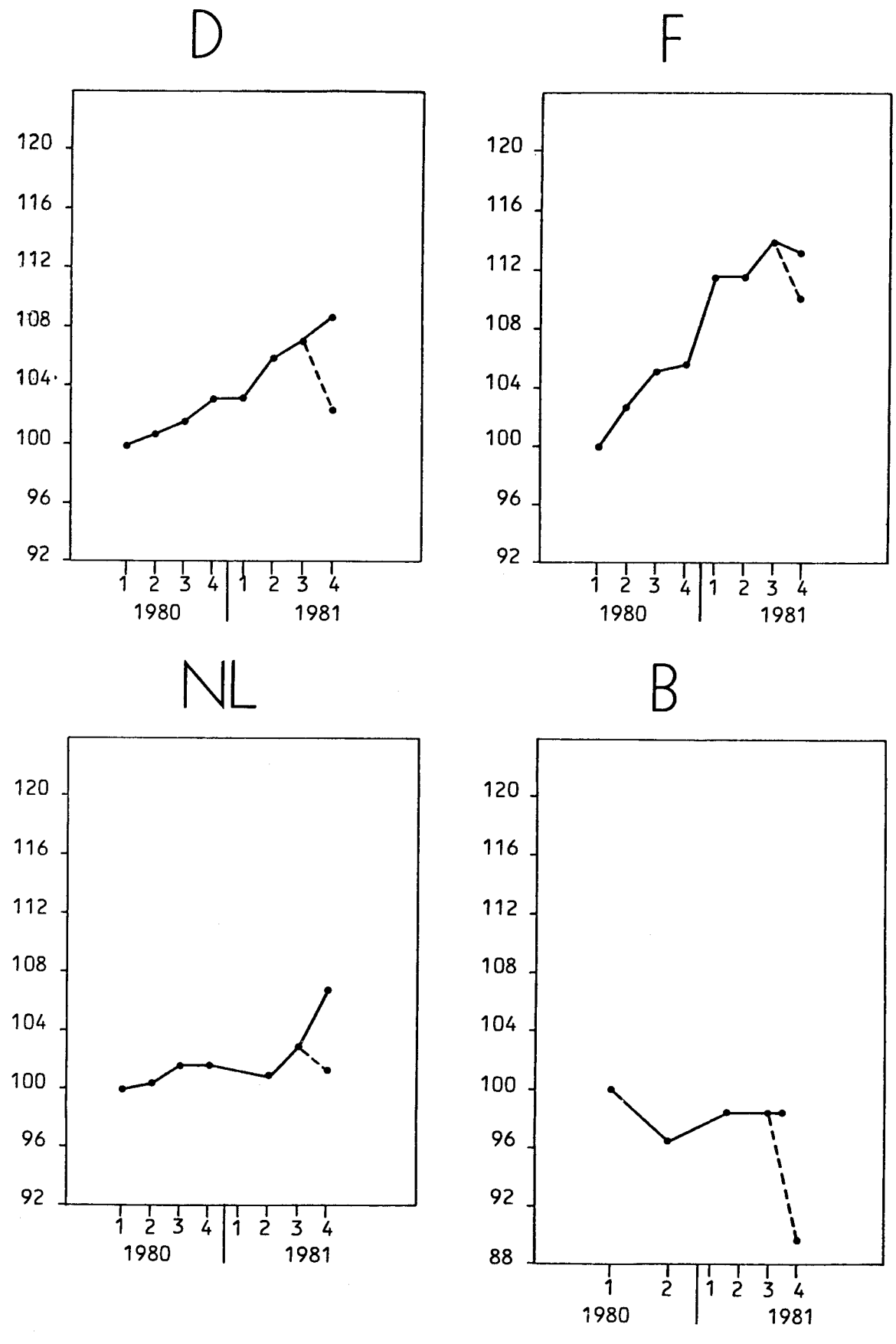
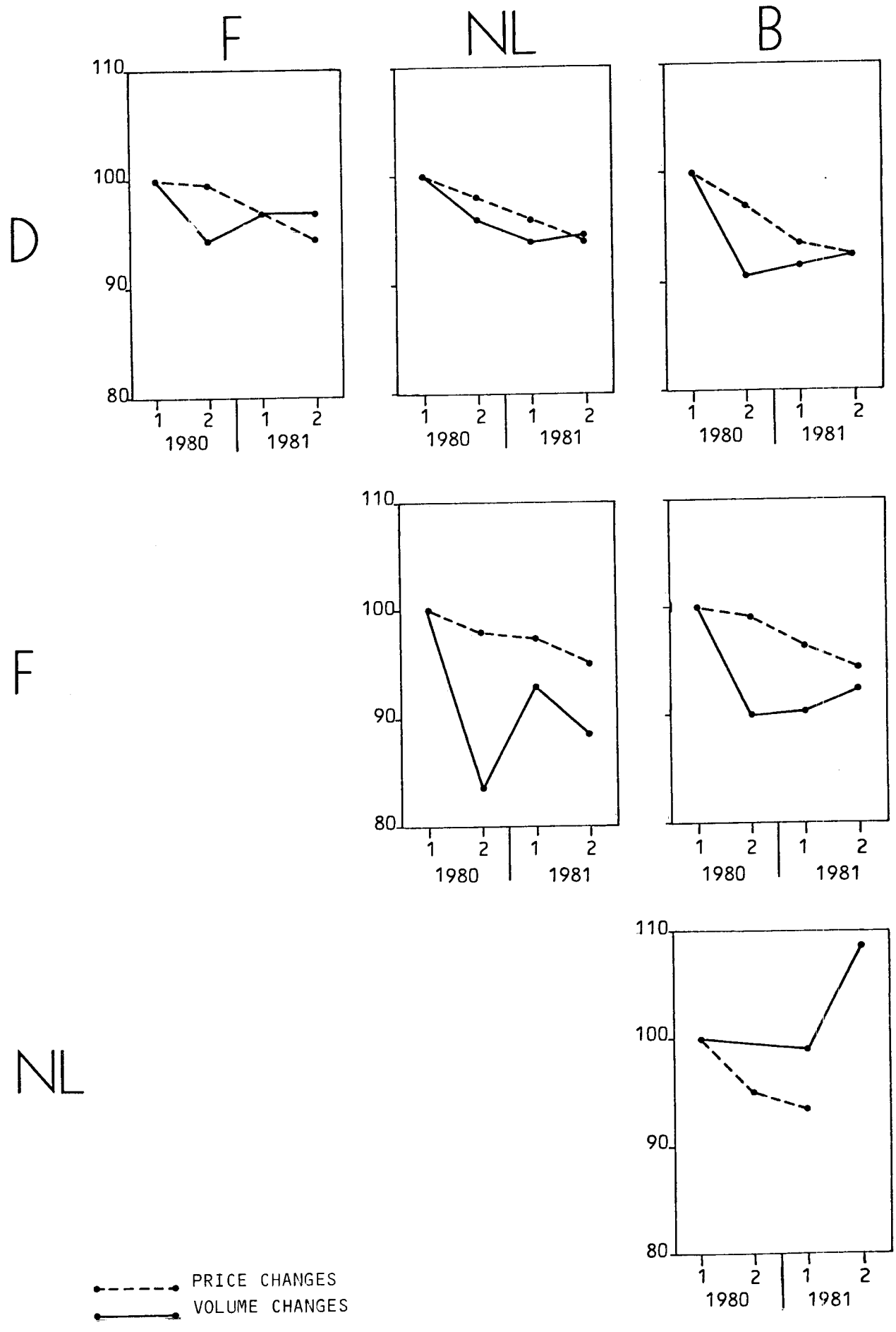


FIGURE 2.8. PRICE AND VOLUME CHANGES



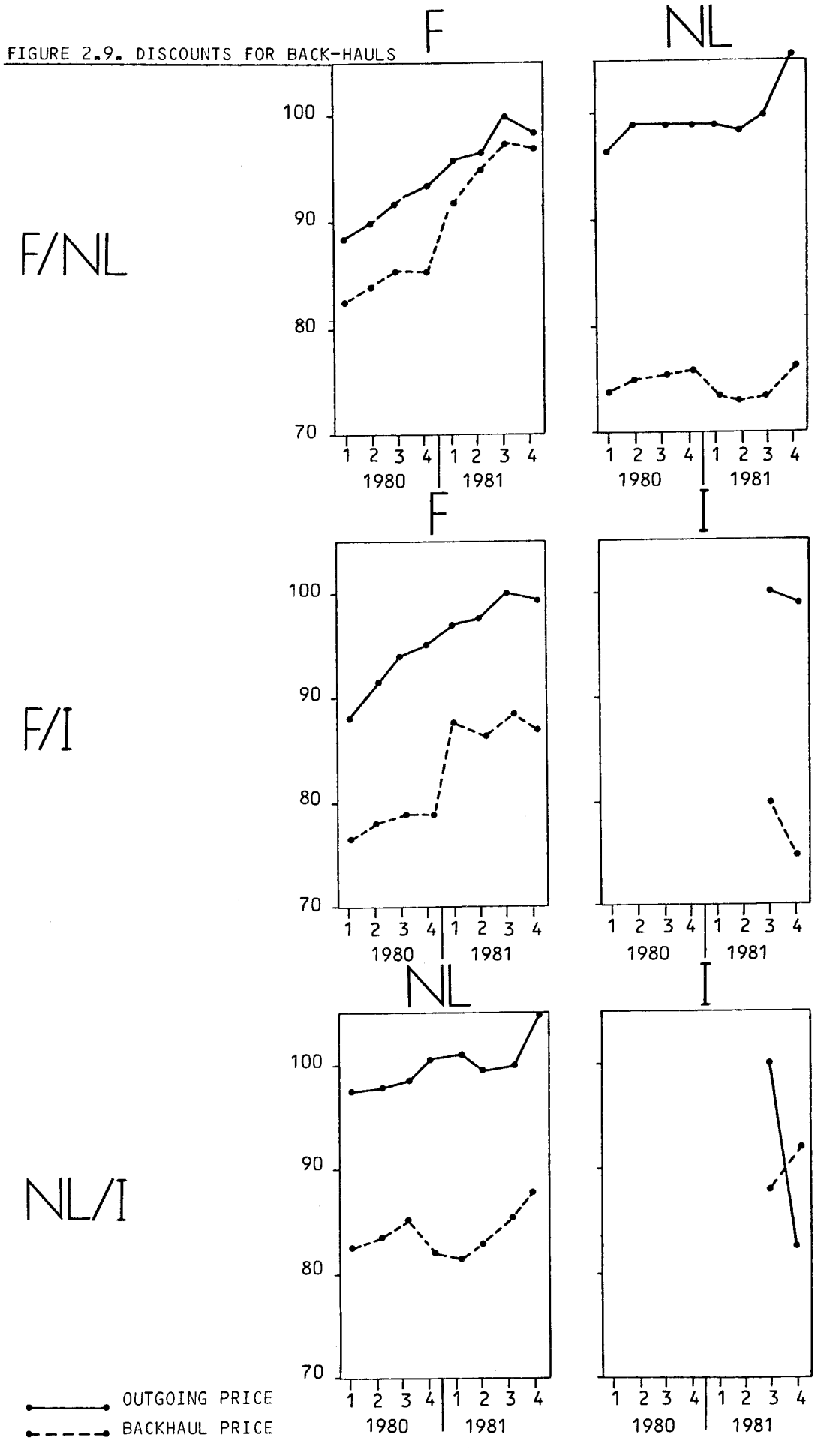
2.3.5. Back-hauls

While it is well known that prices obtained for back-hauls tend to be considerably lower than those for outbound trips, the analysis presented so far has been on a non-directional basis. Analysis on a directional basis is limited to data for French, Dutch and Italian hauliers as the data for German and Belgian hauliers currently available is from BÄG and ITR publications which are on a non-directional basis. As it would not be appropriate to disclose the relative prices for back-hauls for (say) Dutch hauliers on Dutch-German relations when comparable figures for German hauliers were not available, the analysis of back-haul prices is perforce limited to the relations between France, the Netherlands and Italy.

The results in Figure 2.9. show that, except for Italian hauliers on the Netherlands-Italy relation in the fourth quarter of 1981, there is a discount in prices for back-hauls for both hauliers on all three relations. The size of the discount suggests that the current spread of 23% in the obligatory tariff system is too small if, as is customary, the tariff is the same for outbound and back-haul directions. It should be noted that the results in Figure 2.9. have been adjusted to allow for any differences in the traffic mix (average distance, average tonnes carried and goods class mix) in the two directions. It should also be stressed that one cannot deduce the absolute prices charged by hauliers of both nationalities on a relation since all figures are expressed as indices - with the third quarter of 1981 for outbound trips = 100 to facilitate incorporation of the Italian data.

While the results show prices for back-hauls to be generally lower than outgoing trips, the amount of the discount varies considerably by relation and by country of haulier. A tentative explanation for this is put forward as follows:

FIGURE 2.9. DISCOUNTS FOR BACK-HAULS



In the case of the France-Netherlands relation, the Netherlands to France direction is dominant with a tonnage about 50% higher than the reverse direction. Average prices are also about 5% higher in the dominant direction. It follows that hauliers from the Member State with the lower export tonnage (the French hauliers) need to obtain reasonable prices in the dominant direction (which are back-hauls to them) for it to be worthwhile for them to enter the market. The results support this hypothesis, the back-haul discount being under 10% for French hauliers and about 25% for Dutch hauliers (the reason for the reduction of the French discount during 1981 seems to be due to a relative weakening of the French share of their outward traffic making it even more important to get reasonable prices on back-hauls, i.e. reducing the discount for back-hauls).

In the case of the Netherlands-Italy relation, the Netherlands to Italy direction is highly dominant with a tonnage about twice that of the reverse direction. While the Dutch hauliers have a stable discount for back-hauls (15-18%), the Italian hauliers facing dominant import traffic have a smaller discount (12% in the third quarter of 1981 and - 9% in the fourth quarter - a negative figure implying prices for back hauls are higher than outgoing traffic). Thus the results are reasonably consistent with the France-Netherlands relation.

In the case of the France-Italy relation, the tonnages in the two directions are much more balanced, the tonnage in the France to Italy direction being about 20% higher. The hypothesis developed for the two other relations which depended on there being highly dominant flows in one direction could thus not be expected to apply so strongly. In fact, the discount for Italian hauliers (about 20%) is higher than that of the French hauliers (12-15%), whereas one would have expected the French hauliers to have a slightly higher discount than the Italian hauliers for back-hauls.

2.3.6. Sub-Indices

The indices discussed above all relate to the "average" conditions on any traffic relation. Data from French, Dutch and Italian hauliers are also being analysed to produce sub-indices, that is sub-indices by goods class, tonnage class and distance band, the variables built into the tariff structure. Sub-indices for German hauliers can also be calculated for goods class and tonnage class from BAG publications, but such indices would not allow for traffic mix changes (as is done in the case of the analysis of French, Dutch and Italian hauliers) and is thus not presented here.

The amount of analysis that can be carried out on the sub-indices is considerable, the analysis here will be restricted to sub-indices for different goods classes; analysis of other sub-indices will be presented later.

As in the case of back-hauls, it is only appropriate to disclose the relative prices for different goods classes for the relations between France, the Netherlands and Italy. Sub-indices are currently only available for both directions and both "country of haulier" combined. Figure 2.10 shows the ratio of the average prices for goods class I, III and IV relative to goods class II = 100 for each quarter of 1981 after allowing for changes in traffic mix from quarter to quarter (the goods classes referred to are as in the tariff structure); to the right of each figure are shown the "goods class factors", the factors for goods class built into the tariff structure.

Although there are small differences in the goods class factors for each of the three relations, these differences are small compared with the differences between the observed sub-indices and the goods class factors.

Thus for Goods Class I, the observed sub-indices are 20-30% above the basic class (Class II), while the goods class factors are 10-12.5% above the basic class. This suggests that hauliers are obtaining a price differential for high-valued goods about double that foreseen in the tariff structure, however the analysis carried out so far makes no special allowance for refrigerated goods (which are generally Class I).

FIGURE 2.10 RELATIVE PRICES FOR DIFFERENT GOODS CLASSES

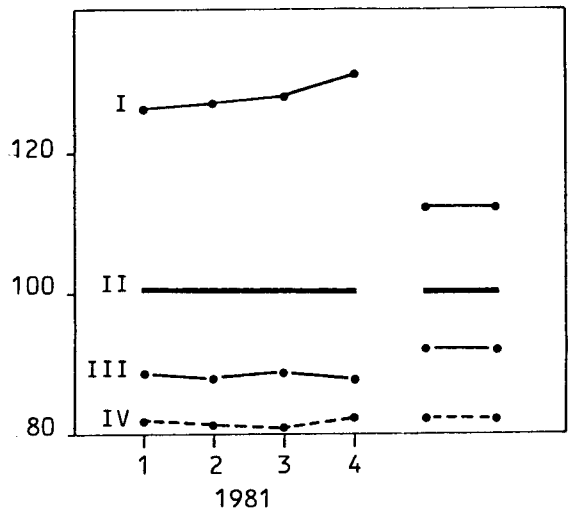
OBSERVED

GOODS CLASS I
GOODS CLASS II
GOODS CLASS III
GOODS CLASS IV

GOODS CLASS FACTORS

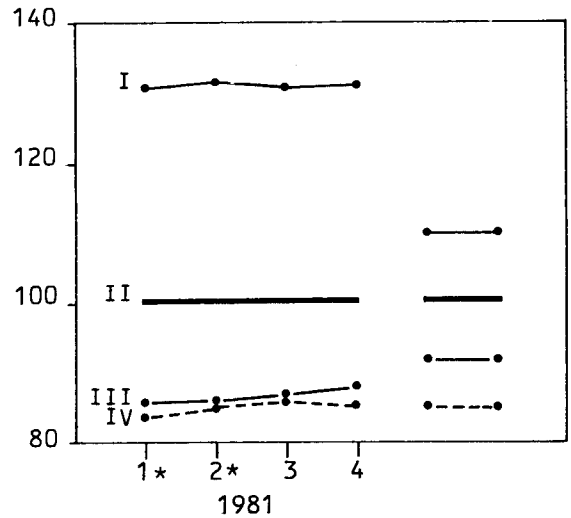
GOODS CLASS"I"
GOODS CLASS"II"
GOODS CLASS"III"
GOODS CLASS"IV"

F/NL



"I" = 112,5%
"II" = 100 %
"III" = 92,5%
"IV" = 82,5%

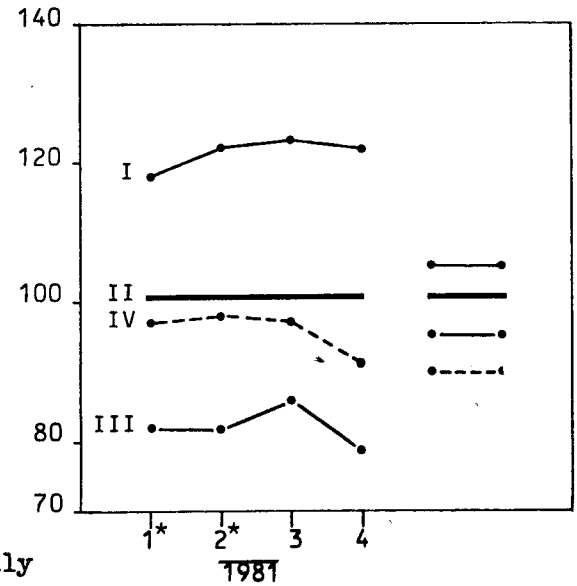
F/I



"I" = 110 %
"II" = 100 %
"III" = 92,5%
"IV" = 85 %

* F hauliers only

NL/I



"I" = 105 %
"II" = 100 %
"III" = 95 %
"IV" = 90 %

* NL hauliers only

The results for Goods Class III and IV vary according to the relation. In the France-Netherlands relation, the sub-indices are quite close to the goods class factors. In the France-Italy relation, average prices for Class IV are marginally higher than Class III, while for the Netherlands-Italy, average prices for Class IV are "paradoxically" quite close to Class II for most of the year, and substantially higher than Class III.

2.4. Costs

2.4.1. Introduction

In the analysis of prices, an attempt was made to compare the evolution of prices and costs, but cost information was not yet available on a harmonized basis, so that the retail price index was used as a proxy for costs. However, some information is available on cost developments for certain Member States in a "semi-harmonized" form for France, Belgium and the Netherlands. Although the French and Belgian data relates to national transport, the Dutch data (which is sub-divided into firms with 0-25, 25-50, 50-75 and 75-100% of their business in international transport) shows that there are relatively small differences in the evolution of costs for the four categories of firm.

It is, therefore, concluded that a preliminary examination of costs can be made on the basis of the French, Belgian and Dutch data; unfortunately, similar German data is not available.

2.4.2. Overall results, 1981

Costs continued to rise in 1981. When expressed in national currency, there was a spread of 6.6% between the increases of costs for France, Belgium and the Netherlands, but when expressed in a common currency (EUAs), the spread was only 2.6%. The details which are given in Table 2.4 also show that the ranking order of the Member States in terms of increase of costs in national currency is reversed in terms of EUAs; thus the French hauliers who had the largest increase (expressed in national currency) had the smallest increase (expressed in EUAs) and so on.

Table 2.4 also shows that cost increases in each Member State were higher than the changes in the retail price indices (when both are expressed in national currency), the difference for France and the Netherlands being almost 1%, while for Belgium just over 3%. This also suggests that the analysis on real price changes discussed in Section 2.3.2. can be refined when harmonized cost indices become available on a wider basis.

Table 2.4: Changes in transport costs in 1981.

Country of haulier	cost increases in 1981 expressed in		Change in Retail Price index (in national currency)
	National currency	EUAs	
F	+ 14.8	+ 9.7	+ 13.9
B	+ 11.3	+ 10.6	+ 8.2
NL	+ 8.2	+ 12.3	+ 7.4

2.4.3. Evolution of cost elements, 1981.

Because the elements in the cost indices in the three Member States are only partially harmonized at this stage, it is proposed only to examine the main cost elements, fuel and labour charges.

Fuel accounts for around 20% of total costs and slightly more for firms engaged principally in international business since longer trips are, on average, involved. The share of total costs attributable to fuel has been rising steadily in recent years, and in 1981 its share rose by about 2% for Belgian and Dutch hauliers, while for French hauliers the increase was only marginal (+0.3%).

Labour charges (wages and social charges) are the largest single element accounting for about 30% of total costs. Its share of total costs has been falling slightly in recent years, although in 1981 French hauliers labour costs were virtually unchanged as a percentage of total costs. Belgian haulier labour costs only rose at 62% of average costs in 1981, while Dutch hauliers labour costs which rose only 3% during 1981 moved up sharply in the first quarter of 1982.

CHAPTER 3: RAIL

3.1. Introduction

Rail transport of goods represents the least integrated part of the Market Observation System. This is due to the fact that up to now there exists no T.I.S. or price and cost indicator system for rail and this has led to an approach in this section of the Annual Report which is slightly different from the analysis of the two other modes.

Notwithstanding the lack of detailed outside information, the Commission services have organized an indepth analysis, of which the main results are described below.

3.2. The relative importance of rail for goods transport

Over the years, rail transport of goods has suffered from a tendency to loose market share, especially to the benefit of road transport. Although careful analysis of the data per NST category indicates that the destiny of rail transport is based mainly on a limited number of NST categories, hit more than proportionally by the recession, one cannot loose sight of other factors that may have played a part (commercial policy, etc.).

Nevertheless, one can safely assume that the decreasing market share (see Table 3.1) is caused by structural changes that are taking place at an increasing pace and which are even more amplified by a cyclical phenomenon: the economic recession which has been bottoming out at very low levels of activity in 1981.

Table 3.1.: Rail share of total international intra-Community transport*

1978	16.7%
1979	18.9%
1980	17.4%
1981	16.6%

*Total transport is defined as: rail transport + road transport + inland waterway transport (freight only).

The differentiated impact of the recession and the structural changes on the different modes can best be analysed by comparing the relative weight of the NST categories for each of these modes.

The perverse situation in the European steel sector, which has led to restrictions on the normal functioning of the market by the implementation of production quotas for individual firms, was felt very hard by rail, since transports belonging to NST 4 (ores and metal waste) and NST 5 (metal products) represent 42% of the total load of rail in 1981 (see Table 3.2).

Other NST categories that are of importance are NST 2 (solid mineral fuels) and NST 9 (machinery, transport equipment, manufactured articles and miscellaneous articles), showing an increasing relative importance.

Table 3.2: Relative importance of NST categories in total rail transport.

	NST 2	NST 4	NST 5	NST 9	OTHER
1979	17.6%	24.5%	19.5%	11.9%	26.5%
1980	16.4%	24.3%	19.0%	13.3%	27.0%
1981	15.2%	22.7%	19.0%	14.2%	28.9%

Taken together, these 4 NST categories represent 71% of total tonnage carried by rail.

The tonnage carried of NST 9 decreased by 0.3% in 1981 for all modes taken together. Compared to the overall decrease in total transport (- 3.3%) in the same year, this can still be interpreted as a positive result. However, although NST 9 has increased its share in total tonnage carried, it appears that on the transport market of NST 9 products, the relative situation of rail has weakened since the quantity forwarded by rail has fallen by 1%. As mentioned already, this points to a situation in which the commercial policy and market penetration of the railways can be questioned. An appropriate answer to this problem is probably to be found in a further promotion of combined transport, allowing rail to exploit better its potential comparative advantages.

3.3. Rail activity in 1981: an overview.

With a decrease in the level of activity of around - 7.6% the overall picture is rather a gloomy one for rail transport. On an annual basis, the statistics indicate a decline for most countries in 1981. Historical data available at the time of writing this report are given in Table 3.3.

Table 3.3.: Activity levels in mio.t for rail transport (EUR-7)
(Growth rates in brackets)

COUNTRY	1979	1980	1981
Germany	42.60	40.87(-4.1%)	
France	47.38	43.81(-7.5%)	36.72(- 16.2%)
Italy	20.20	21.38(+5.8%)	
Netherlands	12.76	13.65(+7.0%)	12.46(- 8.7%)
Belgium/ Luxembourg	35.47	31.77(-10.4%)	27.21(- 14.4%)
Denmark	1.08	1.09(+0.9%)	0.95(- 12.8%)

From Table 3.3. it appears that not only at Community level 1981 has been an extremely bad year for railways, but also at individual Member State level.

In Table 3.4 the figures for the last quarter of 1981 are compared with the figures of the last quarter of the previous year. Activity in the fourth quarter of 1981 was lower in all countries, with an exception for Belgium/Luxembourg (+ 2.1%). In the first three quarters, however, the level of activity has decreased further (- 20.5%, - 9.2% and - 6.6% respectively).

In the case of the Netherlands, although the last quarter of 1981 shows a decrease of 5.4%, the activity in the second and third quarters has increased by 5.5% and 9.0% respectively.

Table 3.4.: Quarterly analysis of transport activity (EUR-7)
(Comparison between corresponding quarters of 1980 and 1981)

COUNTRY	Q4/81 (1)	Q4/80 (2)	% change (1) : (2)
France	9.35	10.14	- 7.8%
Netherlands	2.98	3.05	- 2.3%
Belgium/Luxembourg	7.23	7.08	+ 2.12%
Denmark	0.23	0.26	- 11.4%

3.4. Prosperity and decline: conditioned by industries producing bulk goods.

Rail transport is characterized by the conveyance of large quantities of bulk goods, i.e. goods for which the ratio value/weight is low. Given the low unit price of these products, the transport cost represents a relatively high proportion of the total cost. Rail transport has in this case a comparative advantage, since it is able to forward large volume per transport. At the same time, rail is also a victim of this comparative advantage, since it has created a very high degree of centralization of activity in a few categories of goods produced by a limited number of industries.

Given the predominance of the categories NST 2, 4 and 5, all of which are strongly linked to the iron and steel industry, suggests that there must exist a rather strict causal relationship between a few industrial indicators and overall rail transport of goods.

Table 3.5 contains quarterly index figures (first quarter 1977 = 100) on industrial production, imports and production of solid mineral fuels and steel production.

Table 3.5: Industrial indicators and total rail transport of goods (EUR-9)

Year	Quarter	Industrial Production	Imports and Production solid mineral fuels	Steel Production	Total Rail Transport
1977	1	100.0	100.0	100.0	100.0
	2	99.2	95.6	99.6	105.7
	3	86.2	87.4	94.5	91.2
	4	99.7	100.8	93.7	105.2
1978	1	99.3	98.9	101.4	98.3
	2	100.7	93.8	108.8	106.1
	3	89.1	84.3	97.0	93.3
	4	105.2	103.1	100.7	98.8
1979	1	103.88	102.2	105.9	113.9
	2	106.2	97.5	108.6	123.9
	3	93.9	93.6	106.9	118.1
	4	109.5	106.8	109.7	125.5
1980	1	108.0	111.9	100.4	124.3
	2	106.7	106.9	109.8	119.6
	3	90.6	101.9	83.3	102.1
	4	104.4	109.3	88.8	101.6
1981	1	103.3	109.8	95.4	103.9
	2	103.6	104.5	99.4	106.3

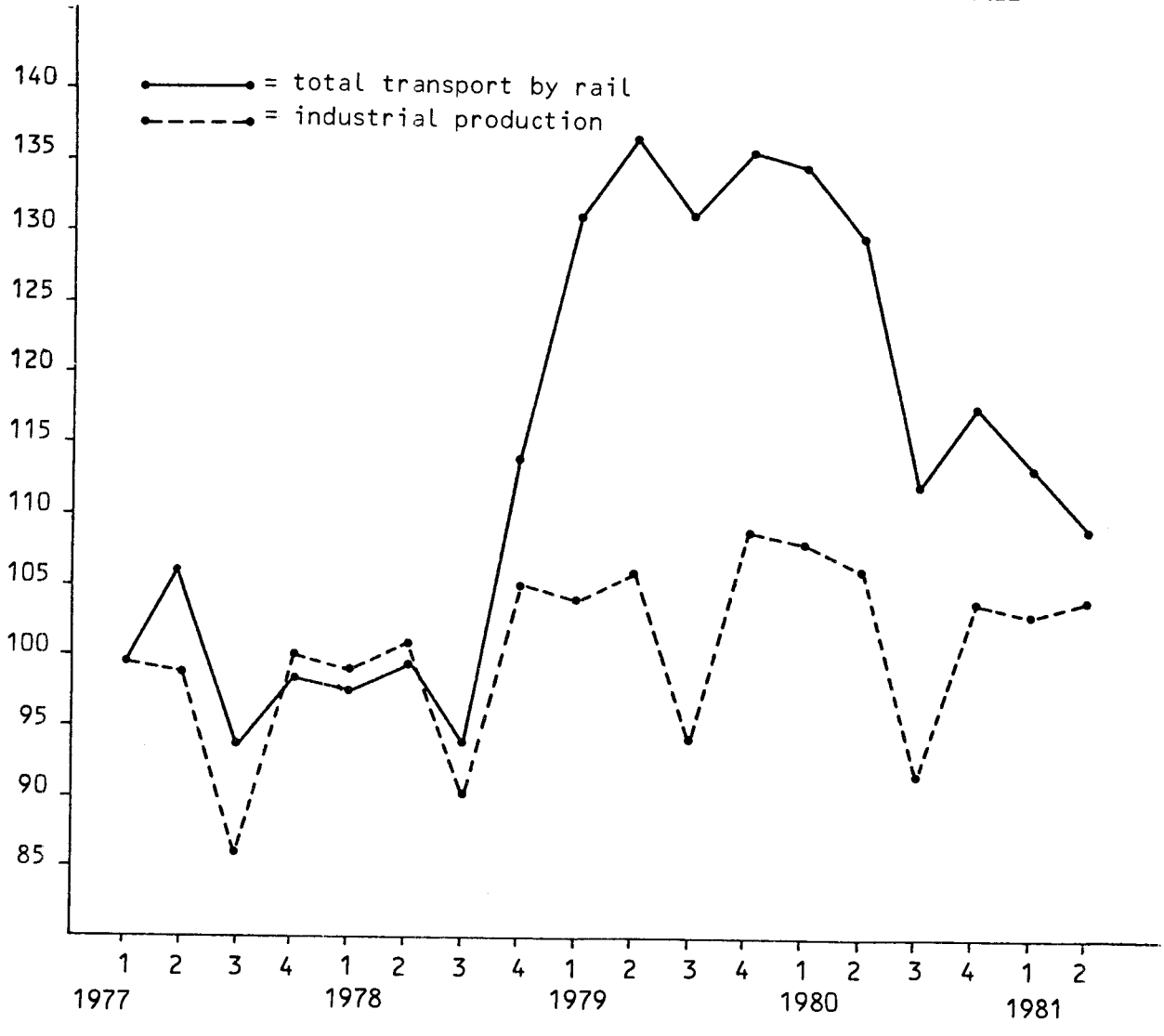
A first glance at Table 3.5 reveals that of all the indicators, it has been rail transport which has known the strongest growth. This is the same phenomenon as is noted for the transport sector in total.

Compared to total industrial production, steel production and imports and production of solid mineral fuels, which are important for rail transport, show a lower growth. Instead, we see that during the entire period, the production has been oscillating around the production level of 1977.

In Graph 1, two curves represent rail transport and industrial production. It appears that during the period starting first quarter 1977 and ending third quarter 1978, both curves coincide well. Under the assumption that rail keeps its share in total transport constant, one can expect the transport indicator to follow the same trend as the indicator of industrial activity. If on the contrary transport is growing faster than industrial production, this can only indicate that for the same level of production, more goods are transported. During the last quarter of 1978 and the first half of 1979 transport by rail has increased more rapidly than industrial production. This has caused the modal share of rail transport to increase from 17.1% in 1978 to 18.6% in 1979.

Since the third quarter 1979, the activity level of railways is following a downward trend: - 5.7% in 1980 and a dramatic fall of - 7.0% in 1981.

Graph 1: Industrial production and transport by rail



3.5. Regional breakdown of transport flows

For the most important NST categories (representing over 70% of total transport) the changes that took place in 1981 for the most important regional relations* are described systematically.

3.5.1. NST 2 (solid mineral fuels)

Transport by rail of these products has changed by - 1.3% in 1981. The most important country of origin for these transports is Germany (the regions "Nordrhein-Westfalen" and "Rhein-Pfalz-Saar"). Transport flows originating in Nordrhein-Westfalen changed in a negative sense with an exception of the flows to the Netherlands:

Nordrhein-Westfalen to	Belgium	:	- 21%
	Luxembourg	:	- 16%
	Rest of Netherlands	:	+ 21%
	France(North-East):		- 23%.

Transport flows from the Rhein-Pfalz-Saar to France (North-East) have fallen by 27%. Table 3.6 summarizes the regional distribution of the most important flows in 1981 (representing 74% of total transport of NST 2 by rail).

Table 3.6: Regional distribution of traffic flows (1981) (NST 2) (% shares)

Germany (Nordrhein-Westfalen) ⟶	Belgium	:	16.6%
	Luxembourg	:	15.6%
	Netherlands (Rest)	:	9.4%
	France (North-East)	:	20.5%
Germany (Rhein-Pfalz-Saar) ⟶	France (North-East)	:	12.2%

*A list of the regions is given in the Annex.

3.5.2. NST 4 (ores and metal waste)

Transport of this category decreased by 18.4%. The major exporting regions are the Netherlands, France (North-West), Germany (Baden-Wurtemberg, Bayern and the Coastal regions) and the Belgium-Luxembourg Economic Union. Important importers are Germany (Rhein-Pfalz-Saar), Italy (North-East, North-West), France (North-East) and the Belgium-Luxembourg Economic Union.

From the Netherlands (Rotterdam) to Germany (Rhein-Pfalz-Saar) : - 2%
Germany (Nordrhein-Westfalen): -0.3%
Germany (coastal regions) : -15%

From the Netherlands (Rest) to Germany (Nordrhein-Westfalen) : -7.3%

From France (North-West) to Germany (Rhein-Pfalz-Saar) : -18.3%
France (North-East) to Belgium/Luxembourg Economic Union : -16.3%

From Germany (Baden-Würtemberg) to Italy (North-West) : + 4.4%
Germany (Bayern) to Italy (North-East) : + 3.4%

From Belgium/Luxembourg Economic Union to France (North-East) : - 24.1%

Table 3.7 summarizes the regional distribution of the most important flows in 1981 (representing 66% of total transport of NST 4 by rail).

Table 3.7: Regional distribution of traffic flows 1981 (NST 4) (% shares)

Netherlands (Rotterdam)	⟶	Germany (Rhein-Pfalz-Saar)	: 2.9%
		(Nordrhein-Westfalen)	: 2.0%
		(coastal regions)	: 2.8%
Netherlands (Rest)	⟶	Germany (Rhein-Pfalz-Saar)	:10.2%
France (North-West)	⟶	Germany (Rhein-Pfalz-Saar)	: 4.6%
(North-East)	⟶	Belgium/Luxembourg	:36.0%
Germany(Baden-Würtemberg)	⟶	Italy (North-west)	: 2.9%
(Bayern)	⟶	Italy (North-East)	: 2.5%
Belgium/Luxembourg	⟶	France (North-East)	: 1.7%

3.5.3. NST 5 (metal products)

Transport by rail of these products has decreased by 9.0% in 1981. The most important exporters and importers coincide with those of NST 4 products. Here again one notices that only a small number of regional flows has grown positively during 1981. Growth rates for the most important relations are:

From Belgium to Germany (coastal regions) : - 17.9%
(Nordrhein-Westfalen): - 27.3%
(Rhein-Pfalz-Saar): - 16.4%

From Luxembourg to Germany (coastal regions): - 17.8%
(Nordrhein-Westfalen): - 15.0%
(Baden-Würtemberg): - 11.6%

From Belgium-Luxembourg Economic Union to France (North-West): - 9.9%
(Paris region): + 24.5%
(South-East): - 22.1%
(North-East) - 19.2%

From Netherlands (rest) to Germany (Nordrhein-Westfalen): - 11.2%

From France (South-East) to Germany (Nordrhein-Westfalen): - 11.5%
Belgium/Luxembourg: - 7.0%

From France (North-East) to Germany (Nordrhein-Westfalen): + 50.1%
(Rhein-Pfalz-Saar): - 55.3%
(Baden-Würtemberg): - 3.2%
to Belgium/Luxembourg: - 42.9%

From Germany (Nordrhein-Westfalen) to Belgium: - 15.0%
Netherlands (Rotterdam): + 24.0%
Italy(North-West): + 8.7%

From Germany (Rhein-Pfalz-Saar) to France (North-East) - 19.0%

Table 3.8 gives an overview of the regional distribution of the most important flows in 1981 (representing 58% of total transport of NST 5 by rail.

Table 3.8: Regional distribution of traffic flows 1981 (NST 5)(EUR-9)(% shares)

Belgium ⟶	Germany (coastal regions)	:	1.4%
	(Nordrhein-Westfalen)	:	1.5%
	(Rhein-Pfalz-Saar)	:	1.5%
Luxembourg ⟶	Germany (coastal regions)	:	0.7%
	(Nordrhein-Westfalen)	:	3.4%
	(Baden-Würtemberg)	:	1.1%
Belgium/Luxembourg Economic Union ⟶	France (North-West)	:	6.0%
	(Paris region)	:	3.0%
	(South-East)	:	0.8%
	(North-East)	:	5.6%
Netherlands (Rest) ⟶	Germany (Nordrhein-Westfalen)	:	0.7%
France (South-East) ⟶	Belgium/Luxembourg	:	6.5%
	Germany (Nordrhein-Westfalen)	:	0.7%
France (North-East) ⟶	Belgium/Luxembourg	:	6.3%
	Germany (Nordrhein-Westfalen)	:	0.8%
	(Rhein-Pfalz-Saar)	:	1.1%
	(Baden-Würtenberg)	:	0.9%
Germany (Nordrhein-Westfalen) ⟶	Belgium	:	1.4%
	Netherlands (Rotterdam)	:	0.8%
	Italy (North-West)	:	1.7%
Germany (Rhein-Pfalz-Saar) ⟶	France (North-east)	:	9.0%

3.5.4. NST 9 (miscellaneous products)

With - 1% the decrease that occurs in 1981 for transport of these products by rail is much smaller than is the case for the other important categories.

It is much more difficult to indicate the most important regional flows for this NST category since these transport flows are more dispersed. For a selected number of regional relationships (representing 31% of the total transport by rail in this category) the following changes took place in 1981:

From Denmark to Germany (coastal regions): + 1.6%

From Belgium/Luxembourg to Germany (coastal regions): + 14.4%
Germany (Nordrhein-Westfalen): + 5.8%

From Italy (North-West) to Germany (Nordrhein-Westfalen): + 7.6%
(Baden-Würtemberg): - 1.1%

From Italy (North-East) to Germany (Nordrhein-Westfalen): + 9.0%
(Bayern): + 10.0%

From Germany (coastal regions) to Belgium: - 3.6%

From Germany (Nordrhein-Westfalen) to Belgium: - 8.6%
Italy (North-West): + 34.6%
Italy (North-East): + 34.1%

From Germany (Hessen) to Belgium: - 8.3%

From Germany (Baden-Würte berg) to Italy (North-West): + 16.1%
Italy (North-East): + 1.9%

In Table 3.9 a summary of the most important regional flows is given.

Table 3.9: Regional distribution of traffic flows 1981(NST 9)(EUR-9) (% share of EUR-9 Rail Traffic)

Denmark	→	Germany (coastal regions) : 1.5%
Belgium	→	Germany (coastal regions) : 1.3%
		(Nordrhein-Westfalen): 2.0%
Italy (North-west)	→	Germany (Nordrhein-Westfalen): 1.5%
		(Baden-Würtenberg): 1.4%
Italy (North-East)	→	Germany (Nordrhein-Westfalen): 1.6%
		(Bayern): 1.9%
Germany (coastal regions)	→	Belgium : 1.5%
Germany (Nordrhein-Westfalen)	→	Belgium : 3.5%
		Italy (North-West): 2.8%
		Italy (North-East): 1.8%
Germany (Hessen)	→	Belgium: 0.9%
Germany (Baden-Würtenberg)	→	Italy (North-West): 1.5%
Germany (Bayern)	→	Italy (North-East): 2.5%

CHAPTER 4: INLAND WATERWAYS

4.1. Introduction

Transport operations by inland waterways depend to a large extent on the level of economic activity of two industrial sectors - steel and construction - and on general economic activity through its effects on energy consumption.

The present economic crisis has affected in particular the steel industry and the building and construction sector, as well as the level of energy consumption. Consequently, inland waterway transport suffered a considerable loss of tonnage in 1981 in comparison with 1980. Moreover, the structural changes in energy production - substitution of oil by other energy sources - has also reduced the demand for inland waterway transport services.

These and other, generally less important, factors affected inland waterway transport activities in 1981. The growth rate in total tonnage transported in 1981 over the previous year between Belgium, the Federal Republic of Germany, France, Luxembourg and the Netherlands fell by - 3.7%. Expressed in terms of tonnage, this corresponds to a decline from 189.3 mio.t in 1980 to 182.3 mio.t in 1981, i.e. 7 mio.t.

A further analysis of the developments in 1981 compared with 1980 on a country-by-country basis, by markets and by commodities is given below.

4.2. Inland waterway transport on a country-by-country basis

4.2.1. Table 4.1 presents tonnage figures for 1980 and 1981 on each of the bilateral traffic relations and the growth rates for 1981 against 1980.

Table 4.1: Inland Waterways - tonnes carried on bilateral relations, 1980 and 1981, with growth rates ('000 tonnes).

FROM \ TO		B+L	D	F	NL
B+L	1980		9.636	3.836	13.757
	1981		9.462	3.690	12.616
	Difference		- 174	- 146	- 1.141
	Growth rate		- 1.8	- 3.8	- 8.3
D	1980	9.147		2.741	31.709
	1981	9.696		2.367	31.110
	Difference	+ 549		- 374	- 599
	Growth rate	6.0		- 13.6	- 2.1
F	1980	3.660	10.966		3.685
	1981	3.501	10.508		3.428
	Difference	- 159	- 458		- 257
	Growth rate	- 4.3	- 4.2		- 7.0
NL	1980	27.951	66.648	5.570	
	1981	26.791	65.010	4.233	
	Difference	- 1.160	- 1.638	- 1.337	
	Growth rate	- 4.2	- 2.6	- 2.4	

4.2.2. As is shown in Table 4.1., all traffic relations except one encountered serious losses in tonnages. The following bilateral relations were down more than 1 mio.t.

NL ⟶ D	1.64 mio.t
NL ⟶ F	1.34 mio.t
NL ⟶ B+L	1.16 mio.t
B+L ⟶ NL	1.14 mio.t
	5.28 mio.t

The only case in which a rise in tonnes transported could be noted was D ⟶ B+L; 0.549 mio.t more than the previous year were carried, a growth rate of + 6%.

4.2.3. An analysis of 1981 figures in terms of percentage lost in comparison with 1980 transport activity shows that the following traffic relations lost more than average.

NL⟶ F	- 24.0%
D ⟶ F	- 13.6%
B+L⟶ NL	- 8.3%
F ⟶ NL	- 7.0%
F ⟶ B+L	- 4.3%
F ⟶ D	- 4.2%
NL⟶ B+L	- 4.2%.

4.2.4. An analysis from the point of view of loss of tonnes by country results in the following table:

Table 4.2: Loss in tonnes by country relation carried by inland waterway.

Bilateral relations	tonnes lost('000t)	As part of total traffic on those relations
B+L ⟶ D, F, NL	- 1.461	- 5.4%
B+L ⟵ D, F, NL	- 770	- 1.9%
Total B+L	- 2.231	- 3.3%
D ⟶ B+L, D, NL	- 424	- 1.0%
D ⟵ B+L, D, NL	- 2.276	- 2.7%
Total D	- 2.700	- 2.3%
F ⟶ B+L, D, NL	- 874	- 4.8%
F ⟵ B+L, D, NL	- 1.857	- 15.3%
Total F	- 2.731	- 9.0%
NL ⟶ B+L, D, F	- 4.135	- 4.3%
NL ⟵ B+L, D, F	- 1.997	- 4.1%
Total NL	- 6.132	- 4.2%

Given an average decline of 3.7%, Belgian and French outwards traffic and French inwards traffic were affected more than average.

In terms of tonnes, the Netherlands lost in international traffic much more than other Member States, and France lost most in terms of percentage of total traffic.

4.3. Inland waterway transport by commodities

4.3.1. The most important commodities shipped by inland waterways are building materials (NST 6), ores and metal waste (NST 4), petroleum products (NST 3) and coal (NST 2). In 1981, 130.2 mio.t of goods in these four NST groups were shipped between Member States, which is 71.4% of all shipments. In 1980, these figures were 137.1 mio.t and 72.4% respectively. The group of building materials is by far the most important, followed by NST 4 and NST 3. The tonnes transported in total international inland waterway traffic in 1980 and 1981 are as follows:

	1980	1981	% change
NST 6	56.42 mio.t	52.27 mio.t	- 7.4
NST 4	39.42 mio.t	37.96 mio.t	- 3.7
NST 3	27.59 mio.t	27.65 mio.t	+ 0.2
NST 2	13.67 mio.t	13.27 mio.t	- 2.9

In terms of tonnage, transport operations involving NST 6, 4, 3 and 2 of all international inland waterway operations within the Community accounted for the following shares in 1980 and 1981:

	1980	1981
NST 6	29.8	28.1
NST 4	20.8	20.4
NST 3	14.6	15.2
NST 2	7.2	7.3

4.3.2. A more detailed analysis of the four main NST groups on a country-by-country basis is given below.

4.3.3. NST 6: Building materials.

Table 4.3: Inland waterways - tonnes of NST 6 carried on bilateral relations, 1980 and 1981, with growth rates ('000 tonnes).

FROM \ TO		B+L	D	F	NL
B+L	1980		1.589	809	6.387
	1981		1.450	518	5.304
	Difference		- 213	- 291	- 1.083
	Growth rate		- 13,4%	- 36%	- 17.0%
D	1980	1.509		233	19.730
	1981	1.450		285	18.307
	Difference	- 59		52	- 1.423
	Growth rate	- 3.9%		+ 22,3%	- 7.2%
F	1980	241	7.988		1.309
	1981	252	7.440		1.380
	Difference	+ 11	- 548		71
	Growth rate	+ 4.6%	- 6.9%		+ 5.4%
NL	1980	13.142	3.226	261	
	1981	11.853	2.868	238	
	Difference	- 1.289	- 358	- 23	
	Growth rate	- 9.8%	- 11.1%	- 8.8%	

The key industry for goods in this category is, as stated earlier, the building industry, which can be divided into the following sub-sectors:

(i) housing construction
(ii) public works
(iii) industrial construction.

Due to high interest rates, housing and industrial construction activity fell considerably in 1981. Government incentives to stimulate investment and housing construction had only limited effects, which were insufficient to offset the negative effects of the situation on the money markets. Moreover, the budgetary situation in Member States forced governments to limit their expenditure on public works.

As a result, and after an appreciable growth in 1980, international traffic between Member States of sand and gravel fell by 10.1%, i.e. 5.7 million tonnes.

As Table 4.3 shows, there is a very broad geographical spread, with all relevant Member States taking a share. All important traffic relations with transports of 5 mio.t or more encountered a loss in transport activity. In the following relations, this loss was more than 1 mio.t.:

D ⟶ NL	:	1.42 mio.t	- 7.2%
NL ⟶ B+L	:	1.29 mio.t	- 9.8%
B+L ⟶ NL	:	1.08 mio.t	- 17.0%

These three relations explain more than 60% of the loss in transport activity in this NST category. Only three traffic relations of minor importance encountered a positive growth.

Traffic into France and out of Belgium/Luxembourg declined significantly by 20.1% and 18.1% respectively, while French and German outwards traffic held up rather well (- 6.7%).

Total tonnage in and out of each of the four relevant Member States show the following results:

	Decrease in tonnes	in percentage
B+L	2.92 mio.t	- 12.3
D	2.55 mio.t	- 7.4
F	0.73 mio.t	- 8.9
NL	4.11 mio.t	- 9.3

4.3.4. NST 4: Ores and metal waste.

Table 4.4: Inland Waterways - tonnes of NST 4 carried on bilateral relations, 1980 and 1981, with growth rates ('000 tonnes).

FROM \ TO		B+L	D	F	NL
B+L	1980		469	478	114
	1981		375	495	117
	Difference		- 94	+ 17	3
	Growth rate		- 20%	+ 3.6%	+ 2.6%
D	1980	114		197	60
	1981	93		133	147
	Difference	- 21		- 64	87
	Growth rate	- 18.4%		- 32.5%	+ 145%
F	1980	33	17		2
	1981	6	5		10
	Difference	- 27	- 12		8
	Growth rate	- 81.8%	- 10.6%		400%
NL	1980	1.984	34.481	1.471	
	1981	2.660	32.599	1.316	
	Difference	676	- 1.882	- 155	
	Growth rate	+ 34%	- 5.5%	- 10.5%	

Because the NST 4 goods are raw materials for the steel industry, the quantities carried in 1981 are obviously determined by the effects of the steel recession. Consequently, after a small decline in traffic in 1980, international traffic between Member States of ores and metal waste fell by 1.5 mio.t (3.7%) in 1981.

As Table 4.4 shows, only one traffic relation is of real importance: the Netherlands to Germany. This flow accounts for more than 85% of international inland waterway traffic between Member States in this category. The decrease in tonnes carried on this specific relation was 1.88 mio.t, i.e. 5.5%.

4.3.5. NST 3: Petroleum products.

Developments in this traffic depend in particular on the following factors:

(i) effect of policies to encourage energy savings, which have a considerable effect on the consumption of heating fuel;

(ii) the general economic situation by the level of industrial activity;

(iii) the refineries' product range policies.

Table 4.5: Inland Waterways - tonnes of NST 3 carried by bilateral relation, 1980 and 1981, with growth rates ('000 tonnes).

FROM \ TO		B+L	D	F	NL
B+L	1980		3.762	244	3.386
	1981		3.717	125	3.614
	Difference		- 45	- 19	228
	Growth rate		- 1.2%	- 7.8%	+ 6.7%
D	1980	201		191	847
	1981	189		166	1.224
	Difference	- 12		- 25	+ 377
	Growth rate	- 6.0%		- 13%	+ 44.5%
F	1980	1	1.065		25
	1981	4	1.182		14
	Difference	3	117		- 11
	Growth rate	300%	11.0%		- 44%
NL	1980	4.820	12.578	474	
	1981	4.853	12.243	223	
	Difference	33	- 335	- 251	
	Growth rate	0.7%	- 2.7%	- 53.0%	

These factors have all had a considerable bearing on the deterioration of this traffic over the last few years. In 1981, these effects were still evident in certain flows, while in others a positive development could be noted.

As a result, international traffic of petroleum products between Member States hardly changed, rising 0.06 mio.t or 0.2%.

As Table 4.5 shows, there is a rather broad geographical spread. Although the Netherlands to Germany is by far the most important flow (44% of total international intra-Community traffic in this NST category), the Netherlands to Belgium/Luxembourg, Belgium/ Luxembourg to Germany and Belgium/Luxembourg to the Netherlands are also important flows.

In terms of tonnage, the Netherlands to Germany was still depressed, with a loss of 0.335 mio.t (- 2.7%), as well as Belgium/Luxembourg to Germany (- 0.045 mio.t, - 1.2%). On the other hand, the Netherlands to Belgium/Luxembourg and Belgium/Luxembourg to the Netherlands increased with 0.033 mio.t (0.7%) and 0.228 mio.t (6.7%) respectively.

4.3.6. NST 2: Solid mineral fuels

A distinction has to be made between the market for the carriage of coal for the steel industry and the market for the carriage of power station coal. Therefore, transport developments depend in particular on the economic situation in the steel industry and on energy policy decisions.

As is shown in Table 4.6, it is clear that the Federal Republic is consuming an increasing proportion of its indigenous coal. Therefore, German exports are down by 9.7% to 6.43 mio.t. A rise of 47.7% in coal shipped by inland waterways imported into Germany shows a shift towards the use of coal in the power stations.

On the other hand, imported coal to France and Belgium through the Netherlands decreased considerably, by 51% and 13.7% respectively. This had, however, been artificially high in 1980.

Table 4.6: Inland Waterways - tonnes of NST 2 carried by bilateral relation, 1980 and 1981, with growth rates ('000 tonnes).

FROM \ TO		B+L	D	F	NL
B+L	1980		248	103	177
	1981		464	143	242
	Difference		216	40	65
	Growth rate		87.1%	38.8%	36.7%
D	1980	1.121		1.542	4.466
	1981	940		1.373	4.121
	Difference	- 181		- 169	- 345
	Growth rate	- 16.1%		- 10.6%	- 7.7%
F	1980	-	90		6
	1981	1	106		20
	Difference		16		14
	Growth rate		18%		233%
NL	1980	1.935	2.392	1.638	
	1981	1.670	3.389	803	
	Difference	- 265	1.047	- 635	
	Growth rate	- 13.7%	+ 44.7%	- 51.0%	

4.4. Inland Waterway transport by transport market

4.4.1. International Community inland waterway transport can be basically divided into two separate geographical and organizational markets: the Rhine and the North-South (i.e. traffic between the Netherlands, Belgium and France which does not pass by the Rhine).

4.4.2. Rhine

Of total international intra-Community traffic by inland waterways, about 70% goes by the Rhine. The tonnage carried on a country-by-country basis are shown in the following table:

Table 4.7: International intra-Community Rhine traffic in 1980 (tonnes carried on a country-by-country basis ('000 t)

FROM \ TO	B+L	D	F	NL	TOTAL
B+L	–	8.750	615	186	9.371
D	9.036	–	2.742	30.896	42.674
F	1.034	10.276	–	1.698	13.008
NL	279	64.454	4.370	–	69.103

An indicator of international Rhine traffic is the traffic passing the German/Dutch border at Emmerich/Lobith. Of total Rhine traffic registered at Emmerich/Lobith, about 92% is international intra-Community traffic.

During 1981 total transport activity decreased by 4.9% both upstream and downstream traffic showed a negative rate of growth, but downstream traffic was clearly much less affected by the economic crisis. A more detailed analysis based on figures for each NST group in each direction is given in Table 4.8.

Table 4.8: Evolution of traffic ('000 t) passing Emmerich/Lobith

NST Chapter	Upstream				Downstream			
	1980	1981	difference	growth rate	1980	1981	difference	growth rate
0+1	9.928	9.283	- 645	- 6,5	2.073	2.539	+ 466	+ 22,5
2	5.148	5.441	+ 293	+ 5,7	5.466	5.106	- 360	- 6,6
3	18.021	17.265	- 756	- 4,2	980	1.225	+ 245	+ 25
4	35.237	31.940	- 3.297	- 9,4	275	392	+ 117	+ 42,5
5	3.925	3.612	- 313	- 8,0	5.982	6.467	+ 585	+ 9,8
6	3.533	2.984	- 549	-15,5	23.546	22.807	- 539	- 6,5
7	2.587	2.320	- 267	-10,3	1.977	1.705	- 272	-13,6
8	4.653	4.504	- 149	- 3,2	2.833	2.861	+ 28	+ 1,0
9	740	641	- 99	- 13,4	2.228	2.341	+ 113	+ 5,1
total	83.772	77.990	- 5.782	- 6,9	45.360	4.643	- 717	- 1,6

Upstream, all NST categories showed a negative growth rate, except NST 2 (destined for German power stations). In particular transports of sand and gravel (NST 6) and iron ore and metal waste (NST 4) were negatively affected by the economic crisis.

Downstream, the picture is much more varied. Transport of sand and gravel and coal, as well as of fertilizers (NST 7) declined, but transport of, in particular, agricultural products and foodstuffs (NST 0 and 1), petroleum products (NST 3) and ores and metal waste (NST 4) rose considerably, although the quantities transported remained rather small.

4.4.3. North-South

Nearly 30% of total international intra-Community traffic by inland waterway uses the North-South network. The picture of the North-South market on a country-by-country basis is shown in the following table:

Table 4.9: North-South traffic in 1980; tonnes carried on a country-by-country basis ('000 t).

FROM \ TO	B+L	F	NL	TOTAL
B+L	-	3.221	13.571	16.792
F	2.626	-	1.987	4.613
NL	27.672	1.200	-	28.872
TOTAL	30.298	4.421	15.558	49.277

During 1981 total transport activity decreased by 5.7%. In particular, the transportation of sand and gravel, which is by far the most important commodity on this market with a share of more than 50%, decreased by about 12%.

4.5. Transport Inquiry Survey

4.5.1. Introduction

The results of Opinion Surveys carried out among waterway operators on the Rhine and the North-South network give a further insight into the effects of the economic crisis on the inland waterway sector.

On the Rhine, these surveys are conducted by the Central Rhine Commission in cooperation with the European Commission among 25 shipowners.

On the North-South, the Economisch Bureau voor het weg en watervervoer (the Netherlands) and the Institute pour le transport par batellerie (Belgium) collect information among a panel of owner/operators and shipowners on behalf of the Commission.

4.5.2. Rhine

Average freight rates were felt to be at a lowest point during the first quarter 1981 and increasing during the rest of the year. Taking into account seasonal influences, the lowest point was reached during the first quarter,after which the situation remained stable.

Utilization of hold capacity decreased during the first three quarters 1981. In the fourth quarter, a slight increase was noted. During the first, second and fourth quarters of 1981, only 14% of the shipowners participating in the Opinion Survey used 100% of their own capacity. In the third quarter, no shipowner used their capacity to the full extent possible. Most shipowners found themselves in the 75-100% utilization bracket; during the first half-year, 63% of all shipowners were in this bracket. In the third quarter, this percentage went up to 74%, while the last quarter showed a decrease to 68%. No shipowner used less than 50% of his capacity.

Relatively few shipowners appealed to the free market for extra capacity. The downward trend reached its lowest point during the second quarter, at 40%. In the first and third quarters, 43% of the shipowners reported having asked for extra capacity on the free market. A further recovery took place during the fourth quarter: 45%.

Taking into account the time of year,the number of new or renewed contracts were felt to be small by 45%, 55%, 50% and 50% of the shipowners during the first, second, third and fourth quarters respectively. All others reported the situation to be normal.

4.5.3. North-South

Waiting time is one of the best indicators of economic activity on the North-South market. During the first half 1981, average waiting time for owner/operators on the Dutch exchanges was 4 days. In the third quarter, the average rose to 4.5 days, but decreased to 4 days during the fourth quarter.

Belgian figures show a similar pattern: 6 days during the first half-year, 7.5 days in the third quarter and 6.5 days in the last quarter 1981.

The opinion of Dutch participants in the Opinion Survey on the number of trips offered was negative during the first nine months of 1981. The aggregate balance of opinions of owner/operators showed a - 29, - 7 and - 11 during the first, second and third quarters. In the fourth quarter, the aggregate response of + 14 reflected an upturn in the market.

The Belgian owner/operators were more optimistic during the year. In general, the market situation was found "acceptable", with the exception of the relation to the Federal Republic of Germany during the first six months.

In view of the state of the market, in which freight rates were found to be low and the future to be bleak, investment intentions were limited in character and in number.

ANNEX

GEOGRAPHICAL STRUCTURE OF THE TRAFFIC FLOWS

The results presented here on the geographical breakdown of the transport flows are taken from the regional forecast prepared by the IFO institute in Munich on behalf of the Commission. The relations are forecasted for 30 regions, 3 modes and 10 NST categories, and, therefore, the amount of quantitative information is substantial.

In Table 1, the transport forecasts for 1982 (in tonnage) are given for the most important international regional flows (the figures in brackets are the corresponding tonnages in 1981). Of the total international regional transport flows possible (760) these 16 flows represent 60% of the total transport between the Member States. Table 2 shows these same transport flows in percentages of the total.

Table 1 : Most important regional traffic flows: forecasts for 1982 (mio. T)
(figures in brackets relate to 1981)

	Germany				France	Netherlands	BLEU
	(24)	(25)	(27)	(28)			
Germany							
(24) *						4.2 (5.0)	
(25)					5.1 (4.9)	34.2 (34.3)	14.8 (14.8)
(27)					4.2 (4.2)		
France							
(18)							8.0 (7.8)
(23)			7.2 (7.1)	7.6 (7.6)			13.5 (13.4)
Netherlands	5.9 (5.3)	58.7 (59.4)			5.1 (4.8)		37.2 (37.2)
BLEU		11.8 (11.8)			5.1 (5.7)	27.0 (25.8)	

* List with regions : see page

Table 2 : Most important regional traffic flows: shares in total international intra-EC transport (in %)

	Germany				France	Netherlands	BLEU
	(24)	(25)	(27)	(28)	(23)		
Germany							
(24) *						1.0	
(25)					1.2	8.1	3.5
(27)					1.0		
France							
(18)							1.9
(23)			1.7	1.8			3.2
Netherlands	1.4	13.9	1.5				8.8
BLEU		2.8			1.2	6.4	

* List with regions : see page ....

Regional subdivisions used for forecasting purposes

KEY

Region	1	Country	Ireland Eire	(IRL)
	2	Land	Danmark	(DK)
	3	Pays	Luxembourg	(L)
	4	Pays	Belgique	(B)
			Belgique + Luxembourg	(B + L)
	5		Rotterdam	
	6		Rest van Nederland	
		Land	Nederland	(NL)
	7		Italia Nord-Ovest	
	8		Italia Nord-Est	
	9		Italia Centrale	
	10		Italia Sud	
	11		Sardegna + Sicilia	
		Paese	Italia	(I)
	12		Northern Ireland	
	13		Scotland	
	14		Wales	
	15		Northern England	
	16		Midlands and East Anglia	
	17		Southern England	
		Country	United Kingdom	(UK)
	18		France Nord-Ouest	
	19		Région Parisienne	
	20		France Sud-Ouest	
	21		France Centre	
	22		France Sud-Est	
	23		France Nord-Est	
		Pays	France	(F)
	24		Norddeutsche Küstenländer	
	25		Nordrhein-Westfalen	
	26		Hessen	
	27		Rhein-Pfalz-Saar-Gebiet	
	28		Baden-Württemberg	
	29		Bayern	
	30		West-Berlin	
		Land	Bundesrepublik Deutschland	(DE)

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