

DEVELOPMENTS IN THE PROCESSING OF MILK AND THE INTRA-EU TRADE IN DAIRY PRODUCTS

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ABSTRACT

DEVELOPMENTS IN THE PROCESSING OF MILK AND THE INTRA-EU TRADE IN DAIRY PRODUCTS

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During the 1970s and early 1980s milk production in the EU had increased stronger than demand for dairy products (within the EU, as well as on the world market) and this led to the introduction of the quota system in 1984. The processing industry adapted to the decreased volume of raw milk by producing relatively more dairy products with a high value added, such as cheese.

In the period 1981-1993 the intra-EU trade increased stronger than exports to third countries. Five member states are net exporters of dairy products: France, the Netherlands, Germany F.R., Ireland and Denmark. There are hardly any imports from third countries. The internal trade in dairy products amounts to 11.7 billion ECU per year (1993). Processed products are the most important, especially cheese. The trade in semi-processed products (such as butter and condensed milk) is much smaller and trade in unprocessed products (fresh milk) is very limited.

The price level in the intra-EU trade in dairy products rose by 40% in the period 1980-1994. The price level of exports to third countries is considerably lower. For total dairy products the gap between intra-EU trade and extra-EU trade was on average 28% in the period 1980-1994.

EU cheese production has risen to 5.6 million tonnes per year, which is around 8% above the level of internal consumption.

Dairy products/EU/Trade/Consumption/Prices

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PREFACE

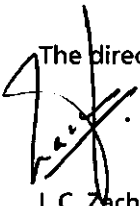
Milk production in the EU has strongly increased in the seventies, partly as a result of the EU's market and price policy. Notwithstanding an internal marketing policy to stimulate consumption the surpluses became larger. Often these surpluses could be sold on the world market only with the help of export refunds. In the eighties the budgetary burden of the dairy policy was the reason for the introduction of measures to curb production growth. Since 1984 milk production in the EU is regulated by means of a quota system. The introduction of the quota system had its effects on milk production and on trade in dairy products. Milk deliveries have fallen and the composition of the total package of products of the European dairy industry has changed.

This report describes the internal EU dairy market. It pays attention to production, the degree of processing and the development of internal trade flows in the period 1980 to 1994. The position of the individual member states on the internal markets is analysed by product group and by separate product. Special attention is given to shifts in market share.

Next the developments in price levels in intra-EU trade are discussed and a comparison is made of the price levels in intra-EU trade and those in trade to third countries.

Finally, an overview of production, consumption and exports by the member states is presented for the most important dairy product, cheese.

The report is a mainly descriptive. Where possible the explanations of developments and situations are linked to the EU dairy policy and changes in this policy.


The director,
L.C. Zachariasse

The Hague, August 1996

SUMMARY

Developments in the demand for dairy products within the EU lagged behind the growth in milk production. It became more and more difficult and expensive to market the surplus on the world market. As a result of this the milk production quota system was introduced in 1984. Then the quota was reduced a number of times. As a result of these reductions the EU milk production in 1992 was 6% below that of 1980.

Processing

In the processing industry the decrease in the deliveries of milk is one of the factors that caused significant changes. There is a tendency towards higher value added. Less and less milk is used for butter and more and more for cheese production, which has a higher value added. Skimmed milk, which is a byproduct of butter production, is increasingly used for cheese production instead of being processed into skimmed powder.

In the EU exports to third countries the processed products, mainly cheese, are getting increasingly important. This is at the expense of semi-processed products, such as butter.

Trade

In the trade flows we distinguish two types: mutual trade between member states (intra-EU trade) and trade between member-states and third countries (extra-EU trade). In the period 1981-93 intra-EU trade increased by 5.5% per year, while EU-9 exports to third countries increased by 2.8% per year. The internal EU-imports market represents a value of almost 12 billion ECU per year (average 1992-94 for EU-12). There are hardly any imports from third countries. Five member states are net-exporters of dairy products: France, the Netherlands, Germany F.R., Ireland, and Denmark.

Processed products have the largest share in dairy trade. Especially cheese is an important product. The Union imports cheese at a rate of 5.3 billion ECU per year. This is virtually all intra-EU trade. The German and Italian import markets are the largest. The Netherlands is by far the most important exporter. EU imports of skimmed powder are considerably lower: approximately 1 billion ECU per year. There are no imports of skimmed powder from third countries.

In the group of semi-processed products the intra-EU trade amounts to much smaller values. Exports to third countries are more important. Butter is the main product in this group. Total EU import value shows no growth and exports to third countries are even declining. In condensed milk there is little intra-EU trade and here too the growth rate for exports to third countries is

negative. Whole milk powder is also exported mainly to third countries. It shows a modest positive growth rate.

Trade in unprocessed dairy products (fresh milk) is rather limited and occurs mainly between the Federal Republic of Germany and Italy.

Prices

The price level of total intra-EU trade in dairy products in the period 1980-91 has risen by 40%. It was not a steady rise; fairly large price increases were followed by periods with a virtually constant price level.

During this period the intra-EU price of cheese rose by 40%. From 1980 to 1989 the price rose very evenly, to stay at the same level after that. The intra-EU price of butter on the other hand is subject to very large fluctuations.

Intra-EU trade is concluded at higher prices than extra-EU trade. For the total of all dairy products the difference in price level between intra-EU trade and extra-EU trade is on average 28%. In the butter trade the gap is the largest, 63% on average, with also the largest fluctuations. Cheese has the second largest gap, namely 45%, with a fairly constant difference between intra-EU price and extra-price.

Production and consumption of cheese

During the period 1980-94 cheese production increased on average by 2.9% per year and has now reached a level of 5.6 million tonnes per year, which is approximately 8% above the level of internal consumption. France and Germany (F.R.) are the biggest consumers; together they account for half the EU consumption.

The Netherlands, France and Denmark are the countries that have a considerably higher production than consumption. The surplus is marketed in the other member states and on the world market. The Netherlands exports its cheese mainly to Germany (F.R.), Belgium/Luxembourg and France. French exports to third countries yield a only slightly lower price than the exports to EU member states. Exports to the world market by the other member states however yield a considerably lower price.

1. INTRODUCTION

EU dairy production amply exceeds internal demand and therefore a considerable share of the production has to be sold on the world market. Considering the price level on the world market this is only feasible with the help of export refunds. Because of this the price on the world market is coming under pressure. This causes frictions with the other suppliers on the world market and in for instance the GATT negotiations the subsidized dairy exports were an important issue. Apart from causing international friction, subsidizing exports costs the EU large amounts of money. Within the EU the costs of the dairy budget has been considered a problem for a long time already. The implementation of the quota system is a direct consequence of the dissatisfaction about the growing surpluses and the growing financial burden that comes along with it.

This study tries to answer the question whether the introduction of the quota system has had consequences for the scale and type (degree of processing) of internal trade and for the price levels at which trade between member states and third countries was concluded. In other words, has the dairy industry put more emphasis on processed products with a higher value added? To answer this question the application of the available milk by the dairy industry was studied, as well as the ratio between processed, semi-processed and unprocessed in the net-exports of the EU.

This report also charts the trade flows in dairy products from member state to member state (intra-EU trade) and the trade flows between the member states and third countries (extra-EU trade). The emphasis is on market shares and the shifts in these shares. Finally, an analysis of production and consumption of the most important dairy product - cheese - is made.

In this report the various dairy products have been divided into three groups, which may be aggregated to the main group *Dairy products, total*. The basis for the aggregation is the degree of processing of the product: processed, semi-processed and unprocessed. The nine products that are discussed in this report have been assigned to the three groups as follows:

Processed:	Semi-processed:	Unprocessed:
- cheese	- milk products/cream	- fresh milk
- skimmed powder	- butter	
- whey	- condensed milk	
- lactose	- whole powder	

The grouping is based on the number of processing steps. However, a higher degree of processing is not always accompanied by a higher value added, but in general this is the case.

2. CHANGES IN THE DEGREE OF PROCESSING

2.1 Analysis via production

As a result of the introduction of the quota system in 1984 the amount of milk produced in the EU in 1992 was almost 6% lower than in 1980 (table 2.1). The shares of the various member states have also changed, usually slightly. For most member states shares hardly changed. Only Germany lost a considerable share compared to 1980. Compared to 1984, not only the German share decreased, but the Dutch share too. The share of the largest producer - France - even increased after 1984.

Table 2.1 Distribution of the total amount of processed and consumed milk among all the present member states in various years

	1980	1984	1992
Volume (x 1,000 tonnes)	113,128	118,868	106,393
Share in %:			
EU-total	100.0	100.0	100.0
France	22.3	21.8	23.0
Belgium/Luxembourg	3.4	3.5	3.0
The Netherlands	10.1	10.5	10.2
Germany (F.R.)	20.6	20.3	23.7
G.D.R.	5.7	6.4	
Italy	9.5	9.6	10.9
United Kingdom	13.8	13.3	12.7
Ireland	4.1	4.8	5.0
Denmark	4.4	4.3	4.2
Greece	0.6	0.5	0.6
Portugal	0.7	0.7	1.4
Spain	4.9	4.6	5.2

Source: FAO Supply and Utilization Accounts.

From the FAO supply and utilization accounts (1980-1992) it appears that a shift in the degree of processing has occurred (table 2.2). For EU-12 the quantity of milk which is processed into butter has clearly decreased in the years after the introduction of the quota system. Before the quota were introduced about 52 to 55% was processed into butter, later the share fell to just over 40%. The share of milk processed into cheese rose from around 29% to almost 40%. Less butter causes a smaller volume of skimmed milk to be processed fur-

ther. This skimmed milk is traditionally processed into skimmed powder, but skimmed milk is increasingly used for cheese production. As a matter of fact this trend started already in the early eighties and the quota system has at best given it an extra impulse. In recent years 56% of the skimmed milk was used for milk powder production and 21% for cheese. In 1980 these shares were 71% and 11% respectively.

Table 2.2 Distribution (in %) of processed milk among the various products in EU-12

	1980	1984	1992
Fresh cream	8	8	11
Butter	53	54	41
Condensed milk	4	4	3
Whole milk powder	6	6	5
Cheese	28	29	39

Source: FAO Supply and Utilization Accounts.

This shift in processing occurred - with different percentages - in all northern member states, with the exception of Ireland. After the implementation of the quota there was a slight drop in the percentage of Irish milk being processed into butter, but it remained very high. By 1992 it was still around 70%, which means only a 10% drop compared to 1984. The skimmed milk is processed into powder and casein. Apparently the Irish dairy industry lacks the flexibility to adapt the processing to the changed circumstances.

The implementation of the dairy quota has brought about a distinctive shift in the utilization of milk in the European dairy industry: more processed products (cheese) and less semi-processed products (butter). This shift has taken place mainly in the northern member states. In the southern member states the utilization of the produced milk has hardly changed however.

2.2 Analysis via trade flows

In the period '81-'93 1) the share of processed products in total net export of EU-9 to the world market has risen by 16% to 47% (figure 2.1). This was fully at the expense of the semi-processed products, because the unprocessed products also show some growth. During the first half of this period there were hardly any changes. The change occurred in the second half, that is after the introduction of the quota system. For EU-12 the period under consideration is very short 2), but the trend is very much the same.

1) Three-year averages: average of the years 1980-1982 compared to the average of the years 1992-1994.

2) The average of 1986-1988 compared to 1992-1994.

3-year
averages

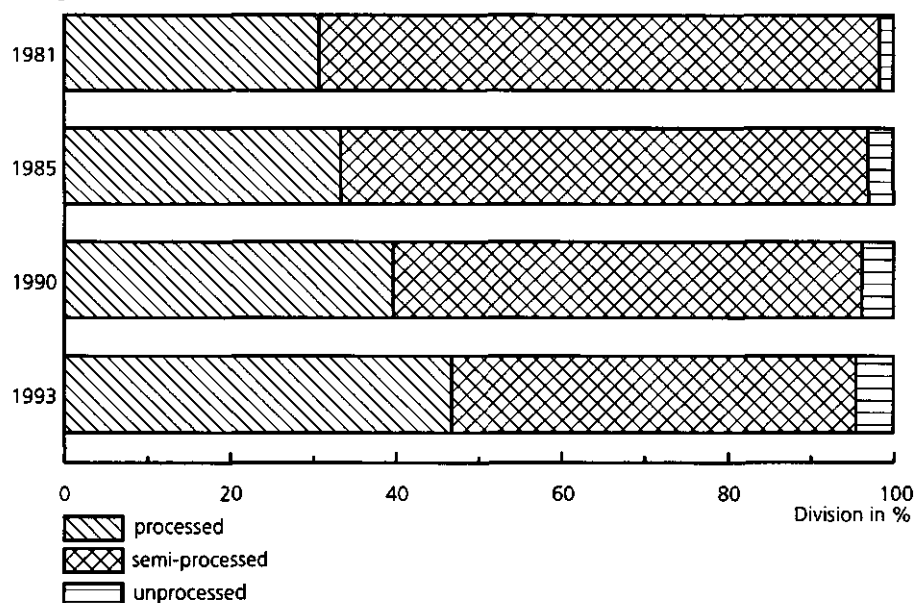


Figure 2.1 Bar chart of EU-9 net export

To indicate the developments in the composition of net export by member state is much more difficult. To be able to make a reliable judgement the trade position during the whole period must be the same for total dairy products and for the three groups mentioned in chapter one, which means: either net exporter or net importer. Whenever one of these four values reverses during this period from net exporter to net importer or vice versa, or if the net trade position is around zero, it is hard to judge whether a shift in the degree of processing has occurred. This problem showed up for Germany and for Belgium/Luxembourg.

With the largest exporters, France and the Netherlands, the share of processed products in the net export in 1993 is around 70% and 65%, respectively. For the Netherlands this meant a considerable growth (approximately 26 percentage points) compared to 1981, and for France the increase amounted to 17 percentage points. In France the growth was realized at the expense of semi-processed products, for the share of unprocessed products remained practically unchanged at around 8%. In Dutch exports the semi-processed products were reduced too (to around 43%), but the rise of the share of processed products was facilitated by the fact that net import of unprocessed milk increased strongly.

In Denmark the shift was very evenly spread over the period; at the start the share of processed products was only slightly above that of semi-processed products. By the end of the period the ratio was 65%:35%. In Ireland the shift

to processed products was not impressive. By 1993 the ratio between processed and semi-processed was 51%:49%. Both countries have a negligible export of unprocessed milk.

For the Federal Republic of Germany the changes are not quite so easy to interpret. The country is a fairly large net exporter, but the value of net export fluctuates annually. Moreover the balance of exports and imports of processed products is negative (i.e. net importer) in a number of years. This results in extreme fluctuations in the ratio between the three groups. The tendency appears to be a shift towards processed products. For Belgium/Luxembourg the situation is even more complicated. The balance of exports and imports of total dairy products alternates between positive and negative. It is an importer for processed products, while the country is an exporter for semi-processed and unprocessed dairy products. The only clear line of development is the growth of exports of unprocessed dairy products. As a matter of fact this growth rate flattens by the end of the period considered.

Italy is a large net importer of dairy products. The ratio between the groups has remained practically unchanged: processed products have a share of around 55% and semi-processed products between 15 and 20%. United Kingdom is a somewhat smaller net importer than Italy. The share of processed products has more than doubled to around 90% during the period considered. The main reason for this is the very constant and strong growth of the net import of cheese. The growth of processed products was fully at the expense of semi-processed products. Imports of unprocessed dairy products in the United Kingdom are very limited.

Greece and Spain are fairly small net importers. In both countries the share of processed products appears to be increasing. Portuguese trade in dairy products is virtually negligible.

The trend towards a higher degree of processing in production is not always easily discernable in the import and export flows of the member states. In the next chapter the trade figures will be analysed further by product and by member state. Special attention will be paid to the trade position - net importer or net exporter - and to mutual market shares.

3. TRADE IN DAIRY PRODUCTS OF THE EU MEMBER STATES

3.1 Procedure for analysis of the data

In the first stage of the research the trade data were collected. The data used are the import statistics of Eurostat. Import statistics have been chosen, because in this report the origins of the imports of dairy products in the various member states are compared. In Eurostat we find the import data as they were registered by the importing countries themselves. An equally important reason to choose for import statistics is the registration of the values. Import values are registered by the importing countries as *cif values* at their border. This implies that the values of the Italian imports of cheese from France and from the Netherlands are comparable. Export statistics on the other hand register the *fob values* at the border of the exporting country. It is obvious that the export values of French and Dutch cheese exports to Italy cannot be compared unless some adjustments have been made.

Next these data have been processed further to be able to aggregate and classify them. For each product 30 import matrices have been made: for each year a matrix with volume data and a matrix with value data in ECU. Table 3.1 is an example of the matrix with values for skimmed milk powder in 1986. The first column shows the country of origin and in the next columns under the heading 'destination' the importing countries are shown. Columns two up to and including column twelve are filled with import data from Eurostat. The column EU-12 is the sum of the preceding eleven columns.

Because Eurostat has no data about the imports by third countries from the EU the last two columns have been filled with export data. The column 'World' contains the values of exports by member states to the world. Next, the column 'non-EU' was calculated as the value for 'World' minus the value for 'EU-12'. Using export data instead of import data introduces an inaccuracy, which may result in a very limited number of cases in a (usually small) negative value in the column non-EU. To make the matrix tally again in these cases the value of the column 'EU-12' was also entered in the column 'World', thus making the column 'non-EU' equal to zero.

Eurostat does not provide data on imports by Greece, Portugal and Spain in the years before they joined the EU. For these years the cells in the matrix concerning imports from 'old' members were filled with export figures from the 'old' members to the 'new' members. The remaining cells were filled with 'NA' (not available). For this reason certain indicators in this research have 1981 or 1986 as their first year. Table 3.2 shows the 1981 matrix of the (weighted) import volume for total dairy products. The weighting method will be explained later on in this section. In order to keep the example simple the Netherlands up to and including Denmark have been left out in the rows and columns. The real matrix (table 3.1) consists of fourteen data columns and fourteen data rows.

Table 3.1 Matrix of the value of imports (x 1,000 ECU) of whole milk powder in 1986

Origin	Destination													
	France	Belg./ Lux.	the Netherl.	Germ.	Italy	United Kingdom	Ireland	Den- mark	Greece	Port.	Spain	EU- 12	non- EU	World
France		9,807	39,879	17,944	18,686	308			690		484	87,798	202,084	289,882
Belgium/Luxemb.	1,805		27,507	3,702	729	91	15	229	3,300			37,378	23,166	60,544
The Netherlands	1,503	7,225		9,324	608	210	15	4,500	2,799	270	1,805	28,259	302,048	330,307
Germany (F.R.)	283	3,500	7,853		18,753	468		1,516	2,518		82	34,973	52,775	87,748
Italy	140							5	76	1		222	222	444
United Kingdom	55	789	11,172	6,826			395	41			56	19,334	44,915	64,249
Ireland		223	2,230	1,245		3,550		15	61			7,324	41,897	49,221
Denmark	3	36	631	584		121	120		160		5	1,660	167,198	168,858
Greece												0	1	1
Portugal												0	46	46
Spain			41	107	67							215	44	259
EU-12	3,789	21,580	89,313	39,732	38,843	4,748	545	6,306	9,604	271	2,432	217,163	834,396	1,051,559
Non-EU	1,216	75	2,219	10	1	111	0	6	14	289	217	4,158	NA	NA
World	5,005	21,655	91,532	39,742	38,844	4,859	545	6,312	9,618	560	2,649	221,321	NA	NA

Table 3.2 Example of matrix for import volume 1981 (x 1,000 tonnes) of total dairy products

Origin	Destination								
	France	Belg./L.	-	Greece	Port.	Spain	EU-12	non-EU	World
France	-	150	-	8	3	16	971	813	1,783
Belgium/Lux.	61	-	-	3	0	1	365	278	643
~	-	-	-	-	-	-	-	-	-
Greece	0	0	-	-	0	0	1	3	4
Portugal	0	0	-	0	-	NA	NA	NA	NA
Spain	0	4	-	0	NA	-	NA	NA	NA
EU-12	318	597	-	179	NA	NA	NA	NA	NA
Non-EU	28	38	-	9	NA	NA	NA	NA	NA
World	346	635	-	188	NA	NA	NA	NA	NA

From 1986 onwards data are available for all cells of the matrix (table 3.3). Only in the right bottom corner there are four cells left containing NA. If the world trade in the product concerned is available, the values for the other three cells may be calculated. For many products the world trade figures are available only at a fairly high level of aggregation. As this research centres on detailed product specifications, the figures for world trade have been left out in all matrices.

In order to aggregate various products to a group the values may simply be added. Volumes however must be weighted first. The world market price (the average 1984-86 price of EU-total exports to third countries) has been used as the weighting factor for the product concerned. The volume multiplied by this price results in a value in constant 1985 prices (VCP_85). Expressed in VCP_85 the volumes of any combination of products may be added.

Table 3.3 Example of matrix for import value 1988 of total dairy products (million ECU)

Origin	Destination								
	France	Belg./L.	-	Greece	Port.	Spain	EU-12	non-EU	World
France	-	273	-	20	1	113	1,745	706	2,451
Belg/Lux.	195	-	-	17	1	1	1,131	9	1,140
~	-	-	-	-	-	-	-	-	-
Greece	1	0	-	-	0	0	30	5	35
Portugal	1	0	-	0	-	16	29	9	38
Spain	22	21	-	0	1	-	85	38	123
EU-12	840	981	-	315	14	198	9,588	3,680	13,268
Non-EU	60	42	-	10	5	15	679	NA	NA
World	899	1,022	-	325	19	214	10,267	NA	NA

From these matrices - single products or aggregates - prices, market shares and net import figures (table 3.4) can be calculated. Starting from the example in table 3.3 net import is calculated as follows. The net import by France from Spain is equal to the French import from Spain (22) minus Spanish import from France (113). The negative result (-91) shows that France is a net exporter to Spain for the product concerned. Alternately the result is of course +91. The net import value shows the balance of the total trade (in the product concerned) between two countries and which of the two countries has a trade surplus.

Table 3.4 Example of matrix for net import value 1988 of total dairy products (million ECU)

Origin	Destination								
	France	Belg./L.	-	Greece	Port.	Spain	EU-12	non-EU	World
France	-	79	-	20	0	91	906	646	1,552
Belg/Lux.	-79	-	-	17	1	-20	150	-32	118
~	-	-	-	-	-	-	-	-	-
Greece	-20	-17	-	-	0	0	-285	-5	-290
Portugal	0	-1	-	0	-	15	15	5	19
Spain	-91	20	-	0	-15	-	-114	23	-90
EU-12	-906	-150	-	285	-15	114	-	3,001	3,001
Non-EU	-646	32	-	5	-5	-23	-3,001	NA	NA
World	-1,552	-118	-	290	-19	90	-3,001	NA	NA

3.2 Trade flows

3.2.1 Total dairy products

Total imports of dairy products in the 'old' member states (EU-9) has increased considerably during the period 1981-93 1). The growth amounted to 5.5% per year on average (table 3.5). The EU member states (EU-12) now import a value of almost 12 billion ECU per year. Practically all of it is intra-EU trade; third countries have a share of only 6 to 7% in the EU-12 dairy imports. Imports from third countries consist mainly of Swiss cheese (in France, Germany and Italy) and New Zealand butter (in the United Kingdom).

The EU as a whole is a large net exporter of dairy products; the net export value of the 'old' member states amounted to around 4.3 billion ECU per year on average in 1992-94. When the 'new' - all three of them net importers - members are included the figure is around 3.7 billion ECU. Strikingly the growth rate of the total import value (of the 'old' member states) of 5.5% per year went together with a considerably smaller increase of the net export va-

1) Three-year averages: average of the years 1980-82 compared to 1992-94.

Table 3.5 Imports of total dairy products in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	1,393	-1,687	10.8	2.0
Belgium/Luxemb.	1,508	-20	5.3	c)
The Netherlands	1,744	-1,645	5.2	1.3
Germany (F.R.)	2,379	-1,186	6.7	1.9
Italy	2,265	1,689	4.3	2.7
United Kingdom	1,262	512	2.6	1.7
Ireland	100	-1,014	10.1	6.5
Denmark	112	-979	4.1	3.2
EU-9	10,765	-4,328	5.5	2.8
Greece a)	449	380	6.4	5.2
Portugal b)	55	3	23.3	c)
Spain b)	440	236	16.5	13.8
EU-12 b)	11,708	-3,709	4.3	6.5

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

lue, namely 2.8% per year. Apparently mutual trade between member states is becoming increasingly important. The intervention stocks probably play an important role in this. The 'mountains' of butter and skimmed powder usually pass some internal borders - for instance from producing country to stocking country and then from stocking country to exporting country - before they reach their destination on the world market.

Five member states (France, the Netherlands, Germany, Ireland and Denmark) are net exporters, two of them (Belgium/Luxembourg and Portugal) have their trade balances for dairy products more or less in equilibrium and the others are net importers. Two of the five net exporters import very little; Ireland and Denmark combine considerable exports with minimal imports. In France too the total imports relative to exports are limited. As a matter of fact France is a net exporter to all EU-12 member states with the exception of Ireland and the Netherlands.

The Netherlands and the Federal Republic of Germany are the most important traders. The Netherlands for instance is for the whole period a net importer relative to Ireland and the United Kingdom, (while the latter country is a fairly big net importer), and is a net exporter to Germany, which like the Netherlands has large imports and large exports. Germany in its turn is a very big net exporter to Italy and has a dominating position on the large Italian import market. The centre of the dairy trade lies in the northern member states, which also have the largest share in European milk production.

Table 3.6 Shares (in %, average '92-'94) in the gross import value of total dairy products in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	30	13	24	21	12	10	14	8	25	48	18
Belg/Lux.	24	-	18	8	8	8	1	9	6	5	2	10
Netherl.	23	32	-	38	5	7	7	18	41	23	18	19
F.R.G.	21	21	37	-	55	13	5	35	27	6	12	25
Italy	7	2	5	5	-	3	1	4	1	2	2	3
United K.	8	5	9	3		-	69	9	2	3	2	4
Ireland	6	4	14	6		29	-	5	4	4	1	8
Denmark	1	1	1	11	2	11	1	-	8	6	6	5
Greece				1					-			
Portugal	1		1							-	4	
Spain	4	1	1							23	-	1
EU-12	96	96	98	96	93	84	94	95	96	96	96	94
non-EU	4	4	2	4	7	16	6	5	4	4	4	6

The limited trade of Ireland and Denmark also appears in their share of the gross import value of EU-12 (table 3.6). Notwithstanding their net export position they have very modest shares as a country of origin. From this table it becomes quite clear that the main exporting countries trade a lot with each other. Total German dairy imports originate for 38% from the Netherlands, while Germany has a 37% share in Dutch imports. There is also considerable trade between the Netherlands, Belgium/Luxembourg and France. The smaller import markets are sometimes dominated by one supplier, but the volume of trade is limited in these cases. The large share of third countries in United Kingdom imports is caused by the earlier mentioned imports of butter from New Zealand.

The five net exporting member states (table 3.5) also supply the bulk of dairy exports to third countries. The Netherlands and France have the largest share, 30 to 35% and 20 to 25% respectively. From year to year the shares may vary a few percentage points, but considering the whole period 1980-94 they have remained unchanged. Exports to the world market are not always based on regular commercial demand. These exports partly consist of intervention stocks that are sold and therefore the volume of this trade flow varies considerably.

3.2.2 Processed products

Imports of processed dairy products have a value of 6.9 billion ECU, which represents 60% of total EU dairy imports (table 3.7). In total net export the share is 45% in 1992-94. Cheese is by far the most important product in this group (import value 5.3 billion ECU), while skimmed milk powder with 1.1 billion ECU is far less important. Whey and lactose, 300 million and 50 million ECU respectively, are of minor importance.

Table 3.7 Imports of processed dairy products in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	672	-1,189	10.2	4.3
Belgium/Luxemb.	743	230	7.1	5.9
The Netherlands	928	-1,051	8.0	5.7
Germany (F.R.)	1,796	-184	6.7	4.1
Italy	1,353	849	4.1	1.6
United Kingdom	744	470	6.0	9.4
Ireland	51	-526	11.7	7.9
Denmark	72	-622	5.9	4.9
EU-9	6,359	-2,024	6.5	6.5
Greece a)	228	173	9.7	8.2
Portugal b)	33	17	15.6	c)
Spain b)	233	150	14.4	14.6
EU-12 b)	6,853	-1,684	4.1	10.6

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

Germany is conspicuously absent in the list of net exporters, because it is a fairly big net importer of cheese. Nevertheless the countries of origin Germany and the Netherlands each have a share of 20 to 25% in the EU-12 gross import value of processed dairy products (table 3.8). These shares are fairly

Table 3.8 Shares (in %, average '92-'94) in the gross import value of processed dairy products in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	31	16	28	18	16	18	22	7	21	31	20
Belg./Lux.	12	-	9	3	9	10		1	2	6	2	6
Netherl.	33	33	-	39	8	9	12	13	31	30	30	22
F.R.G.	22	19	39	-	50	14	5	40	29	6	13	23
Italy	10	4	7	6	-	5	2	6	1	1	2	5
United K.	3	2	8	2		-	50	7	1	3	3	3
Ireland	5	2	14	1	1	32	-	2	8	5	2	7
Denmark	2	2	2	13	2	7	2	-	15	9	10	6
Greece				2					-			1
Portugal								1		-	1	
Spain	4		1		1					14	-	1
EU-12	92	93	96	94	88	92	90	93	93	95	93	93
Non-EU	8	7	4	6	12	8	10	7	7	5	7	7

stable over the whole period. At the start the French share was equal to the share of the two just mentioned countries, but then it fell to 17% and now it has recovered to 20%. The other 'old' member states all have only a small share. The 'new' member states are negligible as a country of origin. This table once again shows the importance of the mutual trade between the main suppliers.

Cheese

Cheese is by far the most important dairy product that is imported in the member states. In the gross import value (EU-12) of total dairy products cheese has a share of 45% and in the EU-12 net export its share is 30%. The Netherlands is by far the largest net exporter (table 3.9), while it has only a modest gross import of cheese. So there is little trading in foreign cheeses. The other three net exporting countries also have limited imports.

Table 3.9 Imports of cheese in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	490	-1,068	8.6	5.8
Belgium/Luxemb.	610	256	6.6	2.0
The Netherlands	301	-1,373	11.7	7.0
Germany (F.R.)	1,662	524	7.4	11.3
Italy	1,066	568	4.2	0.8
United Kingdom	687	533	5.7	4.9
Ireland	36	-236	12.0	7.2
Denmark	53	-603	12.4	4.7
EU-9	4,906	-1,399	6.6	10.2
Greece a)	209	154	9.4	7.7
Portugal b)	21	10	13.0	c)
Spain b)	174	116	16.5	12.8
EU-12 b)	5,310	-1,120	5.7	17.4

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

As a supplier on the internal EU market the Netherlands has a virtually unchanged share of 25% during the whole period (table 3.10). The shares of France, Germany, and Denmark showed a slight drop and amounted to 21%, 17% and 8% respectively in 1992-94. Italy is gaining market share, but its position remains modest; its share rose from 3% in 1980-82 to almost 6% in 1992-94.

Table 3.10 Shares (in %, average '92-'94) in the gross import value of cheese in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	31	23	29	18	17	22	27	6	21	29	21
Belg./Lux.	7	-	17	3	11	11		1		6	2	6
Netherl.	39	32	-	38	9	8	7	6	32	28	32	25
F.R.G.	17	18	17	-	44	15	5	37	29	6	10	17
Italy	14	4	22	7	-	5	1	8	1	2	3	6
United K.	3	3	4	1		-	62	9	1	2	1	2
Ireland	2	1	5			28	-	2	7	1		5
Denmark	3	2	5	14	3	7	2	-	16	13	13	8
Greece	1			2					-			1
Portugal								1		-		
Spain	4		1							16	-	1
EU-12	89	91	93	94	85	92	99	91	93	95	91	91
Non-EU	11	9	7	6	15	8	1	9	7	5	9	9

There is hardly any difference in the price the main suppliers can realize on the internal market, with one exception: Italy. Italian cheese is traded at an approximately 40% higher price than cheese from the other suppliers.

Shifts on the EU cheese market

On the French import market the Netherlands, having a share of around 40%, is by far the main supplier (table 3.10). Over the whole period the shares of all the important countries of origin fluctuate. The Italian share on the French market increased somewhat, while the Netherlands and Germany lost a little. The position of third countries on the French import market has deteriorated considerably; their share fell from 20% to 11%.

In Belgium/Luxembourg the Netherlands lost market share to France and the Federal Republic of Germany. Here too Italian cheese is on the rise.

The French share in the relatively small imports of cheese in the Netherlands has tumbled from 47% to 23%. The 'gap' was partly filled by Germany, but Italy was more successful and its share rose from 7% to 22%.

The already very large share of the Netherlands in German imports increased by around 5% to 47% in the mid 1980s and then it fell back to 38% by the end of the period. France lost approximately 5% and Italy more than doubled its share. An interesting detail is the rise of Greece; its share rose from 0% to 1.8%. Germany is the main destination for the limited Greek cheese exports.

On the Italian import market the Federal Republic of Germany is still the main supplier with a share of 44%, but in the past fifteen years it has had to give up some of its share. France also lost around 4%. Belgium increased its share from 5% to 11%. The Netherlands had the strongest growth: from 2% to 9%. The large increase in the Dutch market share is on account of the 'cheese with holes' that was introduced in the mid 1980s. Italian imports from third countries are still substantial (15%), but are clearly declining.

Germany is a net importer of cheese, but it is also the most important supplier on the Italian market. The Netherlands in its turn is the largest supplier on the German market. German exports to Italy consist of a type of cheese which is completely different from the type of cheese that is imported from the Netherlands.

The shares of all the main suppliers in the cheese imports of the United Kingdom have changed during the period 1980-82 to 1992-94. France, Belgium/Luxembourg and Germany each gained 4 to 6%. Italy too increased its share by a few per cents. The three largest suppliers at the start, namely Ireland, the Netherlands, and Denmark experienced a fall in their shares; the Irish share fell a few per cents, while the Dutch and Danish shares were halved.

Ireland and Denmark hardly import any cheese. Both countries are also exporters of cheese and Denmark is even a fairly large net exporter.

On the Greek market the share of Germany increased considerably at first, to fall down again to the 1980-82 level. The Dutch share declined in the mid 1980s, but by 1992-94 this decline had been more than compensated for. Denmark lost market share: from over 20% to 16%.

In the Spanish imports there were no significant changes in the shares of the supplying member states. The share of third countries fell almost directly after Spain joined the EU. Portuguese imports of cheese are very small.

Skimmed milk powder

There is really no country that sets the tune for the trade in skimmed milk powder; there is no really large net importer, nor a really large net exporter (table 3.11). Although Germany is a large net exporter in 1992-94, this certainly was not the case during the whole period 1980-94. The Netherlands takes an unexpected position: net importer during the whole period. Italy too is net importer in all years, and it is the one and only 'old' member state that exports no skimmed milk powder at all. It should be noted that in the Netherlands as well as in Italy much skimmed powder is used in the production of calf milk. The other countries have a more or less balanced trade or are a net exporter (Germany and Ireland). The three 'new' member states have hardly any trade in skimmed milk powder. France and Belgium/Luxembourg combine limited import with modest net export.

Skimmed milk powder is an intervention product, which implies that there is a regular trade flow at normal 'internal' prices and a flow to and from the intervention stocks. The flow to the stocks is priced at approximately the 'internal' price and skimmed milk powder from the stocks is sometimes traded at extremely low prices. Moreover the volume of this latter trade flow varies considerably annually. In the trade statistics the regular trade flows and the 'intervention flows' are combined under the same product code. This may cause tremendous fluctuations in volume and value. Even three-year averages should be interpreted with care.

In the years with an overproduction of skimmed powder the stockpiling takes place mainly in Germany. These stocks partly originate from other member states. When these stocks are reduced again the statistics suddenly show large German exports. So there is hardly any relation between the volume of

Table 3.11 Imports of skimmed milk powder in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	145	-10	19.2	-19.2
Belgium/Luxemb.	103	-48	11.1	-5.6
The Netherlands	492	335	6.0	10.7
Germany (F.R.)	69	-672	-2.6	8.9
Italy	255	254	3.5	3.5
United Kingdom	33	-71	9.1	-5.5
Ireland	4	-267	20.3	7.8
Denmark	10	-10	-4.6	10.4
EU-9	1,111	-489	5.5	0.7
Greece a)	17	17	14.3	14.6
Portugal b)	9	4	22.1	c)
Spain b)	36	12	14.1	c)
EU-12 b)	1,173	-456	-1.9	1.6

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

gross import and net import. In 1992-94 the value of imports amounted to 69 million ECU gross and -672 million ECU net. In 1984-86 these amounts were 313 million ECU and -74 million ECU respectively.

Germany is the biggest net exporter in the period 1992-94 and has an almost 50% share in EU-12 imports (table 3.12). It has a share of even 78% in the large Italian imports. Italy and Greece are pure importers; they do not export any skimmed powder at all. All the other countries do export to other member states, but the trade volumes of Portugal, Spain and Denmark are very modest.

As has been mentioned before the Netherlands is an important trader and this also shows in skimmed powder; the value of Dutch gross import is almost twice that of net import during the whole period 1980-82 to 1992-94 (table 3.11). The shares of the various countries of origin fluctuate fairly strongly from year to year. Considering the whole period Germany is clearly the main supplier of the Netherlands.

In German imports it is the Netherlands that has the greatest share among the countries of origin. Here too there are great annual fluctuations.

The Italian imports structure is rather simple: Italy has traditionally been a large importer with Germany and France as its only suppliers. During the period Germany has even managed to further increase its large share at the cost of France.

Table 3.12 Shares (in %, average '92-'94) in the gross import value of skimmed milk powder in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	29	6	13	14	2	14	1	16	18	19	10
Belg./Lux.	30	-	5	5			1		17	7	3	7
Netherl.	8	34	-	33	2	6	6	16	17	36	29	8
F.R.G.	36	26	52	-	78	1	4	73	30	6	27	47
Italy					-		13					
United K.	5	1	11	15		-	57		3	7	11	7
Ireland	14	8	22	20	4	88	-	7	16	11	4	17
Denmark				4	1	3		-	1		1	1
Greece									-			
Portugal										-	5	
Spain	4		1	4	1		5			10	-	2
EU-12	99	99	98	95	100	100	100	97	100	95	99	98
Non-EU	1	1	2	5				3		5	1	2

The United Kingdom and Ireland have a large share in each other's imports, but the gross import value in both countries is very small. The net export flow is directed at the member states on the continent. Denmark and the three southern member states hardly import or export any skimmed milk powder.

Whey

Trade flows in whey are small; over the period 1992-94 it did not even amount to 300 million ECU per year on average. There are hardly any exports to third countries. France and to a lesser extent Germany and Denmark are the net exporters. The Netherlands is the most important net importer.

Lactose

EU trade in lactose is almost completely done by Germany and the Netherlands. These two countries realized in 1992-94 an average net export value of 15 and 69 million ECU respectively. The other member states have no noteworthy trade in this product.

3.2.3 Semi-processed products

The largest difference between the group of processed products and the group of semi-processed products is the ratio between total imports and net export of the member states. For the first group of products the gross EU-12 import value of 6.9 billion ECU is linked to a net export value of 1.7 billion ECU (table 3.7). For semi-processed products the total import value amounts to just 3.7 billion ECU, while net export amounts to 1.9 billion ECU (table 3.13). So the gross import value of processed products is almost twice that of semi-processed products, while the net export values of processed products and semi-processed products are practically equal.

Table 3.13 Imports of semi-processed dairy products in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	566	-362	10.0	-3.2
Belgium/Luxemb.	663	-58	2.8	c)
The Netherlands	678	-702	2.1	-2.1
Germany (F.R.)	522	-469	6.7	-1.4
Italy	367	297	5.4	3.8
United Kingdom	471	25	-1.4	-17.7
Ireland	24	-490	2.4	5.3
Denmark	38	-347	1.3	1.0
EU-9	3,329	-2,107	3.4	0.1
Greece a)	209	196	3.7	3.1
Portugal b)	15	-15	40.4	26.1
Spain b)	120	29	30.0	69.2
EU-12 b)	3,673	-1,896	4.2	3.4

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

This means that there is far less mutual trade. In the group of processed products there is a substantial intra-EU trade in cheese and skimmed powder. In the group of semi-processed products there are fairly large direct exports by the producing countries to third countries in condensed milk and in whole milk powder.

Table 3.14 Shares (in %, average '92-'94) in the gross import value of semi-processed dairy products in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	28	12	9	28	8	4		10	17	51	15
Belg./Lux.	25	-	27	15	12	3	3	25	6	3	3	13
Netherl.	18	32	-	41	3	5	2	29	53	16	6	19
F.R.G.	18	20	29	-	50	12	13	21	26	8	20	21
Italy	5	1	2	2	-			1			3	2
United K.	17	9	11	5		-	75	14	3	2	4	8
Ireland	9	7	16	22		23	-	10		5	2	12
Denmark	1	1		5	5	17		-	2		1	4
Greece					1	1			-			
Portugal	1		1							-	9	1
Spain	6	2	1		1					47	-	2
EU-12	100	100	99	100	100	70	98	100	100	97	100	96
Non-EU			1			30	2			3		4

Germany had a virtually neutral trade position in processed products, but with the semi-processed products it has joined the net exporters. The other net exporters are all definite net exporters of semi-processed products too.

For the group of semi-processed products the market is by no means booming. During the fifteen years considered the gross import value of EU-9 rose by only 3.4% per year, while the net export value remained unchanged.

Within this group of products butter accounts for more than half the value. The other three products are less important.

On the internal market the four countries with the largest shares together cover 68% of EU-12 gross import (table 3.14). Apart from being suppliers they are also, just like the United Kingdom and Italy, importers. Considering the whole period the shares fluctuate substantially, but it is clear that the Netherlands has lost some market share.

The large share of non-EU in United Kingdom imports is on account of butter from New Zealand. In the section on butter this will be explained further.

Milk products/cream

In this group of fresh products (yoghurts, desserts, etcetera) trade is almost completely intra affair. The net export value of EU-total is very modest (table 3.15). Germany is the main supplier, while Italy is the largest net importer. Trade in this product group is definitely increasing, but because of an inconsistency in the data series - as a result of the introduction of the Harmonized System in 1988 - it is not possible to give a reliable growth rate over the whole period.

Table 3.15 Imports of milk/cream in the member states of EU-12

	Average import value in million ECU 1992-94	
	gross	net
France	133	-45
Belgium/Luxemb.	200	76
The Netherlands	115	7
Germany (F.R.)	60	-322
Italy	170	165
United Kingdom	104	-17
Ireland	11	-11
Denmark	4	-26
EU-9	798	-174
Greece	25	13
Portugal	7	-2
Spain	61	40
EU-12	891	-123

Table 3.16 Shares (in %, average '92-'94) in the gross import value of milk/cream in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	24	5	26	19	25	7	1	38	20	51	19
Belg./Lux.	22	-	46	25	7	7		21	23		1	14
Netherl.	3	32	-	21			3	23		1	1	10
F.R.G.	33	30	35	-	72	47	2	53	36	16	28	39
Italy			1		-	2		1	2			
United K.	33	13	8	11		-	85	1			1	11
Ireland			4	5		10	-		1	1	2	
Denmark			1	6		2		-			2	1
Greece				4	2	5			-	1	1	
Portugal										-	14	1
Spain	8									62	-	2
EU-12	100	100	100	99	100	99	98	100	100	100	100	100
Non-EU				1		1	2					

France and Germany dominate the import markets in all member states that have substantial imports (table 3.16). Because of the problem with the data series mentioned before it is impossible to indicate whether there have been any significant shifts in the shares.

Butter

Butter is by far the most important product within the group of semi-processed products. Total EU-12 imports amounted to an average of 1.8 billion ECU in 1992-94 (table 3.17). It is almost totally intra-EU trade; the United Kingdom is the sole importer from third countries. Net export amounted to around 230 million ECU per year.

Over the whole period the growth rate of the EU-9 gross import value is practically zero. The net export value has a growth rate of -10%. The export flow to third countries partly consists of intervention butter that the Union has to get rid of. So the volume of this trade flow strongly fluctuates. This implies that the growth rate is strongly influenced by the choice of starting year and ending year. There is however a clearly declining tendency in exports to third countries, which is also influenced by the limitation in milk production.

The United Kingdom is the only large net importer during the whole period 1980-94. The net export is realized by only three countries: the Netherlands, Ireland and Denmark. The other countries now have a more or less neutral trade position, although at the start of the period France and Germany were still fairly large net exporters.

As mentioned before, there is a lively intra-EU trade in butter. This also shows in table 3.18. Belgium/Luxembourg, for instance, has a 31% share in Dutch butter import. This represents a value of 90 million ECU per year. The Dutch share in gross import of Belgium/Luxembourg is 41%, which equals around 125 million ECU. Nevertheless net export of Belgium/Luxembourg is

Table 3.17 Imports of butter in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	348	130	5.8	c)
Belgium/Luxemb.	306	-6	-2.3	c)
The Netherlands	287	-244	-2.5	-0.4
Germany (F.R.)	348	185	7.0	c)
Italy	109	50	-1.4	-7.4
United Kingdom	337	190	-3.8	-4.0
Ireland	6	-397	-3.4	5.6
Denmark	31	-109	0.6	-3.9
EU-9	1,773	-201	-0.2	-9.7
Greece a)	22	22	5.9	5.8
Portugal b)	2	-11	10.3	22.3
Spain b)	9	-39	17.6	32.8
EU-12 b)	1,806	-229	-0.4	-6.7

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

Table 3.18 Shares (in %, average '92-'94) in the gross import value of butter in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	17	14	2	31	3	3		23	5	29	8
Belg./Lux.	23	-	31	11	29	2	6	27	19	10	10	14
Netherl.	24	41	-	47	8	5	2	32	29	29	20	23
F.R.G.	7	12	6	-	28		44	12	13		3	7
Italy	8	1	5	2	-				1			3
United K.	14	10	9	3		-	45	16	1		6	7
Ireland	14	13	30	29		25	-	12	1	20	15	21
Denmark	1			6	3	23		-	13	2	6	6
Greece									-			
Portugal	1		2		1					-	11	1
Spain	6	4	1							25	-	2
EU-12	100	100	99	100	99	58	100	100	100	91	100	92
Non-EU			1		1	42				9		8

practically zero. This phenomenon of large mutual shares is also present in the trade between Belgium/Luxembourg and France.

The most striking detail in table 3.18 is the third countries share in the United Kingdom imports. Before its entry in 1973 the butter imports originated

mainly from New Zealand. In the accession treaty a transitional arrangement was made with New Zealand, in order to enable the United Kingdom to continue importing from this country. The arrangement covered 165,000 tonnes in the first year. This volume was gradually brought down and by 1993 New Zealand was allowed to export to the United Kingdom no more than 52,000 tonnes. A levy must be paid on this butter, which brings the price at around the EU level (CAP Monitor). Butter from other third countries is subject to a higher levy, bringing the price far above the internal level. This is why New Zealand is the only country that can ship (at a competitive price) butter to the EU.

Condensed milk

Basically the EU trade in condensed milk is a three country affair. One net importer: Greece, and only two net exporters: the Netherlands and Germany (table 3.19).

Table 3.19 Imports of condensed milk in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	61	5	43.2	c)
Belgium/Luxemb.	22	-63	-0.2	c)
The Netherlands	114	-217	5.6	-4.2
Germany (F.R.)	49	-201	1.6	3.9
Italy	19	14	15.2	23.5
United Kingdom	15	-24	6.0	1.1
Ireland	2	-1	-2.0	c)
Denmark	1	1	16.2	c)
EU-9	284	-486	6.3	-1.3
Greece a)	148	147	2.6	2.6
Portugal b)	3	3	97.5	c)
Spain b)	37	24	16.1	14.4
EU-12 b)	472	-312	2.9	-0.7

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

Between 1985 and 1993 Dutch net export fell by 200 million ECU. This amount is practically equal to the fall in net export by EU-9. German net export increased. During the second half of the 1980s the demand for condensed milk on the world market has fallen dramatically. Both the net exporters have only modest imports, and they have large shares in their mutual imports (table 3.20). Greek imports originate for around 70% from the Netherlands and the remainder is imported from Germany.

Table 3.20 Shares (in %, average '92-'94) in the gross import value of condensed milk in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	28		5	9	2	1	1	3	10	57	8
Belg./Lux.	46	-	20	44		14	1	1			6	16
Netherl.	12	27	-	43	14	26	1	23	70	36	7	32
F.R.G.	39	42	79	-	71	46	1	75	24	2	15	39
Italy		3			-	1					10	1
United K.	2		1	6		-	97		3		5	3
Ireland				1		11	-					
Denmark								-				
Greece									-			
Portugal										-		
Spain		1		1	5					52	-	1
EU-12	100	100	100	100	100	100	100	100	100	100	100	100
Non-EU												

Whole milk powder

The gross import value of whole milk powder is not particularly large in most member states. The most striking feature with this product is that, with the exception of Greece, Italy and Spain, all countries are net exporters (table 3.21). The member states together export a value of 1.2 billion ECU per year to

Table 3.21 Imports of whole milk powder in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	24	-452	19.1	4.2
Belgium/Luxemb.	134	-66	11.1	5.5
The Netherlands	162	-247	6.4	-1.0
Germany (F.R.)	65	-131	5.0	7.3
Italy	68	67	10.0	10.0
United Kingdom	15	-124	5.4	10.8
Ireland	4	-81	4.6	2.8
Denmark	1	-212	-7.9	5.6
EU-9	474	-1,245	7.9	3.4
Greece a)	15	15	-0.9	-1.0
Portugal b)	3	-5	27.2	50.2
Spain b)	13	3	25.1	c)
EU-12 b)	504	-1,232	5.3	6.2

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

the world market. The growth rate of Dutch net export is negative (-1%), but the other large exporters clearly increased their export.

The United Kingdom has hardly any imports and a fairly large net export. Whole milk powder and skimmed milk powder are the only two products for which the United Kingdom is a net exporter. For all other dairy products it is a net importer or neutral.

The relatively large Dutch imports originate from four different countries (table 3.22). Over the whole period 1980-94 the countries of origin are always the same, but their shares fluctuate strongly from year to year.

Table 3.22 Shares (in %, average '92-'94) in the gross import value of whole milk powder in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	63	23	38	50	14	1		16	24	46	38
Belg./Lux.	27	-	16	5			7		13	9	5	8
Netherl.	13	12	-	28	1	13	4	31	13	21	18	9
F.R.G.	40	17	28	-	23	6	2	52	42	1	9	21
Italy	2				-			13				
United K.	5	3	23	12		-	81	1	12	9	9	11
Ireland	5	3	7	10	1	66	-	2	1	11	2	7
Denmark	2	2	1	3	21	1		-	3		1	4
Greece									-			
Portugal	6		1	1	1		1			-	11	1
Spain				3	1					13	-	1
EU-12	99	100	99	99	100	100	96	99	100	88	100	99
Non-EU	1		1	1			4	1		12		1

3.2.4 Unprocessed products

Unprocessed milk is traded in fairly large volumes in the intra-EU trade, but net export to third countries is limited (table 3.23). The Netherlands and Italy are the countries that have large net imports and the other countries are net exporters or they have a neutral trade position. From the ratio between gross and net import it appears that the trade flows are mainly one-way flows. There are no member states that import on a large scale and also have a large share in each other's imports.

The two countries with the largest imports have the same main supplier: Germany (table 3.24). The Netherlands has Belgium/Luxembourg as its second supplier, while in Italian imports this position is held by France.

Table 3.23 Imports of unprocessed milk in the member states of EU-12

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
France	156	-135	20.5	4.5
Belgium/Luxemb.	102	-191	19.4	12.5
The Netherlands	138	108	8.8	11.7
Germany (F.R.)	61	-533	6.1	5.7
Italy	545	543	4.1	4.2
United Kingdom	47	17	30.5	c)
Ireland	26	2	54.3	c)
Denmark	2	-9	c)	-0.5
EU-9	1,077	-198	7.6	11.8
Greece a)	11	11	10.0	9.7
Portugal b)	8	2	164.4	c)
Spain b)	86	57	10.8	5.5
EU-12 b)	1,182	-128	6.4	12.0

a) '81-'83 basis for growth rate; b) '86-'88 basis for growth rate; c) Not available.

Table 3.24 Shares (in %, average '92-'94) in the gross import value of unprocessed milk in the member states of EU-12

Origin	France	B./L.	Neth.	F.R.G.	Italy	U.K.	Irl.	Den.	Gr.	Port.	Spain	EU-12
France	-	31	3	14	23	9			6	58	93	22
Belg./Lux.	74	-	33	79	4	30			83			21
Netherl.		24	-	2				1		2		2
F.R.G.	24	44	64	-	73	12		99	10	2	1	49
Italy					-					9		
United K.						-	100					2
Ireland						47	-					2
Denmark				4		1		-				
Greece						1			-			
Portugal										-	5	
Spain	1									30	-	
EU-12	100	100	100	99	100	100	100	100	100	100	100	100
Non-EU				1								

3.3 Trade position of the EU and of its member states

The Union (EU-9) is a large net exporter of dairy products. It exports a value of about 4.2 billion ECU per year to the world market (Appendix, table A1). Cheese and milk powder are the main products in the export to third countries. The growth rate of the value of export to third countries is significantly lower than the growth rate of the intra-EU trade (2.5% and 5% respectively). Cheese is the only major product that has a higher growth rate for exports to the world market (10.2%) than for the intra-EU trade (6.6%). Milk powder, butter and condensed milk have growth rates for exports to third countries which are clearly lagging behind those for the intra-EU trade.

France is a large net exporter of especially cheese and whole milk powder (Appendix, table A2). It exports cheese for around 350 million ECU per year to third countries. This makes France the main EU supplier of cheese on the world market. The Netherlands exports slightly less cheese to the world market. For whole milk powder too France is one of the most important suppliers from within the EU.

The Netherlands (Appendix, table A4) is a pre-eminent exporter of cheese. More than 80% of its net export value of dairy products is realized by the export of cheese. A relatively small share of the cheese exports is sold to third countries. The growth rate of the net export value of cheese (7.0%) is slightly higher than the growth rate of the EU-9 intra-EU trade in cheese (6.6%). The growth rate of total net dairy exports amounts to only 1.3% because of the high growth rate of products for which the Netherlands is a net importer (skimmed powder and fresh milk).

The Federal Republic of Germany is a net importer for cheese and butter (Appendix, table A5). For the other dairy products it is a net exporter. The net export value for total dairy products remained virtually unchanged during the period 1981-93. The positive growth rates for net export of milk powder (whole and skimmed) were compensated for by an even higher growth rate for the net import value of cheese.

Italy only exports cheese (at a value of around 500 million ECU per year), but its import value of cheese is considerably higher. For all other products the gross import value is virtually equal to the net import value (Appendix, table A6). Within the EU Italy is the largest net importer of dairy products.

The United Kingdom is the second largest net importer within the EU (Appendix, table A7), although it is a modest net exporter of (whole and skimmed) milk powder.

Ireland hardly imports any dairy products (Appendix, table A8). Its cheese and skimmed milk powder exports are destined for the United Kingdom. Butter is exported to Germany, France, Belgium/Luxembourg and the Netherlands.

Denmark also hardly imports any dairy products (Appendix, table A9). More than half its net export consists of cheese, for which Germany is the main market. The United Kingdom and Greece are also important markets. Whole milk powder and butter are the other products for export. The latter product is exported mainly to the United Kingdom, while whole milk powder is destined for third countries.

3.4 Prices in the dairy products trade

Dairy products are subject to the 'heavy' market regulation and therefore there is a large gap between the internal prices and the - much lower - prices in the trade with third countries. When exporting to third countries the exporter usually receives an export refund, but this amount is not registered in the trade statistics. This implies that for exports to third countries only the 'bare' price may be calculated from the trade statistics. This price may be interpreted as the EU-specific world market price of that product. The ratio between prices in the intra-EU trade and those in the extra-EU trade is a standard for the measure of protection.

The intra-EU trade prices of the intervention products butter and skimmed milk powder should be interpreted with care. Regular trade in these products will usually take place at prices around the intervention level. Surpluses that are offered to intervention boards in another member state, are exported at the intervention price and as such registered in the trade statistics. When the intervention stocks become too large and/or the quality of the stored product has deteriorated too much, the Commission disposes of lots - within the framework of special programmes or for exports to the world market - at sometimes very low prices. These lots may be exported from the country that held it in store directly to a third country, but it is also possible that at this very low price it is first exported from one member state to another and only then to the world market. This may have a negative effect on prices for the intra-EU trade calculated from trade statistics.

In making the matrices the volumes were weighted with the EU export price to third countries. Because of this it is impossible to calculate the actual prices, but it is still possible to calculate price ratios. Therefore in this section only the price levels will be compared. The price of a certain product or certain product group in a certain year is related to the EU export price in 1984-86 (base period) of that same product or product group. The graphs show the annual development of the price level and *only for the base period 1984-86* the gap with the world market price.

3.4.1 Price levels in the intra-EU trade

Total dairy products

Prices in the intra-EU trade of dairy products show a steady increase, without a strong rise or fall. During the period 1980-94 the internal price level rose by 40%. In the base period (1984-86) the EU price level is almost 20% above that of the world market (figure 3.1).

When we look at the price levels at which a certain member state imports the total group of dairy products from the eleven other member states or the level at which the eleven members import from that particular member state, then the tendency is still very much the same, but the lines become much more fanciful. Developments in prices will be discussed in brief for the four largest suppliers: France, Belgium/Luxembourg, the Netherlands and the Federal Republic of Germany.

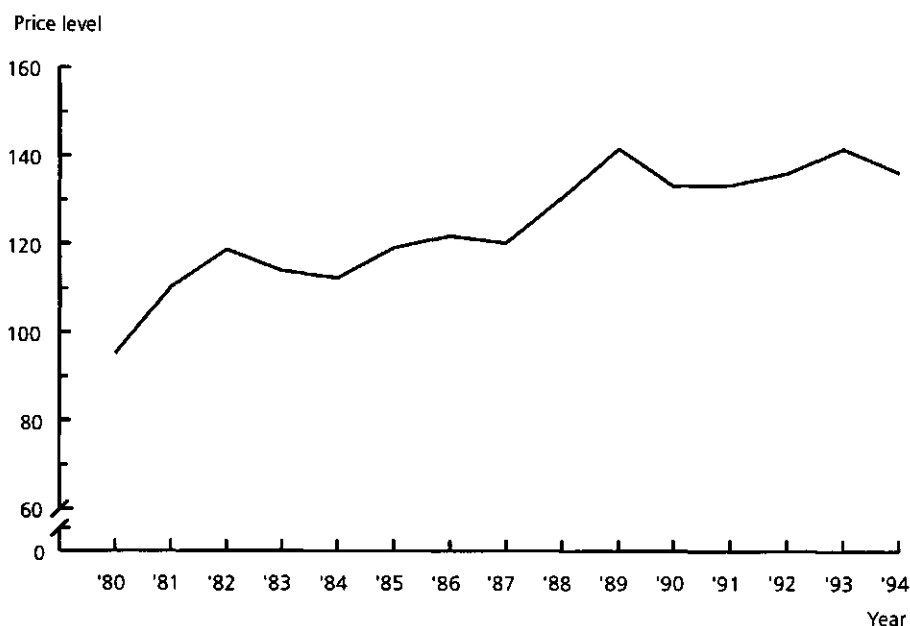


Figure 3.1 Development of the price level of total dairy import in the intra-EU trade compared to the EU export price to third countries in 1984-86 (=100)

The price level of French imports from the EU is alternately higher and lower than the price level of EU imports from France, but the gap is seldom more than 10%. In Belgium/Luxembourg the situation is virtually the same, but in a number of years the price difference is somewhat larger.

For the Netherlands the price levels do not intersect. Exports to the EU always take place at a higher level than imports from the EU. Early in the 1980s the difference was around 10%, but it soon rose to 30% or 40%. The main reason for this gap is the difference in the composition of Dutch imports and the composition of exports. In exports cheese (high price level) is an important product, while cheese is relatively unimportant in imports. Imports consist mainly of less 'expensive' dairy products.

The Federal Republic of Germany also has a gap of 30% to 40% between the price levels, but here imports are more expensive than exports. This too is mainly caused by cheese. Germany is a net importer of cheese and this product has a 65% share in the gross import value.

In the preceding sections it has already been noted that the Netherlands and Germany have a large mutual trade in dairy products. The Netherlands is the largest supplier for Germany (around 45% of the German import value) and conversely Germany is the main supplier for the Netherlands (around 30% of the Dutch import value). This also shows in the price levels of EU imports from the Netherlands and German imports from the Netherlands. They appear to be almost the same. However, when we compare the price level of EU imports from Germany and Dutch imports from Germany, then the level of Dutch

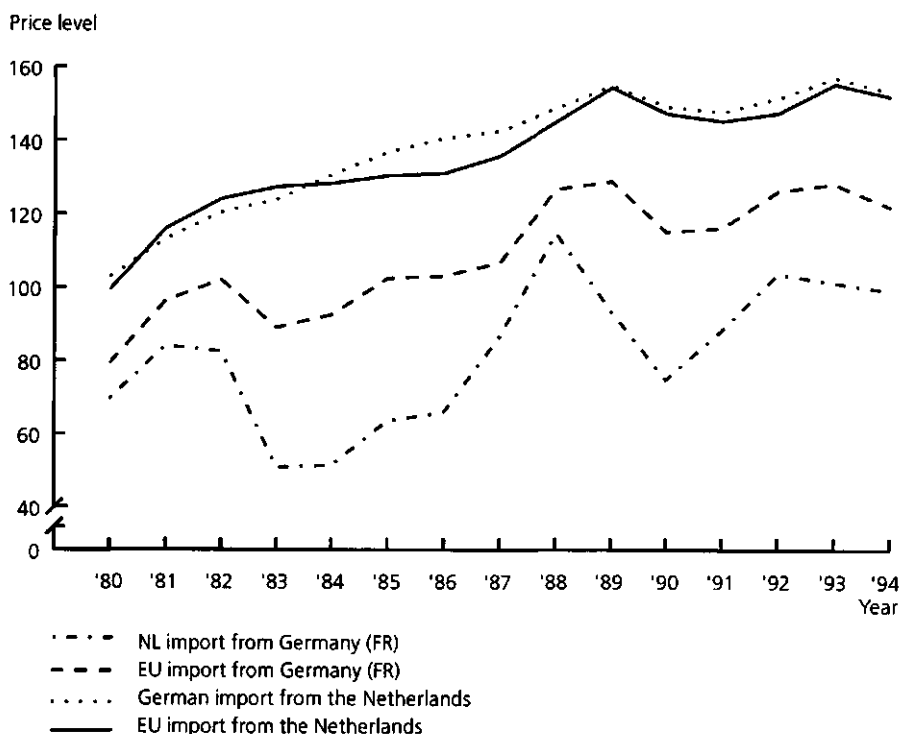


Figure 3.2 Development of the price level of total dairy import in the intra-EU trade between the Federal Republic of Germany and the Netherlands compared to the EU export price to third countries in 1984-86 (=100)

imports appears to be considerably lower. The main reason for this difference is the fact that Germany has fairly large cheese exports to other member states than the Netherlands. During most years the price levels differ between 20% and 40% (figure 3.2).

Processed products

Within this product group cheese has a share of almost 80% in the EU total gross imports and consequently it is of major importance for the development of the price level in this group. During the period 1980-89 the price level of cheese in the intra-EU trade has increased by around 45% and then it stayed on that level (figure 3.3). In the base period the internal price is approximately 40% higher than the world market price.

The Netherlands is the largest cheese exporter within the EU and the development of Dutch export prices to other member states hardly differs from that for the total intra-EU trade. The price level for cheese imports almost equalled that for exports in 1980-87, but then it became distinctly lower. In French cheese trade the price level of imports was considerably lower than that

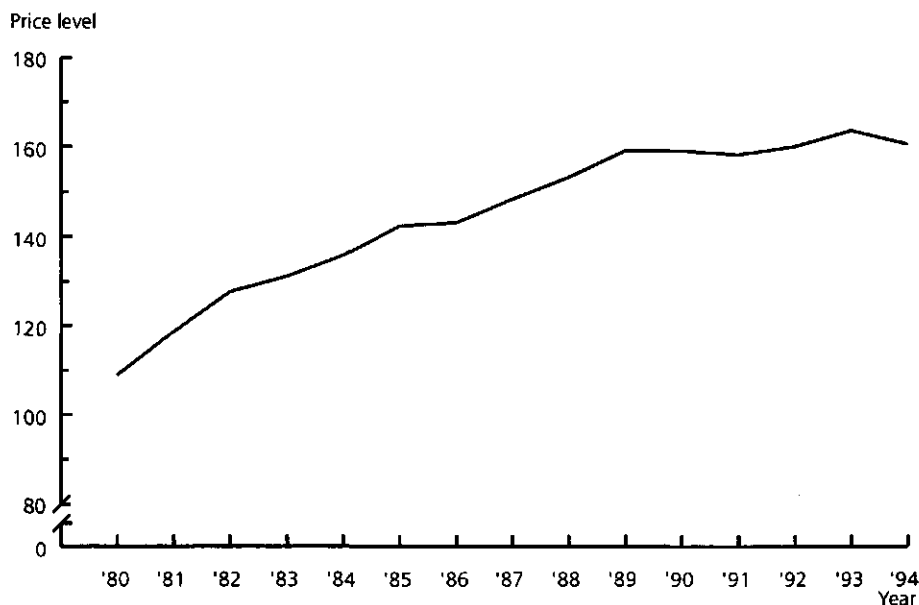


Figure 3.3 Development of the price level of cheese in the intra-EU trade compared to the EU export price to third countries in 1984-86 (=100)

of exports until 1988. From that year onwards the price levels for imports and exports were virtually the same. As a matter of fact in both countries imports are very small when compared to exports.

In the Federal Republic of Germany the import price level for cheese was 10 to 20% higher than the level at which cheese was exported to the other member states. This difference in price level is probably caused by the fact that imports consist of other types of cheese than exports. Italy is a similar case: the price level of imports is about one third lower than that of exports to the EU. Italian exports are rather small however.

Prices in the intra-EU trade of skimmed milk powder vary very much ¹⁾. Yearly, the price may rise or fall strongly. The price level in 1989 is more than twice as high as the level in 1984. Skimmed milk powder is partly a 'surplus product' and this also shows in the price. In 1983 the intervention stocks had risen to almost one million tons and in 1988 the stocks had been cleared again. In the base period the intra-EU price was on average virtually equal to the world market price (figure 3.4).

For most individual member states the charts show large fluctuations in price and the lines for the import price from and the exports price to other member states cross each other more than once. The only exception to this is the Federal Republic of Germany. The price level of German imports from the

1) See also section 3.2.2 under the heading Skimmed milk powder, 2nd paragraph.

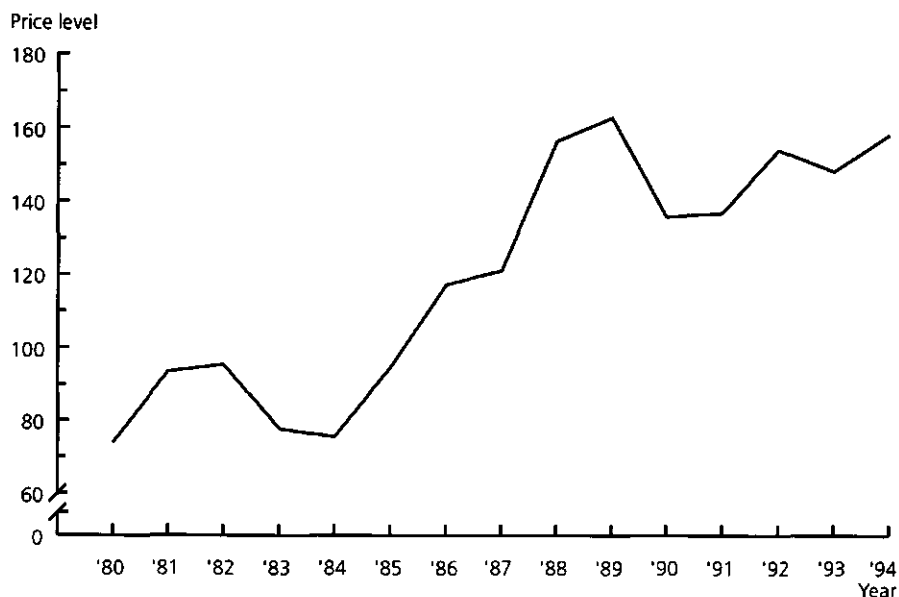


Figure 3.4 Development of the price level of skimmed milk powder in the intra-EU trade compared to the EU export price to third countries in 1984-86 (=100)

other member states is in all years considerably higher than that of German exports to the EU. The price level of German imports from the other member states shows a steady rise in the period 1980-89, but then prices dropped sharply. The price level at which the other member states imported from Germany in the mid 1980s amounted to only half the price that Germany paid for its imports. In 1984-86 the member states imported from Germany at a price that was even considerably below the world market price. The reason for these large gaps is the large flows of intervention powder that are imported in Germany at the intervention price to be exported again at world market price or special 'action prices'. In the early 1980s and by the end of the 1980s there were few surpluses in the EU, so that the difference between import price and export price decreased considerably.

Semi-processed products

The price level of the intra-EU trade in semi-processed products is subject to fairly heavy fluctuations. From 1980 to 1982 prices rose, only to drop again to the starting level during the next five years. Then during 1987-89 prices recovered, but then fell again. The course of the prices was to a large extent dictated by the price of butter. With a 45% share in the gross EU import value it is by far the most important product within this group.

The development of prices for semi-processed products in France and Belgium/Luxembourg hardly differed from the line described in the preceding

paragraph. For both countries the levels of the import price and the export price crossed several times. In the Netherlands and the Federal Republic of Germany there was a distinct difference between import price and export price. For the Netherlands the price level of exports was higher than the price level of imports and for Germany it was just the other way around.

The price at which the internal trade in butter was concluded fluctuated strongly. Like skimmed milk powder it is an intervention product and so prices are influenced the same way. Increasing intervention stocks between 1982 and 1986 had a negative impact on prices, while the disappearance of stocks in 1989 resulted in a peak (figure 3.5).

For the individual member states the course of import price and export price is even more capricious. The gap between these two prices may fluctuate extremely from year to year.

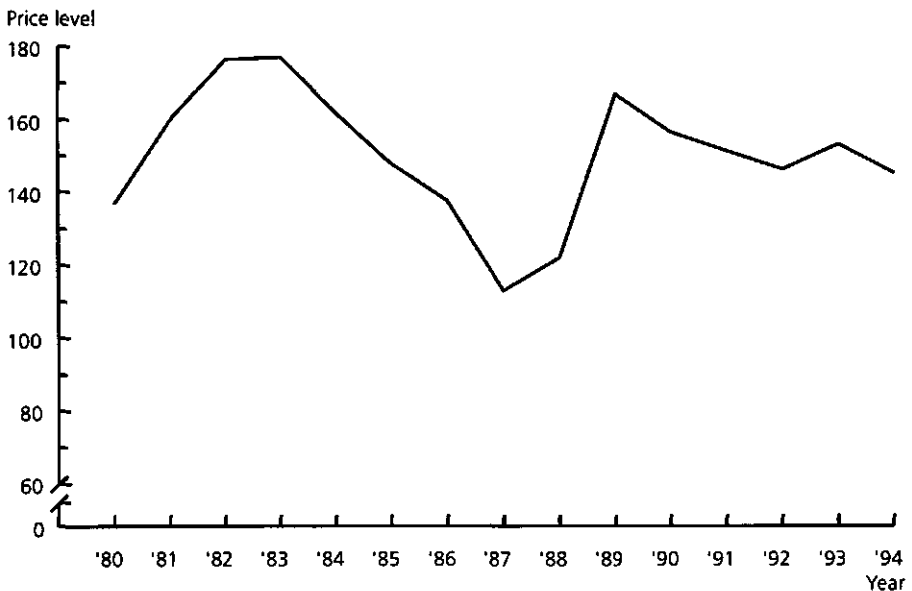


Figure 3.5 Development of the price level of butter in the EU intra-EU trade compared to the EU export price to third countries in 1984-86 (=100)

The intra-EU trade in whole milk powder had a stable price development. From 1980 to 1989 the price level rose steadily, and then stayed at that level (figure 3.6).

France and the Netherlands are the two most important exporting countries for whole milk powder. The development of the price for these two countries largely resembles that of the total intra-EU trade. The levels of import price and export price are very close to each other and the lines also cross.



Figure 3.6 Development of the price level of whole milk powder in the intra-EU trade compared to the EU export price to third countries in 1984-86 (=100)

Trade in condensed milk between the member states is of minor importance, but in exports to third countries it certainly is an important product. In the base period the internal price is only some 15% above the world market price. In the early 1980s the internal price rose by around 40%, and then stayed at that level.

In the milk and cream group there is a break in the data series. In the years up to the break the prices in the intra-EU trade tended to rise slightly and then stabilized.

Unprocessed milk

Trade flows in unprocessed milk are fairly limited. The largest flow is from the federal Republic of Germany to Italy. The price level of the intra-EU trade rose up to 1989 and then stabilized.

3.4.2 Price levels in the extra-EU trade compared with those in the intra-EU trade

The EU dairy market is a market that is shielded very strongly from the world market. Because of this the internal price level is continually above that of the world market. During the period 1980-94 the gap was on average 28% for total dairy products. The difference varies strongly from year to year;

around 10% in 1983 and 1984 and 60% in 1987 and 1988. The large differences from year to year are caused by the variation in the products that are exported and the fluctuations in the world market price. The value of the intra-EU trade is more than three times as high as the value of exports to third countries.

Considering the whole period the average gap between the price levels is highest for butter: 63%. The difference varied between 29% in 1982 to 131% in 1988. The very large difference in the latter year was caused among other things by sales of intervention stocks at extremely low prices to Eastern Europe (figure 3.7).

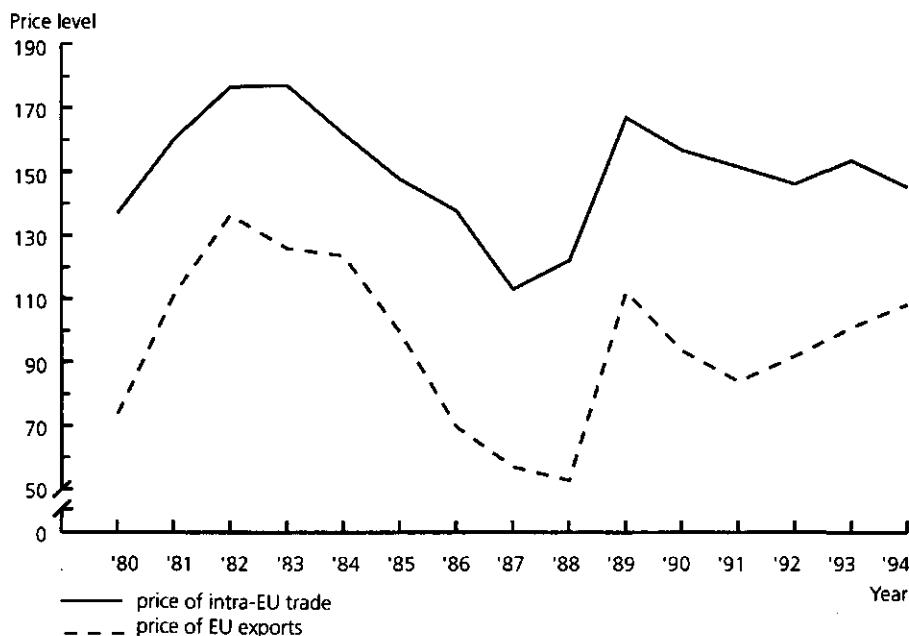


Figure 3.7 The price level of the intra-EU trade and extra-EU trade in butter compared to the EU export price to third countries in 1984-86 (=100)

The other intervention product, skimmed milk powder, shows a very different picture. Considering the whole period the price level of the intra-EU trade was on average only 12% above that of EU exports to third countries. In 1983, 1984 and 1989 the EU export prices were even higher than the prices paid in the intra-EU trade. There is no other product where intra and extra prices are so close. This is caused by the fact that the surplus intervention stocks of skimmed milk powder are to a large extent sold on the internal market via special programmes; for instance for the compound feed industry or for the food and stimulants industry.

Condensed milk is one of the less important dairy products in the EU. The price level of the intra-EU trade was on average 28% above that of the extra-EU trade. In the early 1980s the gap was only some 10%. In 1988-89 the difference amounted to over 60%, while in 1994 it had fallen again to 31%.

Whole milk powder is the only dairy product of which the value of exports to third countries is larger than the value of the intra-EU trade. During the first half of the period 1980-94 intra-EU price and extra-price were practically equal, but then the price level of exports fell below that of the intra-EU trade. Over the whole period the price level of the intra-EU trade was 20% higher.

Cheese is the product that has the second largest gap in price level between intra-EU trade and extra-EU trade: on average 45%. The difference varies relatively little: between 36% and 64% (figure 3.8). The difference in price may partly be explained from the varying composition of the total volume of cheese that is traded within the EU and the volume that is exported to third countries. As a matter of fact the value of the intra-EU trade (4.8 billion ECU in 1994) is more than five times the export value to the world market.

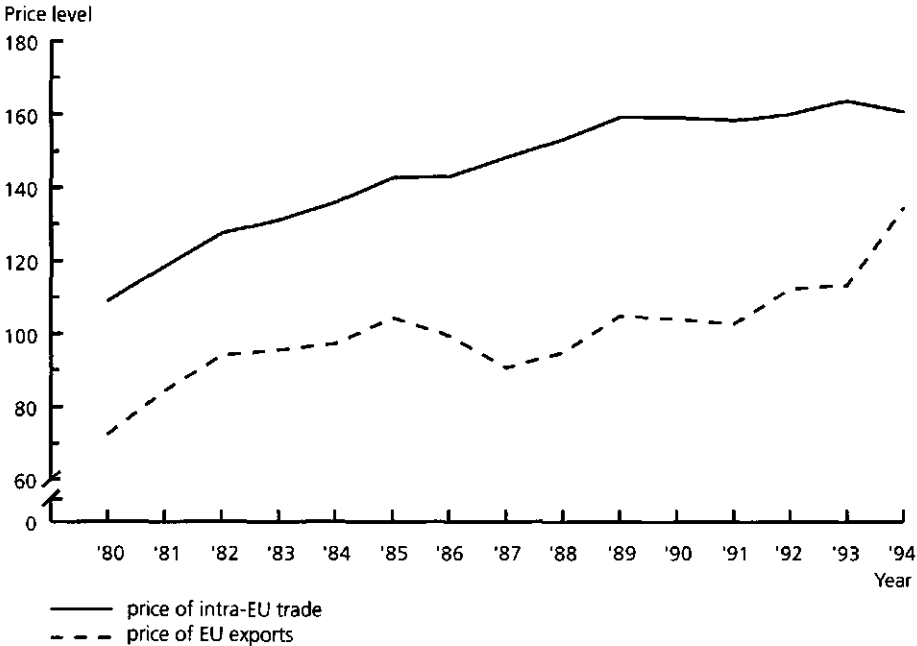


Figure 3.8 The price level of the intra-EU trade and extra-EU trade in cheese compared to the EU export price to third countries in 1984-86 (=100)

The European Union is not the only economic block to protect its dairy industry. Other blocks too protect their own dairy industry. Because of this the world market has become a rest market for selling the surpluses. In a totally free market the world market price would be at a considerably higher level. Various liberalization studies arrive at price rises on the world market of between 15% and 60%. On a liberalized world dairy market the dairy farmers in the EU will however be confronted with a lower milk price.

4. CHEESE CONSUMPTION IN THE EU MEMBER STATES

4.1 Method of calculation and the EU production volume

In chapter 3 the trade flows of dairy within the EU were analysed. Each member state is also a dairy producer and when trade data are linked to the domestic production, then it is possible to calculate for every trading partner the share of that country of origin in the total domestic utilization of the importing country. In this chapter this will be done for the most important product in the dairy trade: cheese, a product with a high value added.

4.1.1 Calculation method

Total cheese imports in country A from country B can be expressed as a percentage of the domestic utilization in country A. However, it is by no means certain that all that is imported from B will also be utilized in country A. It is quite possible and in some cases even highly likely that part of the imports from country B will be re-exported to country C. Moreover there are practically always also imports in country B from country A. Therefore total imports expressed as a percentage of total domestic utilization is not an ideal indicator. It is preferable to plot net import against domestic utilization. This method also shows at once the degree of self-sufficiency of the importing country.

The net import volume of each member state can be calculated from the matrices. Net import plus domestic production equals domestic utilization.

Suppose country A has total net import of 75 and a domestic production of 250. Then total domestic utilization is equal to $75 + 250 = 325$. In case country A has negative net import (i.e. is a net exporter) of e.g. -80, then domestic utilization is $-80 + 250 = 170$. The net import volume (positive or negative) by country of origin can be expressed as a percentage of domestic utilization. So, these shares may be positive as well as negative. Table 4.1 gives an example of the shares for the Federal Republic of Germany for some years from the series 1980-1994.

The net import volume from the Netherlands in 1990 was equal to 13.9% of German domestic utilization. Opposed to this was a slightly smaller net export volume to Italy. The net import volume from EU-12 in 1990 amounted to 7.6% of the domestic utilization in the Federal Republic of Germany. The balance of exports to third countries was 3.6% and so Germany imported 4% of its domestic utilization in 1990. After the reunification with the former G.D.R. domestic production increased of course and by 1994 Germany imported only 1% of its domestic utilization.

From 1990 to 1994 Germany was a net importer from France, the Netherlands, Denmark and (sometimes) Ireland. The share of the net import from the

Table 4.1 Shares in % of the net import volume in domestic utilization in Germany (F.R.)

Origin	'90	'91	'92	'93	'94
France	6.3	6.2	6.2	5.8	5.2
Belgium/Luxembourg	-2.0	-1.8	-1.8	-2.1	-1.3
The Netherlands	13.9	13.6	13.6	10.0	10.6
Italy	-10.0	-8.3	-8.3	-8.2	-8.1
United Kingdom	-2.4	-1.6	-1.6	-1.7	-1.8
Ireland	-0.0	0.1	0.1	0.0	0.1
Denmark	2.9	2.8	2.8	3.5	3.7
Greece	-0.8	-0.6	-0.6	-0.7	-0.8
Portugal	-0.0	-0.0	-0.0	0.2	-0.0
Spain	-0.4	-0.3	-0.3	-0.3	-0.4
EU-12	7.6	10.0	10.0	6.5	7.2
Non-EU	-3.6	-3.9	-3.9	-5.1	-6.1
World	4.0	6.1	6.1	1.4	1.1

Netherlands in German domestic utilization decreased. At the same time the share of the net export volume to Italy decreased too. All in all the share of imports in German domestic utilization is falling. In section 4.2.2 the developments in domestic utilization in all EU member countries will be discussed.

4.1.2 Cheese production

Cheese production in EU-12 has risen from 3.9 million tonnes in 1980 to 5.7 million tonnes in 1994 (FAO Production Yearbook). Over the whole period 1981-1993 (three-year averages) cheese production increased by 2.9% per year. During the first half of the eighties the growth rate was slightly lower than in the second half. In spite of the milk quota system cheese production in the EU kept on increasing. France is the largest producer with 1.56 million tonnes (in 1994); its share in EU production in 1994 was 27%. German cheese production is only slightly lower than that of France; 1.37 million tonnes in 1994. The Federal Republic of Germany did not only have the highest growth rate of all member states (4.6% over the period 1981-1993), but apart from that it also had a higher growth rate in the second half - after implementation of the quota - than in the first half of the period. Because of this the German share in EU cheese production rose from 20% in 1980 to 24% in 1994. Italian cheese production in 1994 amounted to just over 900,000 tonnes and production in the Netherlands was 648,000 tonnes that year. In 1994 these four countries together had a 78% share in EU cheese production.

Total EU cheese production in 1992-94 amounted on average to 5.6 million tonnes per year. Internal consumption of cheese was 5.2 million tonnes, so there was a surplus of over 8% that had to be sold on the world market.

4.2 Developments in cheese production

4.2.1 The main consumers

Three out of the four main cheese producing countries mentioned in the preceding section, are also among the largest consumers of cheese (table 4.2). Nevertheless French production exceeds consumption by more than 20%. In the Federal Republic of Germany the gap between consumption and production is only a few per cents, and in Italy production is 20% lower than consumption. Dutch consumption amounts to just around one third of production and so the Netherlands export (net) a large share of their cheese production. In Ireland and Denmark this ratio is even more extreme, but in absolute terms these countries have a very low consumption.

The average cheese consumption per caput per year is 13.5 kg for the EU as a whole. France and Greece have the highest consumption per caput, with 21.6 and 24.6 kg respectively. Cheese consumption per caput is lowest in the United Kingdom, Ireland, Spain and Portugal; it varies between 4.6 and 7.8 kg. The other member states have a consumption per caput that hardly differs from the EU average.

Cheese consumption in EU-12 increased by 2.9% per year in the period 1987-93 (table 4.2). For EU-10 (1981-90) this was fractionally higher. The rise in consumption is caused by a higher consumption per caput in all countries, with the exception of Ireland and the Netherlands. In these two countries the population grew at a higher rate than total cheese consumption. In Ireland consumption per caput is very low (4.6 kg), but Dutch consumption (13.7 kg) is almost equal to the EU average.

Table 4.2 Production and consumption of cheese in the EU, average per year 1992-94 (x 1,000 tonnes), and the growth rate of consumption in 1981-1993 based on three-year averages

	Production	Consumption	Growth rate consumption
France	1,538	1,252	1.9
Belgium/Luxembourg	72	142	1.6
The Netherlands	635	235	1.1
Germany (F.R.)	1,326	1,372	4.8
Italy	901	1,089	2.4
United Kingdom	339	494	3.0
Ireland	94	23	2.7
Denmark	301	79	3.8
Greece a)	210	254	1.1
Portugal b)	65	67	4.6
Spain b)	156	189	1.3
EU-12 b)	5,638	5,195	2.9

a) Growth rate 1982-93; b) Growth rate 1987-93.

4.2.2 The ratio between production and consumption by member state

In this section the main characteristics of developments in the internal consumption in each member state will be given. Attention will also be paid to the countries of origin that have a positive share in the internal consumption. In the appendix (table A10 - A21) a full account is given for each member state with all positive and negative shares.

As French production amply exceeds internal consumption, the country is a net exporter to all other member states with the exception of the Netherlands. Because France also exports much cheese to the Netherlands the share of the net import volume from the Netherlands in the French consumption is rather low. The share of the net import volume from the Netherlands in the internal (French) consumption rose from 2% in the early eighties to almost 3% in 1992-94. When the gross volume is plotted against consumption, the Dutch share amounts to around 4%.

Belgium/Luxembourg imports half its cheese consumption (Appendix, table A11). It is a net importer from the three neighbouring countries and it has net export to Italy and the United Kingdom. The share of net import from the Netherlands in the consumption amounts to around 30% over the period

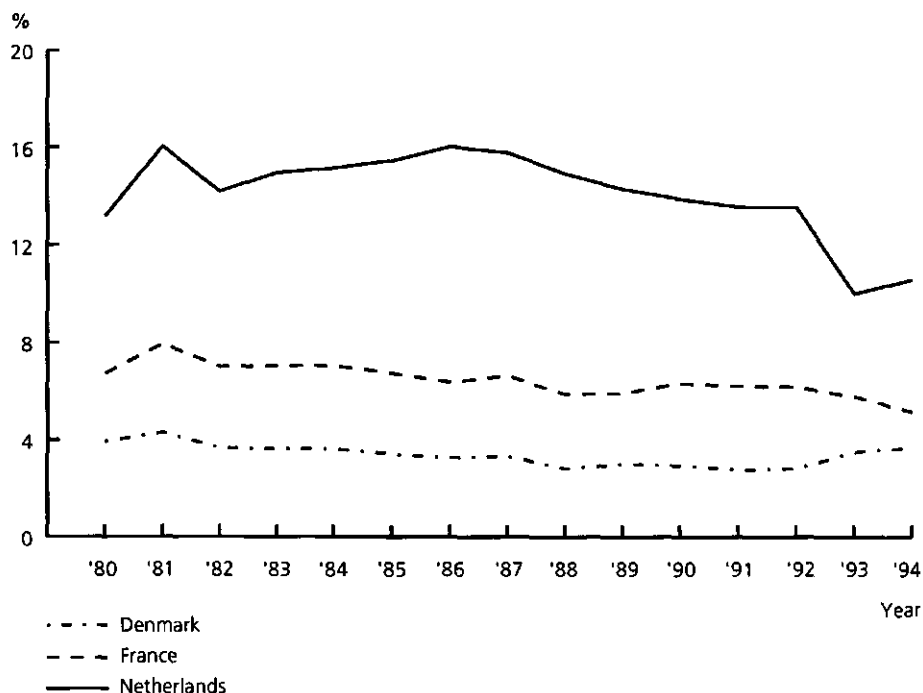


Figure 4.1 Shares in German cheese consumption; the net import volume from the mentioned countries in % of the internal consumption

1980-94. The share of Germany and France lies just under 20% during most years. During the last few years however the French share has risen strongly.

The Netherlands is a net importer only from Ireland and Denmark, but the shares of the net import from these two countries in Dutch consumption are extremely low (Appendix, table A12).

Total cheese consumption in the Federal Republic of Germany is almost equal to that of France. But Germany is a fairly large importer. The net import volume however is very small, since it has large exports too, especially to Italy. The net import from the Netherlands amounts to between 10% and 16% of the internal consumption (figure 4.1). The net import from Denmark and France is much smaller (3% and 6% respectively).

The Italian cheese consumption is the third largest among the EU member states. Its own production is by no means able to meet demand, so it imports on a large scale. Exports are rather limited. These factors cause a considerable net import. Figure 4.2 shows the shares of the net import from the main suppliers in Italian internal consumption.

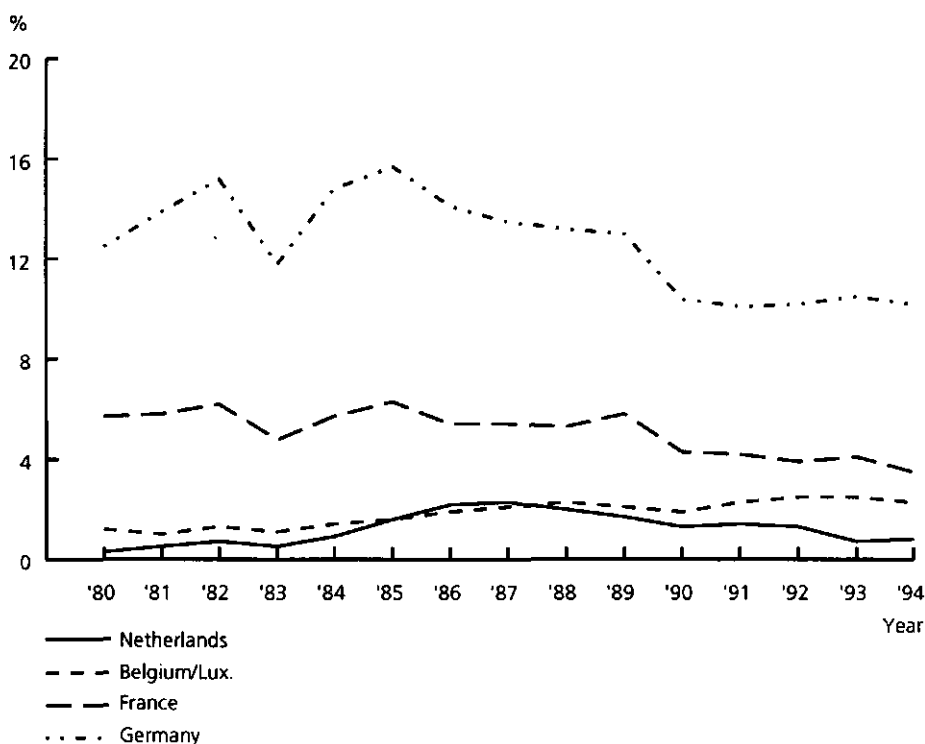


Figure 4.2 Shares in Italian cheese consumption; the net import volume from the mentioned countries in % of the internal consumption

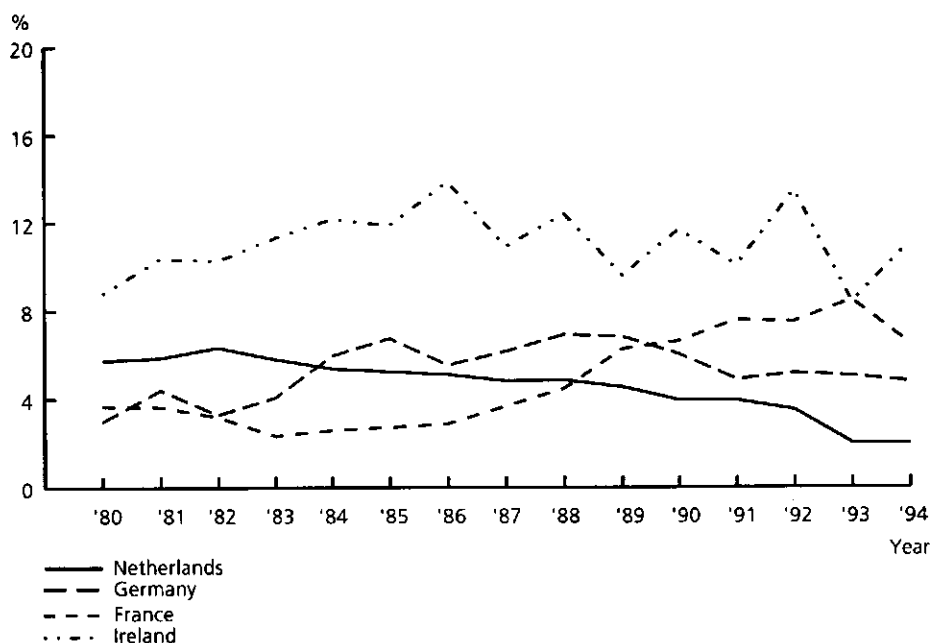


Figure 4.3 Shares in United Kingdom cheese consumption; the net import volume from the mentioned countries in % of the internal consumption

The United Kingdom produces only two thirds of its internal consumption. Apart from the countries mentioned in figure 4.3 Denmark and Belgium/Luxembourg have a very small share in the internal consumption of the United Kingdom. The Dutch share is falling, while the French share is rising.

Ireland has a very low consumption per caput (4.6 kg per year) and also the smallest number of inhabitants of all member states. The internal consumption is only 16,000 tonnes per year. Ireland is a net importer of cheese from France only.

Denmark has a consumption per caput that is around the EU consumption level, but it is also a small country and total consumption is not very large. Here too we find net import only from France. The French share in the internal consumption varies between 2% and 7% in the period 1980-94.

In Greece consumption per caput is high and domestic production is too low. Cheese is imported from the Netherlands, Germany and Denmark. These three countries together have a share in Greek consumption of around 15%. The Dutch share has doubled during the period considered.

In Portugal production and consumption of cheese is very low. There are hardly any imports.

In Spain consumption per caput is as low as in Ireland, but with 39 million inhabitants this leads to a considerable consumption volume. The Netherlands

has by far the largest share in net imports. The share in consumption has risen to around 7%.

The total of EU-12 is net importing from only four member states: Denmark, Ireland, the Netherlands and France (Appendix, table A21). The net import volume from the two first mentioned countries represents a share in the consumption of over 1% each. The French share has risen from 2.7% in 1986 to 3.5% in 1994. The Dutch share started at 6.5% in 1986; during the last two years it fell to 5%.

4.2.3 The main suppliers

France, the Netherlands and Denmark are the suppliers that have a much higher production than consumption.

France is an important supplier for Germany and Italy. It has a 6% share in German consumption and a share of around 4% in Italian consumption. It also has considerable shares in the much smaller consumption of the United Kingdom and Belgium/Luxembourg.

For the Netherlands the consumption of cheese in the Federal Republic of Germany is especially important, but Belgium/Luxembourg and France also consume a considerable volume of Dutch cheese.

Denmark is most of all a supplier to Germany. Its share in German consumption is only around 3%, but measured in volume the German market is very important for Denmark.

In section 4.1.2 it was calculated that production in the EU is 8% higher than consumption. Because there are also some imports of cheese from third countries the EU has to export almost 9% of its production to the world market. This equals approximately 500,000 tonnes per year in the period 1992-94 (Appendix, table A22). The main exporters to third countries are France, the Netherlands, Federal Republic of Germany and Denmark. Third countries have a 23% share in the total French exports volume. For the Netherlands and Germany this is 20% and for Denmark it is even 60%. These four countries together supply over 80% of the total EU exports volume of cheese to third countries.

For most dairy products the world market price is considerably lower than the internal EU price. The price gap between the internal market and the world market depends strongly on the type of cheese. The price of French exports to the EU is only some 5 per cents higher than the exports price to third countries. The difference is around 60% however for the type of cheese that is exported by the Netherlands and Germany. It is obvious that these exports to third countries require substantial export refunds.

Exports to third countries are very important for Denmark. It consists for two thirds of feta cheese that is marketed in Iran, Egypt and Saudi-Arabia at around 1,080 ECU per tonne. The feta that is exported to Greece however yields 2,100 ECU per tonne. The 'stripped' export price of Danish feta to third countries (1,080 ECU) is equal to around 2.40 Dutch guilders per kg. It is quite clear that this export flow is only possible with the aid of considerable refunds.

5. CONCLUDING REMARKS

The increasing milk production in the EU led to surpluses and higher and higher costs for the dairy policy. One of the reasons to introduce the quota system was to have more control over the dairy budget. To get as much value added as possible from a decreasing volume of milk the dairy industry has put more emphasis on products with a higher degree of processing. In practice this means most of all that an increasing share of the available milk is processed into cheese, while less is processed into butter. This development occurred in all the main dairy producing countries, with the exception of Ireland.

The EU imports for around 12 billion ECU worth of dairy products per year. Only 6% of these imports originate from third countries. However, exports to third countries are very large; the balance of exports and imports (average 1992-94) amounts to 3.7 billion ECU per year. In the period 1980-94 the growth rate of total EU-9 imports (virtually all intra-EU trade) was two times the growth rate of net export to third countries. Considering the problems on the world market a substantial increase in the exports to third countries is highly unlikely in the short term. Because of the agreements a cut in these exports is to be expected. Growth will occur mainly in intra-EU trade. Trade liberalization plays a role in this, but at least equally important is the fact that national markets are often not big enough to be able to produce newly developed products at a profit. These new products will be required to create a higher value added. Until now this was done mainly by turning more milk into cheese.

The shift to processed products also appears from the trade figures. The growth rate of the EU-9 import value (intra plus extra) in the period 1980-94 is 6.5% for processed products and 3.4% for semi-processed products. The net export value of processed products increased by 6.5% per year, while the growth rate of semi-processed products was virtually zero. Processed products have become more important in the intra-EU trade as well as in exports to third countries. Considering the emphasis the dairy industry puts on products with a high value added, it is to be expected that this tendency will continue.

On the internal market the Netherlands is the second largest supplier with a (gross) share of 19% for the total group of dairy products. The share of the Federal Republic of Germany is a few per cents higher and the French share is slightly lower than that of the Netherlands. With a net export value of 1,373 million ECU per year (average 1992-94) cheese is by far the most important product for the Netherlands. In the period 1980-94 the net export value of cheese increased by 7% per year. The Netherlands is also a net exporter for butter, condensed milk and whole milk powder. The growth rates for these three products were zero or negative. The Federal Republic of Germany is by far the most important market for Dutch dairy products. The gap between the

internal price level and the world market price amounts on average to 28%. To be able to sell surpluses outside the Union the gap is bridged by export refunds. Other economic blocks also protect their dairy industries. As a result of this protectionism the world market has become a market where surpluses are sold. Trade liberalization will narrow the gap between the internal price and the world market price. The degree of liberalization will determine what the effects will be on trade and production.

EU cheese production amply exceeds the internal consumption. The Netherlands has the largest difference between production and consumption, but France and Denmark too produce considerably more than their consumption. This enables them to supply a large share of the consumption in other countries. The Netherlands has an important share in the internal consumption in the Federal Republic of Germany and Belgium/Luxembourg.

Altogether the EU (in 1992-94) sells 500,000 tonnes of cheese on the world market. Limitations in the export possibilities to third countries will cause most problems for Denmark, as two thirds of Danish exports is destined for third countries. Moreover a large part of these exports consists of low value cheese. The other large cheese exporters sell 'only' one fifth of their exports on the world market.

APPENDIX

Appendix

In this appendix you will find the following tables:

- comprehensive tables of gross and net import value (1992-94) of dairy products and the growth rate (1981-93), for the 'old' member states (tables A1 to A9);
- net cheese imports from the various countries of origin as a percentage of the internal consumption of the importing member states (tables A10 to A21);
- average yearly cheese exports, in tonnes, of the member states in 1992-94 (table A22).

Table A1 Imports of dairy products in EU-9

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	9,967	-4,155	5.0	2.5
of which:				
cheese	4,906	-1,399	6.6	10.2
skimmed milk powder	1,111	-489	5.5	0.7
milk/cream	798	-174	a)	a)
butter	1,773	-201	-0.2	-9.7
condensed milk	284	-486	6.3	-1.3
whole milk powder	474	-1,245	7.9	3.4
fresh milk	1,077	-198	7.6	11.8

a) Not available.

Table A2 Imports of dairy products in France

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	1,261	-1,641	9.9	1.9
of which:				
cheese	490	-1,068	8.6	5.8
skimmed milk powder	145	-10	19.2	-19.2
milk/cream	133	-45	a)	a)
butter	348	130	5.8	a)
condensed milk	61	5	43.2	a)
whole milk powder	24	-452	19.1	4.2
fresh milk	156	-135	20.5	4.5

a) Not available.

Table A3 Imports of dairy products in Belgium/Luxembourg

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	1,307	-96	4.1	a)
of which:				
cheese	610	256	6.6	2.0
skimmed milk powder	103	-48	11.1	-5.6
milk/cream	200	76	a)	a)
butter	306	-6	-2.3	a)
condensed milk	22	-63	-0.2	a)
whole milk powder	134	-66	11.1	5.5
fresh milk	102	-191	19.4	12.5

a) Not available.

Table A4 Imports of dairy products in the Netherlands

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	1,629	-1,651	4.7	1.3
of which:				
cheese	301	-1,373	11.7	7.0
skimmed milk powder	492	335	6.0	10.7
milk/cream	115	7	a)	a)
butter	287	-244	-2.5	-0.4
condensed milk	114	-217	5.6	-4.2
whole milk powder	162	-247	6.4	-1.0
fresh milk	138	108	8.8	11.7

a) Not available.

Table A5 Imports of dairy products in Germany (F.R.)

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	2,320	-863	6.6	-0.5
of which:				
cheese	1,662	524	7.4	11.3
skimmed milk powder	69	-672	-2.6	8.9
milk/cream	60	-322	a)	a)
butter	348	185	7.0	a)
condensed milk	49	-201	1.6	3.9
whole milk powder	65	-131	5.0	7.3
fresh milk	61	-533	6.1	5.7

a) Not available.

Table A6 Imports of dairy products in Italy

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	2,095	1524	3.9	2.1
of which:				
cheese	1,066	568	4.2	0.8
skimmed milk powder	255	254	3.5	3.5
milk/cream	170	165	a)	a)
butter	109	50	-1.4	-7.4
condensed milk	19	14	15.2	23.5
whole milk powder	68	67	10.0	10.0
fresh milk	545	543	4.1	4.2

a) Not available.

Table A7 Imports of dairy products in United Kingdom

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	1,159	529	1.9	2.1
of which:				
cheese	687	533	5.7	4.9
skimmed milk powder	33	-71	9.1	-5.5
milk/cream	104	-17	a)	a)
butter	337	190	-3.8	-4.0
condensed milk	15	-24	6.0	1.1
whole milk powder	15	-124	5.4	10.8
fresh milk	47	17	30.5	a)

a) Not available.

Table A8 Imports of dairy products in Ireland

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	89	-1,002	10.1	6.4
of which:				
cheese	36	-236	12.0	7.2
skimmed milk powder	4	-267	20.3	7.8
milk/cream	11	-11	a)	a)
butter	6	-397	-3.4	5.6
condensed milk	2	-1	-2.0	a)
whole milk powder	4	-81	4.6	2.8
fresh milk	26	2	54.3	a)

a) Not available.

Table A9 Imports of dairy products in Denmark

	Average import value in million ECU 1992-94		Growth rates based on 3-year averages '80-'82 to '92-'94	
	gross	net	gross	net
Total	108	-953	3.8	3.1
of which:				
cheese	53	-603	12.4	4.7
skimmed milk powder	10	-10	-4.6	10.4
milk/cream	4	-26	a)	a)
butter	31	-109	0.6	-3.9
condensed milk	1	1	16.2	a)
whole milk powder	1	-212	-7.9	5.6
fresh milk	2	-9	a)	-0.5

a) Not available.

Table A10 Net import from country of origin in % of domestic cheese consumption in France

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
Belgium/Lux.	-2.2	-2.1	-2.2	-2.1	-1.6	-1.9	-1.9	-1.8	-2.1	-2.0	-2.6	-2.8	-2.9	-3.5	-3.2	1,000,601
The Netherlands	1.8	2.0	2.0	2.3	2.6	2.7	2.8	3.0	3.0	3.0	2.8	2.6	2.6	2.9	2.5	1,125,151
Germany (F.R.)	-5.5	-5.7	-5.7	-5.7	-5.5	-5.6	-5.1	-5.4	-5.0	-5.2	-6.1	-6.6	-7.7	-6.3	-5.8	1,224,374
Italy	-4.6	-4.7	-5.2	-4.8	-4.6	-5.2	-4.2	-4.2	-4.2	-4.4	-3.9	-3.8	-3.5	-3.4	-3.1	1,251,629
Un. Kingdom	-1.3	-1.3	-1.0	-0.8	-0.9	-0.9	-1.0	-1.2	-1.7	-2.2	-2.6	-2.7	-3.1	-3.1	-2.7	1,224,374
Ireland	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.2	-0.2	-0.4	0.0	-0.2	1,251,629
Denmark	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	-0.3	-0.2	-0.2	-0.3	-0.3	-0.2	-0.2	-0.2	1,251,629
Greece	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	1,251,629
Portugal	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-0.1	1,251,629
Spain	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.2	-0.3	-0.2	-0.2	-0.3	-0.3	-0.7	-1.3	1,251,629
EU-12	-12.3	-12.3	-12.6	-11.6	-10.6	-11.5	-10.0	-10.3	-10.6	-11.4	-13.2	-14.3	-15.7	-14.5	-14.2	1,251,629
Non-EU	-5.3	-6.4	-5.3	-7.6	-8.4	-6.7	-5.5	-5.3	-5.9	-6.3	-6.3	-5.7	-5.7	-8.3	-10.2	1,251,629
World	-17.5	-18.7	-17.9	-19.3	-19.0	-18.2	-15.6	-15.7	-16.5	-17.7	-19.5	-20.0	-21.4	-22.8	-24.5	1,251,629

Table A11 Net import from country of origin in % of domestic cheese consumption in Belgium/Luxembourg

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	18.7	18.3	18.7	17.5	14.8	17.2	17.2	17.1	19.1	17.9	23.0	24.6	25.7	29.2	30.1	117,370
The Netherlands	32.5	29.1	27.1	32.5	33.3	31.8	32.4	30.5	29.7	30.1	30.4	30.9	31.2	24.6	26.9	117,370
Germany (F.R.)	11.6	14.2	16.2	17.5	19.2	18.3	20.4	20.6	18.7	17.5	16.9	17.0	14.0	18.7	13.4	117,370
Italy	-8.1	-6.8	-9.1	-9.5	-10.4	-12.5	-13.8	-15.0	-16.9	-14.2	-15.2	-17.9	-19.6	-17.3	-19.4	117,370
Un. Kingdom	-2.7	-3.7	-2.4	-4.1	-9.1	-10.6	-10.5	-9.5	-11.0	-8.5	-10.4	-11.5	-11.8	-8.4	-15.5	117,370
Ireland	0.0	0.0	0.0	-0.0	0.3	-0.1	-0.0	0.0	0.4	0.7	0.8	1.4	2.0	1.3	1.6	122,484
Denmark	0.8	0.8	0.8	2.2	3.6	3.6	3.2	3.2	2.8	1.6	1.4	2.0	2.2	2.2	2.6	122,484
Greece	-0.1	-0.1	-0.1	-0.1	-0.2	-0.6	-0.8	-0.4	-0.1	-0.0	0.0	-0.6	-0.0	0.0	-0.1	139,156
Portugal	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.1	-0.3	141,547
Spain	-0.1	0.0	0.0	0.0	0.0	0.0	-0.0	0.1	0.4	-0.0	-0.1	-0.2	-0.4	-0.1	-0.5	141,547
EU-12	52.6	51.8	51.2	56.0	51.5	47.2	48.0	46.4	43.2	45.1	46.9	45.6	43.0	50.0	38.8	1,077,000
non-EU	6.5	5.2	5.5	7.2	8.8	8.6	8.6	7.7	8.0	6.7	5.1	4.4	4.2	0.4	9.9	1,077,000
World	59.1	57.0	56.7	63.2	60.3	55.7	56.7	54.1	51.2	51.8	51.9	50.0	47.2	50.5	48.7	1,077,000

Table A12 Net import from country of origin in % of domestic cheese consumption in the Netherlands

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	-8.2	-9.7	-10.1	-12.2	-12.9	-15.7	-16.8	-17.4	-17.8	-18.8	-16.1	-15.9	-15.7	-14.8	-12.3	206,302
Belgium/Lux.	-17.4	-16.7	-16.3	-20.5	-18.4	-20.0	-21.0	-18.9	-18.7	-20.8	-19.6	-21.3	-21.2	-15.2	-14.2	206,540
Germany (F.R.)	-49.3	-56.6	-58.8	-64.9	-59.8	-73.1	-76.8	-73.4	-74.2	-77.7	-75.8	-88.3	-90.8	-55.4	-58.6	234,931
Italy	-1.3	-1.9	-3.2	-2.9	-3.6	-7.5	-10.2	-10.2	-9.4	-7.9	-6.6	-7.4	-6.8	-2.8	-3.3	206,302
Un. Kingdom	-9.1	-10.3	-10.7	-10.4	-9.0	-10.4	-10.6	-9.1	-11.1	-9.7	-8.6	-8.5	-8.6	-3.7	-4.1	201,800
Ireland	-0.0	-0.1	0.1	-0.3	0.0	-0.1	0.1	0.4	1.3	3.2	1.0	2.1	2.3	1.4	1.9	206,540
Denmark	0.4	0.7	0.6	0.4	0.3	0.0	-0.1	0.2	0.6	0.4	0.8	0.4	1.0	0.6	1.1	234,931
Greece	-3.1	-3.3	-4.8	-4.3	-3.4	-4.7	-4.9	-4.2	-3.6	-5.6	-6.2	-8.5	-9.0	-8.0	-8.1	growth rate (%)
Portugal	-0.2	-0.3	-0.3	-0.3	-0.3	-0.5	-0.3	-0.4	-0.2	-0.3	-0.3	-0.3	-0.7	-0.6	-0.6	'81-'85: -0.55
Spain	-1.3	-1.4	-1.6	-1.7	-1.7	-2.2	-2.1	-2.8	-2.5	-4.4	-5.1	-5.8	-7.1	-5.4	-6.3	'85-'90: 0.47
EU-12	-89.4	-99.5	-105.2	-117.1	-108.8	-134.1	-142.8	-135.6	-135.9	-141.3	-136.4	-153.4	-156.3	-103.9	-104.5	'90-'93: 4.39
Non-EU	-26.4	-35.1	-34.6	-33.6	-32.2	-30.2	-29.2	-27.8	-32.5	-38.4	-32.7	-42.7	-45.4	-52.4	-52.9	'81-'93: 1.09
World	-115.9	-134.6	-139.8	-150.7	-141.0	-164.2	-172.0	-163.4	-168.4	-179.7	-169.1	-196.1	-201.7	-156.3	-157.4	

Table A13 Net import from country of origin in % of domestic cheese consumption in Germany (F.R.)

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	6.8	7.9	7.0	7.1	7.0	6.8	6.4	6.7	5.9	5.9	6.3	6.2	6.2	5.8	5.2	783,623
Belgium/Lux.	-1.7	-2.3	-2.3	-2.5	-2.7	-2.4	-2.8	-2.7	-2.4	-2.2	-2.0	-1.8	-1.8	-2.1	-1.3	901,423
The Netherlands	13.2	16.1	14.2	15.0	15.2	15.4	16.1	15.8	14.9	14.3	13.9	13.6	13.6	10.0	10.6	1,194,327
Italy	-12.4	-15.6	-15.8	-14.6	-15.5	-15.8	-13.9	-13.1	-12.3	-11.2	-10.0	-8.3	-8.3	-8.2	-8.1	1,371,920
Un. Kingdom	-1.3	-2.2	-1.3	-1.7	-2.5	-2.8	-2.4	-2.5	-3.2	-2.7	-2.4	-1.6	-1.6	-1.7	-1.8	growth rate (%)
Ireland	-0.0	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.1	-0.0	-0.0	0.1	0.1	0.0	0.1	'84-'86: 3.56
Denmark	3.9	4.3	3.7	3.6	3.6	3.4	3.3	3.4	2.8	3.0	2.9	2.8	2.8	3.5	3.7	'89-'91: 1,194,327
Greece	-1.0	-1.3	-1.3	-1.0	-1.2	-1.7	-1.7	-1.4	-0.9	-0.9	-0.8	-0.6	-0.6	-0.7	-0.8	'92-'94: 1,371,920
Portugal	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.2	0.0	growth rate (%)
Spain	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.4	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3	-0.3	-0.4	'81-'85: 3.56
EU-12	7.4	6.9	4.1	5.9	4.0	3.0	4.7	5.9	4.7	5.9	7.6	10.0	10.0	6.5	7.2	'85-'90: 5.79
Non-EU	-4.9	-6.2	-4.7	-6.1	-7.5	-1.6	-4.4	-5.4	-4.6	-4.0	-3.6	-3.9	-3.9	-5.1	-6.1	'90-'93: 4.73
World	2.5	0.7	-0.6	-0.2	-3.5	1.4	0.4	0.5	0.0	1.9	4.0	6.1	6.1	1.4	1.1	'81-'93: 4.78

Table A14 Net import from country of origin in % of domestic cheese consumption in Italy

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	5.7	5.8	6.2	5.9	5.7	6.3	5.4	5.4	5.3	5.8	4.3	4.3	3.9	4.1	3.5	822,206
Belgium/Lux.	1.2	1.0	1.3	1.4	1.4	1.6	1.9	2.1	2.3	2.1	1.9	2.3	2.5	2.5	2.3	910,285
The Netherlands	0.3	0.5	0.7	0.7	0.9	1.6	2.2	2.3	2.0	1.7	1.3	1.4	1.3	0.7	0.8	'80-'82: 822,206
Germany (F.R.)	12.5	13.9	15.2	14.4	14.8	15.7	14.1	13.5	13.2	13.0	10.4	10.1	10.2	10.5	10.2	'84-'86: 910,285
Un. Kingdom	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.3	-0.4	-0.3	-0.4	-0.5	-0.6	-0.6	'89-'91: 1,052,247
Ireland	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	'92-'94: 1,088,606
Denmark	0.7	0.9	0.9	1.0	1.0	1.2	1.0	0.9	0.7	0.7	0.6	0.6	0.7	0.6	0.6	growth rate (%)
Greece	-0.1	-0.1	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	0.0	0.0	-0.0	0.0	-0.0	-0.0	'81-'85: 2.58
Portugal	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	'85-'90: 2.94
Spain	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	-0.0	0.0	-0.0	1.14
EU-12	20.1	21.7	24.1	23.3	23.6	26.4	24.6	24.1	23.3	22.9	18.1	18.2	18.2	17.7	16.8	'90-'93: 2.37
Non-EU	3.1	2.3	2.5	2.3	1.9	2.1	1.8	1.4	1.7	1.8	0.8	0.2	0.1	-0.8	-0.3	
World	23.2	24.0	26.6	25.6	25.5	28.5	26.4	25.5	25.0	24.7	19.0	18.5	18.3	16.9	16.5	

Table A15 Net import from country of origin in % of domestic cheese consumption in United Kingdom

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	3.7	3.6	3.2	2.3	2.6	2.7	2.9	3.7	4.5	6.3	6.6	7.6	7.5	8.5	6.5	346,133
Belgium/Lux.	0.9	1.2	0.9	1.5	3.0	3.3	3.3	3.1	3.0	2.8	3.1	3.7	3.3	2.8	4.0	384,100
The Netherlands	5.7	5.9	6.3	5.8	5.4	5.2	5.1	4.8	4.9	4.5	3.9	3.9	3.5	2.0	2.0	446,223
Germany (F.R.)	3.0	4.4	3.3	4.1	6.0	6.7	5.5	6.2	6.9	6.8	6.0	4.9	5.2	5.0	4.8	'80-'82: 346,133
Italy	0.5	0.5	0.5	0.4	0.4	0.2	0.1	0.2	0.6	0.8	0.8	1.0	1.1	1.4	1.3	'84-'86: 384,100
Ireland	8.8	10.4	10.3	11.3	12.2	11.9	13.9	10.9	12.4	9.6	11.7	10.1	13.5	8.4	11.1	'89-'91: 446,223
Denmark	5.3	5.8	5.9	4.5	3.5	2.8	2.4	2.6	2.3	2.1	1.8	2.2	2.3	2.1	1.8	'92-'94: 493,849
Greece	-0.0	-0.0	-0.0	-0.0	-0.0	-0.1	-0.0	-0.0	0.0	-0.0	-0.0	0.1	-0.0	-0.1	0.0	growth rate (%)
Portugal	-0.0	-0.0	-0.1	-0.0	-0.1	-0.0	-0.1	0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	0.1	'81-'85: 2.64
Spain	0.0	0.0	0.0	-0.0	-0.0	0.0	0.0	0.0	-0.0	0.0	-0.0	-0.0	0.0	-0.1	-0.1	'85-'90: 3.04
EU-12	27.9	31.7	30.2	29.8	32.9	32.8	33.1	31.5	34.6	32.9	33.9	33.4	36.3	29.9	31.5	'90-'93: 3.44
Non-EU	1.6	0.8	-1.8	0.3	-1.2	0.5	1.3	0.0	1.6	0.7	0.4	-1.3	-0.5	-1.9	-1.6	'81-'93: 3.01
World	29.5	32.5	28.4	30.1	31.7	33.3	34.4	31.5	36.2	33.6	34.3	32.1	35.9	28.0	29.9	

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	0.6	0.9	0.8	1.7	2.7	0.9	10.3	1.6	7.5	5.0	22.3	16.5	36.3	-0.4	12.6	
Belgium/Lux.	-0.1			0.0	-4.9	0.5	0.2	-0.2	-4.9	-4.6	-13.3	-10.7	-21.9	-5.0	-11.6	
The Netherlands	0.4	0.9	-1.4	5.2	-0.0	0.6	-4.9	-4.5	-25.4	-28.8	-25.6	-23.7	-37.9	-8.9	-26.6	
Germany (F.R.)	0.5	-8.6	-11.9	-27.6	-26.7	-12.3	-41.3	-3.5	-5.8	0.7	0.7	-4.0	-0.9	-0.9	-4.5	'80-'82: 16,986
Italy	-2.6	-1.3	-1.1	-3.4	-5.8	-3.1	-12.9	-2.3	-7.7	-2.6	-4.8	-3.0	-1.8	-0.5	-1.4	'84-'86: 12,142
Un. Kingdom	-203.4	-219.5	-181.0	-421.2	-558.4	-184.4	626.0	-215.6	-569.7	-184.6	-623.6	-244.0	-530.5	-98.7	-317.3	'89-'91: 16,380
Denmark	0.7	0.2	0.4	0.3	1.2	0.5	3.4	0.4	2.0	0.1	0.9	0.3	-0.8	0.8	0.6	'92-'94: 23,343
Greece	-5.2	-2.8	-1.1	-1.9	-10.9	-2.3	-54.1	-11.6	-18.9	-13.3	-34.5	-18.3	-20.1	-9.8	-17.3	growth rate (%)
Portugal			-0.1										-0.1	-0.3	-0.9	'81-'85: -8.05
Spain						-0.7	-0.1	-0.8	-0.2	-0.2	-0.1	-0.5	-0.9	-0.7	-2.0	'85-'90: 6.17
EU-12	-209.1	-230.2	-195.5	-446.9	-602.8	-199.5	725.9	-235.8	-623.7	-228.3	-678.0	-287.4	-578.5	-124.3	-368.5	'90-'93: 12.53
Non-EU	-32.4	-6.9	-10.4	-22.5	-30.1	-30.9	-28.1	-14.5	-24.6	-14.3	-30.6	-31.8	-67.2	-18.7	-36.5	'81-'93: 2.68
World	-241.5	-237.1	-205.8	-469.4	-632.9	-230.4	753.9	-250.3	-648.3	-242.6	-708.6	-319.2	-645.8	-143.0	-404.9	

Table A17 Net import from country of origin in % of domestic cheese consumption in Denmark

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	1.8	1.4	2.7	2.5	4.0	3.4	4.8	6.9	4.9	4.6	4.9	6.6	3.6	2.9	4.3	
Belgium/Lux.	-1.7	-1.7	-2.3	-6.3	-9.6	-9.1	-7.7	-7.3	-6.2	-3.6	-2.5	-4.5	-3.7	-4.0	-5.0	
The Netherlands	-1.5	-2.9	-2.6	-1.6	-1.5	-0.1	0.5	-0.7	-2.1	-1.3	-2.2	-1.4	-2.6	-1.8	-3.8	
Germany (F.R.)	-57.1	-57.9	-70.3	-70.3	-68.9	-65.6	-58.2	-57.8	-48.9	-51.6	-44.5	-58.8	-53.9	-57.8	-73.5	50,523
Italy	-10.4	-13.1	-17.6	-20.4	-19.7	-23.2	-17.9	-15.7	-11.1	-9.9	-8.9	-11.0	-8.8	-7.6	-9.5	48,414
Un. Kingdom	-32.7	-38.9	-46.0	-36.1	-28.4	-22.4	-18.3	-18.2	-18.2	-14.1	-10.8	-15.4	-13.6	-11.4	-13.0	68,010
Ireland	-0.2	-0.1	-0.2	-0.1	-0.2	-0.3	-0.2	-0.2	-0.3	-0.0	-0.1	-0.1	0.1	-0.4	-0.2	78,734
Greece	-14.4	-15.3	-17.3	-11.2	-11.5	-12.7	-15.8	-10.4	-7.9	-10.5	-8.4	-9.5	-7.7	-11.1	-16.4	growth rate (%)
Portugal	-0.0	-0.2	-0.5	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.5	-0.4	-0.7	-0.9	'81-'85;
Spain	-2.5	-2.1	-3.2	-3.0	-3.9	-3.8	-5.0	-4.2	-3.8	-4.2	-4.1	-5.9	-5.7	-6.0	-8.7	'85-'90;
EU-12	-118.6	-130.9	-157.4	-146.7	-140.1	-134.2	-118.3	-107.9	-94.0	-91.0	-76.9	-100.5	-92.5	-97.9	-126.8	'90-'93;
Non-EU	-183.5	-226.0	-306.2	-328.7	-419.2	-296.7	-266.9	-280.8	-244.4	-243.4	-200.3	-261.1	-154.3	-194.3	-186.3	'81-'93;
World	-302.1	-358.8	-463.6	-475.4	-559.3	-430.8	-385.2	-388.7	-338.4	-334.4	-277.1	-361.6	-246.8	-292.2	-313.1	

Table A18 Net import from country of origin in % of domestic cheese consumption in Greece

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	NA	0.4	0.5	0.6	0.8	0.6	0.4	0.6	0.4	0.5	0.5	0.6	0.4	0.7	1.0	224,226
Belgium/Lux.	NA	0.1	0.1	0.1	0.1	0.3	0.4	0.2	0.0	0.0	-0.0	0.3	0.0	-0.0	0.0	229,863
The Netherlands	NA	3.0	4.2	3.8	3.3	4.0	4.0	3.8	3.1	4.3	5.1	6.9	7.6	7.7	7.8	255,596
Germany (F.R.)	NA	4.0	4.8	4.0	4.6	6.8	6.8	5.7	4.0	3.8	3.6	3.2	3.9	3.9	4.3	254,003
Italy	NA	0.3	0.1	0.1	0.1	0.0	0.0	0.0	-0.1	-0.0	0.0	0.0	-0.1	0.0	0.1	0.83
Un. Kingdom	NA	0.0	0.0	0.0	0.0	0.1	0.0	0.1	-0.0	0.0	0.0	-0.1	0.0	0.2	-0.0	2.14
Ireland	NA	0.2	0.1	0.1	0.4	0.2	0.8	1.0	0.8	1.1	1.2	1.3	1.0	1.5	1.2	-0.21
Denmark	NA	3.6	3.3	2.2	2.3	2.6	3.5	2.5	1.9	2.6	2.5	2.4	2.6	3.6	4.4	1.14
Portugal	NA															
Spain	NA	0.0						0.0	0.0	0.1	0.0	0.0		0.0	0.1	
EU-12	NA	11.6	13.2	10.9	11.6	14.7	15.9	13.9	10.2	12.4	12.9	14.7	15.6	17.6	18.8	
Non-EU	NA	0.6	0.3	-1.0	-1.0	-0.7	-1.0	-0.6	0.3	0.1	-0.6	0.2	-0.8	-0.5	0.7	
World	NA	12.2	13.5	9.9	10.6	14.0	14.9	13.3	10.4	12.5	12.3	14.9	14.8	17.1	19.5	

Table A19 Net import from country of origin in % of domestic cheese consumption in Portugal

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	NA	NA	NA	NA	NA	NA	0.3	0.2	0.2	0.2	0.5	0.9	1.6	1.6	1.5	51,265
Belgium/Lux.	NA	NA	NA	NA	NA	NA	NA	-0.0	-0.0	-0.0	0.2	0.4	0.5	0.3	0.6	59,961
The Netherlands	NA	NA	NA	NA	NA	NA	1.1	1.2	1.8	0.6	1.1	1.0	2.0	2.3	2.4	66,963
Germany (F.R.)	NA	NA	NA	NA	NA	NA	0.3	0.3	0.4	0.4	0.6	0.3	0.5	-4.7	0.5	
Italy	NA	NA	NA	NA	NA	NA	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-0.1	
Un. Kingdom	NA	NA	NA	NA	NA	NA	0.5		0.0	0.0	0.0	0.0	0.2	0.2	-0.5	
Ireland	NA	NA	NA	NA	NA	NA	NA	0.5	0.5	0.4	0.3	0.5	0.4	0.8	1.0	
Denmark	NA	NA	NA	NA	NA	NA	0.4	0.5	0.5	0.4	0.0	-0.1	0.0	-0.1	-0.3	
Greece	NA	NA	NA	NA	NA	NA	NA	0.1	-0.2	-0.7	0.3	0.4	1.1	1.2	1.5	
Spain	NA	NA	NA	NA	NA	NA	0.0	0.1	2.8	1.0	3.2	3.4	6.2	1.9	6.8	
EU-12	NA	NA	NA	NA	NA	NA	2.7	2.4	-3.5	-1.3	-0.9	-1.0	-1.5	0.4	-3.0	
Non-EU	NA	NA	NA	NA	NA	NA	-2.7	-2.2	-0.8	-0.3	2.3	2.4	4.7	2.4	3.7	
World	NA	NA	NA	NA	NA	NA	-0.1	0.2	-0.8	-0.3	2.3	2.4	4.7	2.4	3.7	

Table A20 Net import from country of origin in % of domestic cheese consumption in Spain

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	NA	NA	NA	NA	NA	NA	1.9	1.7	1.9	1.6	1.6	2.3	2.3	4.9	7.7	175,124
Belgium/Lux.	NA	NA	NA	NA	NA	NA	0.0	-0.1	-0.3	0.0	0.1	0.2	0.3	0.1	0.4	186,089
The Netherlands	NA	NA	NA	NA	NA	NA	2.3	3.4	2.9	4.8	5.9	6.3	8.1	7.3	7.8	189,016
Germany (F.R.)	NA	NA	NA	NA	NA	NA	2.1	1.4	1.5	2.2	2.4	1.8	1.9	2.2	2.7	
Italy	NA	NA	NA	NA	NA	NA	0.1	0.0	0.1	-0.1	0.1	0.2	0.1	-0.1	0.1	
Un. Kingdom	NA	NA	NA	NA	NA	NA	-0.0	-0.0	0.0	-0.0	0.0	0.1	-0.0	0.3	0.3	
Ireland	NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	
Denmark	NA	NA	NA	NA	NA	NA	1.5	1.4	1.3	1.4	1.7	2.0	2.6	2.7	3.0	
Greece	NA	NA	NA	NA	NA	NA	-0.0	-0.1	-0.1	-0.1	-0.0	-0.1	-0.4	-0.4	0.0	2.04
Portugal	NA	NA	NA	NA	NA	NA	-0.0	-0.0	0.1	0.2	-0.1	-0.1	-0.4	-0.4	-0.5	0.52
EU-12	NA	NA	NA	NA	NA	NA	7.8	7.8	7.4	10.1	11.8	12.8	15.1	17.0	21.6	1.28
Non-EU	NA	NA	NA	NA	NA	NA	2.4	0.6	0.6	-0.2	-1.1	-1.6	-1.2	-1.8	0.6	
World	NA	NA	NA	NA	NA	NA	10.2	8.5	8.1	9.9	10.7	11.2	14.0	15.1	22.2	

Table A21 Net import from country of origin in % of domestic cheese consumption in EU-12

Origin	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	average domestic utilization in tonnes per year
France	NA	NA	NA	NA	NA	NA	2.7	2.8	2.8	3.1	3.3	3.5	3.8	3.5	3.4	4,370,204
Belgium/Lux.	NA	NA	NA	NA	NA	NA	-1.4	-1.4	-1.2	-1.4	-1.3	-1.3	-1.2	-1.5	-1.0	4,848,901
The Netherlands	NA	NA	NA	NA	NA	NA	6.5	6.5	6.2	6.2	6.0	6.2	6.3	4.9	5.0	5,194,541
Germany (F.R.)	NA	NA	NA	NA	NA	NA	-1.0	-1.3	-1.1	-1.4	-1.8	-2.6	-3.0	-1.7	-1.9	
Italy	NA	NA	NA	NA	NA	NA	-5.3	-5.2	-4.9	-4.7	-4.1	-4.0	-3.9	-3.6	-3.5	
Un. Kingdom	NA	NA	NA	NA	NA	NA	-3.1	-2.8	-3.6	-3.1	-3.2	-2.9	-3.6	-2.7	-3.1	
Ireland	NA	NA	NA	NA	NA	NA	1.4	1.1	1.4	1.1	1.2	1.0	1.4	0.9	1.3	
Denmark	NA	NA	NA	NA	NA	NA	1.5	1.4	1.2	1.3	1.2	1.2	1.5	1.6	1.7	
Greece	NA	NA	NA	NA	NA	NA	-0.9	-0.7	-0.5	-0.7	-0.7	-0.7	-0.7	-0.9	-0.9	3.53
Portugal	NA	NA	NA	NA	NA	NA	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.1	-0.0	-0.1	2.32
Spain	NA	NA	NA	NA	NA	NA	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.5	-0.6	-0.8	2.92
Non-EU	NA	NA	NA	NA	NA	NA	-6.3	-7.1	-6.6	-7.2	-6.8	-7.5	-7.0	-9.5	-9.1	

Table A22 Average yearly cheese exports of the EU member states (in tonnes) 1992-94

Origin EU-12	Destination												
	France non-EU	Belg./Lux.	Netherl. World	F.R.G.	Italy	United K.	Ireland	Denmark	Greece	Port.	Spain		
France	49814	18475	121915	56804	41939	2889	7370	2510	1286	15575	318590	94875	413513
Belgium/Lux.	8693	15347	14816	31703	20778	38	776	212	438	1232	94039	5600	99649
The Netherlands	53310	54616	205117	22371	16346	762	1383	19348	1992	15388	390642	94233	484876
Germany (F.R.)	24859	35133	25320	135006	32753	481	7359	14937	463	4631	280954	81471	362425
Italy	14154	5281	15005	23245	6874	109	1125	443	71	1101	67422	36610	104096
United Kingdom	4816	3618	2765	7114	462	8542	3198	266	180	546	31512	23741	55254
Ireland	2482	2203	5415	1032	486	91207	246	3437	47	244	106799	6274	113075
Denmark	3800	3151	3869	53402	7752	11329	213	8917	582	4816	97836	144832	242669
Greece	558	214	166	7176	499	179				10	8807	4185	13008
Portugal	169	7	342	3	37	121	189	149		368	1386	1752	3141
Spain	5076	361	219	333	861	86	7	7	1366		8406	8202	16610
EU-12	117917	154396	86923	434154	255981	221612	13041	50226	6424	43911	1406393	501773	1908316