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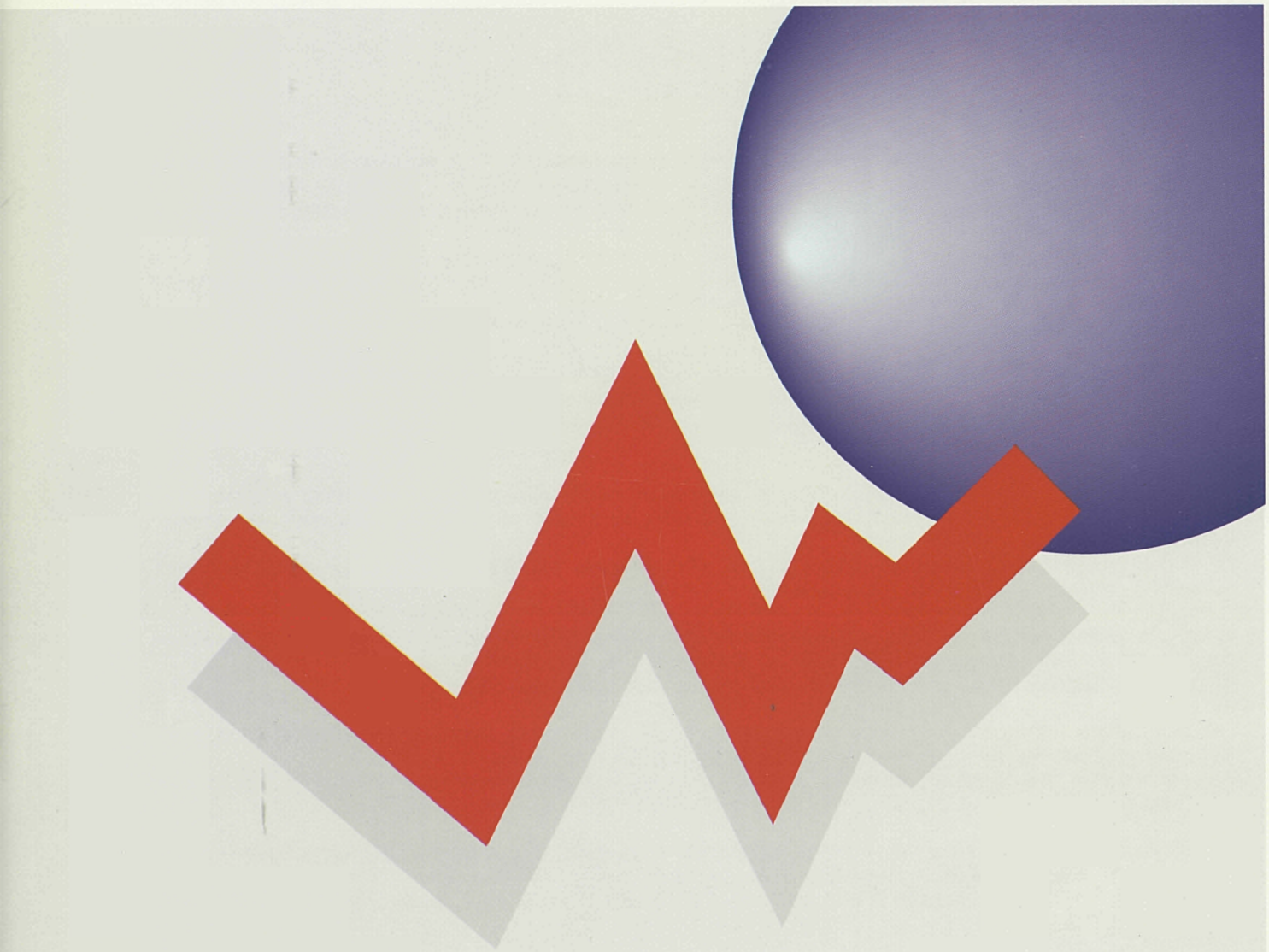
Panorama of EU industry

Short-term supplement
Latest information on EU industry

bi-monthly

2/1996



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SERVIÇO DE ESTATÍSTICA DAS COMUNIDADES EUROPEIAS

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The European economy was going through a period of restrained growth in the late months of 1995 - with a decline in industrial production in both Germany and France at the end of the year. These figures were furthermore supported by the latest data on GDP, where EU growth in constant prices for the third quarter of 1995 was around the two per cent level. Inflationary pressures remained weak in the majority of Member States. Producer price inflation fell back below the four per cent level by October 1995. Capacity utilisation figures also showed a reduction at the end of 1995, with a decline in the rate to 82.6% for EUR12.

In this issue there are special articles on

- the metal articles industry
- the mechanical engineering industry
- comparative analysis of growth and investment
- competitiveness in industry: a first approach

The first special article in this issue is on the metal articles industry - an industry whose production is almost solely intermediate goods. The industry has recently faced strong competition from the emerging economies of south-east Asia. Nevertheless, the European industry remains the world's number one producer - in front of the USA and Japan.

The second article is on the mechanical engineering industry, where 44% of Community (EUR12) production was accounted for by Germany in 1995. This sector is characterised by having a high number of SMEs. 7.8% of European industrial production came from the mechanical engineering sector in 1995 - somewhat down on the 1990 level of 8.6%.
The third article on investment follows one on capital intensity published in the first issue of 1996. It takes a look at the respective production and investment performance of the TRIAD (EU, USA and Japan) over the period 1985-1990. The article examines whether or not countries are able to specialise their investment effort by choosing fast growth sectors.
Following the Commission's White Paper on "Growth, competitiveness and employment", Eurostat launched a database in order to meet the needs of legislators and the general public to have more information concerning competitiveness issues. The final article gives an insight into the contents of the Eurostat database - which had its second released during March 1996. The article discusses some of the methodological problems in collecting and processing the data, as well as giving details of the classification plan. Eurostat's approach has been one based at a sectoral level. The database contains figures not just for EUR15, but also for the USA, Japan, other OECD countries and the NICs.

Photis Nanopoulos, Director
BUSINESS AND ENERGY STATISTICS, R & D, AND STATISTICAL METHODS

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The supplement appears six times during the course of the year.

The Panorama of EU Industry provides users of enterprise statistics each year with a complete and detailed publication on the state of and main trends in industry and services.

The Panorama Short-term Supplement has a simple objective: to furnish readers of the annual Panorama with an instrument which will allow them to follow the evolution of industrial short-term trends and also show the structure and activity of industry at the sectorial level.

The data processing, statistical analysis, writing of the chapters and desktop publishing were carried out by the following team at Eurostat:

Timothy Allen
Laurence Bastin
Raymond Chaudron
Catherine Dailleau
Paul Hanson
Rita Keenan
Andrew Redpath
Paris Sansoglou

For more information, please contact:
Mr. Berthold Feldmann,
Statistical Office of the European Communities,
Bâtiment Jean Monnet,
C5/30,
L-2920 Luxembourg
Tel: (352) 4301 34401
Fax: (352) 4301 34359

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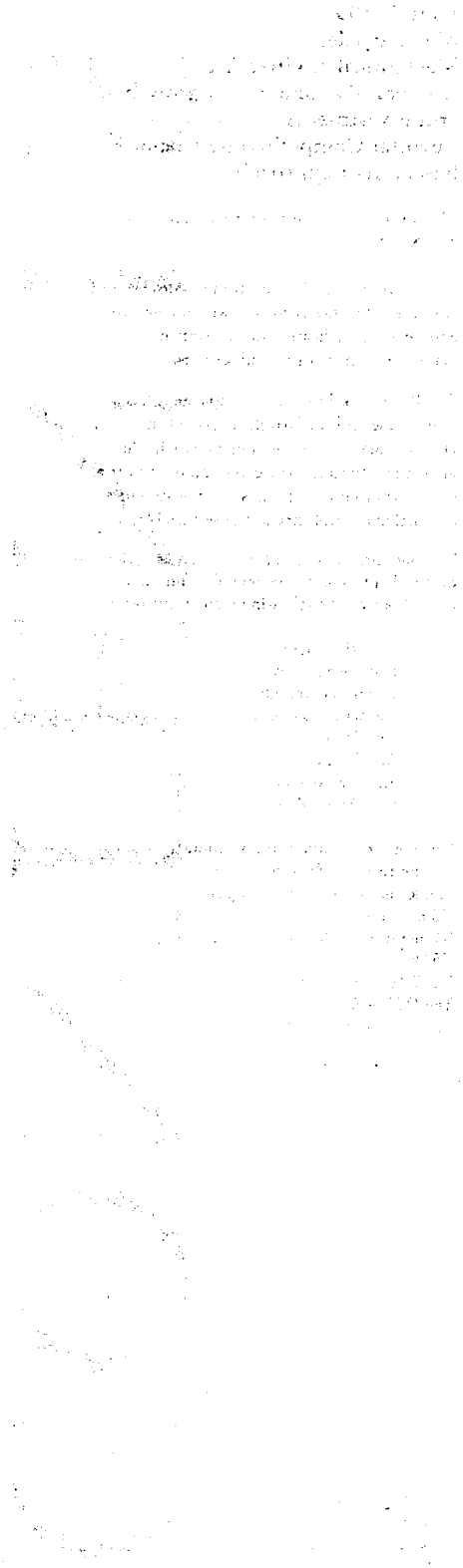

MACRO-ECONOMY

IN BRIEF....

- ★ ECONOMIC GROWTH IN EUROPE AND THE USA DECELERATED
- ★ UNEMPLOYMENT IN GERMANY REACHED 4 MILLION
- ★ THE AMERICAN FEDERAL RESERVE BOARD LOWERED ITS FEDERAL FUNDS AND DISCOUNT RATES
- ★ DESPITE CONTINUED STAGNATION IN JAPAN IN 1995, EXPECTATIONS FOR 1996 WERE OPTIMISTIC

The year-on-year growth rate of gross domestic product in constant prices was at a level of around 2 per cent in the third quarter of 1995 for the European Member States. This represents a small but significant decline compared to the first and second quarters. The growth rates for countries with third quarter data available, lay between 1.2 per cent for Austria and 3.8 per cent for Sweden. For the second quarter these figures had been 2.2 per cent for Germany and 4.8 per cent for Sweden. A major decline in the growth rate of GDP took place in Germany, from 2.2 per cent in the second quarter of 1995 to 1.5 per cent in the third quarter. Comparable declines took place in France, from 3.0 per cent in the second to 2.0 per in the third quarter of 1995, in Austria and in Sweden. The countries with relatively stable growth rates throughout the first to the third quarters were Denmark, Spain and Italy. These three Member States experienced growth rates of approximately 3 per cent in all three quarters. In Germany, the decline in the growth rate of GDP was accompanied by lower growth in industrial production. Capacity utilisation reached a peak though in the third quarter at 86.1 per cent, after which it declined to 84.7 per cent in December.

Stock markets barely reacted to the decline in the growth of economic activity in the European Union Member States. At the start of February, many markets' indices reached levels considerably higher than they were a year before. As some of them even set new records, expectations about future economic growth were optimistic. However, compared to other financial markets, the European ones were less bullish in 1995. The best performing stock markets in Europe, the Belgian, British, Dutch and Swedish, hardly reached the increase in the Morgan Stanley World Index and stayed well behind the American. The rise in stock prices coincided with an decrease in long-term interest rates through 1995.

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FIGURE 1.1

INTERNATIONAL COMPARISON OF ANNUAL GROWTH RATES FOR INDUSTRIAL PRODUCTION (%)

SOURCE: eurostat

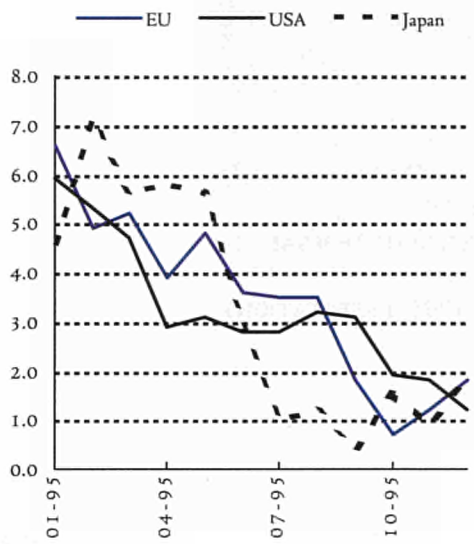


FIGURE 1.2

INTERNATIONAL COMPARISON OF ANNUAL GROWTH RATES FOR CONSUMER PRICES (%)

SOURCE: eurostat

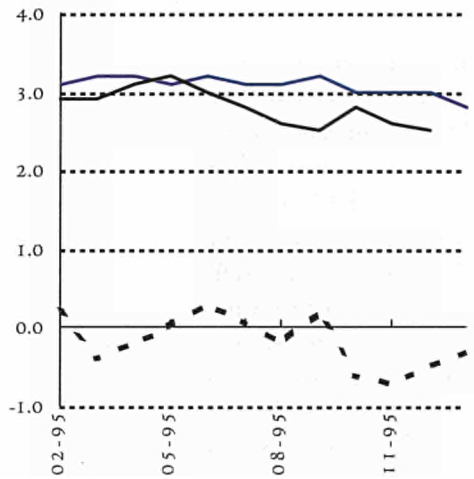
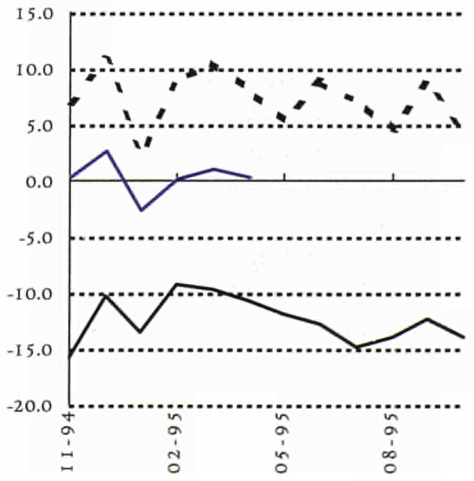


FIGURE 1.3

INTERNATIONAL COMPARISON OF MONTHLY TRADE BALANCE (BILLION ECU)

SOURCE: eurostat



Inflation remained at a relatively low level. When measured by the change in the average of the level of prices during a three months period compared to the three months before at an annualised rate, inflation was negative in Germany, Belgium and Austria in December 1995. In Germany, inflation remained negative in January, at a month-on-month rate of -0.1 per cent. In addition to Germany, Belgium and Austria, inflation stayed below 2 per cent in December 1995 in the Netherlands and the United Kingdom.

The increase in economic activity during 1995 did not produce the effect on unemployment many had hoped it would. Instead, unemployment started to rise again by December 1995 in some Member States. In Germany, the non-seasonally adjusted rate was 10.8 per cent, up 1.6 percentage points from October, the total number of unemployed Germans coming to just under 4 million. Unemployment also rose in France, to 11.7 per cent in December. The governments of both Germany and France announced measures to combat this situation in the second week of February. Germany's plans are directed at boosting domestic demand while cutting the budget deficit, further deregulation of the economy and the rationalisation of the welfare system. Sweden's unemployment rate increased from a low of 7.2 per cent in November to 8.1 per cent in January. In the United Kingdom and the Netherlands, unemployment remained constant throughout the second half of 1995, at around 8 per cent and 7 per cent respectively. Developments in the number of unemployed were most positive in Denmark, where the rate fell from 9.3 per cent in November to 9.1 per cent a month later.

The visible trade balance among Member States developed in varying directions. In Italy and Belgium, the surpluses widened considerable. Over the three month period of May to July 1995, Belgium's surplus (measured in ECU) increased by 24 per cent over the same months in 1994. In Italy, the surplus increased

by the same percentage for the period August to October 1995. As a result of Italy's booming exports, its current account totalled almost 12 billion ECU in 1995. Germany's visible trade balance remained stable during the same period, as did France's. The Dutch, Danish and Finish surpluses decreased somewhat on 1994.

As in Europe, economic growth slowed down in the USA. The annual change in gross domestic product declined from 4.0 per cent in the first quarter of 1995 to 1.9 per cent in the third quarter. Unemployment edged up from 5.5 per cent in October to 5.8 per cent in January while the year-on-year inflation rate has remained constant at 2.7 per cent since October 1995. Growth in the volume of industrial production also declined. American industrial sectors went through a phase of stock correction during the summer months of 1995, after which economic growth rebounded. The American Federal Reserve Board then decided to stimulate the economy by lowering the federal funds rate by 0.25 per cent in the first week of July. On the 31st of January, the Fed used this instrument again, with the same aim, lowering the rate to 5.25 per cent. The discount rate was lowered by an equal amount, to 5.0 per cent. This was the third consecutive reduction of the federal funds rate by the Fed, after the rate had remained constant throughout the first half of 1995 at 6.0 per cent. The current level is still 2.25 per cent above the low it reached in 1994.

Japan's current account surplus dropped by 22 per cent, from 109 billion ECU in 1994 to 85 billion ECU in 1995. The decrease was even larger for the visible trade balance - the surplus dropped by 31 per cent in ECU in the final quarter of 1995, compared to the same quarter in 1994. This development, which started at the beginning of 1992, was caused largely by the appreciation of the Yen (by an average of 8 per cent over the last 5 years) to a level of 122.9 Yen to the ECU in 1995 and by the rise in exports of Japanese transplants in other Asian countries. Many Japanese companies have

TABLE 1.1

INTERNATIONAL COMPARISON OF ANNUAL GROWTH RATES FOR INDUSTRIAL PRODUCTION (%)

	EUR15	USA	JAPAN
01-95	6.6	5.9	4.6
02-95	4.9	5.3	7.1
03-95	5.2	4.7	5.6
04-95	3.9	2.9	5.8
05-95	4.8	3.1	5.6
06-95	3.6	2.8	2.9
07-95	3.5	2.8	1.0
08-95	3.5	3.2	1.2
09-95	1.8	3.1	0.4
10-95	0.7	1.9	1.5
11-95	1.2	1.8	0.9
12-95	1.8	1.2	1.8

SOURCE: eurostat

TABLE 1.2

INTERNATIONAL COMPARISON OF ANNUAL GROWTH RATES FOR CONSUMER PRICES (%)

	EUR15	USA	JAPAN
02-95	3.1	2.9	0.2
03-95	3.2	2.9	-0.4
04-95	3.2	3.1	-0.2
05-95	3.1	3.2	0.0
06-95	3.2	3.0	0.3
07-95	3.1	2.8	0.1
08-95	3.1	2.6	-0.2
09-95	3.2	2.5	0.2
10-95	3.0	2.8	-0.6
11-95	3.0	2.6	-0.7
12-95	3.0	2.5	-0.5
01-96	2.8	N/A	-0.3

SOURCE: eurostat

TABLE 1.3

INTERNATIONAL COMPARISON OF MONTHLY TRADE BALANCE (BILLION ECU)

	EUR12	USA	JAPAN
11-94	0.3	-15.8	6.9
12-94	2.7	-10.3	10.7
01-95	-2.7	-13.5	2.3
02-95	0.1	-9.3	9.0
03-95	1.1	-9.7	10.5
04-95	0.3	-10.7	8.1
05-95	N/A	-11.9	5.3
06-95	N/A	-12.8	8.8
07-95	N/A	-14.8	7.0
08-95	N/A	-13.9	4.6
09-95	N/A	-12.4	8.8
10-95	N/A	-14.0	4.1

SOURCE: eurostat

shifted their production to nearby Asian production centres in recent years, in order to escape the high Yen. As demand picks up in 1996, the economy is expected to grow by around 2 per cent this year according to financial experts, imports will grow further and the trade balance should shrink further. Growth in domestic output is already speeding up. Production volume in industry increased by 9.5 per cent at an annual rate in the last quarter of 1995, compared to the quarter before. Consumer and producer prices were both 0.3 per cent lower in December 1995 compared with December 1994, but were also seen to be picking up pace. Unemployment, at 3.4 per cent of the labour force, remained high for Japanese standards. The stimulation package the Japanese government introduced last year and the loose monetary policy of the Japanese central bank seemed finally to be having its effect. The discount rate still remained at an unprecedented 0.5 per cent in February 1996 and M1, a narrow measure of the amount of money in the economy, rose by 13 per cent in 1995. Gross domestic product had yet to respond to the active stimulation of the economy, its growth rate remaining below 1 per cent in the year to the third quarter of 1995.

TOTAL INDUSTRY

IN BRIEF....

- ★ BASED ON THE FIRST 11 MONTHS OF 1995, INDUSTRIAL PRODUCTION VOLUME INCREASED BY 3 PER CENT ON 1994
- ★ INDUSTRIAL PRODUCTION IN GERMANY STAGNATED DURING THE SAME PERIOD
- ★ PRODUCER PRICES INCREASED BY 3.8 PER CENT ON AVERAGE IN THE EU DURING THE PERIOD JANUARY TO FEBRUARY OF 1995
- ★ CAPACITY UTILISATION DROPPED TO 82.6 PER CENT IN THE FINAL QUARTER OF 1995

Industrial production volume in the fifteen Member States increased by approximately 3 per cent on average over the first eleven months of 1995 compared to 1994. Germany, France, the United Kingdom and the Netherlands experienced lower than average growth. In Germany, where year-to-year growth rates had been lower than the European Union average throughout the year, growth in production volume dropped from about 5 per cent in January to -3 per cent in November. This decline in growth rates was most notable in the consumer durables sectors of German manufacturing, where the year-to-year growth rates went negative as early as the second quarter of 1995. Together with comparable but less severe downturns in the other sectors of manufacturing industry, the average growth in 1995 for German industry came to less than 1 per cent. The European average was pulled up by higher growth in Italy, Spain and the Scandinavian Member States. But in these countries too, growth in production slowed in the third and fourth quarters. Average growth in Italy, Spain and Denmark was between 4 and 6 per cent, while in Sweden and Finland, it was 9 and 7 per cent respectively.After a mild acceleration of the increase in producer prices during the spring of 1995, producer price inflation dropped back to under 4 per cent again by October. This average pattern was replicated in the intermediate goods and the consumer non-durables sectors. The strong upward trend in world commodity prices of 1993 and 1994 (excluding oil) had turned downwards by late 1994 for food items and by early 1995 for industrials. These developments on the world commodity markets had a strong influence on domestic markets' prices for certain goods for which Europe is dependent on imports. Good examples of this were coffee and cotton. Capacity utilisation declined in the fourth quarter of 1995, together with the slowing down in production growth, to 82.6 for EUR12. It had reached a high in the third quarter of 1995 of 83.2 per cent. The utilisation of production capacity remained at the same level in the investment goods industry during the fourth quarter of 1995 at 83.0 per cent as in the third, while in the intermediate and consumer goods industries the rate fell. This could point to a continuation of investment in industry and a temporary correction in the levels of stocks as an explanation for the slowdown in industrial activity in the EU. Whether Europe is going through a level of stocks correction, such as the USA experienced during the summer of 1995, or is heading for a more serious decline in economic growth, remains to be seen.

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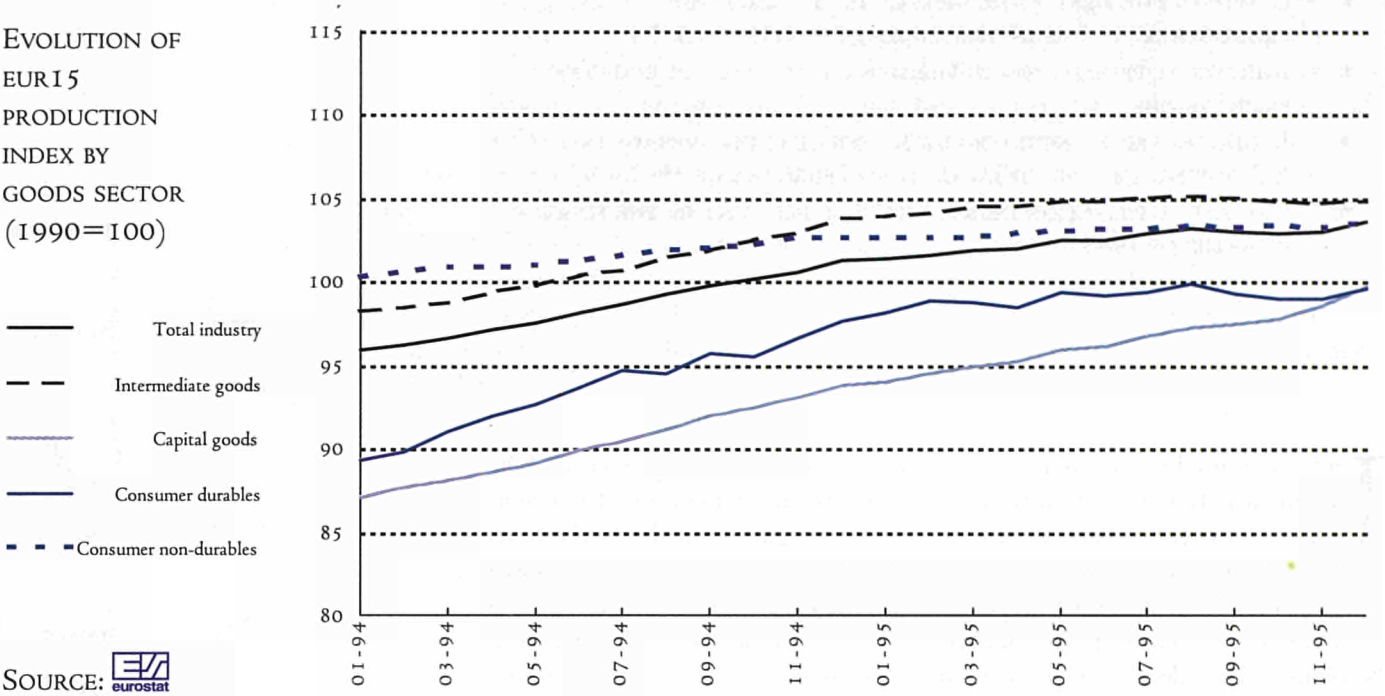
FIGURE 2.1

EVOLUTION OF EUR15 PRODUCTION INDEX BY GOODS SECTOR (1990=100)



SOURCE: eurostat

TABLE 2.1

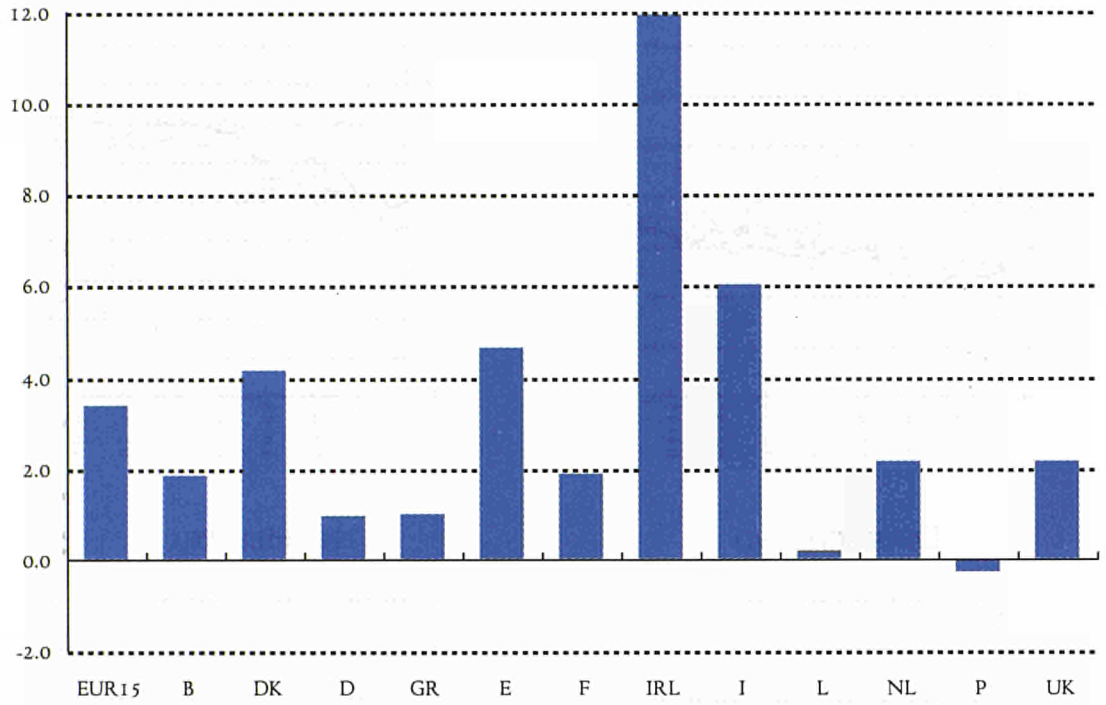
QUARTERLY PRODUCTION INDEXES (1990=100)

	Latest quarter available	Total industry	Intermediate goods	Capital goods	Consumer durables	Consumer non-durables
EUR15	10-95 ⇨ 12-95	103.5	104.8	99.6	99.6	103.6
Growth rate, t/t-4 (%)		2.7	1.0	6.3	2.0	0.9
B	04-95 ⇨ 06-95	96.9	96.6	97.7	97.4	96.3
Growth rate, t/t-4 (%)		1.6	1.9	3.5	0.1	-1.9
DK	10-95 ⇨ 12-95	115.6	111.5	120.4	112.9	116.7
Growth rate, t/t-4 (%)		4.9	-1.8	7.8	2.4	1.1
D	10-95 ⇨ 12-95	95.2	97.7	90.0	91.1	98.3
Growth rate, t/t-4 (%)		0.2	-2.1	2.1	-1.6	0.6
GR	09-95 ⇨ 11-95	98.2	95.4	101.5	94.0	103.3
Growth rate, t/t-4 (%)		0.6	1.6	6.7	6.8	2.1
E	10-95 ⇨ 12-95	102.7	102.6	98.5	105.6	97.0
Growth rate, t/t-4 (%)		4.2	1.2	10.7	4.5	-2.9
F	10-95 ⇨ 12-95	102.7	104.4	92.3	100.0	104.1
Growth rate, t/t-4 (%)		1.6	-0.1	3.2	2.4	1.6
IRL	07-95 ⇨ 09-95	158.1	164.8	187.0	N/A	132.1
Growth rate, t/t-4 (%)		18.9	18.3	39.1	N/A	7.6
I	10-95 ⇨ 12-95	109.5	108.3	113.3	112.3	111.6
Growth rate, t/t-4 (%)		5.4	2.4	18.9	6.7	2.6
L	10-95 ⇨ 12-95	100.5	100.8	90.6	114.4	98.4
Growth rate, t/t-4 (%)		1.4	-2.0	3.6	50.7	-5.0
NL	10-95 ⇨ 12-95	106.1	107.9	104.7	99.0	103.9
Growth rate, t/t-4 (%)		0.3	2.6	4.4	-0.2	0.9
P	08-95 ⇨ 10-95	99.0	100.3	87.9	90.8	90.1
Growth rate, t/t-4 (%)		4.0	3.3	4.3	1.6	1.5
UK	10-95 ⇨ 12-95	105.7	110.9	97.2	101.2	102.5
Growth rate, t/t-4 (%)		1.6	2.2	1.3	2.3	0.7

SOURCE: eurostat

FIGURE 2.2

ANNUAL GROWTH RATE OF TOTAL INDUSTRY PRODUCTION INDEX BY MEMBER STATE (1) (%)



(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 2.2

ANNUAL PRODUCTION INDEXES (1) (1990=100)

	Latest year available	Total industry	Intermediate goods	Capital goods	Consumer durables	Consumer non-durables
EUR15	1995	103.1	105.0	97.9	99.5	103.3
Growth rate, t/t-1 (%)		3.4	2.9	6.5	4.2	1.1
B	1994	94.7	95.5	95.3	96.4	97.1
Growth rate, t/t-1 (%)		1.8	3.4	3.1	-1.3	-1.9
DK	1995	115.8	113.2	118.9	113.0	116.7
Growth rate, t/t-1 (%)		4.1	2.7	10.2	4.7	1.8
D	1995	94.8	98.1	89.1	90.4	97.7
Growth rate, t/t-1 (%)		1.0	0.8	2.0	-0.1	0.1
GR	1994	95.7	93.5	95.0	86.8	101.2
Growth rate, t/t-1 (%)		1.0	2.4	-7.6	5.1	0.7
E	1995	103.3	103.6	97.5	106.2	97.5
Growth rate, t/t-1 (%)		4.6	4.5	14.3	9.7	-2.1
F	1995	101.1	105.3	90.6	99.6	103.3
Growth rate, t/t-1 (%)		1.9	2.7	4.1	5.3	1.4
IRL	1994	133.3	144.1	138.1	N/A	122.6
Growth rate, t/t-1 (%)		11.9	14.5	17.1	N/A	6.2
I	1995	107.8	107.8	106.8	112.9	110.3
Growth rate, t/t-1 (%)		6.0	4.5	15.6	9.8	2.6
L	1995	101.0	101.8	93.4	101.8	99.1
Growth rate, t/t-1 (%)		0.2	-1.7	6.7	36.3	-4.0
NL	1995	104.7	106.6	102.8	98.5	103.5
Growth rate, t/t-1 (%)		2.1	2.2	3.9	-0.9	1.2
P	1994	94.9	96.5	84.3	89.1	88.2
Growth rate, t/t-1 (%)		-0.3	3.4	0.1	-3.4	-5.2
UK	1995	105.5	110.6	96.4	100.7	103.3
Growth rate, t/t-1 (%)		2.1	2.7	0.7	3.2	1.7

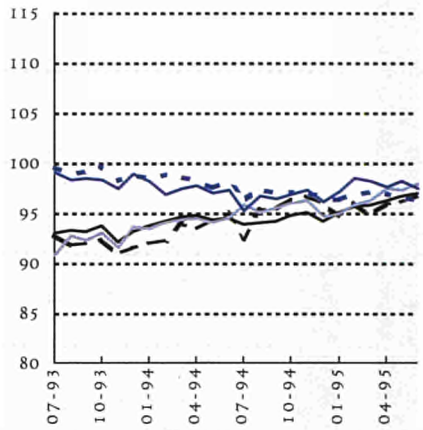
(1) Annual growth rates are based on the latest annual data. Only when data to October is available will an annual estimate for the year be made.

SOURCE: eurostat

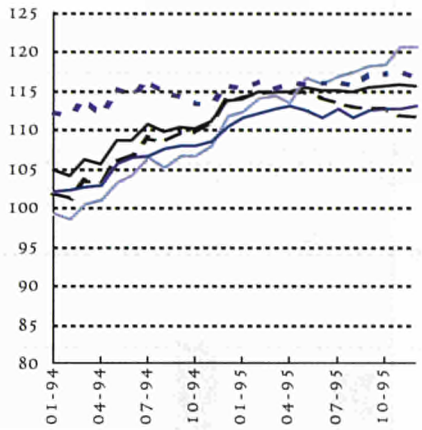
FIGURE 2.3

EVOLUTION OF PRODUCTION INDEX BY GOODS SECTOR (1990=100)

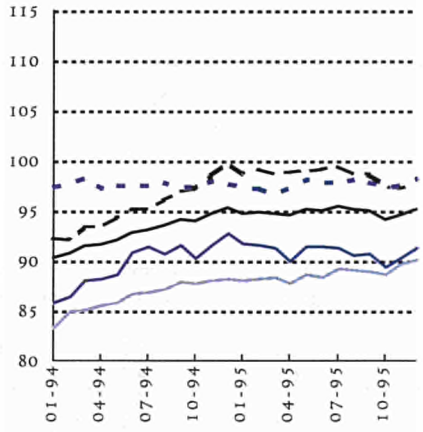
BELGIQUE/BELGIË



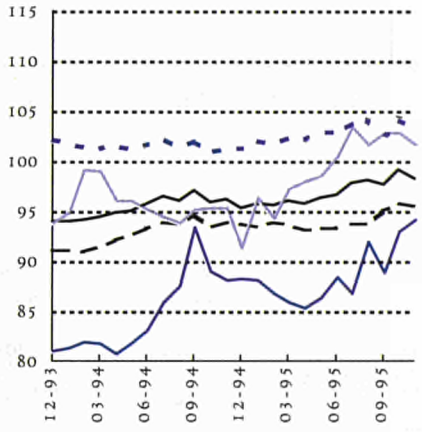
DANMARK



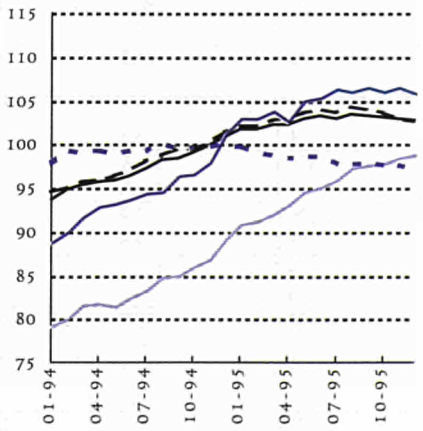
DEUTSCHLAND



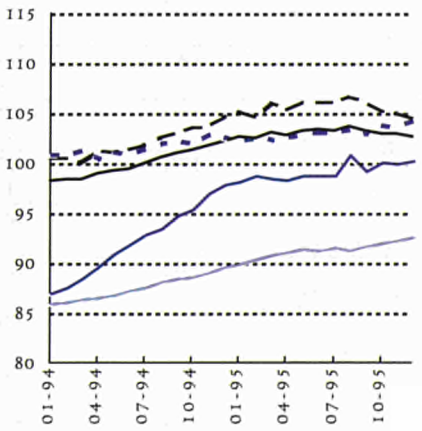
HELLAS



ESPAÑA



FRANCE



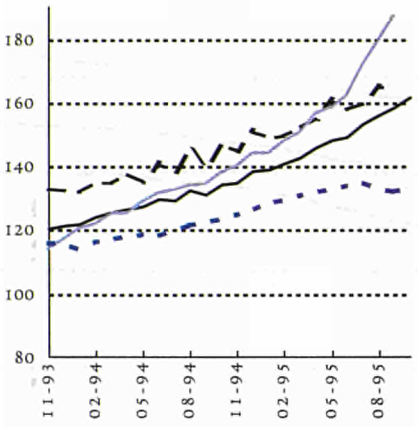
Total industry
Intermediate goods
Capital goods
Consumer durables
Consumer non-durables

SOURCE: eurostat

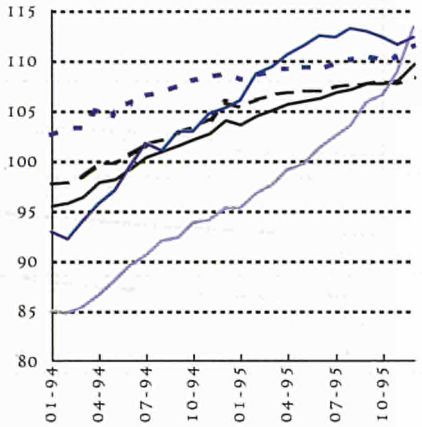
FIGURE 2.3

EVOLUTION OF PRODUCTION INDEX BY GOODS SECTOR (1990=100)

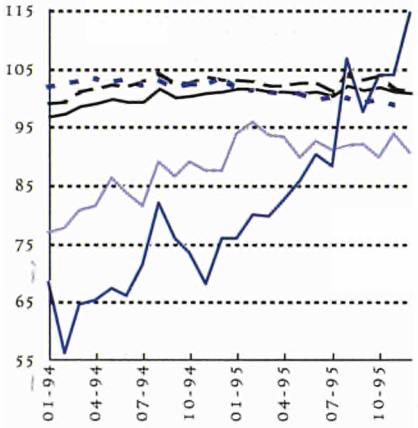
IRELAND



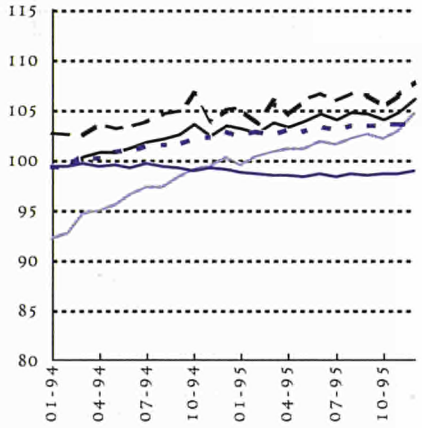
ITALIA



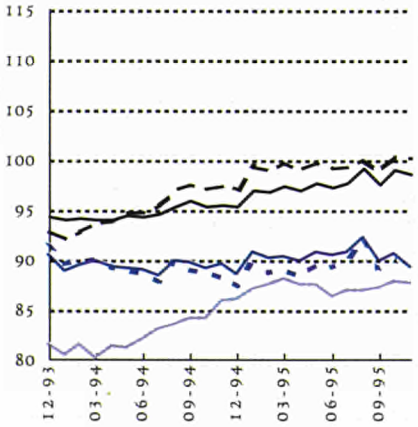
LUXEMBOURG



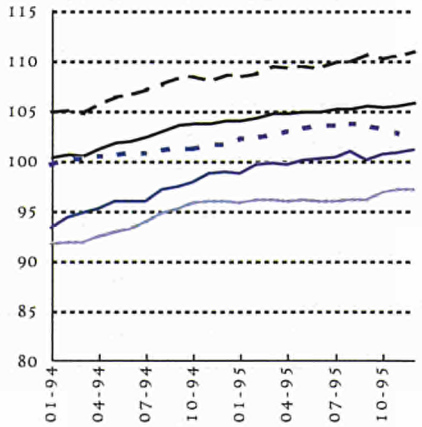
NEDERLAND

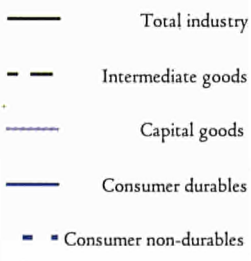


PORTUGAL



UNITED KINGDOM

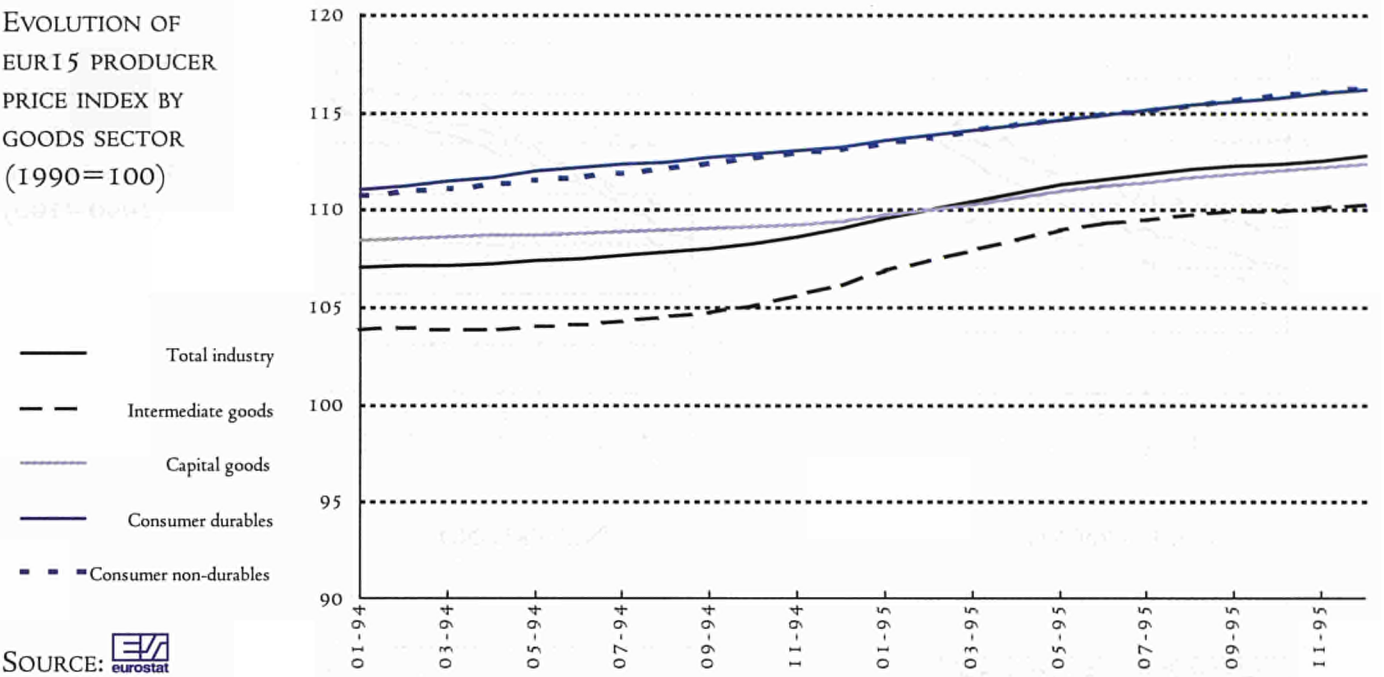




SOURCE: eurostat

FIGURE 2.4

EVOLUTION OF EUR15 PRODUCER PRICE INDEX BY GOODS SECTOR (1990=100)



SOURCE: eurostat

TABLE 2.3

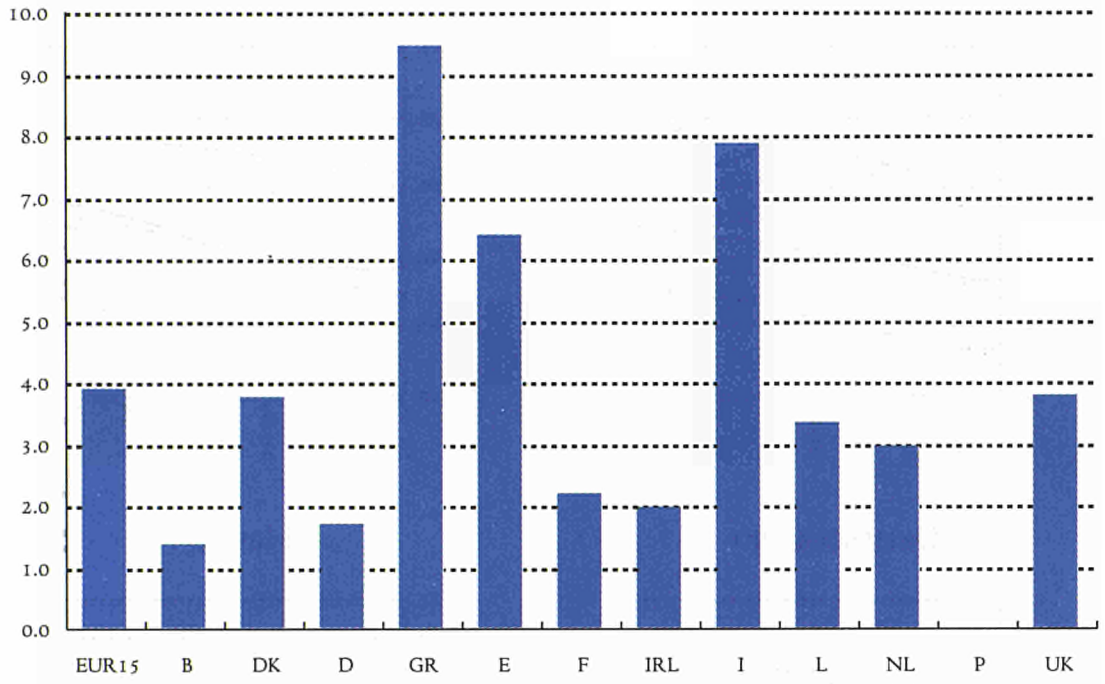
QUARTERLY PRODUCER PRICE INDEXES (1990=100)

	Latest quarter available	Total industry	Intermediate goods	Capital goods	Consumer durables	Consumer non-durables
EUR15	10-95 ⇨ 12-95	112.8	110.2	112.3	116.1	116.3
Growth rate, t/t-4 (%)		3.5	4.0	2.7	2.6	2.8
B	08-95 ⇨ 10-95	101.8	97.4	108.4	N/A	109.1
Growth rate, t/t-4 (%)		2.0	2.7	1.4	N/A	1.9
DK	10-95 ⇨ 12-95	104.0	102.3	109.2	109.7	103.0
Growth rate, t/t-4 (%)		3.6	4.3	3.9	2.1	3.0
D	11-95 ⇨ 01-96	106.3	103.5	110.6	110.1	108.0
Growth rate, t/t-4 (%)		1.0	0.7	1.7	1.1	1.1
GR	10-95 ⇨ 12-95	174.1	171.0	174.6	160.9	179.0
Growth rate, t/t-4 (%)		9.2	10.7	8.3	5.5	7.9
E	11-95 ⇨ 01-96	117.5	114.4	114.5	120.2	123.0
Growth rate, t/t-4 (%)		5.1	5.3	3.6	4.5	5.3
F	11-95 ⇨ 01-96	103.2	102.5	102.0	114.8	104.2
Growth rate, t/t-4 (%)		1.5	1.7	0.7	1.3	0.0
IRL	12-94 ⇨ 02-95	108.8	96.3	N/A	N/A	110.1
Growth rate, t/t-4 (%)		2.4	-0.7	N/A	N/A	2.4
I	10-95 ⇨ 12-95	123.1	125.9	117.4	126.9	125.1
Growth rate, t/t-4 (%)		7.5	10.0	5.5	5.1	5.5
L	10-95 ⇨ 12-95	110.6	92.2	108.8	103.0	112.2
Growth rate, t/t-4 (%)		2.7	5.4	2.6	1.8	1.5
NL	10-95 ⇨ 12-95	103.7	102.3	105.9	105.0	105.1
Growth rate, t/t-4 (%)		2.2	2.4	1.7	0.8	1.6
P	⇨	N/A	N/A	N/A	N/A	N/A
Growth rate, t/t-4 (%)		N/A	N/A	N/A	N/A	N/A
UK	11-95 ⇨ 01-96	120.0	110.7	117.2	114.5	126.0
Growth rate, t/t-4 (%)		2.9	1.5	2.9	1.8	4.1

SOURCE: eurostat

FIGURE 2.5

ANNUAL GROWTH RATE OF TOTAL INDUSTRY PRODUCER PRICE INDEX BY MEMBER STATE (1) (%)



(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 2.4

ANNUAL PRODUCER PRICE INDEXES (1) (1990=100)

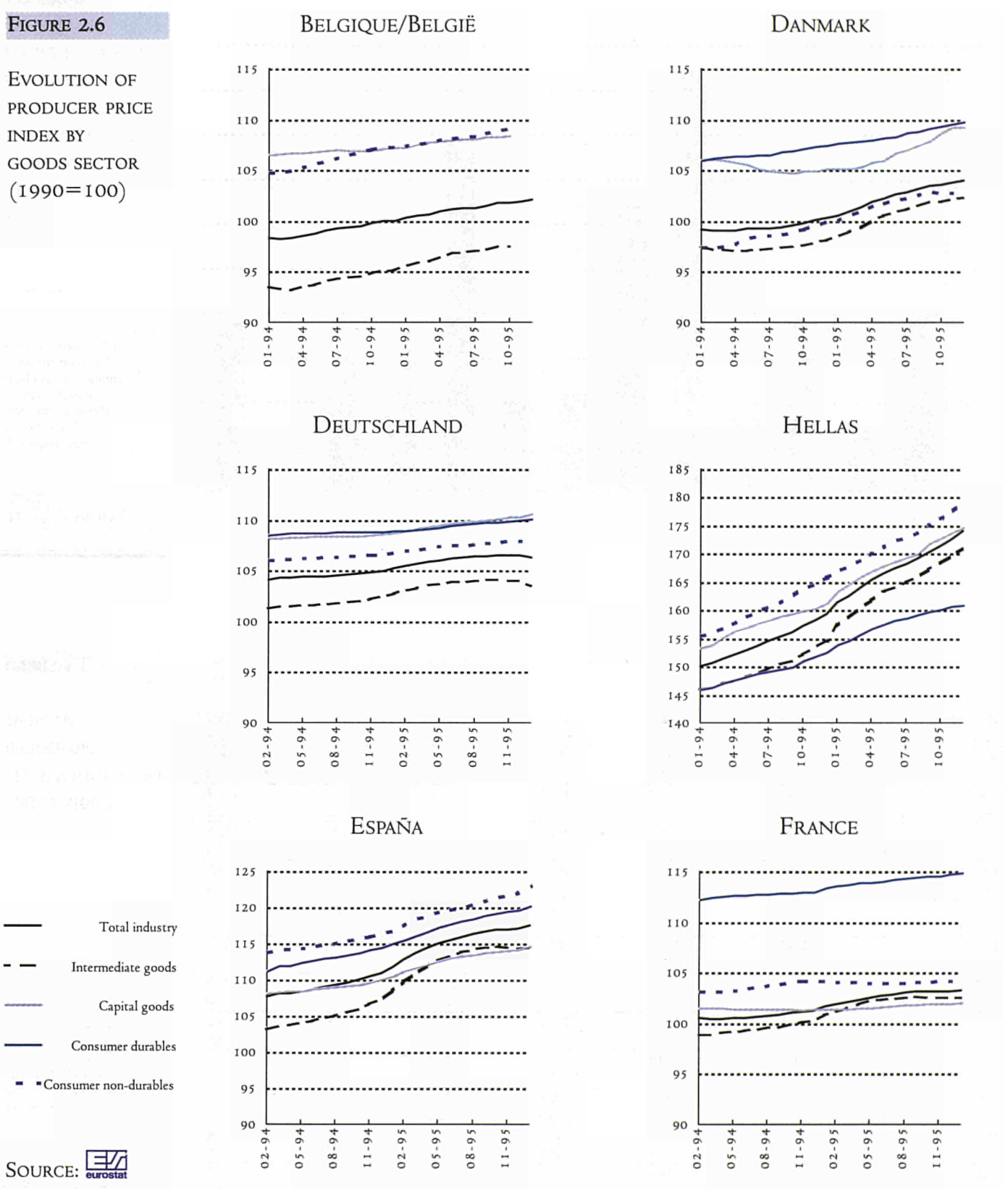
	Latest year available	Total industry	Intermediate goods	Capital goods	Consumer durables	Consumer non-durables
EUR15	1995	112.4	110.1	111.9	115.6	115.7
Growth rate, t/t-1 (%)		3.9	4.8	2.6	2.6	2.9
B	1994	99.5	94.5	107.1	N/A	106.8
Growth rate, t/t-1 (%)		1.4	1.1	0.9	N/A	2.0
DK	1995	103.4	101.8	108.0	109.1	102.7
Growth rate, t/t-1 (%)		3.8	4.4	2.7	2.0	3.7
D	1995	106.5	104.1	110.0	109.7	107.8
Growth rate, t/t-1 (%)		1.7	2.1	1.5	0.8	1.3
GR	1995	171.4	168.5	172.5	160.0	176.0
Growth rate, t/t-1 (%)		9.5	11.0	8.1	6.3	7.9
E	1995	116.8	114.5	113.8	118.9	121.2
Growth rate, t/t-1 (%)		6.4	8.3	4.2	4.7	4.9
F	1995	103.1	102.6	101.8	114.5	104.1
Growth rate, t/t-1 (%)		2.2	2.9	0.4	1.5	0.3
IRL	1994	107.6	95.1	N/A	N/A	109.5
Growth rate, t/t-1 (%)		2.0	-3.7	N/A	N/A	3.0
I	1995	122.2	125.0	116.5	125.9	124.2
Growth rate, t/t-1 (%)		7.9	11.0	5.2	5.1	5.8
L	1995	110.8	92.0	108.4	103.1	112.3
Growth rate, t/t-1 (%)		3.4	5.0	2.5	1.9	1.5
NL	1995	103.9	102.6	105.9	105.0	104.8
Growth rate, t/t-1 (%)		2.9	3.3	2.0	1.0	1.6
P		N/A	N/A	N/A	N/A	N/A
Growth rate, t/t-1 (%)		N/A	N/A	N/A	N/A	N/A
UK	1995	118.7	109.6	116.3	113.7	124.7
Growth rate, t/t-1 (%)		3.8	3.1	3.0	1.1	4.1

(1) Annual growth rates are based on the latest annual data. Only when data to October is available will an annual estimate for the year be made.

SOURCE: eurostat

FIGURE 2.6

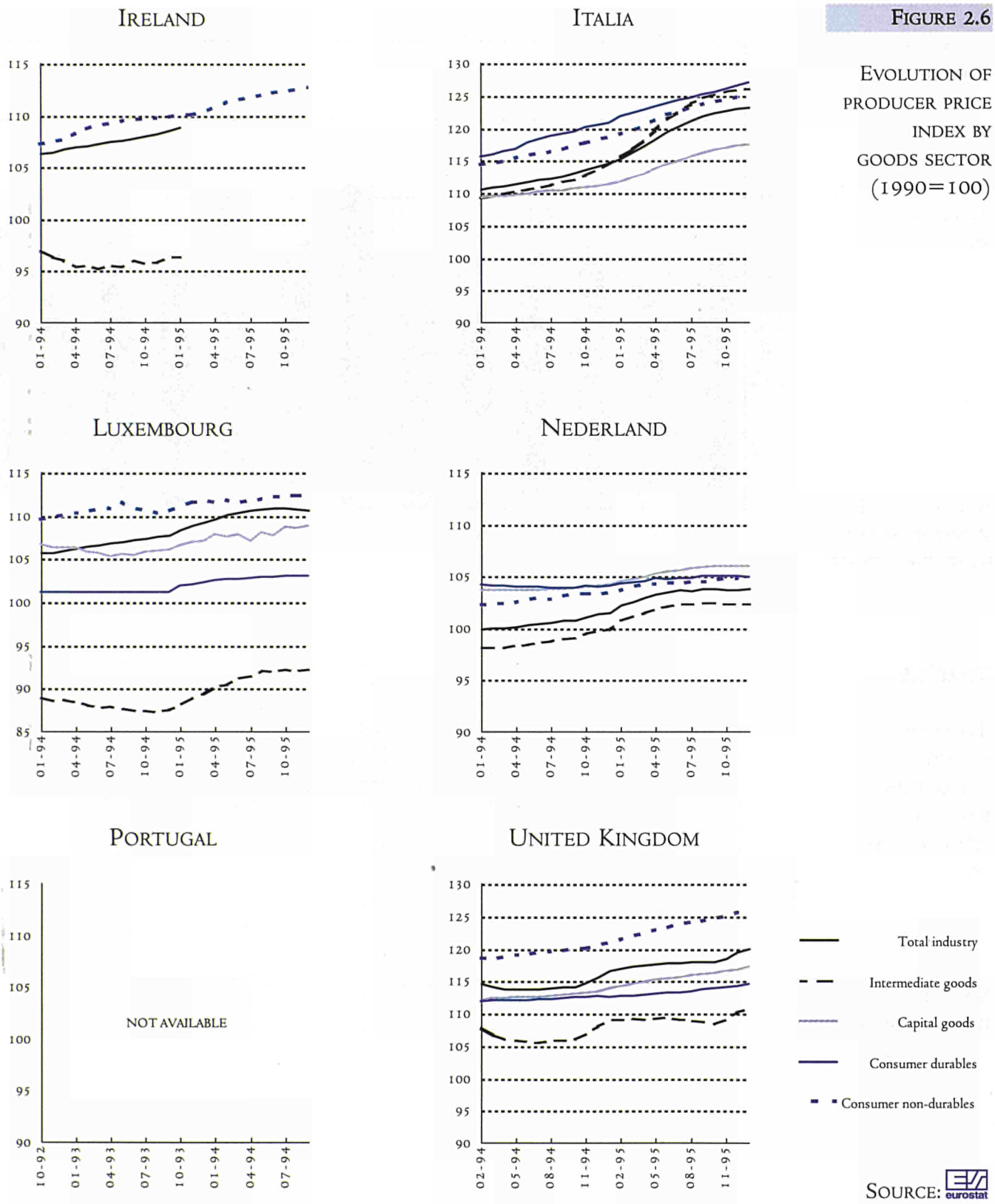
EVOLUTION OF PRODUCER PRICE INDEX BY GOODS SECTOR (1990=100)



SOURCE: eurostat

FIGURE 2.6

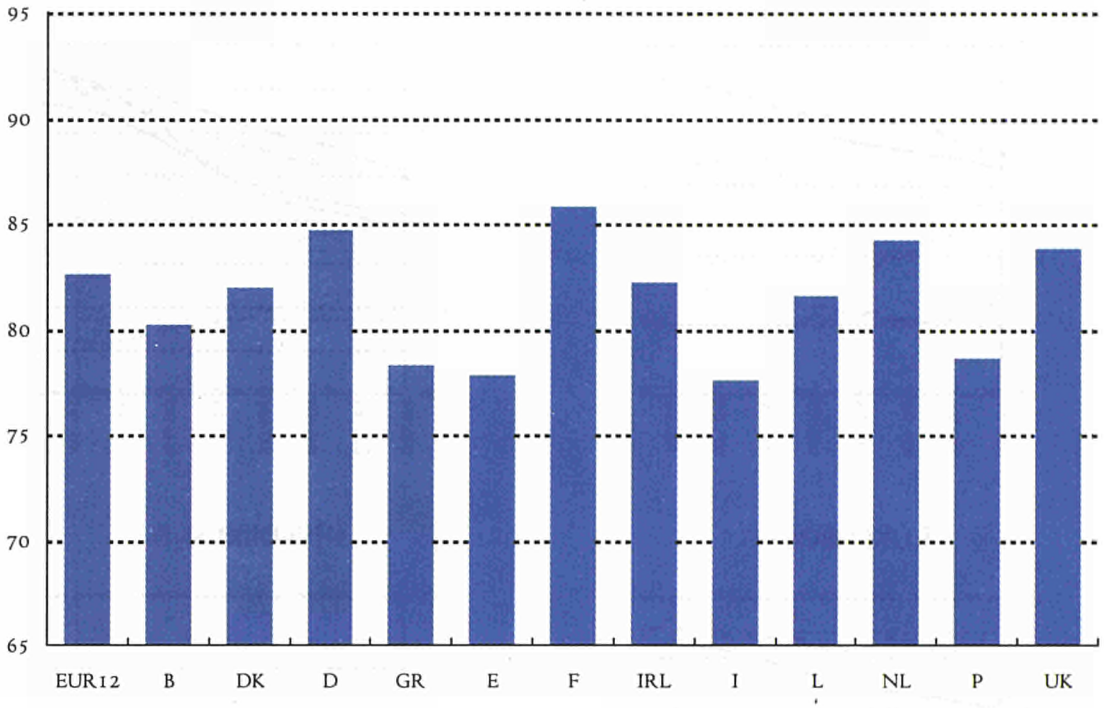
EVOLUTION OF PRODUCER PRICE INDEX BY GOODS SECTOR (1990=100)



SOURCE: eurostat

FIGURE 2.7

TOTAL INDUSTRY: CAPACITY UTILISATION RATES BY MEMBER STATE, FOURTH QUARTER 1995 (%)



SOURCE: DG II - BUSINESS SURVEY

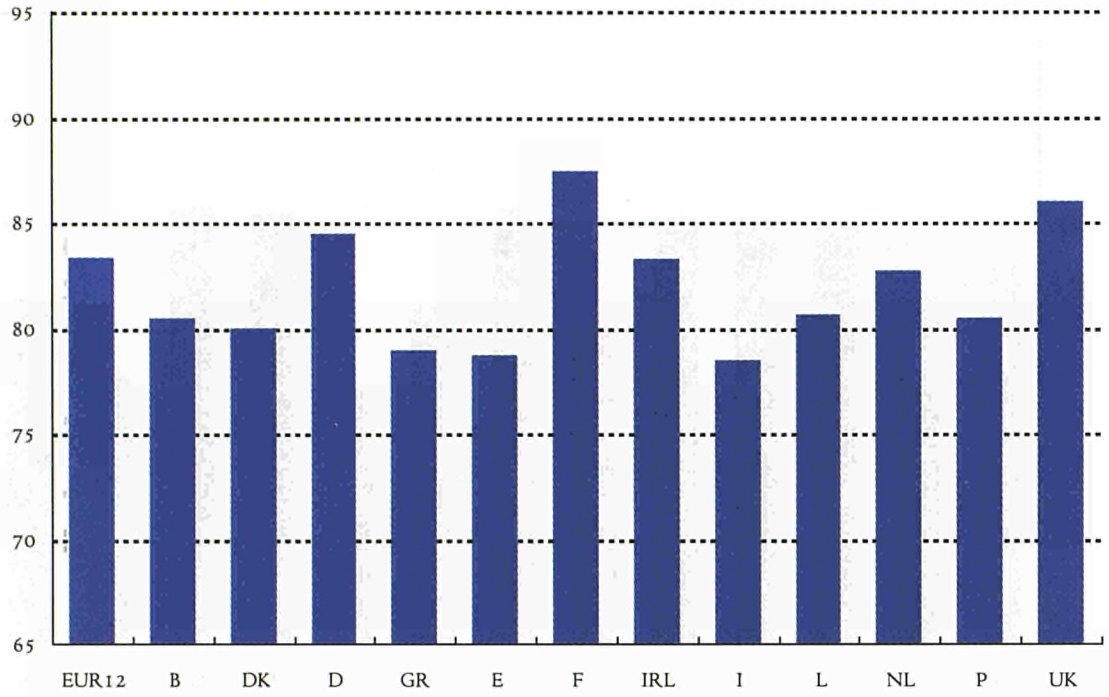
TABLE 2.5

TOTAL INDUSTRY: CAPACITY UTILISATION RATES BY MEMBER STATE (%)

	Annual growth rate: latest quarter, t/t-4	First quarter 1995	Second quarter 1995	Third quarter 1995	Fourth quarter 1995
EUR12	1.6	82.4	83.1	83.2	82.6
B	1.1	79.7	81.3	81.2	80.2
DK	-2.4	83.0	82.0	83.0	82.0
D	1.3	84.1	85.1	86.1	84.7
GR	2.0	75.7	75.2	76.5	78.3
E	2.9	78.3	78.6	77.9	77.8
F	1.4	85.6	85.7	85.5	85.8
IRL	10.2	77.2	80.9	79.2	82.2
I	2.4	77.6	78.2	78.6	77.6
L	-0.2	82.5	83.2	83.4	81.6
NL	-0.5	83.0	84.4	85.1	84.2
P	1.9	78.1	78.3	78.5	78.6
UK	0.3	84.1	85.2	84.1	83.8

SOURCE: DG II - BUSINESS SURVEY

FIGURE 2.8



INTERMEDIATE GOODS: CAPACITY UTILISATION RATES BY MEMBER STATE, FOURTH QUARTER 1995 (%)

SOURCE: DG II - BUSINESS SURVEY

TABLE 2.6

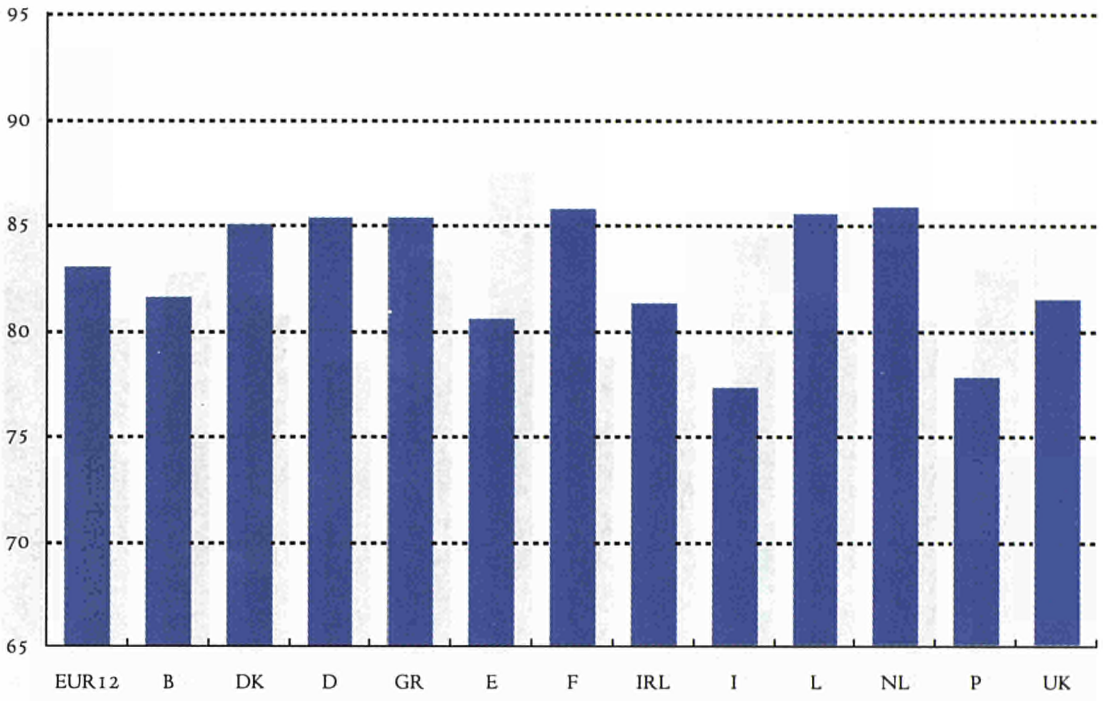
	Annual growth rate: latest quarter, t/t-4	First quarter 1995	Second quarter 1995	Third quarter 1995	Fourth quarter 1995
EUR12	1.0	83.8	84.7	84.5	83.3
B	-1.8	81.5	85.3	84.0	80.4
DK	-4.8	82.0	81.0	81.0	80.0
D	-0.8	85.4	86.6	87.3	84.4
GR	1.4	77.2	78.2	78.4	78.9
E	6.5	80.1	81.6	79.4	78.7
F	-1.0	87.4	87.8	88.4	87.4
IRL	17.3	80.3	83.8	74.1	83.2
I	2.9	79.2	79.6	79.3	78.4
L	-0.4	81.2	82.0	82.7	80.6
NL	-2.2	84.0	85.4	85.4	82.7
P	-0.2	82.3	82.2	81.7	80.4
UK	1.8	85.4	85.7	85.1	86.0

INTERMEDIATE GOODS: CAPACITY UTILISATION RATES BY MEMBER STATE (%)

SOURCE: DG II - BUSINESS SURVEY

FIGURE 2.9

CAPITAL GOODS: CAPACITY UTILISATION RATES BY MEMBER STATE, FOURTH QUARTER 1995 (%)



SOURCE: DG II - BUSINESS SURVEY

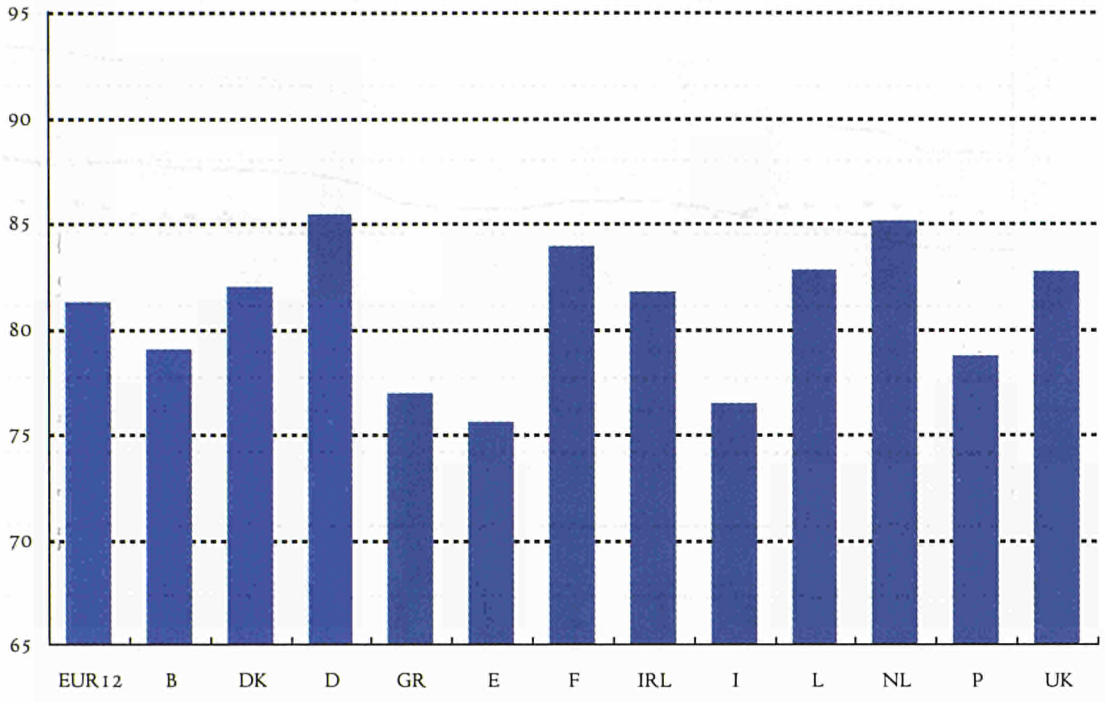
TABLE 2.7

CAPITAL GOODS: CAPACITY UTILISATION RATES BY MEMBER STATE (%)

	Annual growth rate: latest quarter, t/t-4	First quarter 1995	Second quarter 1995	Third quarter 1995	Fourth quarter 1995
EUR12	4.7	81.1	82.1	82.8	83.0
B	2.6	79.2	80.0	81.8	81.6
DK	1.2	85.0	85.0	85.0	85.0
D	5.8	81.2	82.6	85.5	85.3
GR	25.8	75.2	79.0	80.4	85.3
E	6.5	76.3	77.9	76.2	80.5
F	5.2	87.6	85.4	82.2	85.7
IRL	-0.9	76.8	85.4	83.3	81.2
I	4.6	76.1	77.7	79.5	77.2
L	4.8	82.8	84.7	84.1	85.5
NL	4.4	82.0	82.1	84.2	85.8
P	1.8	74.3	74.0	75.1	77.7
UK	1.8	81.2	83.6	82.9	81.4

SOURCE: DG II - BUSINESS SURVEY

FIGURE 2.10



CONSUMER GOODS: CAPACITY UTILISATION RATES BY MEMBER STATE, FOURTH QUARTER 1995 (%)

SOURCE: DG II - BUSINESS SURVEY

TABLE 2.8

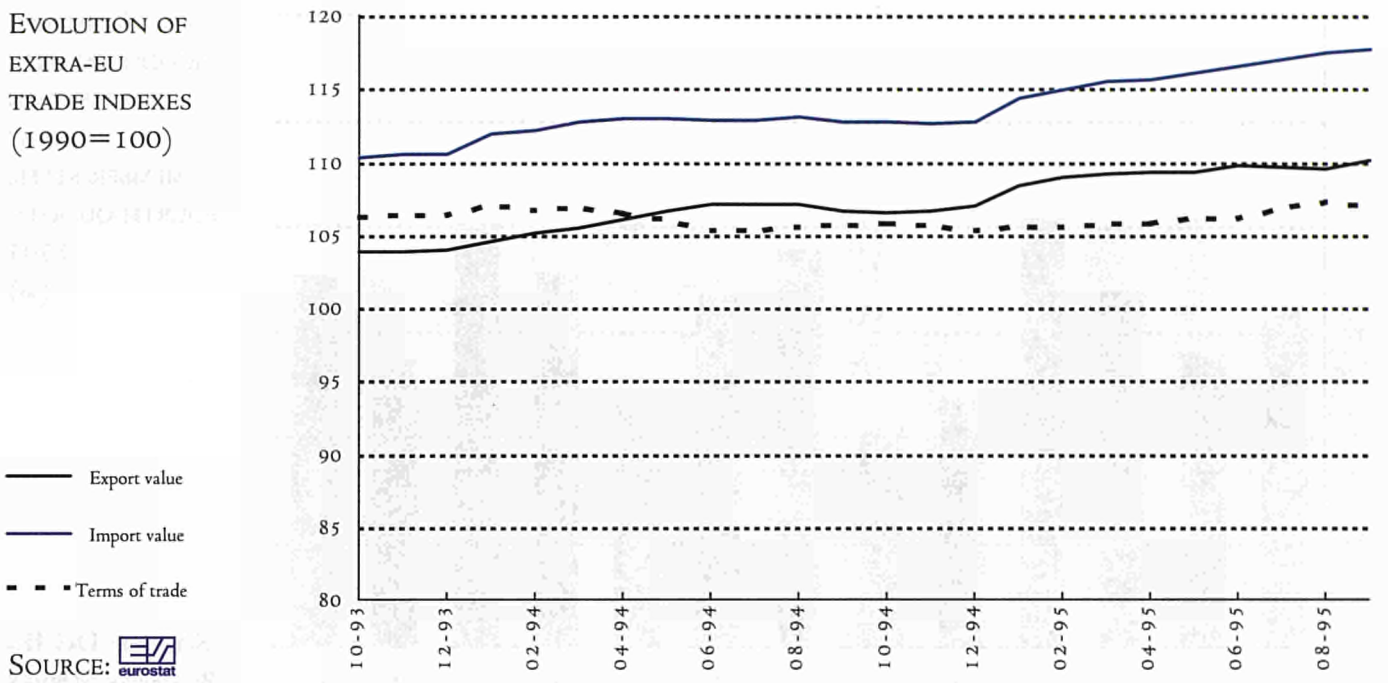
	Annual growth rate: latest quarter, t/t-4	First quarter 1995	Second quarter 1995	Third quarter 1995	Fourth quarter 1995
EUR12	-1.0	81.5	81.7	81.6	81.3
B	5.1	78.1	78.0	77.6	79.0
DK	1.2	83.0	82.0	83.0	82.0
D	0.7	85.9	86.4	84.9	85.4
GR	-1.8	73.5	70.9	73.3	76.9
E	-1.2	77.4	75.8	77.0	75.6
F	-0.8	82.7	83.3	83.8	83.9
IRL	8.9	79.8	75.4	82.7	81.7
I	0.3	76.3	76.5	77.2	76.4
L	-3.2	87.1	86.8	85.7	82.8
NL	-1.3	84.0	84.7	85.4	85.1
P	-0.1	80.7	79.1	79.2	78.7
UK	-2.8	83.9	85.1	83.4	82.7

CONSUMER GOODS: CAPACITY UTILISATION RATES BY MEMBER STATE (%)

SOURCE: DG II - BUSINESS SURVEY

FIGURE 2.11

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)



SOURCE: eurostat

TABLE 2.9

QUARTERLY EXTRA-EU TRADE INDEXES (1990=100)

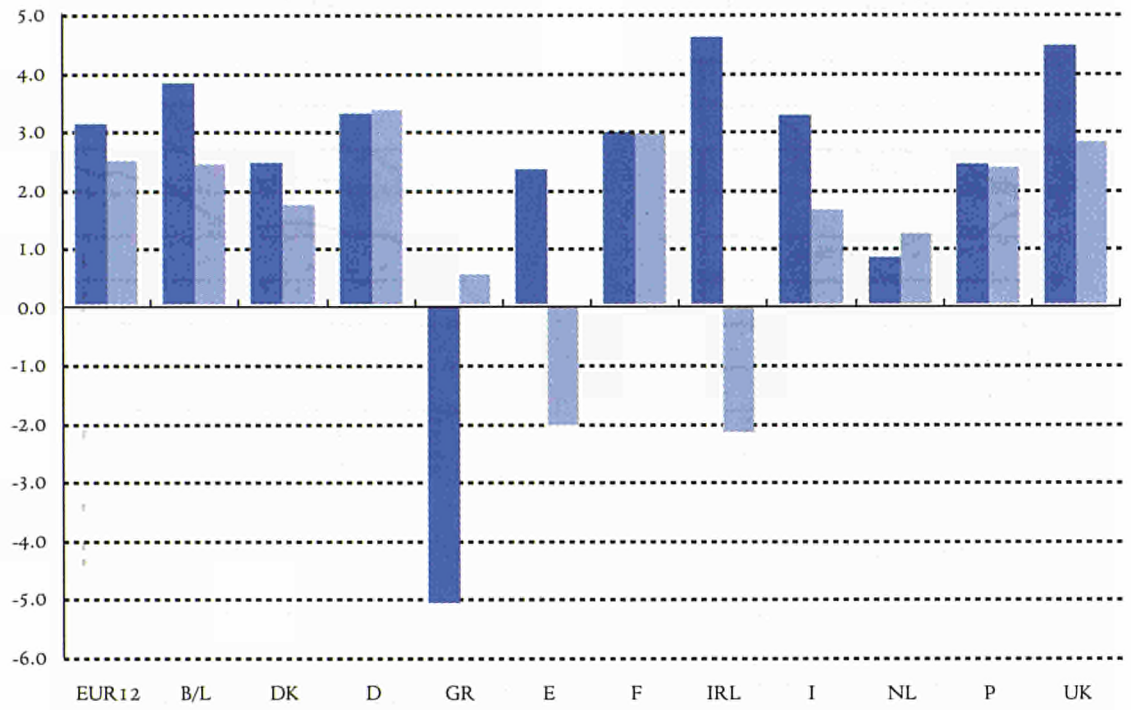
	Latest quarter available	Exports		Imports		Terms of trade index
		Value	Volume	Value	Volume	
EUR12	07-95 ⇨ 09-95	110.1	109.7	117.7	110.5	106.9
Growth rate, t/t-4 (%)		3.3	-2.2	4.4	-6.2	1.1
B/L	07-95 ⇨ 09-95	116.2	113.2	116.1	143.0	99.9
Growth rate, t/t-4 (%)		6.3	5.9	8.4	2.8	2.0
DK	07-95 ⇨ 09-95	107.8	98.0	111.8	104.7	103.7
Growth rate, t/t-4 (%)		7.0	-19.7	5.5	-13.9	-1.4
D	07-95 ⇨ 09-95	115.2	111.7	124.4	102.0	107.9
Growth rate, t/t-4 (%)		4.3	-4.9	5.2	-6.1	0.9
GR	07-95 ⇨ 09-95	104.0	120.4	103.9	164.1	99.9
Growth rate, t/t-4 (%)		4.4	8.9	4.5	14.8	0.1
E	07-95 ⇨ 09-95	103.6	99.6	104.3	131.1	100.6
Growth rate, t/t-4 (%)		1.3	-1.8	5.1	-9.7	3.8
F	07-95 ⇨ 09-95	107.4	99.2	120.5	93.0	112.2
Growth rate, t/t-4 (%)		2.7	-1.9	3.9	-15.4	1.2
IRL	07-95 ⇨ 09-95	109.6	160.3	108.4	185.9	99.0
Growth rate, t/t-4 (%)		-1.8	14.0	2.5	5.8	4.5
I	07-95 ⇨ 09-95	103.4	105.0	107.3	132.7	103.8
Growth rate, t/t-4 (%)		5.1	0.5	1.1	6.0	-3.9
NL	07-95 ⇨ 09-95	102.4	123.0	116.6	130.3	113.8
Growth rate, t/t-4 (%)		0.3	-5.5	8.6	-10.7	8.3
P	07-95 ⇨ 09-95	95.4	112.7	109.3	101.7	114.5
Growth rate, t/t-4 (%)		0.9	1.3	4.4	-4.0	3.5
UK	07-95 ⇨ 09-95	115.2	111.7	117.5	102.9	101.9
Growth rate, t/t-4 (%)		2.2	-0.8	3.0	-9.8	0.7

SOURCE: eurostat

eurostat

FIGURE 2.12

ANNUAL GROWTH RATE OF EXTRA-EU TRADE INDEXES BY MEMBER STATE (%) (1)



Export value
Import value

(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 2.10

ANNUAL EXTRA-EU TRADE INDEXES (1990=100)

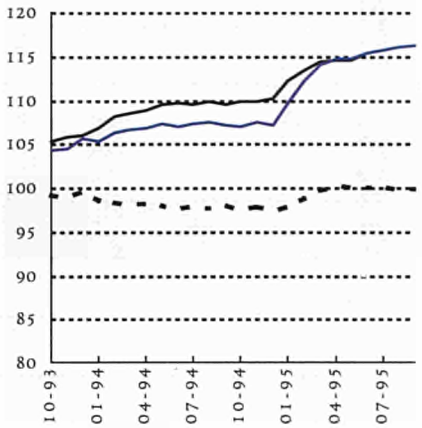
	Latest year available	Exports Value	Exports Volume	Imports Value	Imports Volume	Terms of trade index
EUR12	1994	107.0	112.8	113.2	119.4	105.7
Growth rate, t/t-1 (%)		3.1	7.8	2.4	8.3	-0.7
B/L	1994	110.1	107.1	107.3	140.8	97.4
Growth rate, t/t-1 (%)		3.8	14.3	2.4	16.7	-1.3
DK	1994	101.6	119.4	106.8	120.5	105.1
Growth rate, t/t-1 (%)		2.4	16.8	1.7	12.3	-0.7
D	1994	110.8	118.6	118.4	110.8	106.8
Growth rate, t/t-1 (%)		3.3	5.8	3.3	8.4	0.0
GR	1994	100.3	117.4	100.1	158.3	99.8
Growth rate, t/t-1 (%)		-5.1	-10.7	0.5	12.7	5.9
E	1994	102.2	98.3	99.7	147.6	97.5
Growth rate, t/t-1 (%)		2.3	7.3	-2.1	12.4	-4.3
F	1994	105.3	101.8	116.4	111.4	110.5
Growth rate, t/t-1 (%)		2.9	3.9	2.9	6.2	0.0
IRL	1994	112.2	148.7	107.8	171.3	96.0
Growth rate, t/t-1 (%)		4.6	16.9	-2.2	14.6	-6.5
I	1994	98.9	102.9	106.7	126.4	107.8
Growth rate, t/t-1 (%)		3.2	6.4	1.6	9.0	-1.6
NL	1994	102.0	129.1	108.0	145.8	105.8
Growth rate, t/t-1 (%)		0.8	28.7	1.2	7.8	0.4
P	1994	94.3	110.1	104.7	102.7	111.0
Growth rate, t/t-1 (%)		2.4	1.5	2.3	5.5	0.0
UK	1994	113.3	115.4	114.8	115.2	101.3
Growth rate, t/t-1 (%)		4.4	3.1	2.8	4.1	-1.6

SOURCE: eurostat

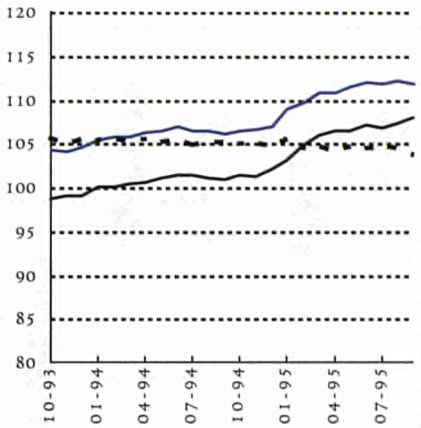
FIGURE 2.13

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)

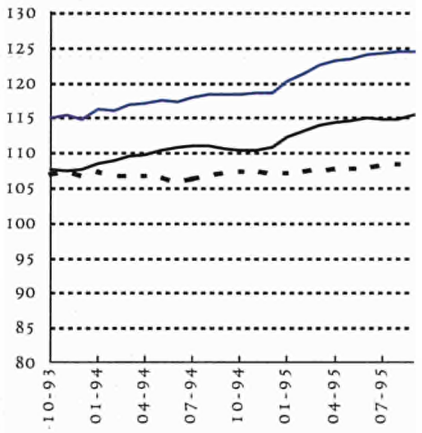
BELGIQUE/BELGIË, LUXEMBOURG



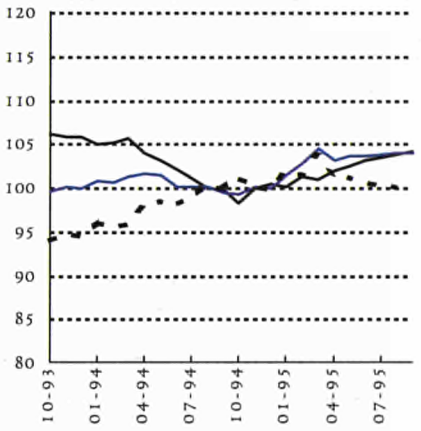
DANMARK



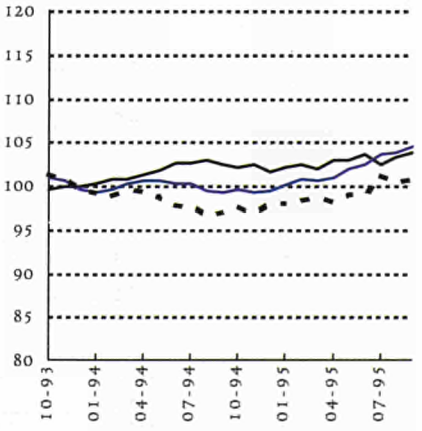
DEUTSCHLAND



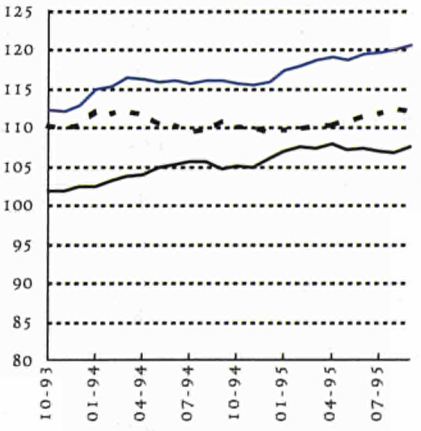
HELLAS



ESPAÑA



FRANCE



Export value

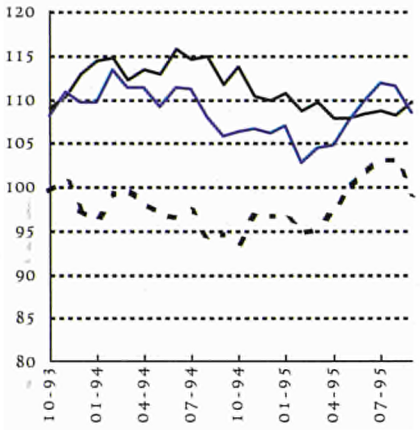
Import value

Terms of trade

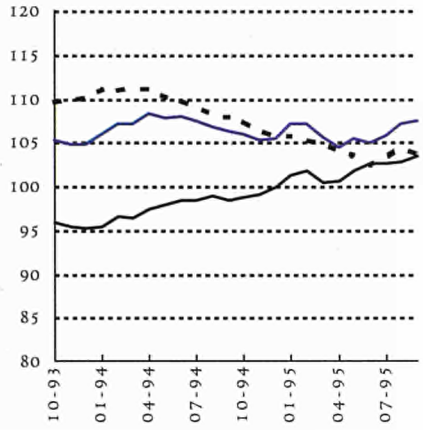
SOURCE: eurostat

eurostat

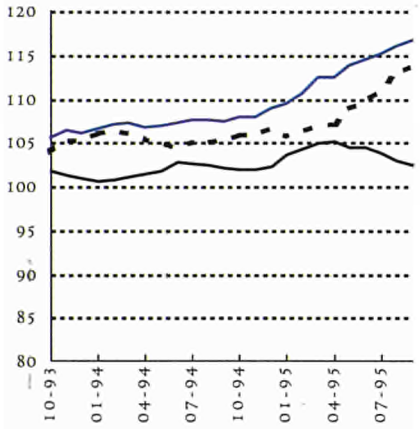
IRELAND



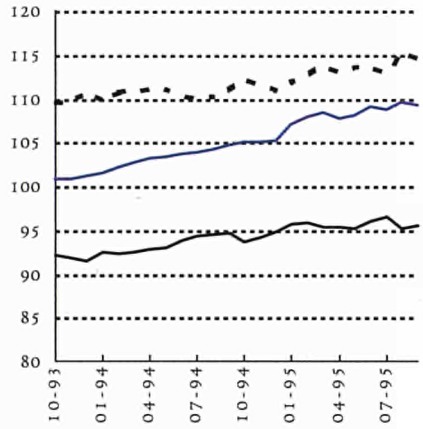
ITALIA



NEDERLAND



PORTUGAL



UNITED KINGDOM

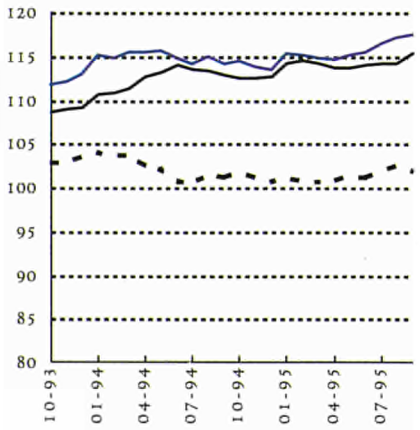


FIGURE 2.13

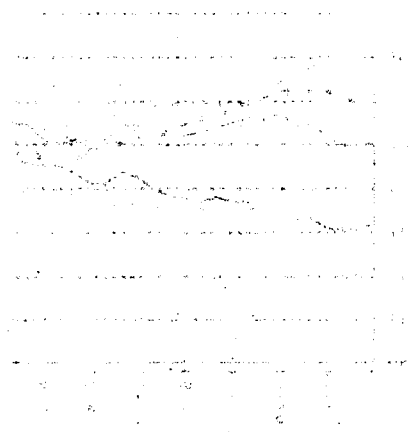
EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)

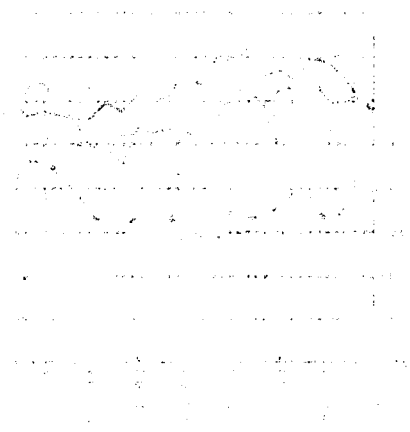
Export value

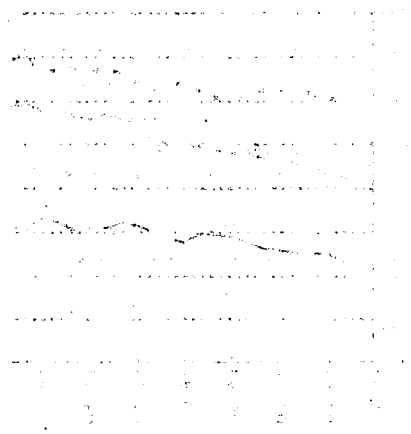
Import value

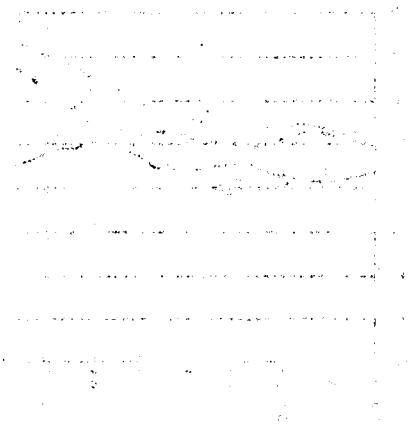
Terms of trade

SOURCE: eurostat









METAL ARTICLES

IN BRIEF....

- ★ IN 1995, GERMANY CONTRIBUTED 42.7% OF COMMUNITY VALUE ADDED
- ★ IN OCTOBER 1995, CAPACITY UTILIZATION WAS 83.9% IN FRANCE AND 81.1% IN BELGIUM
- ★ BETWEEN OCTOBER 1994 AND OCTOBER 1995, PRODUCTION VOLUME IN EUR 15 ROSE BY 2.2%
- ★ BETWEEN AUGUST 1994 AND AUGUST 1995, ITALY'S EXTRA-COMMUNITY EXPORTS INCREASED IN VOLUME TERMS BY 13.3%, WHEREAS GERMANY'S DECREASED BY 15.7%
- ★ IMPORTS ROSE BY 34.8% IN PORTUGAL OVER THE SAME PERIOD

The metal goods sector includes the tools and finished metal products subsector, which accounted for 44% of the Community total in 1995, the secondary transformation of metals (17.2%, making it the second-biggest subsector), the foundry subsector, steel construction (for example, bridge-building and the construction of railway track) and the construction of tanks. The European Union is the world's biggest producer of metal goods, ahead of the United States and Japan. However, new producing countries are emerging, such as the newly industrialized countries of Asia and Eastern Europe. The five biggest EU producers (Germany, France, Italy, the United Kingdom and Spain, in that order) accounted for 89.8% of total value added in 1995 (Germany alone accounting for 42.7%).

In 1995, the value of EU output was ECU 196.5 billion, which represented an annual increase of 10.1% in current prices and 7.0% in constant prices. Expressed in constant prices, production grew by 9.2% in Germany, 6.3% in France and 15.9% in Belgium, but fell by 1.1% in the United Kingdom.

Over the period October 1994 to October 1995, production in EUR 15 grew by 2.2% in volume terms, with increases of 7.6% in Austria, 11.3% in Finland and 8.0% in Sweden, whereas the United Kingdom and the Netherlands recorded falls of 1.8% and 2.3% respectively.

In constant prices, EU turnover grew by 7.0% in 1995, compared with 4.7% the previous year. Increases of 9% were recorded in Germany and Italy and 6.2% in France, whereas the United Kingdom saw a fall of 1.1%. This brings the cumulative decline in the United Kingdom between 1990 and 1995 to more than 21%, i.e. an average annual fall of 4.6%.

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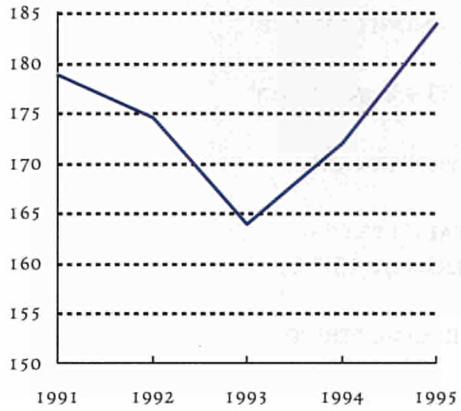
FIGURE 3.1.1

EVOLUTION OF EU PRODUCTION IN CONSTANT PRICES (BILLION ECU)



SOURCE: DEBA GEIE

Metal products are used mainly as intermediate goods in industries such as mechanical engineering and the construction and car industries. The industry's fortunes are therefore closely bound up with those of the sectors which provide its main customers. In Germany, for example, only 6% of production goes directly on final consumption, mainly for the DIY market. At the beginning of the 1990s, the fall in demand caused by the recession downstream resulted in overcapacity and downward pressure on prices. Moreover, relatively high EU production costs reduced European competitiveness. This spurred European producers to raise their productivity by increasing their levels of robotization and employing more skilled labour, but also reducing the overall workforce. As a result, unit labour costs fell in 1994 by 0.8% in the EU as a whole, by 3% in Germany and 1.5% in Italy, but increased by 2% in France and nearly 6% in the United Kingdom.

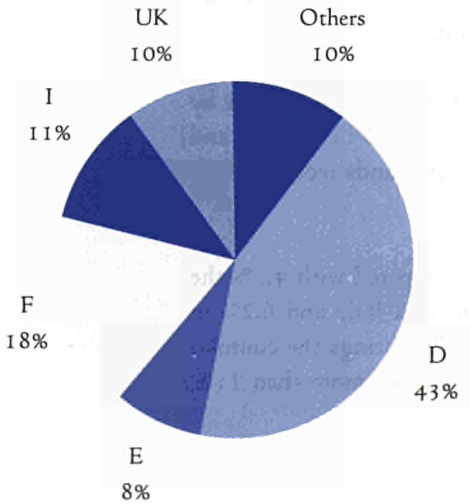
In October 1995, capacity utilization was 82.2% in Europe, 83.9% in France, 81.2% in the United Kingdom, 81.1% in Belgium and 80.8% in the Netherlands. Apparent consumption in the EU increased by 4.6% in 1994, after falling by 7.8% the previous year.

The sector comprises many small enterprises, making it one of Europe's biggest industrial employers, with 1.96 million workers in 1995 (nearly 10% of total industrial employment), although it contributes only 6.7% of total industrial production. Employment fell by 3% compared with 1993 and 11% over a four-year period. Germany, where the decline reached 6% in 1994, accounts for one-third of the workforce and France 18%. The fact that German production accounts for 38% of the EU total shows that policies aimed at increasing productivity have paid off, resulting in improved international competitiveness. Employment in the sector expanded by 1.5% in 1995, with increases of 4.4% in France and 3.5% in Spain.

As has already been pointed out, the metal-processing sector is not highly concentrated. It is therefore not greatly affected by mergers and acquisitions. This is probably due to the links between suppliers and customers which are accentuated by geographical proximity dictated by the size and weight of the components produced. Thus, companies tend to be located near to car-assembly plants and other manufacturing sites. However, the recession has demonstrated the danger of such dependence and encouraged producers to diversify their customer base, even to the extent of seeking new customers abroad.

FIGURE 3.1.2

SHARE OF VALUE-ADDED AT FACTOR COST BY MEMBER STATE, 1995 (%)



SOURCE: DEBA GEIE

Four of the five biggest European companies are French (Pechiney, Marine-Wendel, CGIP and Carnaudmetalbox) and one is German (Deutsche Babcock), which means that the industry is much more highly concentrated in France than it is in Germany.

The European Union saw its trade surplus deteriorate in 1994, owing to an erosion of its exports and an increase in imports from very varied sources, although international trade still accounts for a fairly modest share of the sector: in 1994, the ratio of exports to production was only 9.5% and that of imports to apparent consumption only 6.7%. Moreover, in 1994, intra-Community trade represented 64.6% of total imports and 58.0% of exports, although these percentages are decreasing in the face of increasing import penetration, especially from South-east Asia.

In 1994, imports grew at a fairly uniform rate of about 16%. However, 57% of German imports are from outside the EU, while the principal suppliers of France, the United Kingdom and Italy are European (with shares of 80%, 60% and 67% respectively).

Although expanding less rapidly, exports grew by 12%, thus continuing the decline in the coverage ratio, which stood at 148% in 1994. Nevertheless, the trade balance increased by 2.5%, to stand at ECU 5.5 billion. Intra-Community exports are growing more quickly than exports to non-EU countries. An exception here is Germany, which sells 48% of its exports to the rest of the EU, compared with France's 62%.

Germany's coverage ratio, although still above 100%, continues to decline, unlike France's, which benefited from an improvement of 28% in the trade balance in 1994. The United Kingdom is gradually moving into balance, whereas Italy exports 3.5 times as much in value terms as it imports.

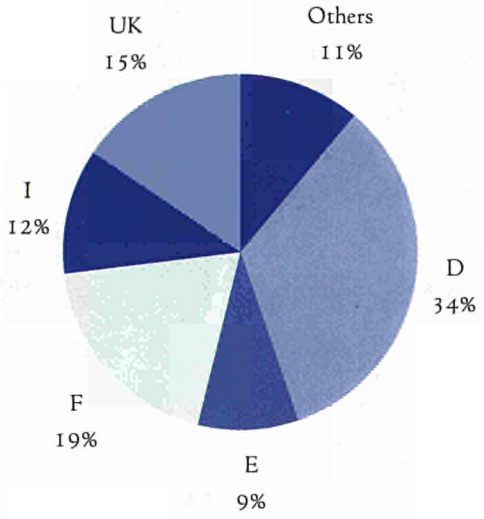


FIGURE 3.1.3

SHARE OF NUMBER OF EMPLOYEES BY MEMBER STATE, 1995 (%)

SOURCE: DEBA GEIE

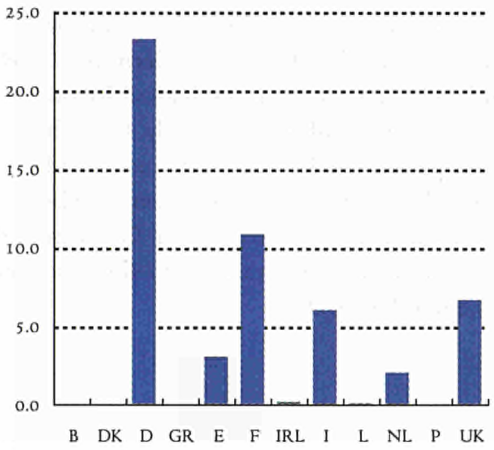


FIGURE 3.1.4

LABOUR COSTS BY MEMBER STATE, 1994 (BILLION ECU)

SOURCE: DEBA GEIE

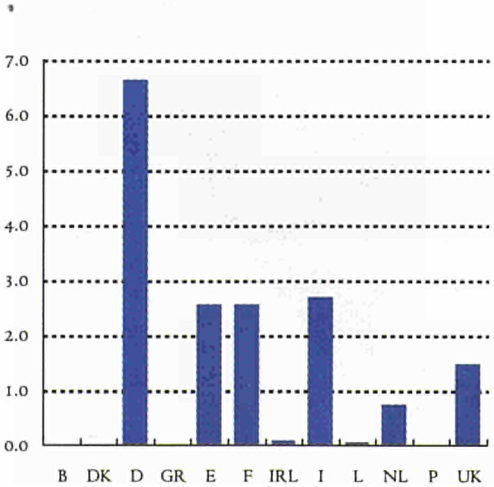


FIGURE 3.1.5

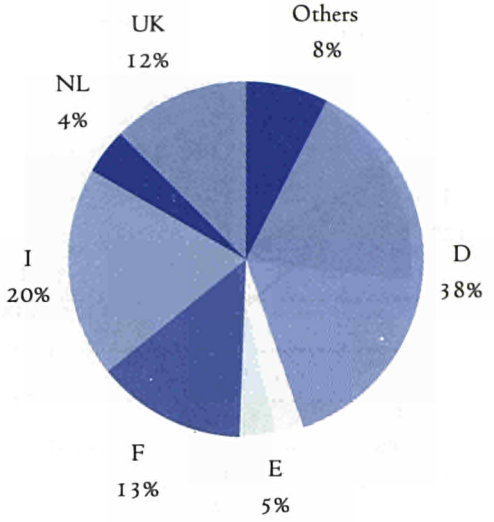
GROSS OPERATING SURPLUS BY MEMBER STATE, 1994 (BILLION ECU)

SOURCE: DEBA GEIE

FIGURE 3.1.6

SHARE OF EXTRA-EU EXPORTS BY MEMBER STATE, 1994 (%)

SOURCE: eurostat



Between August 1994 and August 1995, extra-Community exports fell in value terms by 10.5%, with falls of 15.7% in Germany, 14.9% in France and 10.7% in the United Kingdom and an increase of 13.3% in Italy. Over the same period, the EU's imports increased by 2.3%. The changes varied between Member States, with a decline of 3.9% in Germany and increases of 6.8% in France, 32.2% in Italy and 34.8% in Portugal.

FIGURE 3.1.7

SHARE OF EXTRA-EU IMPORTS BY MEMBER STATE, 1994 (%)

SOURCE: eurostat

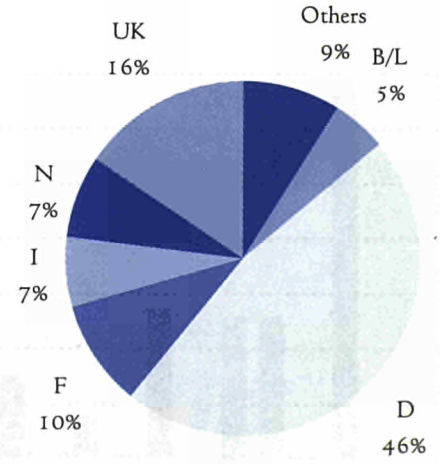


TABLE 3.1.1

VALUE-ADDED AT FACTOR COST BY MEMBER STATE (MILLION ECU)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	75,854	5.0	75,316	-0.7	69,793	-7.3	72,973	4.6	80,801	10.7
B	1,701	-0.2	1,767	3.8	1,591	-9.9	1,643	3.2	1,994	21.4
share (%)	2.2		2.3		2.3		2.3		2.5	
DK	1,171	2.6	1,227	4.8	1,216	-0.9	1,433	17.8	1,678	17.1
share (%)	1.5		1.6		1.7		2.0		2.1	
D	29,855	9.0	30,419	1.9	28,905	-5.0	29,870	3.3	34,499	15.5
share (%)	39.4		40.4		41.4		40.9		42.7	
GR	95	-24.5	75	-20.9	71	-5.3	72	1.5	75	4.1
share (%)	0.1		0.1		0.1		0.1		0.1	
E	6,908	10.0	6,801	-1.6	5,420	-20.3	5,636	4.0	6,189	9.8
share (%)	9.1		9.0		7.8		7.7		7.7	
F	13,401	0.5	13,218	-1.4	12,432	-5.9	13,418	7.9	14,741	9.9
share (%)	17.7		17.5		17.8		18.4		18.2	
IRL	218	-3.2	222	1.7	226	1.8	249	10.2	254	2.3
share (%)	0.3		0.3		0.3		0.3		0.3	
I	9,643	7.7	9,428	-2.2	8,257	-12.4	8,739	5.8	9,200	5.3
share (%)	12.7		12.5		11.8		12.0		11.4	
L	108	-5.8	115	6.7	107	-7.0	129	20.7	155	19.9
share (%)	0.1		0.2		0.2		0.2		0.2	
NL	2,719	11.1	2,789	2.6	2,802	0.5	2,806	0.1	3,149	12.2
share (%)	3.6		3.7		4.0		3.8		3.9	
P	702	20.8	790	12.5	773	-2.1	853	10.3	923	8.2
share (%)	0.9		1.0		1.1		1.2		1.1	
UK	9,332	-6.3	8,466	-9.3	7,992	-5.6	8,126	1.7	7,943	-2.2
share (%)	12.3		11.2		11.5		11.1		9.8	

SOURCE: DEBA GEIE

TABLE 3.1.2

TURNOVER IN CURRENT PRICES BY MEMBER STATE (MILLION ECU)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	190,488	3.5	190,414	0.0	177,141	-7.0	184,835	4.3	203,687	10.2
B	4,786	-1.2	4,932	3.1	4,409	-10.6	4,576	3.8	5,570	21.7
share (%)	2.5		2.6		2.5		2.5		2.7	
DK	2,667	2.3	2,776	4.1	2,724	-1.8	3,127	14.8	3,614	15.6
share (%)	1.4		1.5		1.5		1.7		1.8	
D	70,476	8.2	73,579	4.4	69,989	-4.9	72,152	3.1	82,904	14.9
share (%)	37.0		38.6		39.5		39.0		40.7	
GR	620	-3.4	687	10.9	673	-2.0	696	3.4	731	5.0
share (%)	0.3		0.4		0.4		0.4		0.4	
E	16,265	6.6	15,840	-2.6	12,590	-20.5	13,114	4.2	14,409	9.9
share (%)	8.5		8.3		7.1		7.1		7.1	
F	33,906	-0.6	33,409	-1.5	31,864	-4.6	34,251	7.5	37,447	9.3
share (%)	17.8		17.5		18.0		18.5		18.4	
IRL	638	-0.5	655	2.6	672	2.6	750	11.5	771	2.9
share (%)	0.3		0.3		0.4		0.4		0.4	
I	27,721	2.1	27,048	-2.4	23,758	-12.2	25,096	5.6	26,412	5.2
share (%)	14.6		14.2		13.4		13.6		13.0	
L	266	-4.5	287	8.1	270	-6.0	327	21.3	394	20.3
share (%)	0.1		0.2		0.2		0.2		0.2	
NL	7,534	6.2	7,827	3.9	8,014	2.4	8,041	0.3	9,035	12.4
share (%)	4.0		4.1		4.5		4.4		4.4	
P	1,903	15.6	2,054	7.9	2,044	-0.5	2,272	11.2	2,466	8.5
share (%)	1.0		1.1		1.2		1.2		1.2	
UK	23,708	-3.6	21,320	-10.1	20,135	-5.6	20,433	1.5	19,936	-2.4
share (%)	12.4		11.2		11.4		11.1		9.8	

SOURCE: DEBA GEIE

TABLE 3.1.3

NUMBER OF EMPLOYEES BY MEMBER STATE (THOUSANDS)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	2,211.3	-0.4	2,141.5	-3.2	1,972.8	-7.9	1,936.2	-1.9	1,964.1	1.4
B	52.0	1.2	48.6	-6.7	45.5	-6.2	43,907	-3.5	43.3	-1.5
share (%)	2.4		2.3		2.3		2.3		2.2	
DK	31.5	-1.1	31.5	0.1	29.3	-7.2	N/A	N/A	N/A	N/A
share (%)	1.4		1.5		1.5		N/A		N/A	
D	771.4	2.1	754.7	-2.2	692.4	-8.2	655.2	-5.4	657.4	0.3
share (%)	34.9		35.2		35.1		33.8		33.5	
GR	12.9	-15.3	12.6	-2.1	12.2	-3.1	12.0	-1.9	12.2	1.5
share (%)	0.6		0.6		0.6		0.6		0.6	
E	239.1	-0.4	232.3	-2.8	180.6	-22.3	170.0	-5.9	176.0	3.5
share (%)	10.8		10.8		9.2		8.8		9.0	
F	389.6	-0.4	378.0	-3.0	351.3	-7.1	357.7	1.8	373.4	4.4
share (%)	17.6		17.6		17.8		18.5		19.0	
IRL	8.5	-1.6	8.4	-1.0	8.3	-1.5	8.6	3.3	9.0	5.4
share (%)	0.4		0.4		0.4		0.4		0.5	
I	249.3	1.6	243.3	-2.4	237.1	-2.6	233.7	-1.5	233.1	-0.2
share (%)	11.3		11.4		12.0		12.1		11.9	
L	2.7	4.5	2.7	1.3	2.7	-2.1	2.6	-2.8	2.7	5.8
share (%)	0.1		0.1		0.1		0.1		0.1	
NL	74.8	7.0	75.5	0.9	71.8	-4.9	70.6	-1.7	N/A	N/A
share (%)	3.4		3.5		3.6		3.6		N/A	
P	56.5	1.0	56.5	0.1	51.1	-9.6	52.9	3.5	N/A	N/A
share (%)	2.6		2.6		2.6		2.7		N/A	
UK	322.9	-8.5	297.4	-7.9	290.6	-2.3	300.6	3.4	303.5	1.0
share (%)	14.6		13.9		14.7		15.5		15.5	

SOURCE: DEBA GEIE

TABLE 3.1.4

LABOUR COSTS BY MEMBER STATE (MILLION ECU)

	1990	t/t-1 (%)	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)
EUR12	53,211	9.9	56,941	7.0	57,780	1.5	55,054	-4.7	55,184	0.2
B	1,368	18.4	1,452	6.2	1,396	-3.8	1,406	0.7	N/A	N/A
share (%)	2.6		2.6		2.4		2.6		N/A	
DK	840	13.0	858	2.2	898	4.7	869	-3.2	N/A	N/A
share (%)	1.6		1.5		1.6		1.6		N/A	
D	21,167	12.0	23,184	9.5	24,064	3.8	23,770	-1.2	23,237	-2.2
share (%)	39.8		40.7		41.6		43.2		42.1	
GR	183	10.8	164	-10.6	170	3.9	166	-2.6	N/A	N/A
share (%)	0.3		0.3		0.3		0.3		N/A	
E	4,000	8.0	4,400	10.0	4,496	2.2	3,311	-26.4	3,072	-7.2
share (%)	7.5		7.7		7.8		6.0		5.6	
F	10,177	10.2	10,439	2.6	10,668	2.2	10,361	-2.9	10,868	4.9
share (%)	19.1		18.3		18.5		18.8		19.7	
IRL	154	13.4	155	0.8	167	7.4	164	-1.4	180	9.4
share (%)	0.3		0.3		0.3		0.3		0.3	
I	6,401	5.8	7,049	10.1	6,942	-1.5	6,133	-11.7	6,044	-1.4
share (%)	12.0		12.4		12.0		11.1		11.0	
L	59	6.5	64	8.2	70	9.7	71	1.4	73	2.8
share (%)	0.1		0.1		0.1		0.1		0.1	
NL	1,697	8.4	1,875	10.5	2,018	7.6	2,044	1.3	2,061	0.8
share (%)	3.2		3.3		3.5		3.7		3.7	
P	378	50.3	456	20.7	529	16.1	473	-10.7	N/A	N/A
share (%)	0.7		0.8		0.9		0.9		N/A	
UK	6,789	5.2	6,846	0.8	6,362	-7.1	6,286	-1.2	6,642	5.7
share (%)	12.8		12.0		11.0		11.4		12.0	

SOURCE: DEBA GEIE

TABLE 3.1.5

EXTRA-EU EXPORTS BY MEMBER STATE (MILLION ECU)

	1990	t/t-1 (%)	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)
EUR12	13,350	1.6	13,734	2.9	14,040	2.2	15,284	8.9	17,030	11.4
B/L	338	9.8	333	-1.7	352	5.8	473	34.3	493	4.2
share (%)	2.5		2.4		2.5		3.1		2.9	
DK	506	6.9	486	-3.8	474	-2.6	433	-8.7	514	18.8
share (%)	3.8		3.5		3.4		2.8		3.0	
D	4,883	-0.7	5,184	6.2	5,327	2.7	5,650	6.1	6,364	12.6
share (%)	36.6		37.7		37.9		37.0		37.4	
GR	54	-16.0	72	32.1	70	-2.0	95	35.0	87	-8.6
share (%)	0.4		0.5		0.5		0.6		0.5	
E	705	15.3	640	-9.1	731	14.2	947	29.6	924	-2.5
share (%)	5.3		4.7		5.2		6.2		5.4	
F	1,942	8.4	1,905	-1.9	2,027	6.4	2,021	-0.3	2,274	12.5
share (%)	14.5		13.9		14.4		13.2		13.3	
IRL	58	5.9	51	-11.0	56	9.4	56	0.7	65	16.0
share (%)	0.4		0.4		0.4		0.4		0.4	
I	2,508	-4.3	2,514	0.3	2,653	5.5	3,002	13.2	3,344	11.4
share (%)	18.8		18.3		18.9		19.6		19.6	
NL	611	9.1	821	34.3	633	-22.9	620	-2.1	731	18.0
share (%)	4.6		6.0		4.5		4.1		4.3	
P	120	8.7	124	4.1	140	12.4	128	-8.7	139	8.6
share (%)	0.9		0.9		1.0		0.8		0.8	
UK	1,627	-0.2	1,604	-1.4	1,578	-1.6	1,859	17.8	2,096	12.7
share (%)	12.2		11.7		11.2		12.2		12.3	

SOURCE: eurostat

TABLE 3.1.6

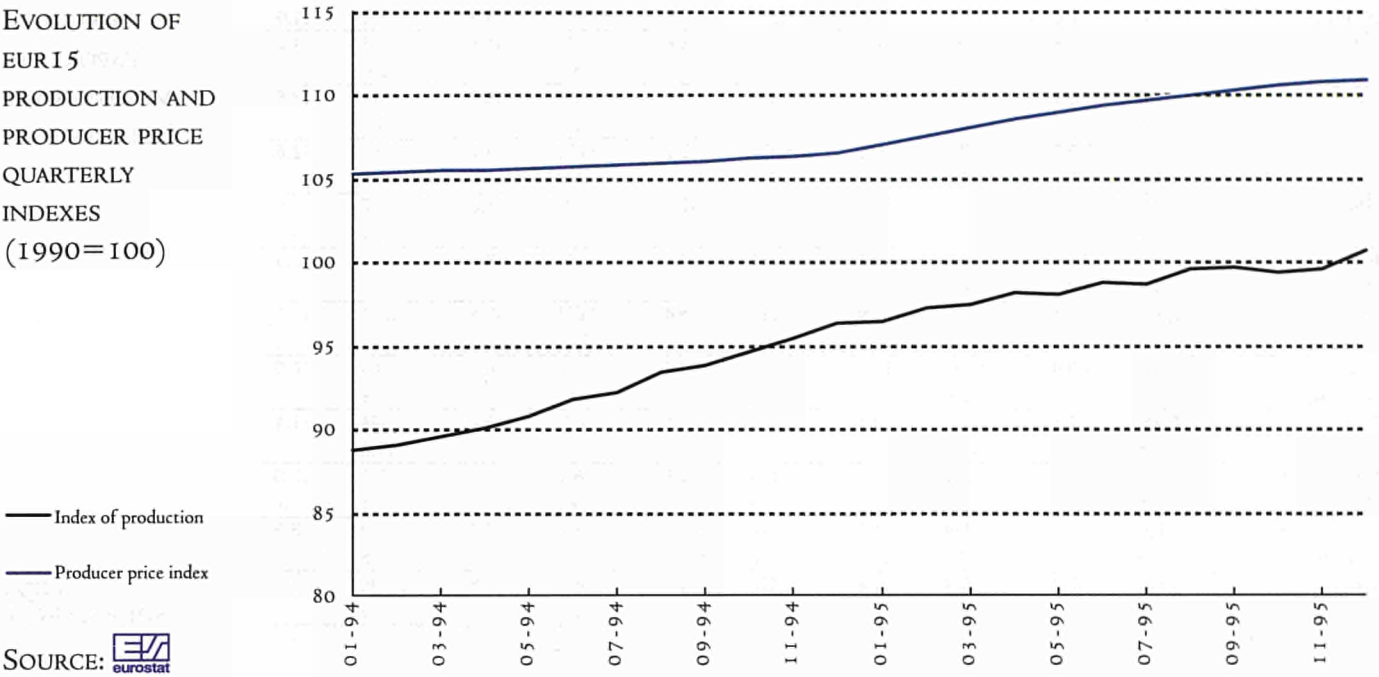
EXTRA-EU IMPORTS BY MEMBER STATE (MILLION ECU)

	1990	t/t-1 (%)	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)
EUR12	33,895	3.8	35,573	5.0	36,855	3.6	36,035	-2.2	41,301	14.6
B/L	3,085	3.9	3,225	4.5	3,566	10.6	3,038	-14.8	3,728	22.7
share (%)	9.1		9.1		9.7		8.4		9.0	
DK	849	-2.5	823	-3.1	861	4.7	999	16.0	1,058	6.0
share (%)	2.5		2.3		2.3		2.8		2.6	
D	8,082	4.2	9,077	12.3	9,134	0.6	8,953	-2.0	9,777	9.2
share (%)	23.8		25.5		24.8		24.8		23.7	
GR	388	5.7	464	19.5	470	1.3	554	17.9	565	1.9
share (%)	1.1		1.3		1.3		1.5		1.4	
E	2,130	7.8	2,328	9.3	2,409	3.5	1,839	-23.7	2,217	20.5
share (%)	6.3		6.5		6.5		5.1		5.4	
F	4,909	3.4	4,862	-0.9	5,067	4.2	5,343	5.4	6,095	14.1
share (%)	14.5		13.7		13.7		14.8		14.8	
IRL	449	3.5	555	23.7	556	0.2	752	35.3	858	14.1
share (%)	1.3		1.6		1.5		2.1		2.1	
I	4,950	-0.2	5,014	1.3	5,118	2.1	5,157	0.8	5,633	9.2
share (%)	14.6		14.1		13.9		14.3		13.6	
NL	3,764	2.0	3,789	0.7	4,159	9.8	3,578	-14.0	4,822	34.7
share (%)	11.1		10.7		11.3		9.9		11.7	
P	376	10.9	404	7.5	417	3.2	415	-0.4	418	0.7
share (%)	1.1		1.1		1.1		1.2		1.0	
UK	4,915	8.0	5,033	2.4	5,098	1.3	5,407	6.1	6,131	13.4
share (%)	14.5		14.1		13.8		15.0		14.8	

SOURCE: eurostat

FIGURE 3.2.1

EVOLUTION OF EUR15 PRODUCTION AND PRODUCER PRICE QUARTERLY INDEXES (1990=100)



SOURCE: eurostat

TABLE 3.2.1

QUARTERLY AND ANNUAL PRODUCTION INDEXES (1) (1990=100)

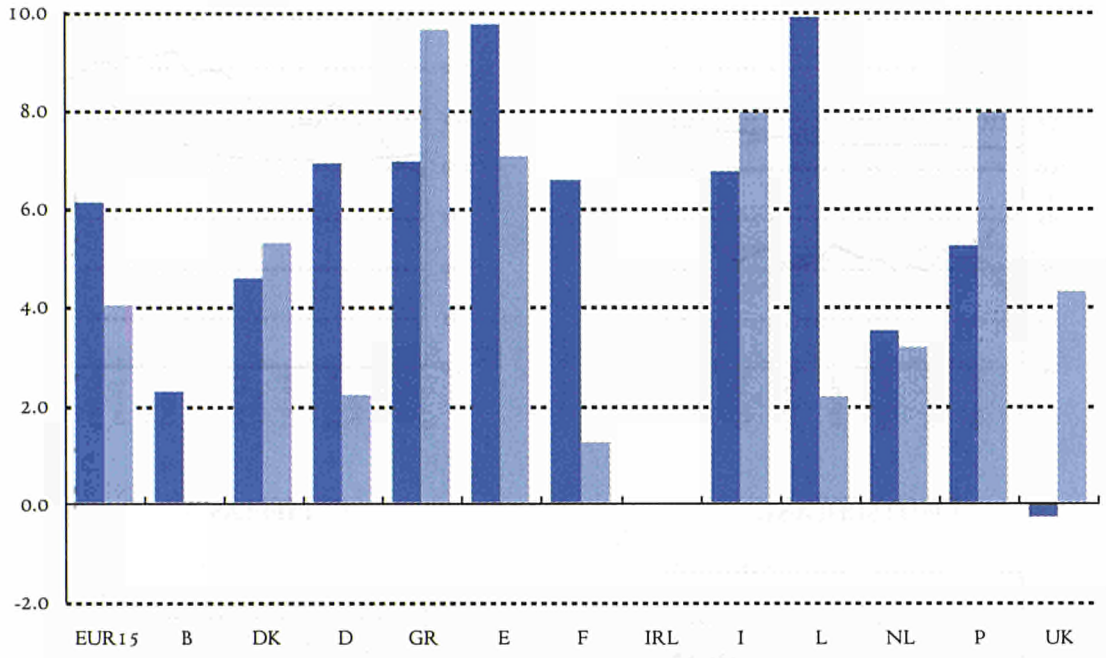
(1) Annual growth rates are based on the latest annual data. Only when data to October is available will an annual estimate for the year be made.

SOURCE: eurostat

	Latest quarter available	Quarterly Index	Quarterly t/t-4 (%)	Annual Index	Annual t/t-1 (%)
EUR15	10-95 ⇨ 12-95	100.6	4.6	99.7	6.1
B	04-95 ⇨ 06-95	92.0	1.8	91.7	2.3
DK	10-95 ⇨ 12-95	108.5	1.9	110.7	4.6
D	10-95 ⇨ 12-95	106.9	5.0	106.2	6.9
GR	09-95 ⇨ 11-95	86.6	-10.5	94.6	6.9
E	10-95 ⇨ 12-95	98.4	5.8	97.9	9.7
F	10-95 ⇨ 12-95	97.6	3.8	97.5	6.6
IRL	⇨	N/A	N/A	N/A	N/A
I	10-95 ⇨ 12-95	102.7	9.0	98.7	6.7
L	10-95 ⇨ 12-95	117.9	0.6	121.5	9.8
NL	09-95 ⇨ 11-95	103.8	1.0	101.6	3.5
P	08-95 ⇨ 10-95	87.8	-7.1	94.0	5.2
UK	10-95 ⇨ 12-95	84.4	-2.7	85.5	-0.3

FIGURE 3.2.2

ANNUAL GROWTH RATE OF EU PRODUCTION AND PRODUCER PRICE INDEXES (%) (1)



(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 3.2.2

QUARTERLY AND ANNUAL PRODUCER PRICE INDEXES (1990=100) (1)

	Latest quarter available	Quarterly Index	Quarterly t/t-4 (%)	Annual Index	Annual t/t-1 (%)
EUR15	10-95 ⇨ 12-95	111.0	4.1	110.5	4.0
B	08-95 ⇨ 10-95	104.1	1.8	102.3	0.0
DK	10-95 ⇨ 12-95	107.9	7.0	106.0	5.3
D	11-95 ⇨ 01-96	106.6	2.3	106.0	2.2
GR	10-95 ⇨ 12-95	189.5	10.0	187.0	9.6
E	11-95 ⇨ 01-96	119.1	6.3	117.9	7.0
F	⇨	N/A	N/A	N/A	N/A
IRL	⇨	N/A	N/A	N/A	N/A
I	10-95 ⇨ 12-95	120.2	8.5	118.7	7.9
L	10-95 ⇨ 12-95	94.4	3.6	93.0	2.2
NL	10-95 ⇨ 12-95	103.9	2.5	103.9	3.1
P	10-95 ⇨ 12-95	114.5	7.5	114.2	7.9
UK	11-95 ⇨ 01-96	117.1	4.6	115.8	4.3

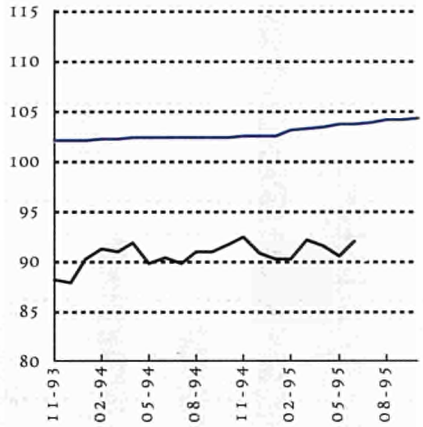
(1) Annual growth rates are based on the latest annual data. Only when data to October is available will an annual estimate for the year be made.

SOURCE: eurostat

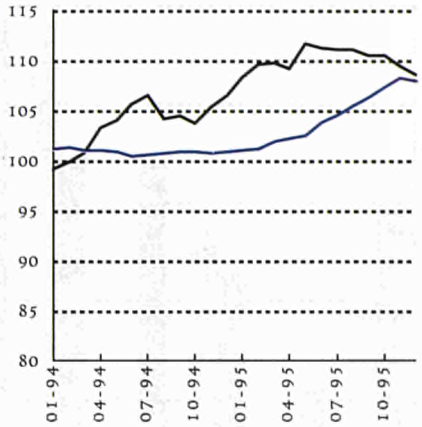
FIGURE 3.2.3

EVOLUTION OF PRODUCTION AND PRODUCER PRICE INDEXES
(1990=100)

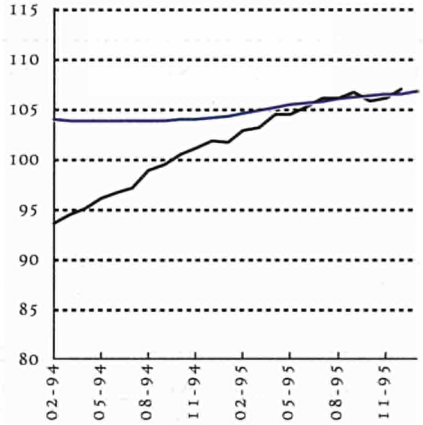
BELGIQUE/BELGIË



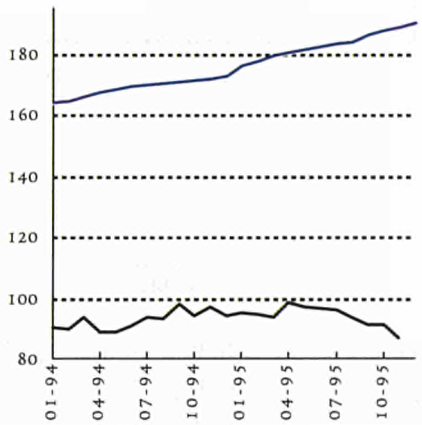
DANMARK



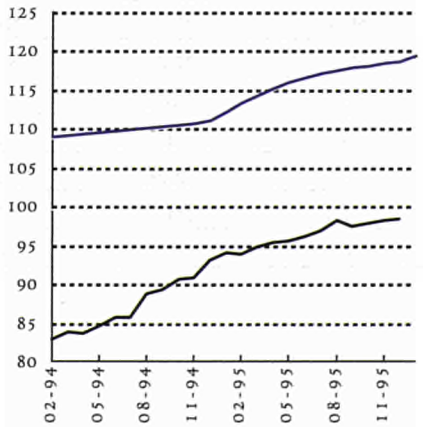
DEUTSCHLAND



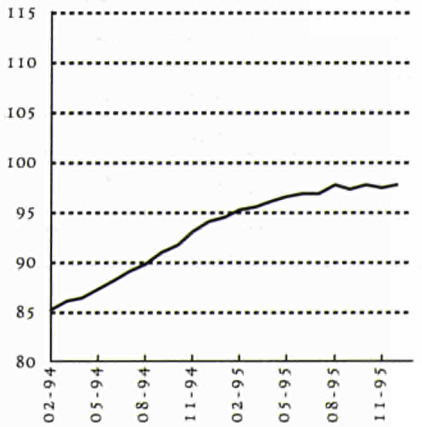
HELLAS



ESPAÑA



FRANCE



Index of production

Producer price index

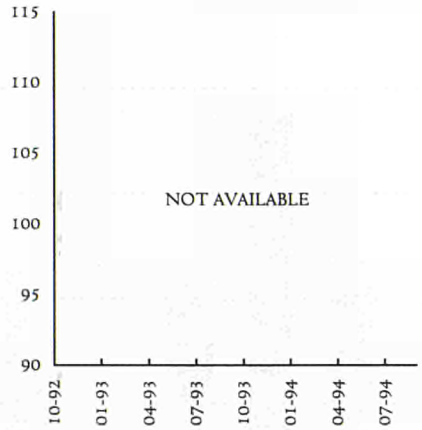
SOURCE: eurostat

eurostat

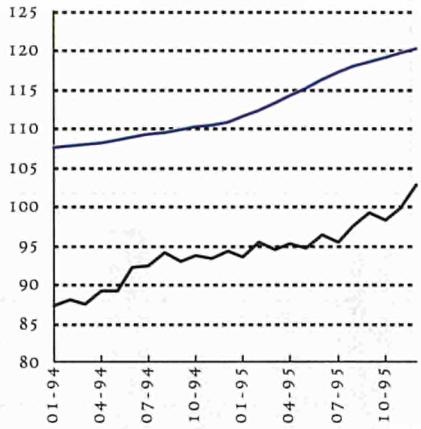
FIGURE 3.2.3

EVOLUTION OF PRODUCTION AND PRODUCER PRICE INDEXES (1990=100)

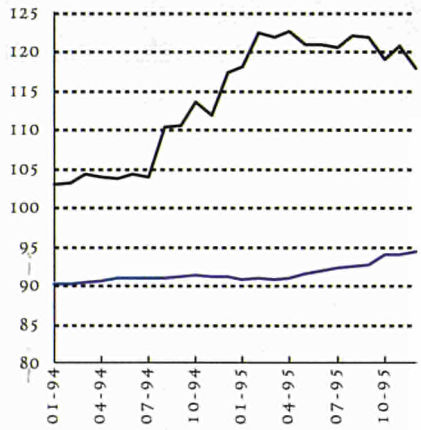
IRELAND



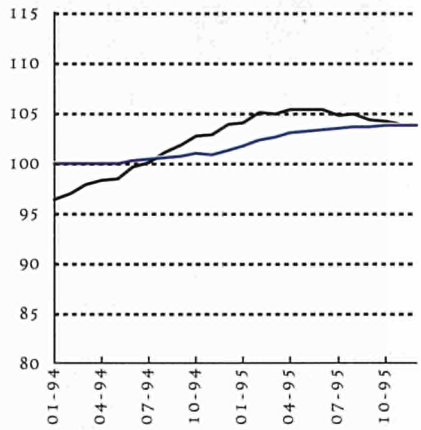
ITALIA



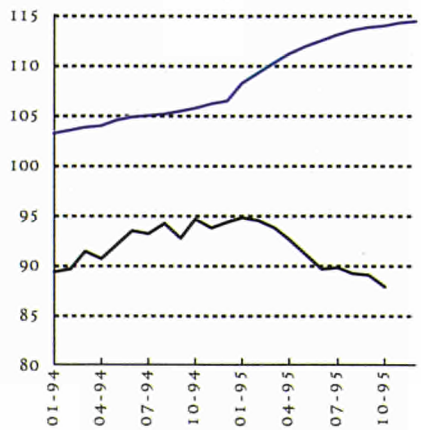
LUXEMBOURG



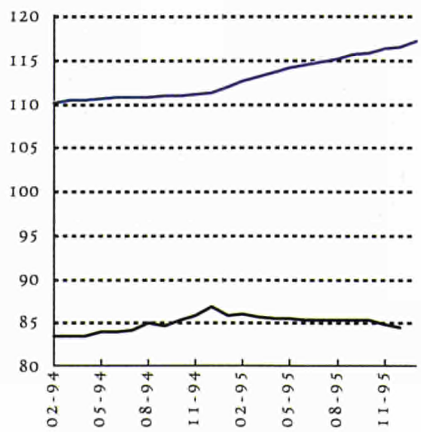
NEDERLAND



PORTUGAL



UNITED KINGDOM



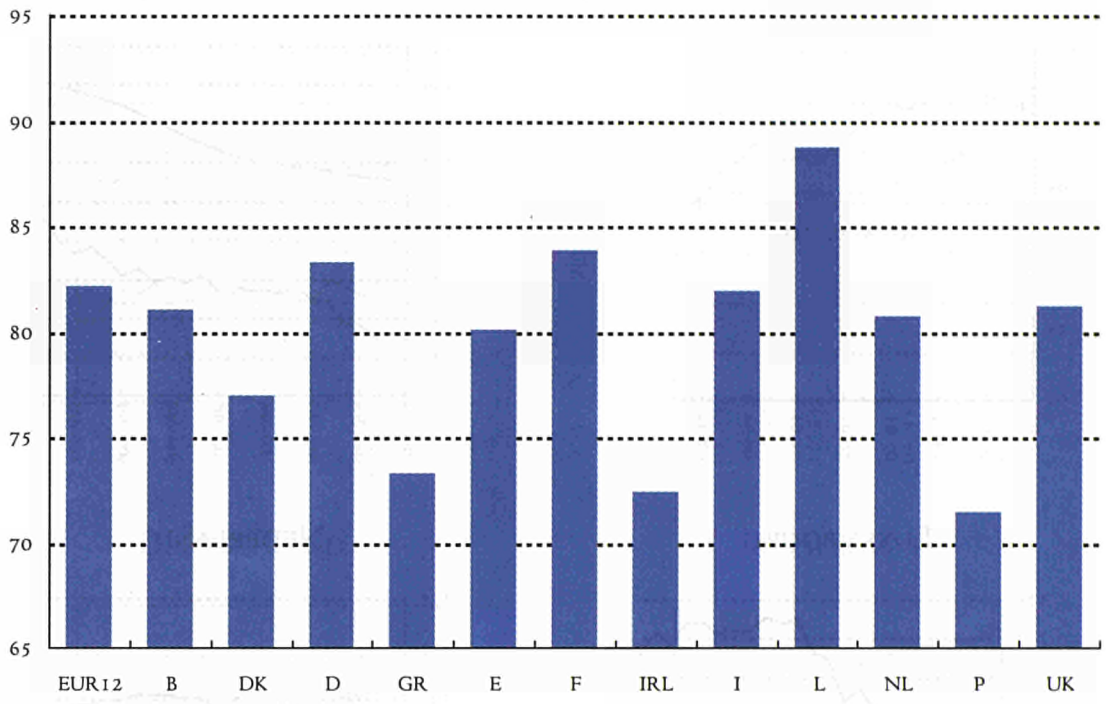
Index of production

Producer price index

SOURCE: eurostat

FIGURE 3.2.4

CAPACITY UTILISATION RATES BY MEMBER STATE, FOURTH QUARTER 1995 (%)



SOURCE: DG II - BUSINESS SURVEY

TABLE 3.2.3

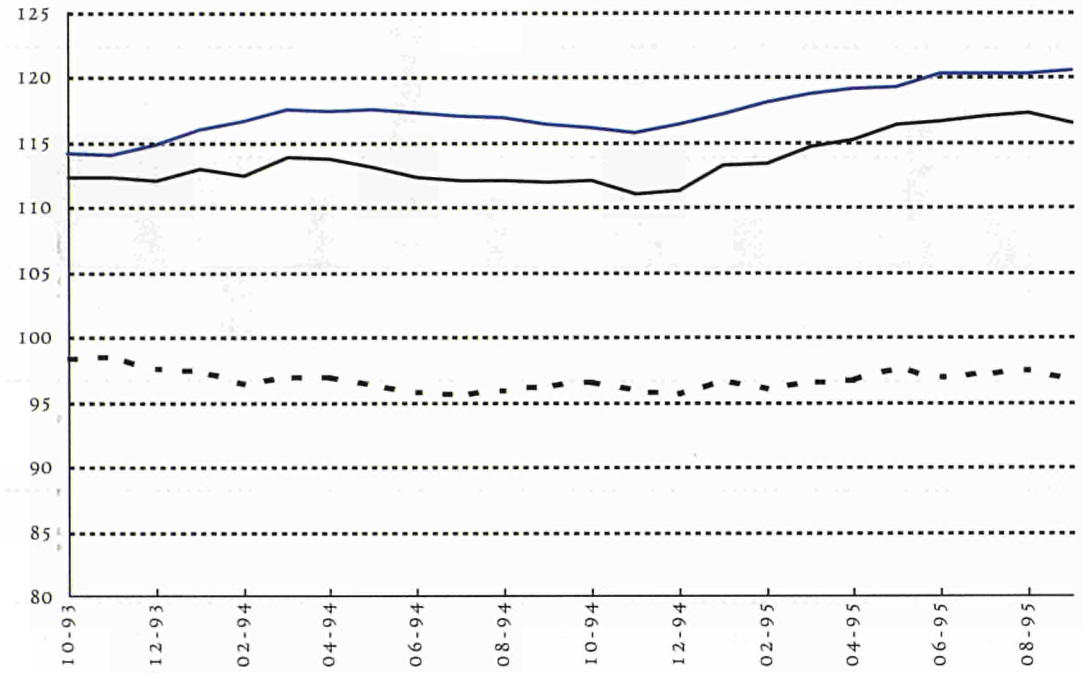
CAPACITY UTILISATION RATES BY MEMBER STATE (%)

	Annual growth rate: latest quarter, t/t-4	First quarter 1995	Second quarter 1995	Third quarter 1995	Fourth quarter 1995
EUR12	6.3	80.0	80.7	82.2	82.2
B	2.3	74.1	74.7	80.7	81.1
DK	-4.9	80.0	81.0	78.0	77.0
D	3.1	82.5	81.9	83.4	83.3
GR	2.1	67.6	66.9	69.3	73.3
E	16.6	76.4	78.7	80.6	80.1
F	2.8	82.5	81.9	84.4	83.9
IRL	2.1	65.4	77.7	75.8	72.4
I	15.2	74.5	77.5	79.6	82.0
L	-1.1	89.8	91.3	93.8	88.8
NL	2.9	78.0	79.6	80.4	80.8
P	-1.8	67.1	80.0	73.0	71.5
UK	1.9	84.7	83.9	83.1	81.2

SOURCE: DG II - BUSINESS SURVEY

FIGURE 3.2.5

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)



SOURCE: eurostat

TABLE 3.2.4

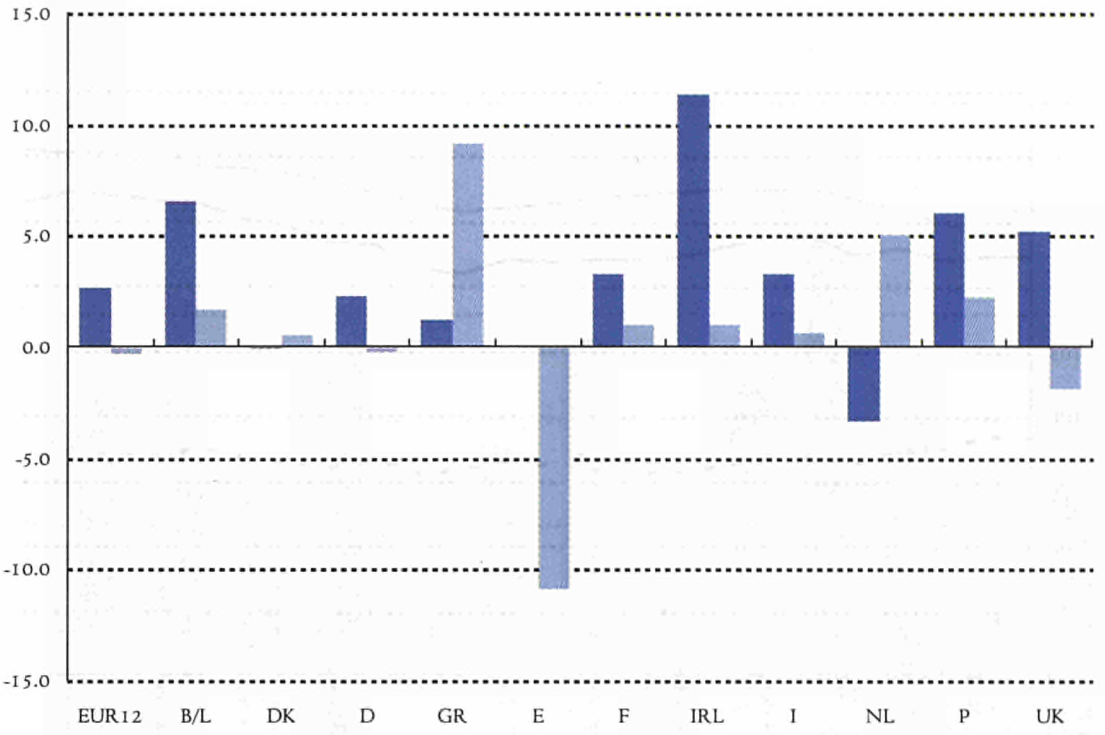
QUARTERLY EXTRA-EU TRADE INDEXES (1990=100)

	Latest quarter available	Exports Value	Exports Volume	Imports Value	Imports Volume	Terms of trade index
EUR12	07-95 ⇨ 09-95	120.4	116.3	116.5	101.3	96.7
Growth rate, t/t-4 (%)		3.6	-0.6	4.1	-4.0	0.4
B/L	07-95 ⇨ 09-95	120.6	109.7	117.5	113.7	97.4
Growth rate, t/t-4 (%)		3.4	11.7	2.5	0.3	-0.8
DK	07-95 ⇨ 09-95	107.9	113.8	124.4	74.4	115.4
Growth rate, t/t-4 (%)		8.4	-13.2	8.6	-16.3	0.3
D	07-95 ⇨ 09-95	122.2	134.0	122.5	101.8	100.3
Growth rate, t/t-4 (%)		4.7	-6.1	5.2	-3.7	0.4
GR	07-95 ⇨ 09-95	99.8	135.4	111.8	123.9	112.3
Growth rate, t/t-4 (%)		-12.8	32.6	4.3	-4.4	20.0
E	07-95 ⇨ 09-95	106.7	137.3	90.3	124.0	85.1
Growth rate, t/t-4 (%)		2.4	7.2	1.7	0.9	-0.2
F	07-95 ⇨ 09-95	122.3	98.0	131.2	74.2	107.3
Growth rate, t/t-4 (%)		0.9	4.2	11.7	-16.7	10.6
IRL	07-95 ⇨ 09-95	117.1	116.0	97.8	183.0	84.4
Growth rate, t/t-4 (%)		14.7	-24.1	6.4	2.0	-6.2
I	07-95 ⇨ 09-95	121.2	102.0	106.9	132.1	88.3
Growth rate, t/t-4 (%)		3.2	6.0	-2.3	18.5	-5.3
NL	07-95 ⇨ 09-95	122.5	88.1	109.4	69.3	89.4
Growth rate, t/t-4 (%)		9.4	4.6	-1.9	-11.3	-10.3
P	07-95 ⇨ 09-95	91.6	109.4	118.0	111.4	129.1
Growth rate, t/t-4 (%)		-7.7	20.9	2.7	15.4	11.3
UK	07-95 ⇨ 09-95	122.0	113.7	111.1	105.9	91.1
Growth rate, t/t-4 (%)		0.7	3.1	4.2	-17.1	3.6

SOURCE: eurostat

FIGURE 3.2.6

ANNUAL GROWTH RATE OF EXTRA-EU TRADE INDEXES (%) (1)



Export value
Import value

(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 3.2.5

ANNUAL EXTRA-EU TRADE INDEXES (1990=100)

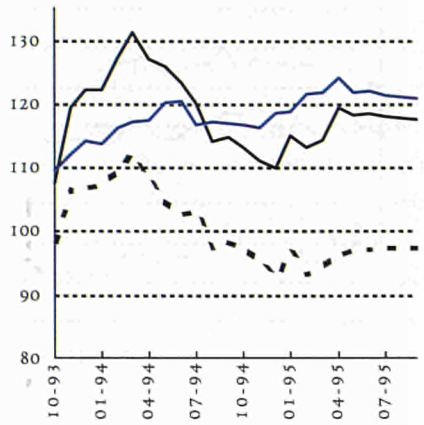
	Latest year available	Exports Value	Exports Volume	Imports Value	Imports Volume	Terms of trade index
EUR12	1994	117.0	116.7	112.0	109.0	95.7
Growth rate, t/t-1 (%)		2.6	10.8	-0.3	9.1	-2.8
B/L	1994	118.3	104.6	115.5	109.6	97.6
Growth rate, t/t-1 (%)		6.6	15.5	1.7	3.1	-4.6
DK	1994	100.0	131.6	114.4	88.4	114.4
Growth rate, t/t-1 (%)		-0.1	25.9	0.5	19.8	0.7
D	1994	117.1	139.7	115.9	109.9	98.9
Growth rate, t/t-1 (%)		2.3	9.6	-0.3	12.6	-2.5
GR	1994	113.0	127.1	108.3	129.9	95.8
Growth rate, t/t-1 (%)		1.3	9.5	9.2	-6.9	7.9
E	1994	105.4	127.4	85.8	139.1	81.4
Growth rate, t/t-1 (%)		0.0	18.4	-10.9	10.2	-10.8
F	1994	120.9	95.8	118.1	92.9	97.6
Growth rate, t/t-1 (%)		3.2	8.5	1.0	7.2	-2.2
IRL	1994	104.9	153.1	94.0	170.9	89.6
Growth rate, t/t-1 (%)		11.4	10.7	1.0	17.3	-9.3
I	1994	117.7	94.3	109.9	115.6	93.3
Growth rate, t/t-1 (%)		3.2	5.5	0.6	5.5	-2.5
NL	1994	112.1	92.0	110.9	78.5	98.9
Growth rate, t/t-1 (%)		-3.4	34.5	5.0	14.1	8.7
P	1994	101.0	96.3	115.3	97.1	114.1
Growth rate, t/t-1 (%)		6.0	-21.9	2.2	8.0	-3.6
UK	1994	123.2	106.4	107.9	127.8	87.5
Growth rate, t/t-1 (%)		5.2	4.9	-1.9	4.6	-6.8

SOURCE: eurostat

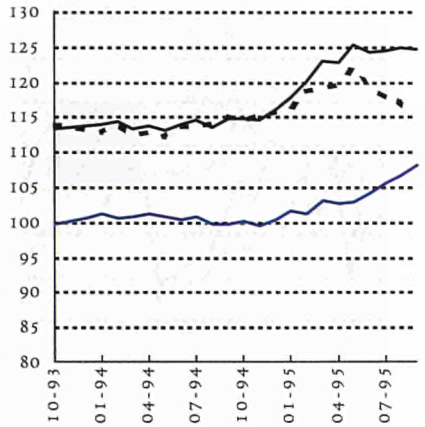
FIGURE 3.2.7

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)

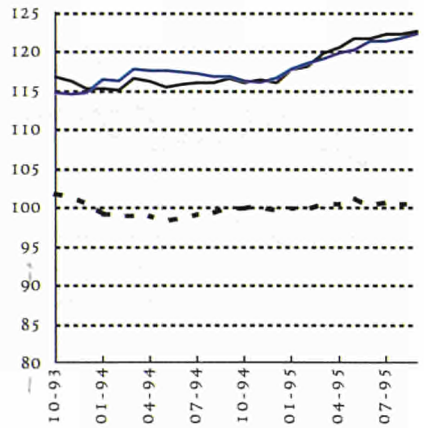
BELGIQUE/BELGIË, LUXEMBOURG



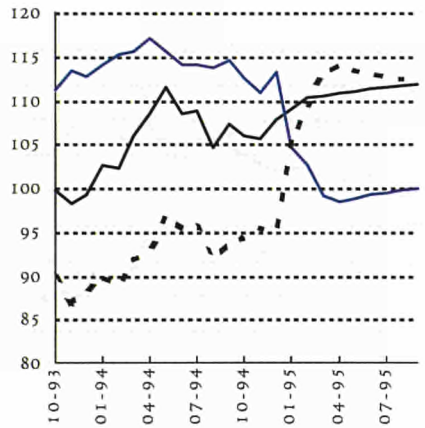
DANMARK



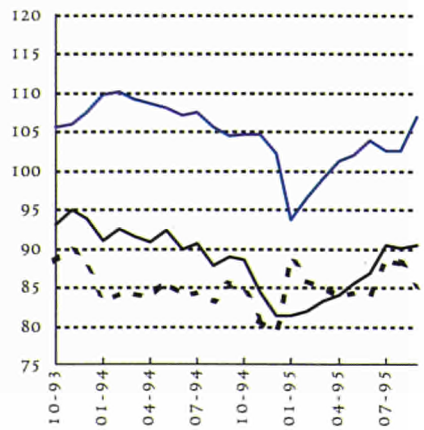
DEUTSCHLAND



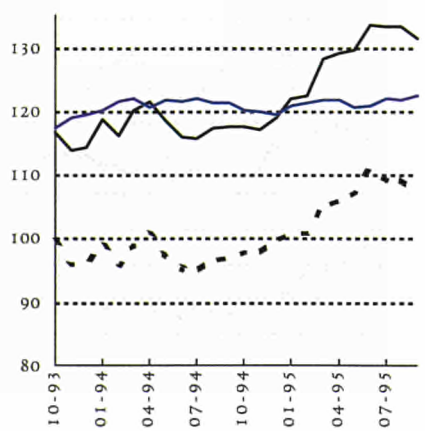
HELLAS



ESPAÑA



FRANCE



Export value

Import value

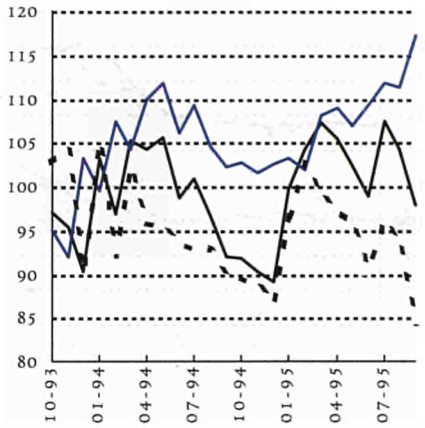
Terms of trade

SOURCE: eurostat

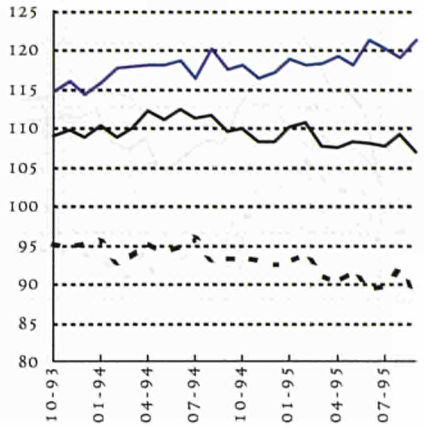
FIGURE 3.2.7

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)

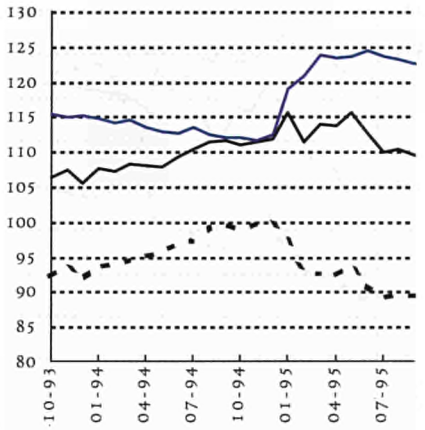
IRELAND



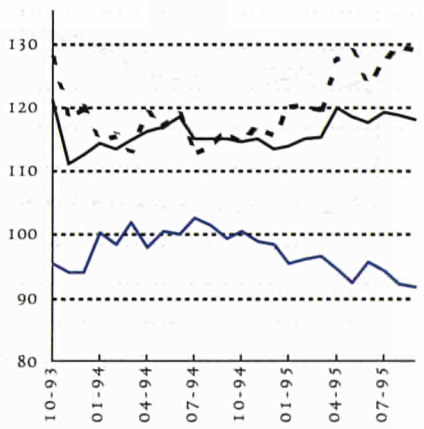
ITALIA



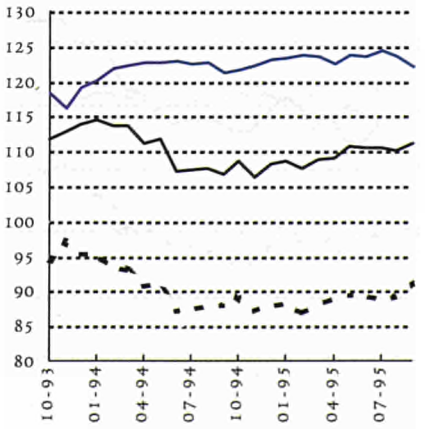
NEDERLAND



PORTUGAL



UNITED KINGDOM



Export value

Import value

Terms of trade

SOURCE: eurostat

MECHANICAL ENGINEERING

IN BRIEF....

- THE ENGINEERING SECTOR IS DOMINATED BY SMES
- THE EU IS THE WORLD'S BIGGEST PRODUCER IN THE SECTOR, WITH PRODUCTION TOTALLING ECU 229.7 BILLION IN 1995
- IN 1995, 44% OF COMMUNITY PRODUCTION WAS ACCOUNTED FOR BY GERMANY
- AT THE END OF 1995, CAPACITY UTILIZATION WAS 87.5% IN THE NETHERLANDS AND 87.6% IN GERMANY
- BETWEEN AUGUST 1994 AND AUGUST 1995, THE EU'S EXPORTS DECLINED BY 2.7% IN VOLUME TERMS, WHILE IMPORTS INCREASED BY 6.6%

The engineering industry is characterized by a wide diversity of products, including agricultural machinery, machine tools, machines for the textile industry, motors, compressors and pumps. It other words, it provides the goods used by industry as a whole. The variedness of the sector is conducive to the existence of SMEs, which can adapt to their customers' needs in terms of technical specifications, ancillary services and specialization. The engineering industry is not highly concentrated. In 1990, for example, only 4% of European engineering companies employed more than 100 people. Small and medium-sized enterprises are therefore highly specialized, using advanced technologies and computer-assisted design (CAD), whereas larger companies profit instead from economies of scale. Moreover, production sites tend to be in or near the major industrial centres where their clients are located, e.g. Baden-Württemberg, Lombardy and the English Midlands.

More than half of production in the sector involves finished products, while the remainder involves components for capital goods and, to a lesser extent, goods for direct household consumption. The main customers, apart from companies in the sector itself, are the car, chemical and electrical engineering industries. The level of activity in the sector is closely correlated with the level of investment, which means that it is subject to cyclical forces. Thus, at the beginning of the 1990s, a decline in investment caused growth to slow down and employment to fall. This correlation compels companies to be flexible and react quickly to changes in trends.

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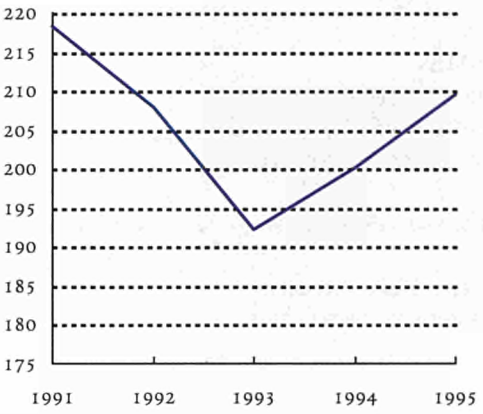
FIGURE 4.1.1

EVOLUTION OF EU PRODUCTION IN CONSTANT PRICES (BILLION ECU)



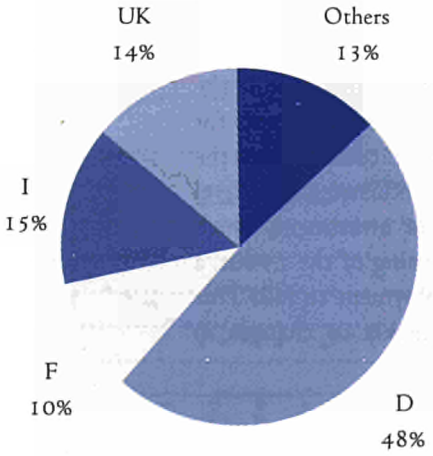
SOURCE: DEBA GEIE

The European Union is the world's biggest player in the engineering sector, ahead of Japan and the United States. In 1994, production in each was ECU 218.3, 208.6 and 189.6 billion respectively. European production in 1995 was ECU 228.7 billion, 4.8% up on the previous year. In terms of price competitiveness, the EU is facing a considerable challenge from the Far East and Eastern Europe.

In 1995, the sector represented 7.8% of total industrial production, as against 8.6% in 1990. The corresponding share in Germany declined from 12.6% to 10.9% and that in France from 5.6% to 4.9% between those two years.

FIGURE 4.1.2

SHARE OF VALUE-ADDED AT FACTOR COST BY MEMBER STATE, 1995 (%)



SOURCE: DEBA GEIE

Germany is the leading European producer, accounting for 44% of Community output in 1995, followed at some distance by Italy (18%), the United Kingdom (13%) and France (12%). These four countries therefore account for 87% of production in EUR 12.

From October 1994 to October 1995, production increased in value by 6.8% in EUR 15. There were increases of 10.0% in Denmark, 15.3% in Spain, 21.3% in Greece and 19.3% in Austria, whereas the United Kingdom recorded a decline of 2.8%. European turnover grew by 4.7% in real terms in 1995, after expanding by 4.6% the previous year (by 1.9% in Germany, 1.6% in France, 1.0% in the United Kingdom and 12.3% in Italy).

In 1994, the biggest Community producer was Mannesmann (Germany). Of the ten biggest companies, four are German, three British and three Swedish.

In the fourth quarter of 1995, capacity utilization was 85.8% in the EU as a whole, 87.6% in Germany, 87.5% in the Netherlands, 86.2% in the United Kingdom, 84.3% in France and 83.9% in Italy.

Between October 1994 and October 1995, the producer price index rose by 3.1% for EUR 15, with increases of 0.9% in the Netherlands, 6.5% in Italy and Greece, 1.7% in Finland and 5.8% in Sweden.

The engineering sector employed 1.94 million workers in 1995. After contracting by 6% in 1994, Europe's engineering workforce declined by a further 1.5% in 1995. This was mainly due to the decline in Germany (-6%), which accounts for 42% of the Community workforce. Employment grew by almost 3% in France and nearly 6% in Spain, two countries where it had declined the previous year.

In 1994, apparent consumption grew by 4.6% in Europe. It declined by nearly 3% in Germany, while Italy recorded an increase of

18%. German exports are equivalent to 91% of national consumption, which reflects the outward-looking nature of the German economy.

Extra-Community imports expanded by 13% in 1994, having fallen by 5.3% the previous year. 60% of imports of engineering equipment were from within the Community (76% in the case of Spain and 68% in France, but only 42% in Germany). Moreover, German imports from outside the EU increased by 10%, compared with 3% for intra-Community imports. The opposite was true in Spain, whose intra-Community imports grew by 18% while its extra-Community imports fell by 3%. The EU's exports to the rest of the world increased by 8.6%, with increases of 7.6% in Germany, 11.1% in France and 7.1% in the United Kingdom. Intra-Community trade expanded the fastest in France, Italy, the United Kingdom and Spain although, unlike their imports, their export trade is for the most part (60%) done with non-EU countries. Moreover, the Community trade balance is positive, rising by an annual average of 7.8% over the period 1990-1994. Germany and Italy have the biggest trade surpluses, while those of France (positive balance) and Spain (negative) have been continually improving since 1990. However, their respective coverage ratios, at 109% and 70%, still remain quite weak compared with those of Germany and Italy (282% and 300% respectively).

Among non-EU producers, the Czech Republic has the advantages of an established industry and competitive prices. Although price competitiveness is important, however, the European Union unquestionably has an edge in terms of superior technology, quality and service, especially as the price-elasticity of demand is low. Since engineering production has to be tailored to the specific needs of individual customers, economies of scale are small, with the result that the market pays greater attention to quality and technology than to price.

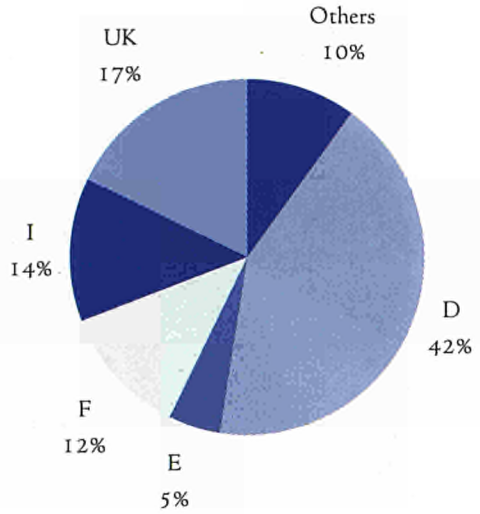


FIGURE 4.1.3

SHARE OF NUMBER OF EMPLOYEES BY MEMBER STATE, 1995 (%)

SOURCE:DEBA GEIE

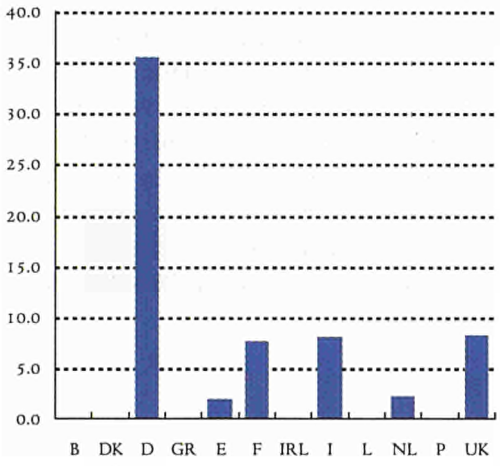


FIGURE 4.1.4

LABOUR COSTS BY MEMBER STATE, 1994 (BILLION ECU)

SOURCE: DEBA GEIE

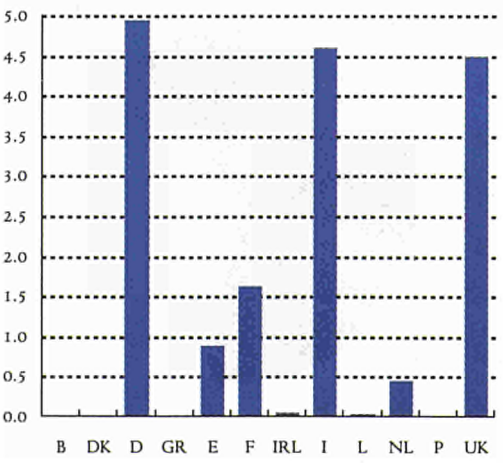


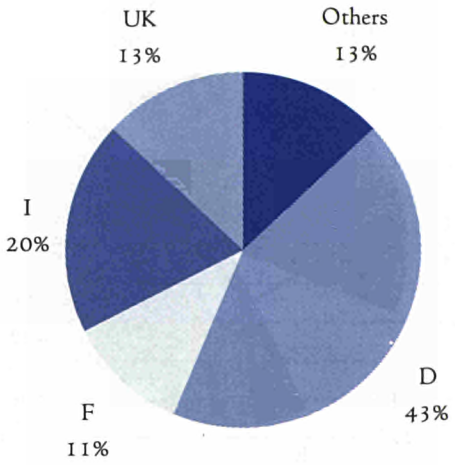
FIGURE 4.1.5

GROSS OPERATING SURPLUS BY MEMBER STATE, 1994 (BILLION ECU)

SOURCE: DEBA GEIE

FIGURE 4.1.6

SHARE OF EXTRA-EU EXPORTS BY MEMBER STATE, 1994 (%)

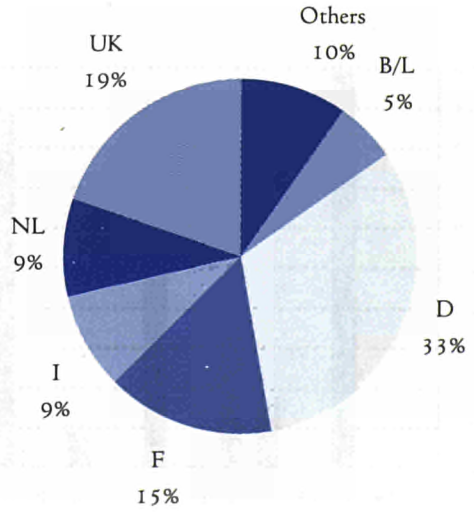


SOURCE: eurostat

Finally, over the period from August 1994 to August 1995, the EU's exports of engineering products to the rest of the world decreased in volume terms by 2.7%, with falls of 4% in Germany, 5.9% in France and 6.7% in the United Kingdom, but growth of 10.7% in Italy. Community imports increased by 6.6%. At national level, there were increases of 4.5% in Germany and France, but big falls in the Netherlands and Ireland (18.8% and 32.9% respectively).

FIGURE 4.1.7

SHARE OF EXTRA-EU IMPORTS BY MEMBER STATE, 1994 (%)



SOURCE: eurostat

TABLE 4.1.1

VALUE-ADDED AT FACTOR COST BY MEMBER STATE (MILLION ECU)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	90,046	0.8	89,003	-1.2	82,925	-6.8	85,981	3.7	90,151	4.8
B	1,824	-7.4	1,742	-4.5	1,665	-4.4	1,780	6.9	1,965	10.4
share (%)	2.0		2.0		2.0		2.1		2.2	
DK	2,078	5.3	2,145	3.3	2,071	-3.5	2,382	15.0	2,701	13.4
share (%)	2.3		2.4		2.5		2.8		3.0	
D	43,558	1.3	44,072	1.2	40,808	-7.4	40,585	-0.5	43,196	6.4
share (%)	48.4		49.5		49.2		47.2		47.9	
GR	58	-10.4	60	2.4	55	-7.7	57	4.0	66	14.1
share (%)	0.1		0.1		0.1		0.1		0.1	
E	3,566	8.2	3,306	-7.3	2,860	-13.5	2,916	2.0	3,454	18.4
share (%)	4.0		3.7		3.4		3.4		3.8	
F	9,159	0.1	9,212	0.6	8,721	-5.3	9,334	7.0	9,202	-1.4
share (%)	10.2		10.4		10.5		10.9		10.2	
IRL	211	-2.0	208	-1.6	198	-4.5	237	19.3	255	7.9
share (%)	0.2		0.2		0.2		0.3		0.3	
I	13,525	4.3	12,823	-5.2	11,411	-11.0	12,675	11.1	13,273	4.7
share (%)	15.0		14.4		13.8		14.7		14.7	
L	107	14.9	97	-9.5	99	2.4	102	2.5	112	9.7
share (%)	0.1		0.1		0.1		0.1		0.1	
NL	2,509	1.8	2,751	9.6	2,596	-5.6	2,718	4.7	2,958	8.8
share (%)	2.8		3.1		3.1		3.2		3.3	
P	406	10.1	428	5.5	382	-10.7	424	11.0	470	10.7
share (%)	0.5		0.5		0.5		0.5		0.5	
UK	13,045	-5.5	12,161	-6.8	12,060	-0.8	12,773	5.9	12,500	-2.1
share (%)	14.5		13.7		14.5		14.9		13.9	

SOURCE: DEBA GEIE

TABLE 4.1.2

TURNOVER IN CURRENT PRICES BY MEMBER STATE (MILLION ECU)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	238,159	0.9	234,641	-1.5	222,014	-5.4	231,407	4.2	242,635	4.9
B	5,485	-3.6	5,256	-4.2	5,036	-4.2	5,423	7.7	5,999	10.6
share (%)	2.3		2.2		2.3		2.3		2.5	
DK	4,440	4.5	4,595	3.5	4,430	-3.6	5,111	15.4	5,805	13.6
share (%)	1.9		2.0		2.0		2.2		2.4	
D	106,850	3.8	107,355	0.5	102,591	-4.4	102,111	-0.5	108,560	6.3
share (%)	44.9		45.8		46.2		44.1		44.7	
GR	161	-8.0	158	-1.4	140	-11.5	142	1.4	159	12.2
share (%)	0.1		0.1		0.1		0.1		0.1	
E	8,801	4.8	8,101	-8.0	7,035	-13.2	7,119	1.2	8,408	18.1
share (%)	3.7		3.5		3.2		3.1		3.5	
F	29,173	-2.9	30,090	3.1	28,288	-6.0	30,298	7.1	30,344	0.2
share (%)	12.2		12.8		12.7		13.1		12.5	
IRL	532	-2.5	525	-1.3	503	-4.3	599	19.2	648	8.1
share (%)	0.2		0.2		0.2		0.3		0.3	
I	41,200	0.5	38,992	-5.4	34,735	-10.9	38,889	12.0	40,866	5.1
share (%)	17.3		16.6		15.6		16.8		16.8	
L	292	16.0	268	-8.1	273	1.9	287	5.2	315	9.6
share (%)	0.1		0.1		0.1		0.1		0.1	
NL	6,839	3.4	7,225	5.7	7,325	1	7,657	5	8,327	9
share (%)	2.9		3.1		3		3		3	
P	1,142	15.6	1,146	0.3	1,022	-10.8	1,066	4.3	1,146	7.5
share (%)	0.5		0.5		0.5		0.5		0.5	
UK	33,243	-5.5	30,930	-7.0	30,635	-1.0	32,704	6.8	32,058	-2.0
share (%)	14.0		13.2		13.8		14.1		13.2	

SOURCE: DEBA GEIE

TABLE 4.1.3

NUMBER OF EMPLOYEES BY MEMBER STATE (THOUSANDS)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	2,378.0	-2.0	2,268.2	-4.6	2,093.3	-7.7	1,968.0	-6.0	1,940.7	-1
B	49.1	-0.2	44.2	-10.1	41.3	-6.5	40.6	-2	40.4	0
share (%)	2.1		1.9		2.0		2		2	
DK	54.2	0.7	53.2	-1.8	49.8	-6.4	N/A	N/A	N/A	N/A
share (%)	2.3		2.3		2.4		N/A		N/A	
D	1,083.6	-0.8	1,051.2	-3.0	956.0	-9.1	867.5	-9.3	816.4	-6
share (%)	45.6		46.3		45.7		44.1		42	
GR	4.2	-14.0	3.6	-13.4	3.4	-5.5	3.3	-5	3.6	10
share (%)	0.2		0.2		0.2		0		0	
E	103.0	-2.1	96.0	-6.8	92.0	-4.2	89.6	-2.5	95.1	6
share (%)	4.3		4.2		4.4		4.6		5	
F	254.3	3.8	250.5	-1.5	232.5	-7.2	224.1	-3.6	230.2	3
share (%)	10.7		11.0		11.1		11.4		12	
IRL	6.6	-1.2	6,883	0.0	6.8	-0.6	7.3	6.9	8.0	9
share (%)	0.3		0.3		0.3		0.4		0	
I	325.1	-2.2	297.6	-8.4	273.3	-8.2	262.5	-3.9	265.3	1
share (%)	13.7		13.1		13.1		13.3		14	
L	2.0	-5.3	1.9	-3.3	1.9	-4.0	1.8	-5.5	1.7	-2.9
share (%)	0.1		0.1		0.1		0.1		0	
NL	74.5	2.6	74.7	0.3	70.8	-5.2	68.8	-2.9	N/A	N/A
share (%)	3.1		3.3		3.4		3.5		N/A	
P	30.2	1.1	28.5	-5.4	25.9	-9.2	24.7	-5	N/A	N/A
share (%)	1.3		1.3		1.2		1		N/A	
UK	391.1	-9.3	359.9	-8.0	339.6	-5.6	331.3	-2.4	337.5	1.9
share (%)	16.4		15.9		16.2		16.8		17	

SOURCE: DEBA GEIE

TABLE 4.1.4

LABOUR COSTS BY MEMBER STATE (MILLION ECU)

	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)	1995	t/t-1 (%)
EUR12	71,742	5.5	72,416	0.9	69,215	-4.4	67,574	-2.4	N/A	N/A
B	1,575	4.9	1,459	-7.4	1,435	-1.6	N/A	N/A	N/A	N/A
share (%)	2.2		2.0		2.1		N/A		N/A	
DK	1,531	4.1	1,564	2.2	1,533	-2.0	N/A	N/A	N/A	N/A
share (%)	2.1		2.2		2.2		N/A		N/A	
D	36,332	6.0	37,674	3.7	37,064	-1.6	35,643	-3.8	N/A	N/A
share (%)	50.6		52.0		53.5		52.7		N/A	
GR	54	-5.9	48	-11.2	48	0.4	N/A	N/A	N/A	N/A
share (%)	0.1		0.1		0.1		N/A		N/A	
E	2,372	7.1	2,334	-1.6	2,116	-9.3	2,035	-3.8	N/A	N/A
share (%)	3.3		3.2		3.1		3.0		N/A	
F	7,621	7.1	8,036	5.4	7,788	-3.1	7,698	-1.2	N/A	N/A
share (%)	10.6		11.1		11.3		11.4		N/A	
IRL	133	5.0	151	13.4	151	-0.1	176	16.7	N/A	N/A
share (%)	0.2		0.2		0.2		0.3		N/A	
I	10,477	6.7	9,942	-5.1	8,398	-15.5	8,067	-3.9	N/A	N/A
share (%)	14.6		13.7		12.1		11.9		N/A	
L	67	0.6	69	3.9	70	0.7	71	1.1	70	-1.7
share (%)	0.1		0.1		0.1		0.1		N/A	
NL	1,990	6.5	2,139	7.5	2,195	2.6	2,260	2.9	N/A	N/A
share (%)	2.8		3.0		3.2		3.3		N/A	
P	282	22.2	308	9.4	276	-10.4	N/A	N/A	N/A	N/A
share (%)	0.4		0.4		0.4		N/A		N/A	
UK	9,309	0.3	8,692	-6.6	8,141	-6.3	8,288	1.8	8,271	-0.2
share (%)	13.0		12.0		11.8		12.3		N/A	

SOURCE: DEBA GEIE

TABLE 4.1.5

EXTRA-EU EXPORTS BY MEMBER STATE (MILLION ECU)

	1990	t/t-1 (%)	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)
EUR12	66,711	5.7	67,087	0.6	67,655	0.8	75,651	11.8	82,169	8.6
B/L	1,780	5.4	1,541	-13.4	1,583	2.7	2,057	29.9	2,694	31.0
share (%)	2.7		2.3		2.3		2.7		3.3	
DK	1,931	8.1	1,790	-7.3	1,892	5.7	1,958	3.5	2,127	8.6
share (%)	2.9		2.7		2.8		2.6		2.6	
D	29,608	6.4	30,422	2.7	30,509	0.3	32,866	7.7	35,364	7.6
share (%)	44.4		45.3		45.1		43.4		43.0	
GR	64	17.0	82	28.1	80	-2.4	106	32.8	121	14.1
share (%)	0.1		0.1		0.1		0.1		0.1	
E	1,409	1.2	1,497	6.3	1,569	4.8	1,926	22.7	1,981	2.9
share (%)	2.1		2.2		2.3		2.5		2.4	
F	7,791	13.2	7,747	-0.6	7,971	2.9	8,269	3.7	9,192	11.2
share (%)	11.7		11.5		11.8		10.9		11.2	
IRL	251	-2.6	232	-7.5	186	-19.8	243	30.7	318	30.9
share (%)	0.4		0.3		0.3		0.3		0.4	
I	11,983	2.7	12,336	2.9	12,453	0.9	15,227	22.3	16,197	6.4
share (%)	18.0		18.4		18.4		20.1		19.7	
NL	2,413	2.1	2,405	-0.3	2,439	1.5	2,824	15.8	3,260	15.4
share (%)	3.6		3.6		3.6		3.7		4.0	
P	142	7.2	153	7.5	157	2.7	171	9.2	197	15.0
share (%)	0.2		0.2		0.2		0.2		0.2	
UK	9,340	3.1	8,883	-4.9	8,817	-0.8	10,003	13.5	10,718	7.1
share (%)	14.0		13.2		13.0		13.2		13.0	

SOURCE: eurostat

TABLE 4.1.6

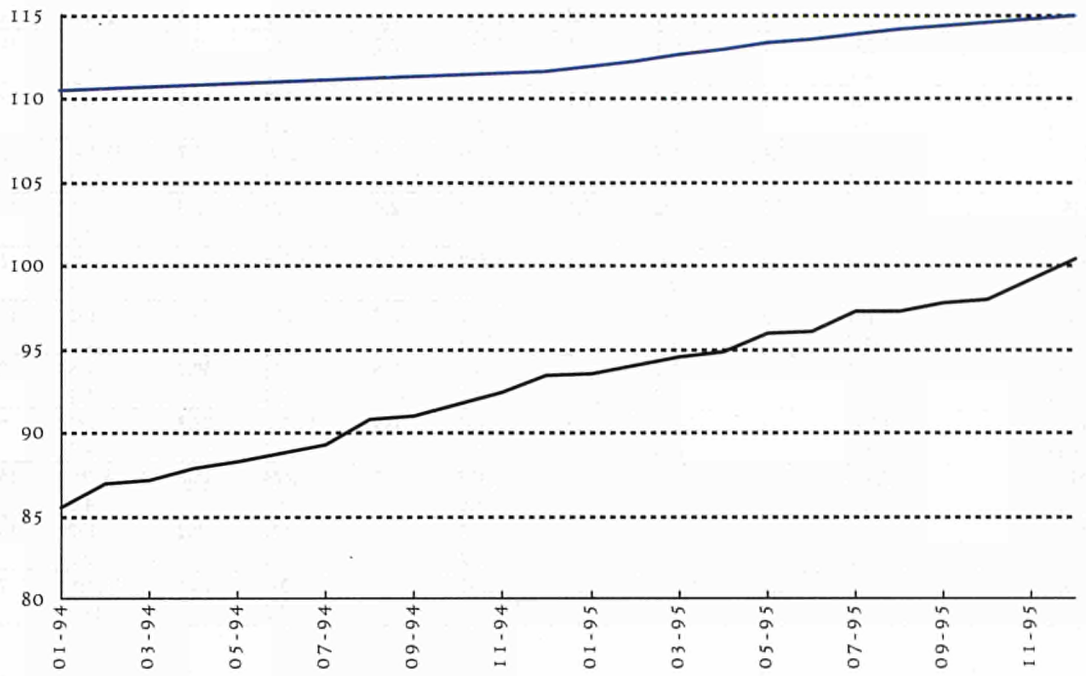
EXTRA-EU IMPORTS BY MEMBER STATE (MILLION ECU)

	1990	t/t-1 (%)	1991	t/t-1 (%)	1992	t/t-1 (%)	1993	t/t-1 (%)	1994	t/t-1 (%)
EUR12	31,564	9.0	33,001	4.6	32,403	-1.8	30,683	-5.3	34,662	13.0
B/L	1,726	7.0	1,735	0.5	1,660	-4.3	1,551	-6.6	1,902	22.6
share (%)	5.5		5.3		5.1		5.1		5.5	
DK	808	9.7	809	0.1	779	-3.7	758	-2.7	916	20.9
share (%)	2.6		2.5		2.4		2.5		2.6	
D	9,393	16.7	10,988	17.0	10,874	-1.0	10,149	-6.7	11,114	9.5
share (%)	29.8		33.3		33.6		33.1		32.1	
GR	348	-18.4	360	3.3	384	6.7	374	-2.4	340	-9.1
share (%)	1.1		1.1		1.2		1.2		1.0	
E	1,890	10.1	1,897	0.4	1,852	-2.4	1,381	-25.5	1,335	-3.3
share (%)	6.0		5.7		5.7		4.5		3.9	
F	5,538	23.1	5,526	-0.2	5,221	-5.5	4,673	-10.5	5,178	10.8
share (%)	17.5		16.7		16.1		15.2		14.9	
IRL	352	0.3	373	6.0	376	0.9	400	6.4	506	26.4
share (%)	1.1		1.1		1.2		1.3		1.5	
I	3,173	10.8	3,139	-1.1	3,118	-0.7	2,790	-10.5	3,122	11.9
share (%)	10.1		9.5		9.6		9.1		9.0	
NL	2,118	-5.8	2,305	8.8	2,311	0.3	2,220	-3.9	3,234	45.7
share (%)	6.7		7.0		7.1		7.2		9.3	
P	497	17.7	468	-6.0	416	-11.0	394	-5.4	285	-27.5
share (%)	1.6		1.4		1.3		1.3		0.8	
UK	5,722	-5.3	5,402	-5.6	5,413	0.2	5,994	10.7	6,731	12.3
share (%)	18.1		16.4		16.7		19.5		19.4	

SOURCE: eurostat

FIGURE 4.2.1

EVOLUTION OF EUR15 PRODUCTION AND PRODUCER PRICE INDEXES (1990=100)



SOURCE: eurostat

TABLE 4.2.1

QUARTERLY AND ANNUAL PRODUCTION INDEXES (1990=100) (1)

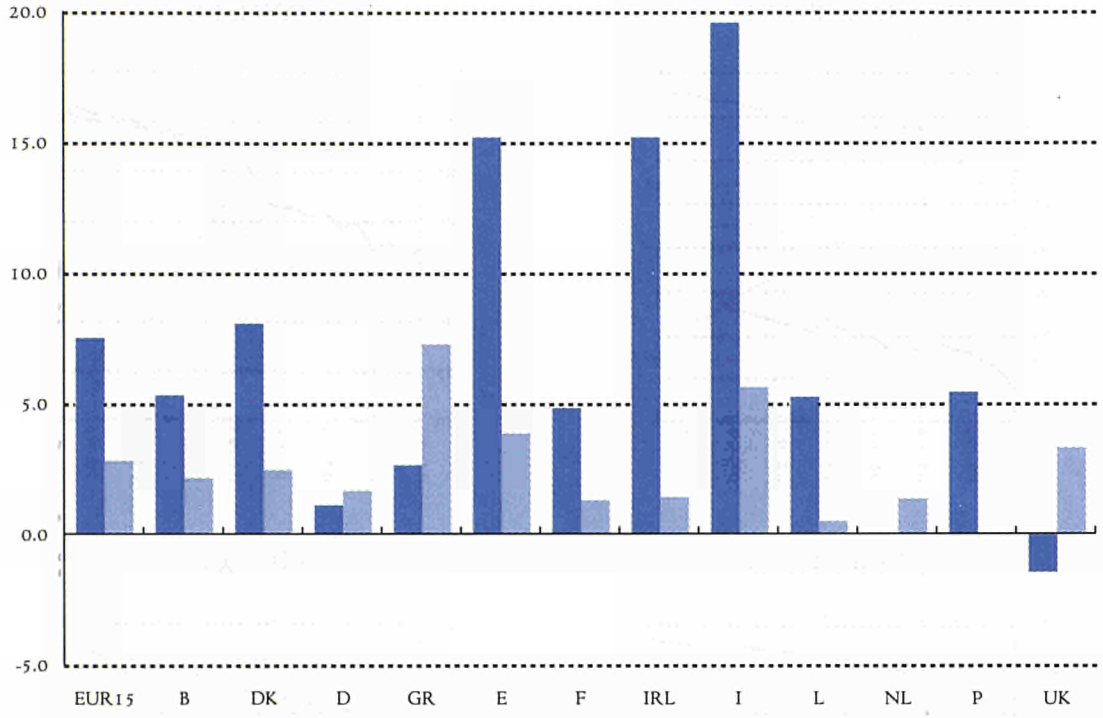
(1) Annual growth rates are based on the latest annual data. Only when data to October is available will an annual estimate for the year be made.

	Latest quarter available	Quarterly Index	Quarterly t/t-4 (%)	Annual Index	Annual t/t-1 (%)
EUR15	10-95 ⇨ 12-95	100.3	7.5	98.2	7.5
B	04-95 ⇨ 06-95	89.5	7.3	85.5	5.3
DK	10-95 ⇨ 12-95	109.7	3.8	110.5	8.0
D	10-95 ⇨ 12-95	82.0	1.7	80.7	1.1
GR	09-95 ⇨ 11-95	115.8	18.3	97.0	2.7
E	10-95 ⇨ 12-95	104.7	11.1	103.1	15.2
F	10-95 ⇨ 12-95	109.6	4.3	88.6	4.8
IRL	08-95 ⇨ 10-95	113.3	14.5	97.8	15.2
I	10-95 ⇨ 12-95	137.6	20.8	130.1	19.5
L	10-95 ⇨ 12-95	90.7	10.8	90.2	5.2
NL	⇨	N/A	N/A	N/A	N/A
P	08-95 ⇨ 10-95	87.3	0.1	86.6	5.4
UK	10-95 ⇨ 12-95	87.5	-1.7	88.1	-1.5

SOURCE: eurostat

FIGURE 4.2.2

ANNUAL GROWTH RATE OF EU PRODUCTION AND PRODUCER PRICE INDEXES (%) (1)



Production
Producer prices

(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 4.2.2

QUARTERLY AND ANNUAL PRODUCER PRICE INDEXES (1990=100) (1)

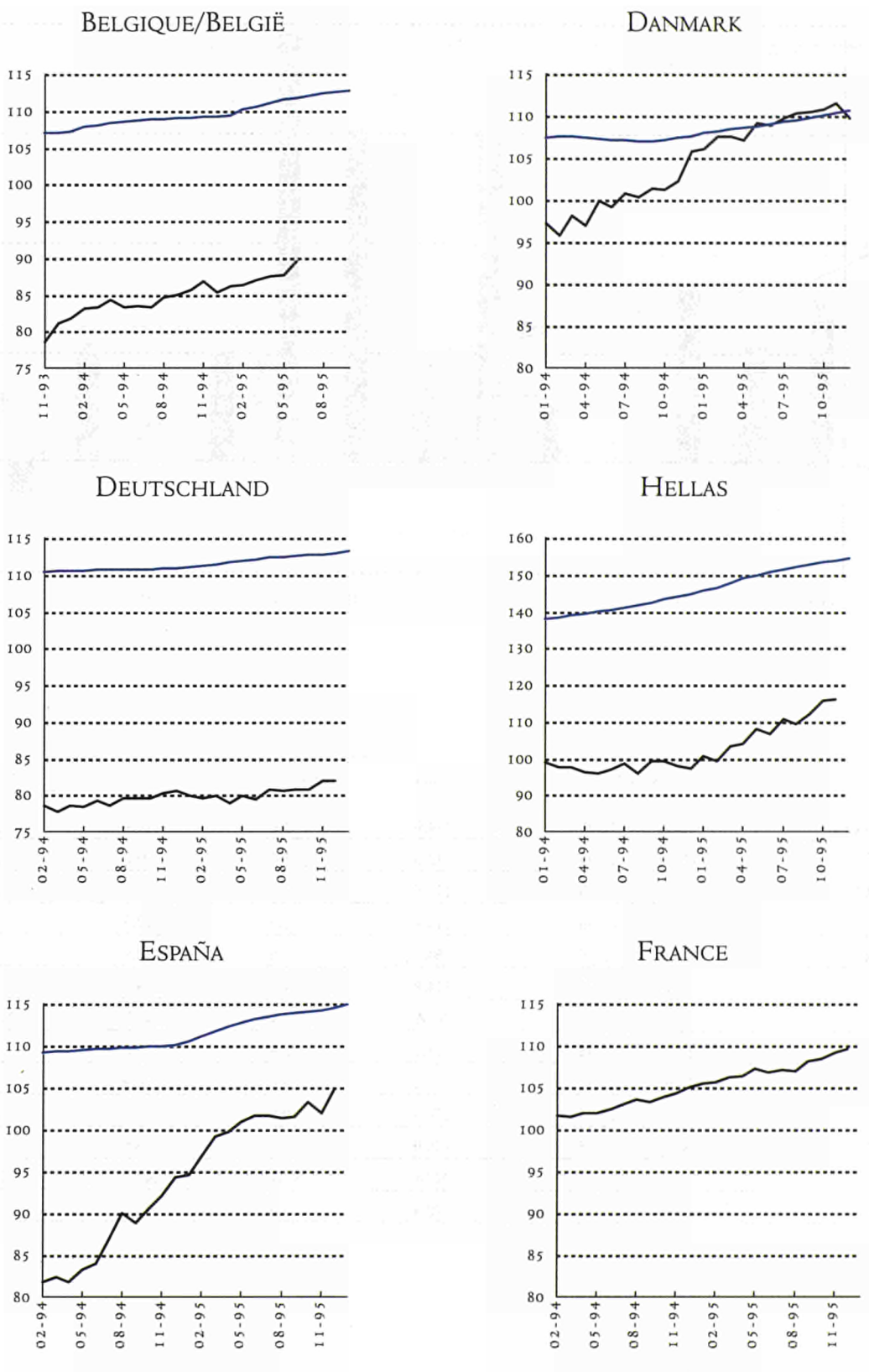
(1) Annual growth rates are based on the latest annual data. Only when data to October is available will an annual estimate for the year be made.

	Latest quarter available	Quarterly Index	Quarterly t/t-4 (%)	Annual Index	Annual t/t-1 (%)
EUR15	10-95 ⇨ 12-95	114.9	3.0	114.4	2.8
B	08-95 ⇨ 10-95	112.6	3.4	109.0	2.1
DK	10-95 ⇨ 12-95	110.6	2.8	109.9	2.5
D	11-95 ⇨ 01-96	113.1	1.9	112.5	1.7
GR	10-95 ⇨ 12-95	154.2	6.6	152.9	7.3
E	11-95 ⇨ 01-96	114.8	4.0	114.0	3.8
F	⇨	N/A	N/A	N/A	N/A
IRL	10-95 ⇨ 12-95	113.1	2.4	112.0	1.4
I	10-95 ⇨ 12-95	122.2	6.0	120.9	5.6
L	10-95 ⇨ 12-95	109.4	0.8	109.2	0.5
NL	10-95 ⇨ 12-95	106.9	1.2	106.8	1.3
P	⇨	N/A	N/A	N/A	N/A
UK	11-95 ⇨ 01-96	120.4	3.6	119.2	3.3

SOURCE: eurostat

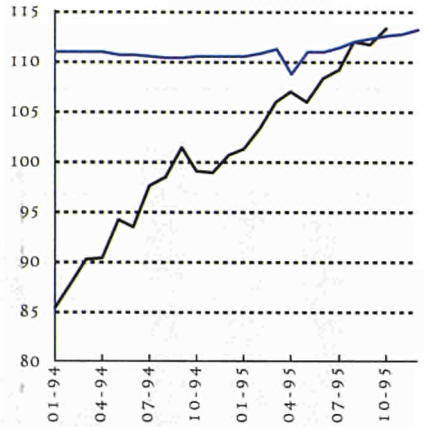
FIGURE 4.2.3

EVOLUTION OF PRODUCTION AND PRODUCER PRICE INDEXES (1990=100)

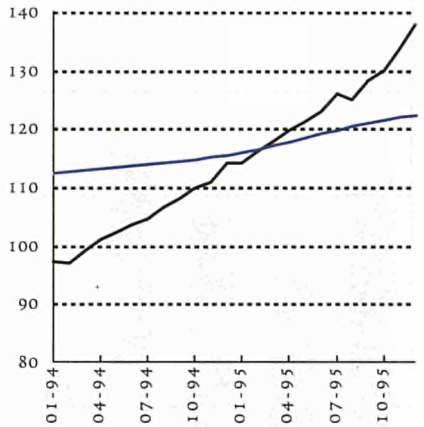


SOURCE: eurostat

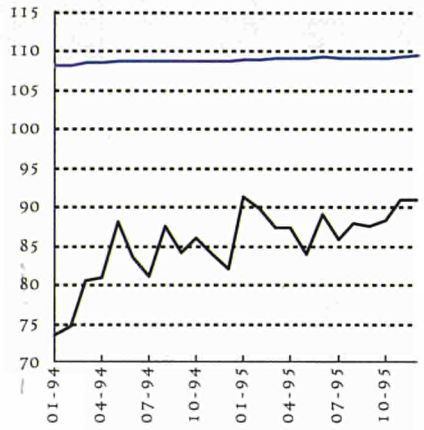
IRELAND



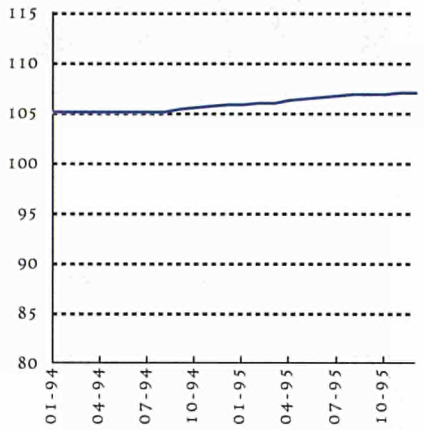
ITALIA



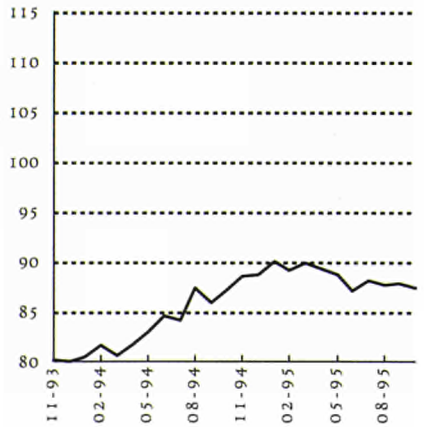
LUXEMBOURG



NEDERLAND



PORTUGAL



UNITED KINGDOM

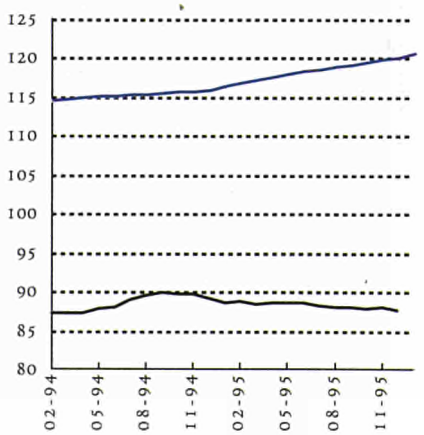


FIGURE 4.2.3

EVOLUTION OF PRODUCTION AND PRODUCER PRICE INDEXES (1990=100)

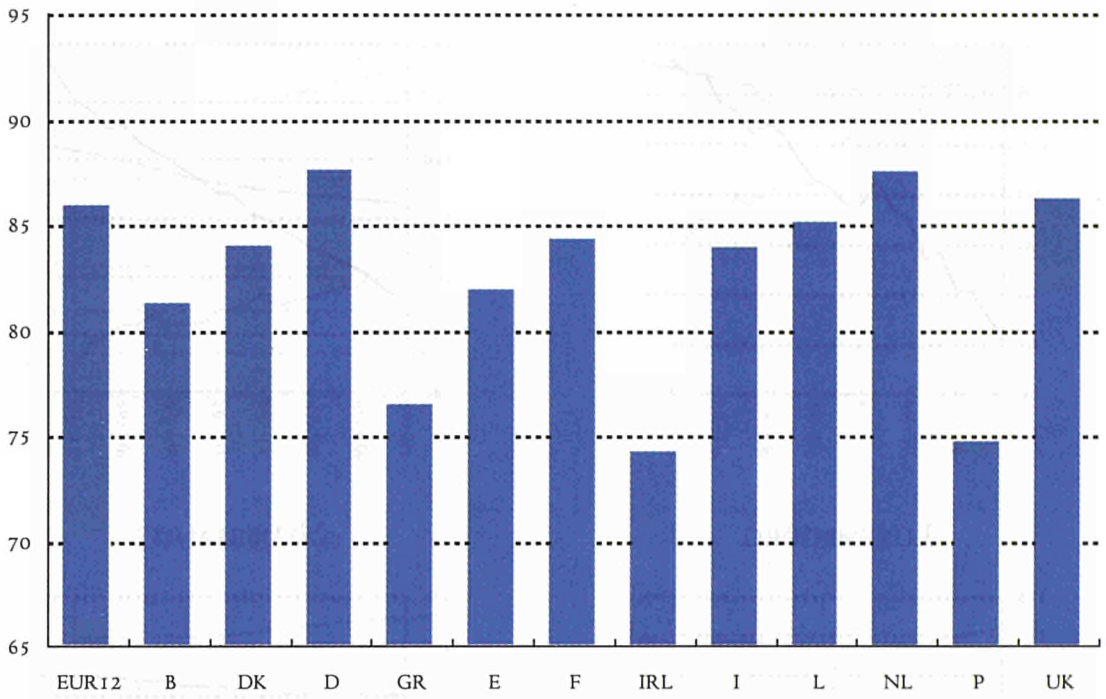
Index of production

Producer price index

SOURCE: eurostat

FIGURE 4.2.4

CAPACITY UTILISATION RATES BY MEMBER STATE, FOURTH QUARTER 1995 (%)



SOURCE: DG II - BUSINESS SURVEY

TABLE 4.2.3

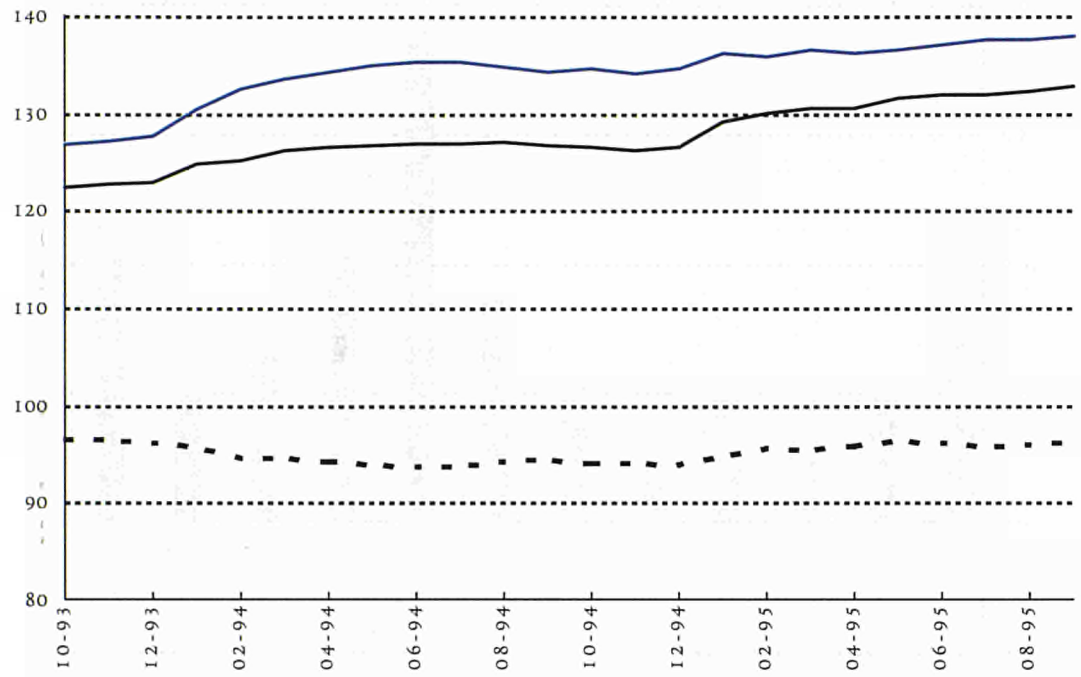
CAPACITY UTILISATION RATES BY MEMBER STATE (%)

	Annual growth rate: latest quarter, t/t-4	First quarter 1995	Second quarter 1995	Third quarter 1995	Fourth quarter 1995
EUR12	6.8	82.4	84.5	85.2	85.9
B	4.6	76.7	79.9	81.2	81.2
DK	-1.2	85.0	87.0	86.0	84.0
D	5.4	84.4	86.4	88.4	87.6
GR	11.7	70.2	70.1	74.3	76.4
E	7.8	78.9	76.7	75.1	81.9
F	5.0	81.0	80.6	80.7	84.3
IRL	-10.8	82.2	80.0	72.8	74.2
I	7.8	79.2	83.6	84.1	83.9
L	2.9	84.5	88.1	86.6	85.1
NL	1.4	84.0	86.7	87.2	87.5
P	7.6	59.2	60.3	61.0	74.7
UK	4.8	82.7	85.1	84.3	86.2

SOURCE: DG II - BUSINESS SURVEY

FIGURE 4.2.5

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)



SOURCE: eurostat

TABLE 4.2.4

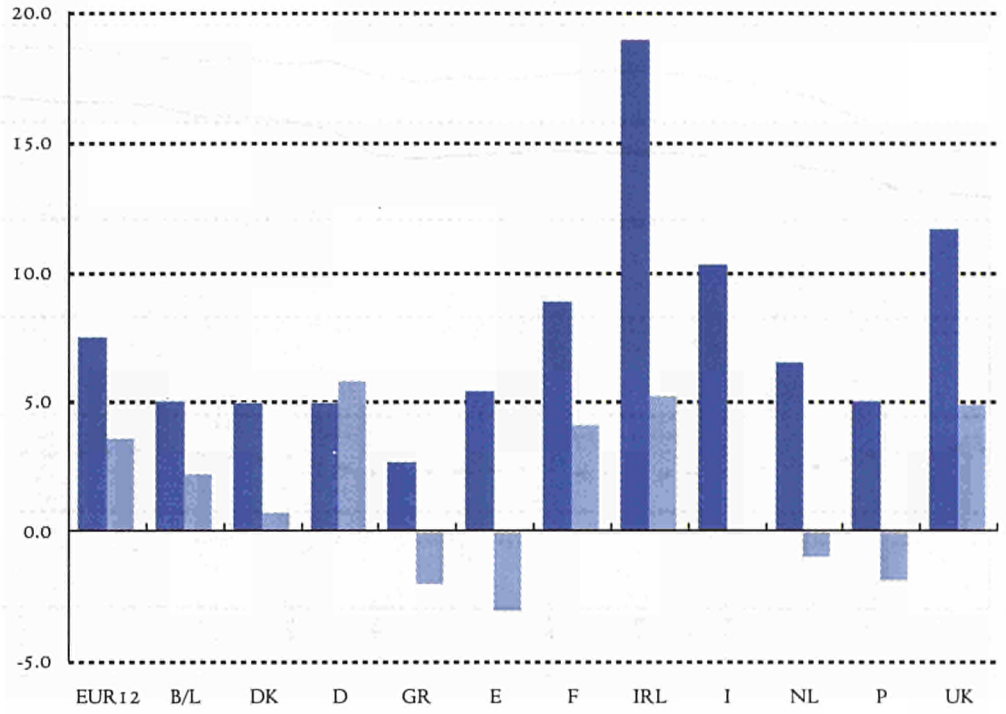
QUARTERLY EXTRA-EU TRADE INDEXES (1990=100)

	Latest quarter available		Exports		Imports		Terms of trade index
			Value	Volume	Value	Volume	
EUR12	07-95 ⇨	09-95	137.9	82.0	132.7	91.3	96.2
Growth rate, t/t-4 (%)			2.7	-0.3	4.7	-3.9	2.0
B/L	07-95 ⇨	09-95	140.7	90.2	139.5	108.6	99.1
Growth rate, t/t-4 (%)			3.1	13.1	10.2	-8.4	6.9
DK	07-95 ⇨	09-95	132.6	77.4	127.4	89.0	96.1
Growth rate, t/t-4 (%)			4.1	-13.2	6.1	-5.6	1.8
D	07-95 ⇨	09-95	135.5	90.1	140.6	82.9	103.8
Growth rate, t/t-4 (%)			4.9	-2.3	7.1	-8.1	2.2
GR	07-95 ⇨	09-95	127.2	116.4	86.2	434.3	67.8
Growth rate, t/t-4 (%)			1.6	40.9	4.7	5.7	2.7
E	07-95 ⇨	09-95	129.2	64.9	107.6	128.1	83.3
Growth rate, t/t-4 (%)			3.2	11.5	3.5	-1.0	0.2
F	07-95 ⇨	09-95	139.5	70.3	141.5	81.8	101.4
Growth rate, t/t-4 (%)			1.9	1.7	3.5	-6.5	1.5
IRL	07-95 ⇨	09-95	158.5	88.4	120.7	169.2	76.6
Growth rate, t/t-4 (%)			6.3	-12.8	5.5	23.0	-0.2
I	07-95 ⇨	09-95	135.5	84.2	110.7	126.7	81.7
Growth rate, t/t-4 (%)			-2.0	20.2	-1.7	10.5	0.2
NL	07-95 ⇨	09-95	138.5	99.8	138.7	87.4	100.2
Growth rate, t/t-4 (%)			0.8	-21.3	17.6	-19.3	16.6
P	07-95 ⇨	09-95	121.0	54.0	107.8	135.7	89.4
Growth rate, t/t-4 (%)			1.6	8.7	0.5	7.9	-1.1
UK	07-95 ⇨	09-95	145.2	74.9	140.4	75.3	96.6
Growth rate, t/t-4 (%)			2.2	-2.2	3.5	-3.9	1.2

SOURCE: eurostat

FIGURE 4.2.6

ANNUAL GROWTH RATE OF EXTRA-EU TRADE INDEXES (%) (1)



Export value
Import value

(1) Growth rates are based on the latest annual data available for each country. Please see the table below for the year concerned.

SOURCE: eurostat

TABLE 4.2.5

ANNUAL EXTRA-EU TRADE INDEXES (1990=100)

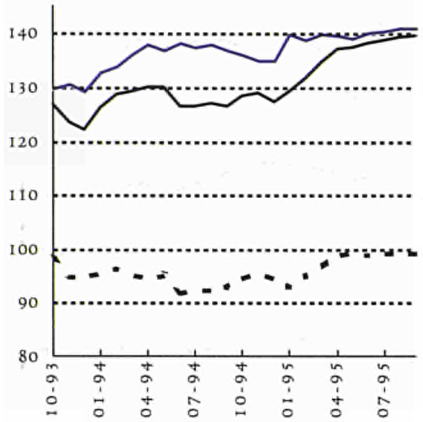
	Latest year available	Exports Value	Exports Volume	Imports Value	Imports Volume	Terms of trade index
EUR12	1994	135.7	82.2	127.1	97.4	93.6
Growth rate, t/t-1 (%)		7.5	4.3	3.6	6.2	-3.7
B/L	1994	137.1	82.6	128.7	116.8	93.8
Growth rate, t/t-1 (%)		5.1	18.2	2.2	29.6	-2.7
DK	1994	128.9	88.7	121.4	93.4	94.1
Growth rate, t/t-1 (%)		5.0	14.3	0.7	10.5	-4.1
D	1994	129.6	93.9	131.2	92.3	101.2
Growth rate, t/t-1 (%)		4.9	3.0	5.8	3.4	0.8
GR	1994	124.9	81.3	82.4	408.2	65.9
Growth rate, t/t-1 (%)		2.7	-10.6	-2.0	20.1	-4.6
E	1994	126.5	57.5	104.4	138.0	82.5
Growth rate, t/t-1 (%)		5.4	-8.4	-3.1	-0.7	-8.0
F	1994	139.2	71.3	136.5	89.1	98.0
Growth rate, t/t-1 (%)		8.8	3.2	4.1	8.3	-4.4
IRL	1994	155.0	97.3	115.0	142.2	74.1
Growth rate, t/t-1 (%)		19.0	4.7	5.2	29.9	-11.6
I	1994	139.5	70.9	112.8	121.8	80.8
Growth rate, t/t-1 (%)		10.3	0.1	0.1	7.8	-9.2
NL	1994	139.4	114.8	120.1	106.7	86.1
Growth rate, t/t-1 (%)		6.5	34.3	-1.0	13.6	-7.0
P	1994	118.4	52.2	108.9	123.6	91.9
Growth rate, t/t-1 (%)		5.1	-27.8	-1.9	17.3	-6.6
UK	1994	144.5	75.5	137.2	78.5	94.9
Growth rate, t/t-1 (%)		11.7	0.4	4.9	4.9	-6.0

SOURCE: eurostat

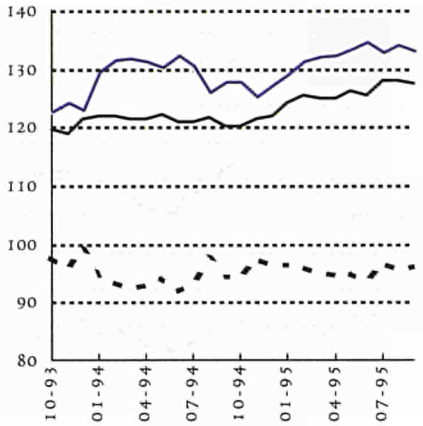
FIGURE 4.2.7

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)

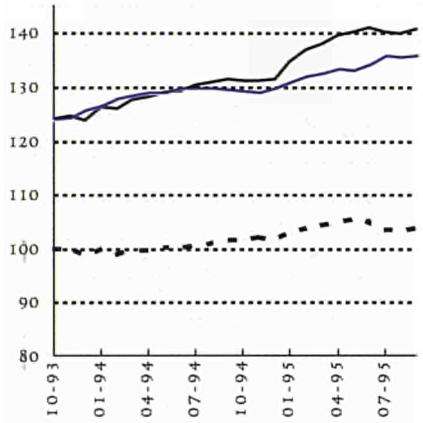
BELGIQUE/BELGIË, LUXEMBOURG



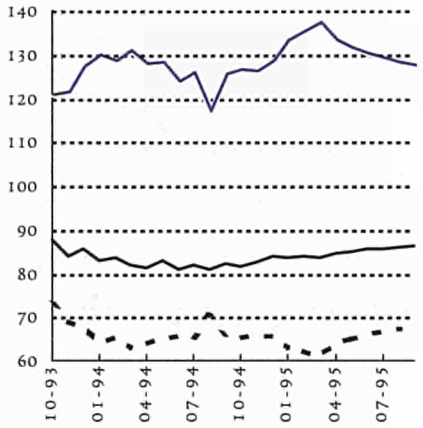
DANMARK



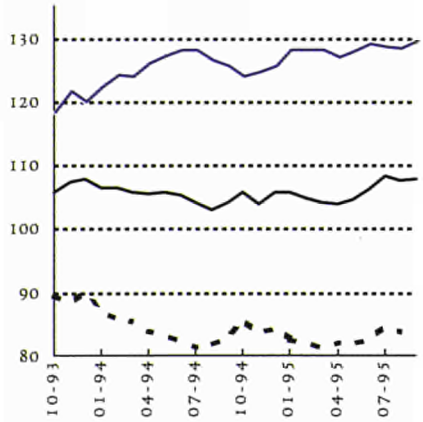
DEUTSCHLAND



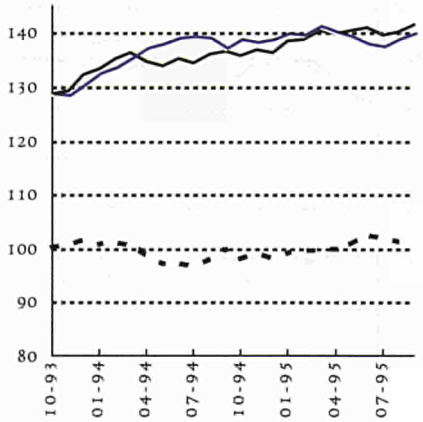
HELLAS



ESPAÑA



FRANCE



Export value

Import value

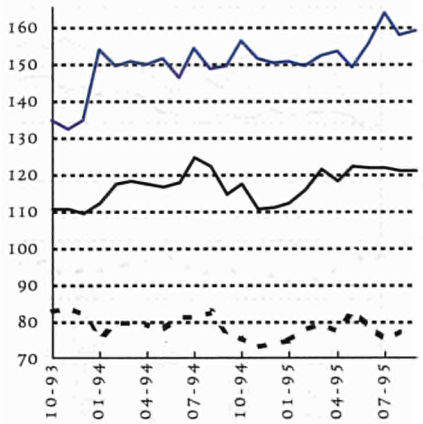
Terms of trade

SOURCE: eurostat

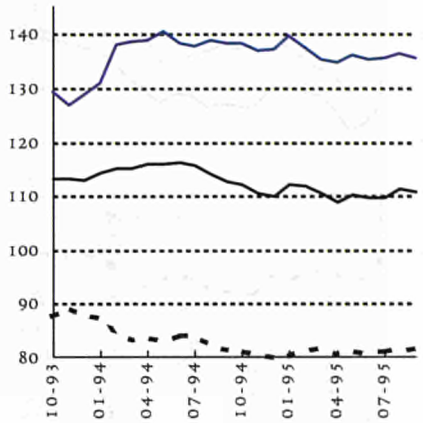
FIGURE 4.2.7

EVOLUTION OF EXTRA-EU TRADE INDEXES (1990=100)

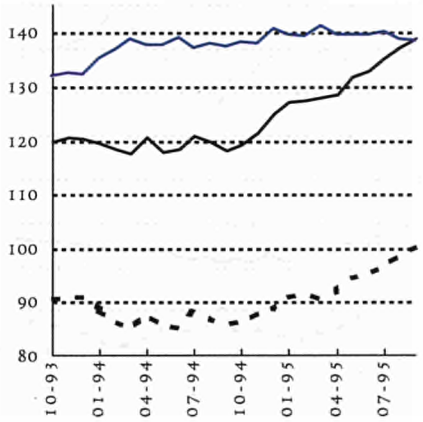
IRELAND



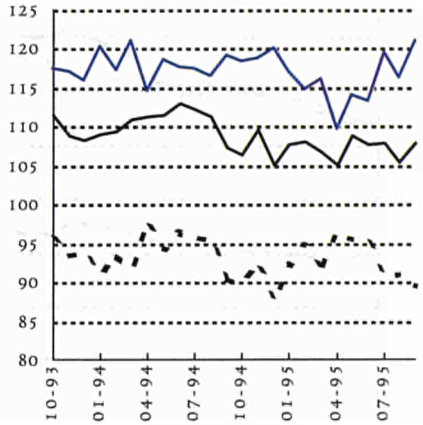
ITALIA



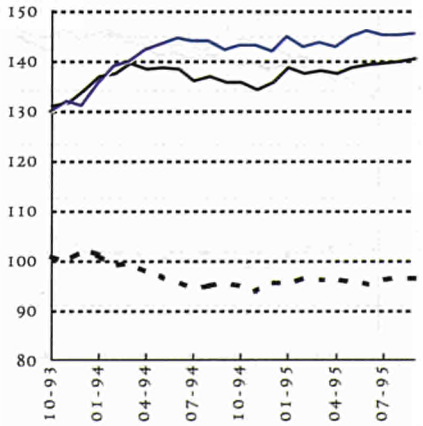
NEDERLAND



PORTUGAL



UNITED KINGDOM



Export value

Import value

Terms of trade

SOURCE: eurostat

eurostat

INDUSTRY CLASSIFICATION SYSTEM:

The industry groupings used in this publication are based on the NACE classification system. This classifies economic activity in terms of the nature of goods and services produced or by the nature of the production process employed. It is arranged on the decimal system and is subdivided into divisions (1-digit codes), classes (2-digit codes), groups (3-digit codes), sub-groups (4-digit codes) and items (5-digit codes). More information is contained in the "General Industrial Classification of Economic Activities within the European Community" published by Eurostat (1985 reprint of the 1970 edition). This publication is available from the usual outlets for EU publications. A major revision to the NACE classification has been incorporated in a Council Regulation (OJ L293 24th October 1990) and is being used for short-term indicators already, whereas structural indicators are still based on NACE 1970.

The broad groups used in Section 1 of this publication have the following definitions in terms of NACE Revision 1:

Total industry
C, D, E

Intermediate goods industries
13.1, 13.2, 14.1-14.5, 15.6, 15.7, 17.1-17.3, 20.1-20.5, 21.1, 21.2, 24.1-24.3, 24.6, 24.7, 25.1, 25.2, 26.1-26.8, 27.1-27.5, 28.4-28.7, 31.2-31.6, 32.1, 34.3, 37.1, 37.2, 41.0

Capital goods industries
28.1-28.3, 29.1-29.6, 30.0, 31.1, 32.2, 33.1-33.3, 34.1, 34.2, 35.1-35.3

Durable consumer goods industries
29.7, 32.3, 33.4, 33.5, 35.4, 35.5, 36.1-36.3

Non durable consumer goods industries
15.1-15.5, 15.8-16.0, 17.4-17.7, 18.1-18.3, 19.1-19.3, 22.1-22.3, 24.4, 24.5, 36.4-36.6

STATISTICAL SOURCES:

Most of the data in this publication is harmonized data supplied to Eurostat by the EUR12 Member States. The exceptions are:

1) The capacity utiliSation series which come from the business surveys carried out on behalf of the Directorate General for Economic Affairs of the Commission (DG II).
2) The estimates for the latest years' structural data, which are supplied by the DEBA European Economic Interest Group: DEBA GEIE, EBBC F , 2-6, Rue de Trèves,
L-2633 Senningerberg-Luxembourg;
tél: (352) 3410 4000.
3) The indices of industrial production for the USA and Japan, which are supplied by the OECD.

Data sources are indicated for each statistical table. Every effort has been made to include data for the EUR 15 Member States. The indices from 1991 onwards are on a post-unification basis and include East-Germany. However the structural data is still on a pre-unification basis unless otherwise stated.

Short term indicators:
The index of production measures changes in the volume of the gross value added created by industry, the branch indices being aggregated by means of a system of weighting according to gross value added (in principle, at factor cost). The indices are adjusted in two stages; firstly to take account of the varying number of working days in the month (except for Spain and Japan) and secondly by seasonal adjustment. The other short term indices in this publication are not adjusted for working days.

The index of producer prices shows (in the national currency of the Member State in question) changes in the ex-works selling prices of all products sold on the domestic markets of the various countries. The EU indices refer to overall weighted price changes. No seasonal adjustment is carried out on them.

For the indices of imports and exports, external trade data of industrial products were grouped according to the industrial NACE branch to which they belong. The value indices are all in ECU terms. The indices refer only to extra-EU trade. The indices are not seasonally adjusted.

The capacity utilisation series come from quarterly European Union business surveys, and are not seasonally adjusted.

The changes which are given in the tables show the growth rate for the moving average of the latest three months compared to the same three months of the previous year (t/t-4). These series are derived from data which has not been seasonally adjusted. Estimates are shown in bold. For annual data, estimates are made if data exists to October of the year concerned. In this case the estimates of the indexes are rounded to the nearest integer, as are the corresponding growth rates.

Structural data:
Data in the structural tables are in current ECU unless otherwise stated. They are based on the NACE 70 classification.

Data for value added at factor cost, turnover, labour costs, gross operating surplus and employment come from annual enquiries conducted by Member States involving all enterprises with 20 or more employees. The exceptions to this are Spain and Portugal (upto 1990) where the coverage is for local units of all sizes.

The employment data relates to persons employed excluding home workers. The definitions are standardized and so the figures are comparable across industries and countries.

Estimates are not supplied to Eurostat by Member States for the smaller firms not covered by the enquiries, and the figures under-report the actual values.

Gaps in Eurostat's data have been filled by estimates supplied by DEBA. Thus EU totals often contain estimates for missing countries. Estimates are shown in bold.

SIGNS AND ABBREVIATIONS:

EU: European Union of 12
EUR 12: European Union of 12
EUR 15: European Union of 15
B/L: Belgo-Luxembourg Economic Union
ECU: European currency unit
Mio: Million
Billion: Thousand million
N/A: Not available
%: Percent
1990 = 100: Reference year

[illegible]

COMPARATIVE ANALYSIS OF GROWTH AND INVESTMENT

IN BRIEF....

- ★ THIS STUDY RELATES TO THE MEMBERS OF THE "TRIAD," I.E. THE EUROPEAN UNION, THE UNITED STATES AND JAPAN, DURING THE YEARS 1985-1990, AND CONSIDERS IN PARTICULAR THEIR RATES OF GROWTH OF INDUSTRIAL OUTPUT AND INDUSTRIAL INVESTMENT DURING THAT PERIOD
- ★ INVESTMENT IS AN INDICATOR OF GROWTH POTENTIAL WHILE THE STUDY OF THE LIFE CYCLE, BY REVEALING THE LINK BETWEEN PRODUCTION AND INVESTMENT, IS USEFUL IN FORECASTING A COUNTRY'S FUTURE INDUSTRIAL SITUATION
- ★ COMMUNITY OUTPUT GREW BY A TRUE ANNUAL AVERAGE 3.6% BETWEEN 1985 AND 1990. MOREOVER, THERE SEEM TO BE MORE INDUSTRIES WHICH CAN BE DESCRIBED AS IN THE PHASE OF GROWTH THAN THERE ARE SHOWING THE CHARACTERISTICS OF THE START-UP PHASE
- ★ DURING THIS PERIOD INVESTMENT IN THE UNITED STATES DECLINED BY AN ANNUAL -8% ON AVERAGE.
- ★ ALTHOUGH JAPANESE INVESTMENTS INCREASED SHARPLY, FACTORS SUCH AS THE APPRECIATION OF THE YEN MEAN THAT INVESTMENT AND PRODUCTION ARE LIKELY TO BE REDIRECTED TOWARDS DOMESTIC CONSUMPTION

Market share at world level does not depend exclusively on price-competitiveness. In fact, customers are looking for product quality and distinctiveness which is reflected upstream in more dynamic Research and Development departments and in strategic positioning, specialisations and niches. In such a context, investment policy plays a major role. It must consider problems such as the optimal combination of production factors, geographical location and potential market sphere, the launching of new products and the exploitation of new technologies. However, this determination must also come to grips with economic indicators such as the economic climate and interest rates. As a result, despite the heterogeneous constraints and targets, comparing investments in Japan, the United States and the European Union can help us to elucidate recent trends in market shares, growth rates and development potential.

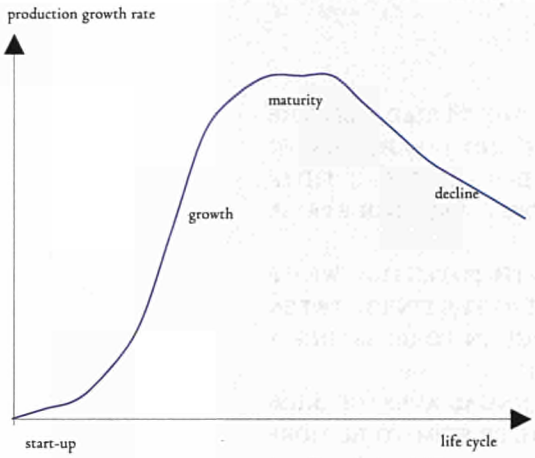
Classifying the industries of each member of the triad according to their position in the life-cycle helps in establishing international and intersectoral comparisons. This cycle comprises four phases: start-up characterised by slow growth and high investment; a growth phase of continued high investment followed by maturity, a period during which growth stagnates, profits are high and investment becomes replacement investment, followed finally by decline. From this we can see that investment is important in high growth sectors.

IN THIS SECTION:

Comparative analysis of growth and investment 66

FIGURE 5.1

LIFE CYCLE



SOURCE: eurostat

However, account must also be taken of the fact that some industries are more investment-intensive than others. This may be because the lifetime of the products is relatively short, because the industry in question has substantial fixed investment costs or, finally, because it is a high-technology sector, a breeding ground for research and development.

But investment has other determinants such as income calculated according to the multiplier index (positive correlation) and interest rates (negative correlation), even, in some circumstances, the level of exports, i.e. external demand (positive correlation). The fact is that although from the macro-economic point of view there is no link either between exports and investments, or between exports and production, the relations between each pair of variables actually depend on the development strategy adopted by each country. For example, Japan's growth is export-driven whereas other countries, particularly in Latin America, have a strategic policy of substituting new national production for imports. This is why countries can have varying investment levels to achieve the same production dynamism.

Finally, investment means more than simply improving the production process: it also involves direct investments abroad, particularly in geographic areas of actual or expected high growth. Furthermore, the current trend towards partnership agreements will inevitably lead to lower investment levels as a result of the impact of synergy, information exchange and joint technological research while at the same time increasing installed capacity and minimising capital investments.

TABLEAU 5.1

SECTOR SHARE
1985-1990
(%)

	Share of sector investment in total industrial production			Share of sector production in industrial production		
	EUR	USA	JAPAN	EUR	USA	JAPAN
Oil refining	2.6	3.0	1.5	5.3	4.9	2.8
Metals	5.7	4.9	7.8	5.6	4.6	6.7
Non-metallic mineral products	5.4	2.7	3.7	3.6	2.2	3.4
Chemical industry	14.0	13.2	9.2	11.0	10.6	7.3
Man-made fibres	0.5	1.1	0.8	0.4	0.8	0.4
Metal articles	6.3	4.4	5.4	6.4	5.5	6.5
Mechanical engineering	7.2	6.7	7.1	8.2	7.6	8.5
Office machinery	2.0	2.9	3.4	1.8	2.4	3.2
Electrical engineering	10.1	13.1	18.6	9.2	10.2	15.3
Motor vehicles and parts	10.8	9.3	13.7	9.5	9.8	12.6
Other means of transport	2.3	4.1	0.9	2.6	4.2	1.3
Precision instruments	1.0	1.7	1.8	0.9	1.6	1.6
Food, drink and tobacco	12.0	9.3	8.2	16.2	14.0	11.0
Leather	0.2	0.1	0.1	0.4	0.2	0.2
Footwear and clothing	1.3	0.5	0.7	2.6	1.6	1.8
Timber	2.3	2.3	1.0	2.6	3.1	2.6
Paper, printing and publishing	7.4	13.3	8.1	5.8	9.3	6.7
Rubber and plastics	4.8	3.8	5.0	3.7	3.2	4.3

SOURCE: eurostat

In real terms, mean annual growth in total industrial output for the period 1985-1990 was 3.6% for the European Union, 2.2% for the USA and 5.4% for Japan. For investments, the corresponding rates were 7.0%, -8.0% and 5.4%. Finally, the Union's extra-Community exports shrank by 1.6%; US exports grew by 0.7% and Japanese shrank by 1.1%. Thus, although real growth was high for all three members of the triad, the figures for investments and exports show substantial differences in opposite directions.

TABLE 5.2

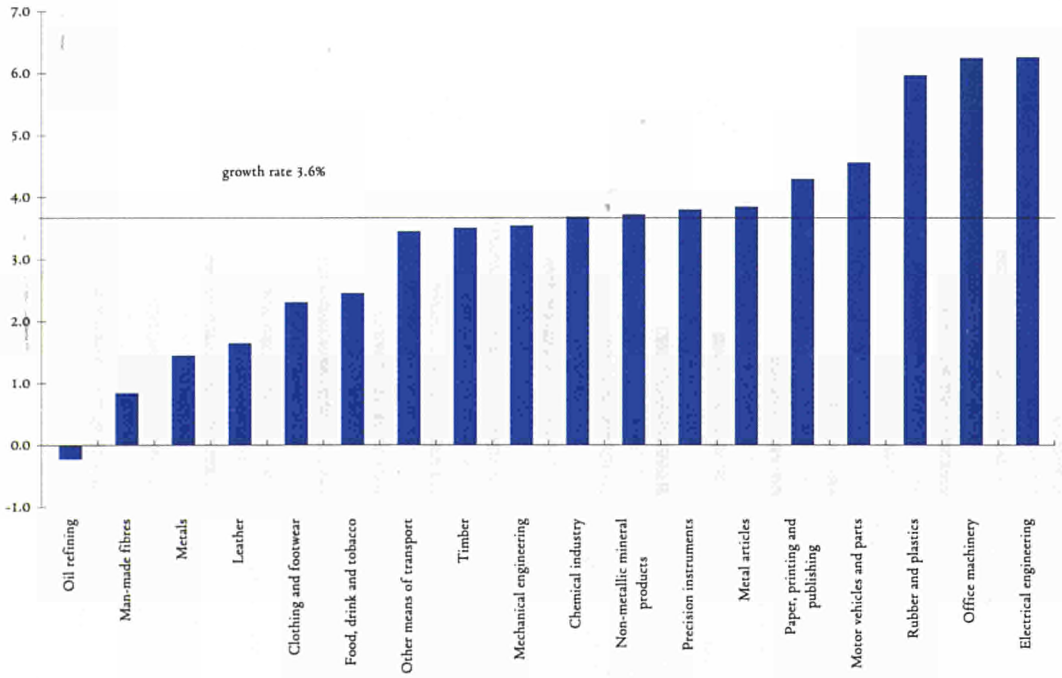
CAPITAL INTENSITIES COMPARED (RATIO)

		EUR	USA	JAPAN
14	Oil refining	1.1	1.3	0.6
22	Metals	1.0	0.8	1.3
24	Non-metallic mineral products	1.3	0.7	0.9
25	Chemical industry	1.1	1.1	0.7
26	Man-made fibres	0.6	1.5	1.1
31	Metal articles	1.2	0.8	1.0
32	Mechanical engineering	1.0	1.0	1.0
33	Office machinery	0.8	1.1	1.3
34	Electrical engineering	0.8	1.0	1.4
35	Motor vehicles and parts	1.0	0.8	1.2
36	Other means of transport	1.0	1.7	0.4
37	Precision instruments	0.7	1.2	1.3
41	Food, drink and tobacco	1.2	0.9	0.8
44	Leather	1.8	0.5	0.4
45	Footwear and clothing	1.4	0.6	0.8
46	Timber	1.2	1.2	0.5
47	Paper, printing and publishing	0.8	1.4	0.9
48	Rubber and plastics	1.1	0.8	1.1

SOURCE: eurostat

FIGURE 5.2

ANNUAL AVERAGE GROWTH OF THE TRIAD 1985-1990 (%)



SOURCE: eurostat

For the triad over the period 1985-1990, the sectors experiencing the highest production growth rates were electronics, office machinery and plastics. The sectors which had the lowest growth rates, on the other hand, were oil refining (the only sector to record negative growth), synthetic fibres and metals. Generally speaking, sectors recording strong growth were advanced technology sectors which are commercially dynamic, frequently oligopolistic and propagators of new technologies. In Europe, the most dynamic sectors were the rubber and plastics processing sectors with almost 7% of real annual growth, electronics (5.8%), paper (5.4%) and

TABLE 5.3

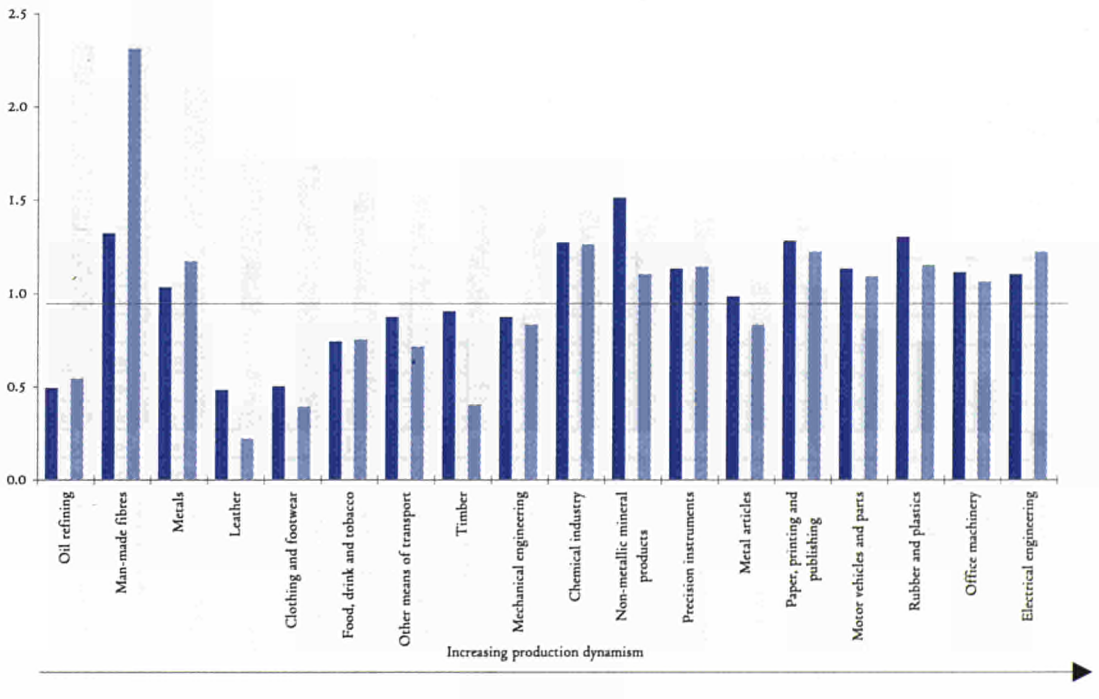
PRODUCTION GROWTH AND CAPITAL INTENSITIES 1985-1990 (AVERAGE GROWTH RATE, %)

	Average growth rate, TRIAD	Scale	Product of the compared capital intensity and scale value		
			EUR	USA	JAPAN
Oil refining	-0.2	0.0	0.0	0.0	0.0
Man-made fibres	0.8	16.5	10.6	23.9	17.6
Metals	1.4	25.7	24.3	20.6	33.2
Leather	1.6	28.8	50.4	14.4	12.0
Clothing and footwear	2.3	39.0	55.9	23.0	29.5
Food, drink and tobacco	2.5	41.3	48.9	37.8	33.4
Other means of transport	3.5	56.7	53.7	94.9	21.1
Timber	3.5	57.5	67.9	68.5	30.2
Mechanical engineering	3.5	58.1	59.4	55.5	58.9
Chemical industry	3.7	60.3	67.9	64.3	44.6
Non-metallic mineral products	3.7	60.9	79.7	40.2	54.3
Precision instruments	3.8	62.1	42.6	73.8	79.0
Metal articles	3.8	62.7	71.9	50.3	62.0
Paper, printing and publishing	4.3	69.7	55.1	99.4	60.3
Motor vehicles and parts	4.6	73.8	71.3	61.5	90.8
Rubber and plastics	6.0	95.5	100.3	79.9	104.6
Office machinery	6.3	99.9	75.2	110.5	126.7
Electrical engineering	6.3	100.0	75.7	97.9	139.2

SOURCE: eurostat

FIGURE 5.3

CAPITAL INTENSITY AND GROWTH RATE BY SECTOR 1985-1990 (% RATIO)



SOURCE: eurostat

transport equipment (5.2%). The synthetic fibres sector has been shrinking at an annual average of around 3%. The electronics industry, which has a rising exports/production ratio, is marked by a reduction in manpower and a brake on investment. The available funds go to Research and Development, to replace obsolete equipment and to restructure the production process in order to achieve productivity gains. It has been suggested elsewhere that European growth could last, improving business competitiveness, efficient manufacturing and innovative products or processes. The European chemicals industry, for example, has adopted a policy of specialisation necessitating intensive recourse to new technologies.

For the United States, production rose significantly in the transport, plastics, chemicals and precision instrument sectors while Japan had average growth rates of 15% for the office machinery sector and 10% for electronic engineering. Oil refining, however, recorded an annual average decline of almost 3%.

The figures for investment are of greater magnitude whether they are positive or negative. Thus, Europe's average rate of investment growth was higher than its production growth in almost all sectors with the exception of office machinery and electronic engineering which, incidentally, were among the most dynamic sectors. In addition, it should be noted that for most sectors there was some correlation between rates of production growth and investment. The concentration of industries showing the features of the growth phase - that is, high growth rates in both production and investment - does not prohibit the deployment of substantial efforts in R & D to promote tomorrow's industries, which may arise from the exploitation of new technology, the discov-

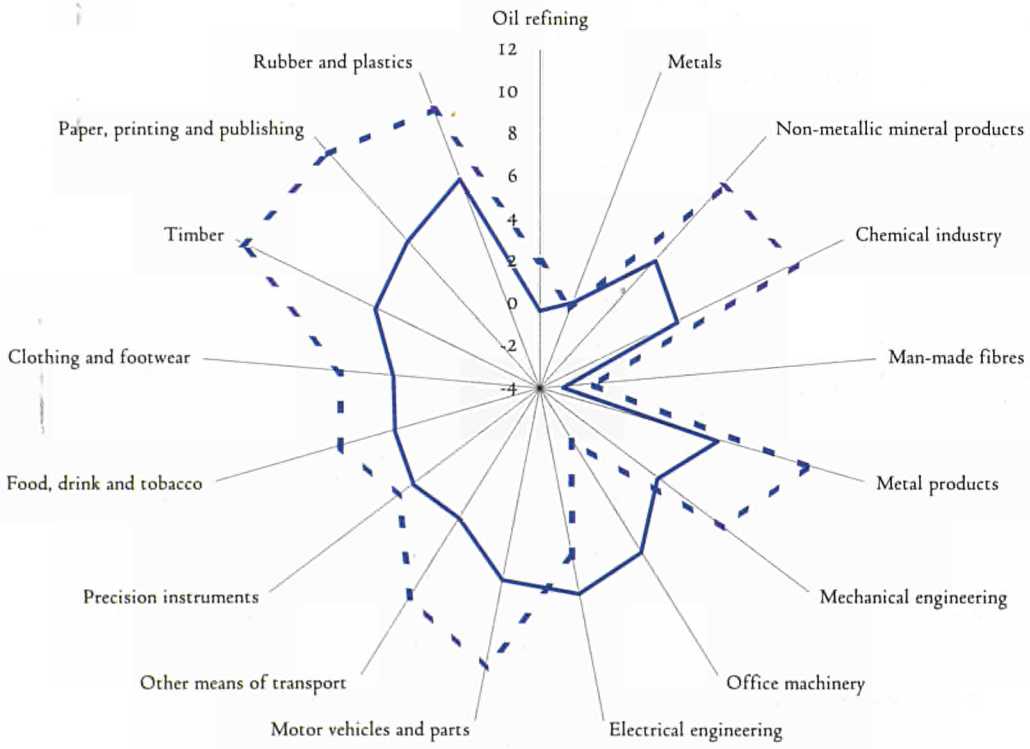


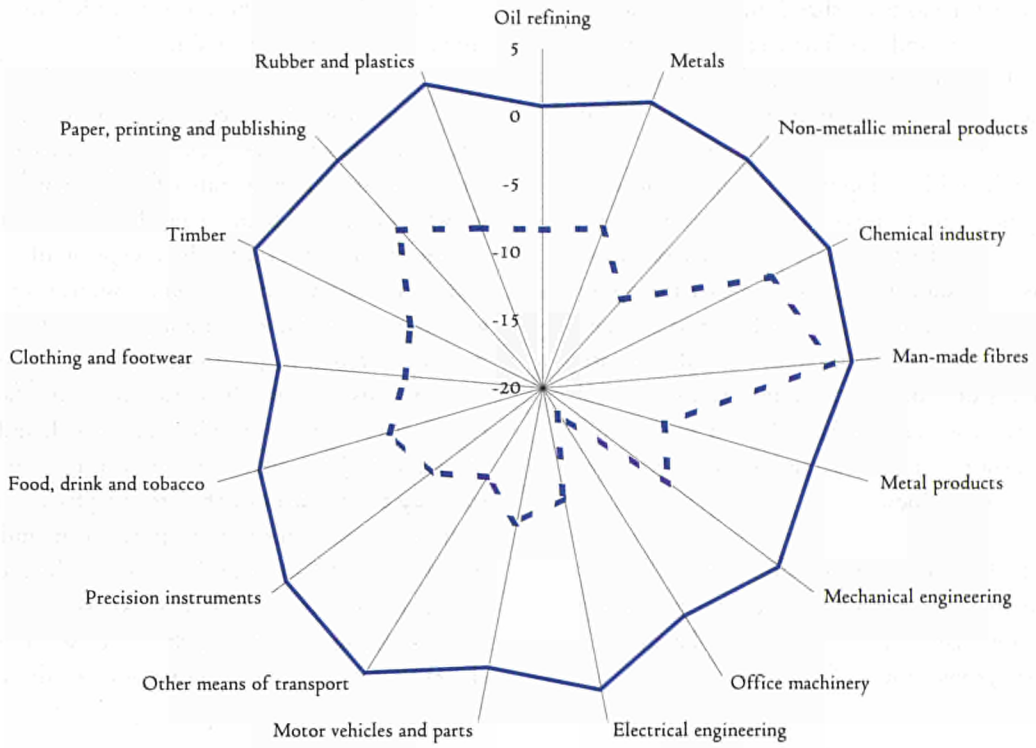
FIGURE 5.4

ANNUAL AVERAGE EUROPEAN GROWTH RATE 1985-1990 (%)

SOURCE: eurostat

FIGURE 5.5

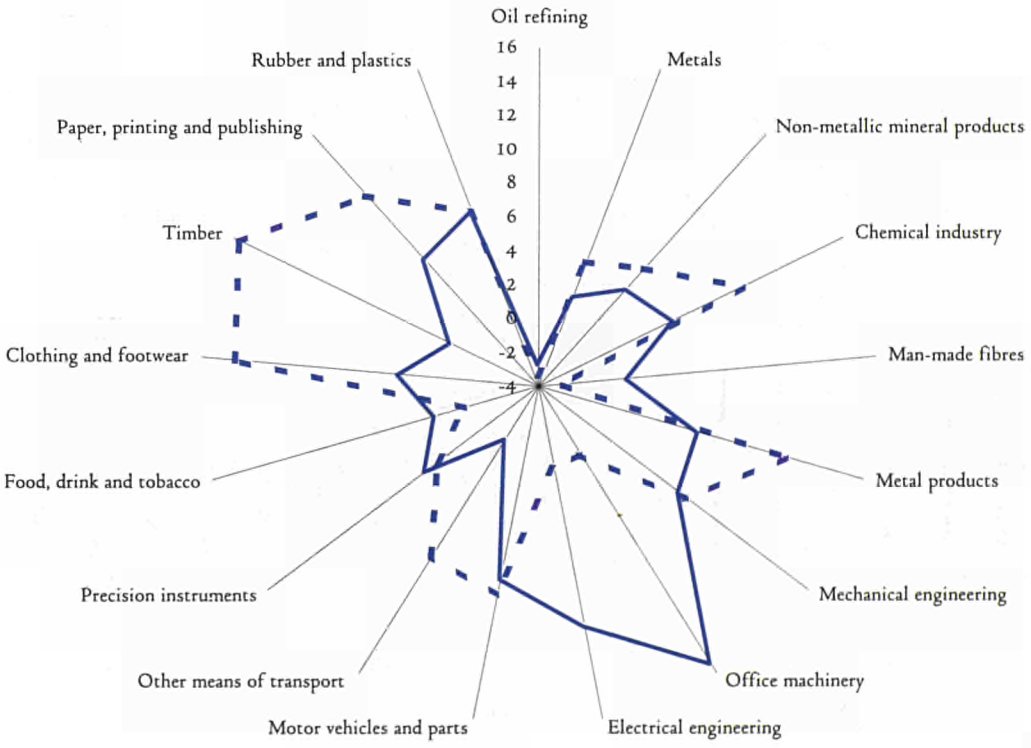
ANNUAL AVERAGE AMERICAN GROWTH RATE 1985-1990 (%)



SOURCE: eurostat

FIGURE 5.6

ANNUAL AVERAGE JAPANESE GROWTH RATE 1985-1990 (%)



SOURCE: eurostat

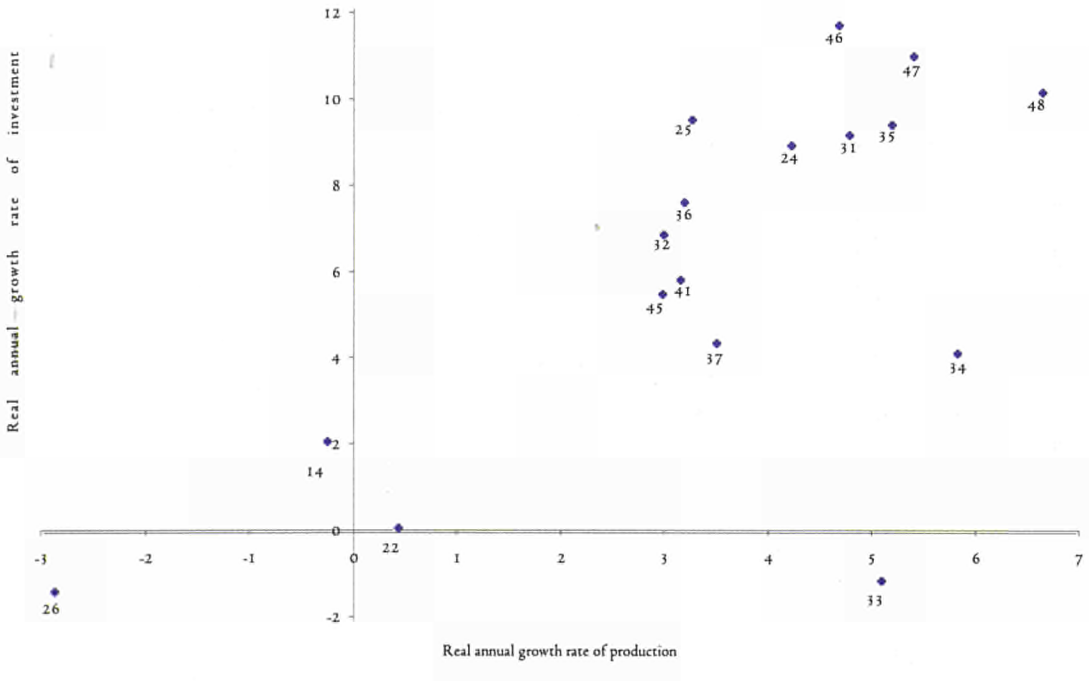
ery of new materials or from recycling techniques. Finally, amongst the industries with weak or negative growth in production and investments we find the synthetic fibres sector, which is facing competition from Asian manufacturers.

The situation in the United States is somewhat different: for every sector the true rate of growth in investments is below that of production. 17 of the 18 sectors covered record a real decline in investments whereas the only positive figure, that for synthetic fibres, is an increase of only 1.5%. The concentration of industries in the growth area is less than in Europe. The centre of gravity of American industry is shifting towards, or at least assuming the features of, the later phases of the life cycle, whilst few emerging industries can be noted. It can be assumed that the decline in interest rates has stimulated investment and enabled the launching of new products and the use of leading-edge technologies.

For Japan, finally, the growth rates for investments generally exceed those for production. In some sectors, however, production has been higher than investment: electronics. precision instruments and office machinery all experienced higher than average industrial growth. Although two of the 18 sectors under review (synthetic fibres and oil refining) had negative growth rates, another six had growth rates higher than 10%. Furthermore, the rising returns on investment in South-East Asia are encouraging Japanese business to invest in the second-generation newly industrialised countries, whilst investments in Japan itself are being directed towards quality and technology-intensive activities. It can be seen also that the most investment-intensive industries are those whose production growth rates are highest: electronics, publishing, plastics and chemicals.

FIGURE 5.7

MATRIX OF THE EUROPEAN INDUSTRIAL CYCLE 1985-1990 (%) (NUMBERS REFER TO 2-DIGIT NACE 70 GROUPINGS)



SOURCE: eurostat

The coefficient of variance of capital intensity within the triad is 33.7%. This suggests that investment efforts vary according to sector. For the European Union the coefficient of variance is 27.3%, for the United States 30.1% and for Japan 47.3%. The interval is considerably wider for Japan, with capital intensities ranging from 0.2 for the leather industry to 2.3 for synthetic fibres. In fact, if we exclude the synthetic fibres sector, Japan's capital intensity ratio falls to 32.0%.

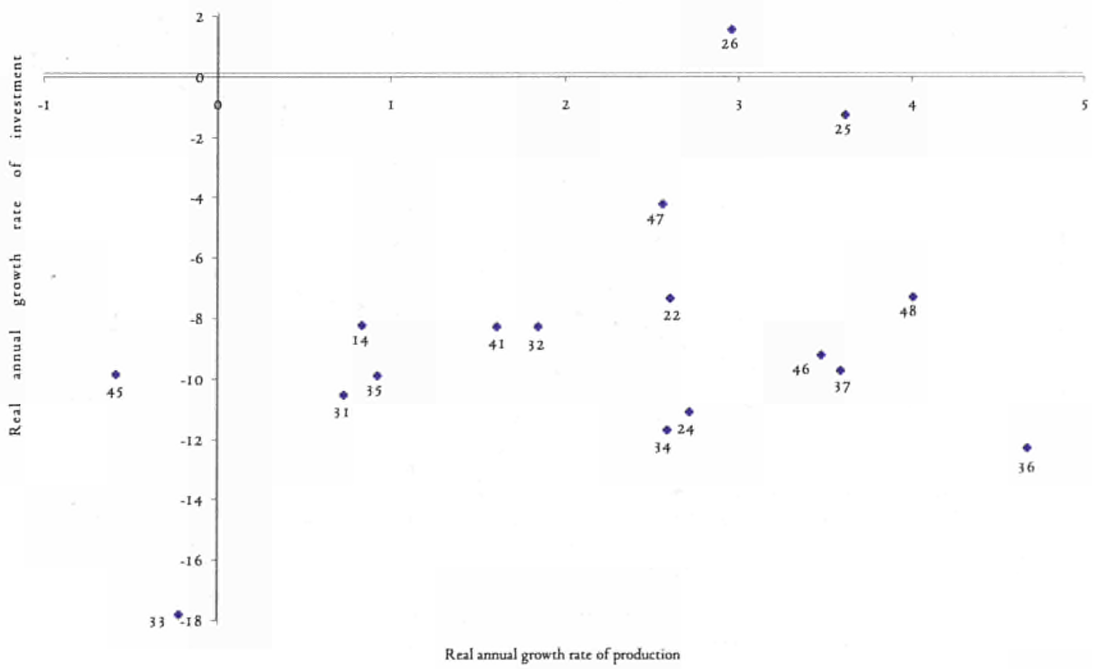
Specialisation differences within the triad and at sectoral level are slight with a coefficient of variation of 12%. Sectoral variations are highest in the timber industry (37.6%), synthetic fibres (32.2%), and footwear and clothing (21.2%). But the corresponding values are very low for chemicals (1.2%), mechanical engineering (2.7%) and precision instruments (2.9%).

The coefficients of variance thus seem smallest for the industries where the production growth rate is above average. The leather industry's share of total industry is less than 1% whilst its capital intensity variance is 38%, and it has been ignored for these computations.

It is rare that a sector has a low capital intensity, i.e. less than one, for one zone of the triad, while it is high for the other two, or vice versa. In fact this occurs in only one sector, the motor industry, and even then the divergence is only 0.95%. This means that some industries are more capital-intensive than others but also that investment efforts do not differ significantly between Europe, the United States and Japan. Even if the coefficients of variance are small, of the triad it is Japan which has the highest capital intensity in low-growth industries such as metals and synthetic fibres, Europe places the emphasis on investment in intermediate-growth

FIGURE 5.8

MATRIX OF THE AMERICAN INDUSTRIAL CYCLE 1985-1990 (%) (NUMBERS REFER TO 2-DIGIT NACE 70 GROUPINGS)



SOURCE: eurostat

eurostat

sectors such as the motor industry and chemicals while in relative terms the United States invests more in high-growth sectors such as electronics, office machinery and paper.
Of the 18 sectors covered, ten have a capital intensity greater than 1.0 and three - oil-refining, leather and clothing, all of which account for a relatively low share of total industrial production - have intensities of less than 0.5. In addition, apart from synthetic fibres and perhaps even metals, it is true to say that the higher the average annual growth the higher the probability that the intensity will be greater than one. This should mean that industries receiving the highest investment in relative terms are the most dynamic. However, such a correlation tells us nothing about the cause-and-effect relationship: do high-growth sectors attract investment or does investment generate greater production?

If these capital-intensity ratios are multiplied by the average annual growth rates we can identify the sectors which have both high production growth and a capital intensity ratio greater than one. These are plastics and paper, electronics, office machinery and motor vehicles.
Furthermore, in Europe, the largest industrial sector, food, beverages and tobacco, has a capital intensity of less than one. It is true that this is not a leading-edge technology sector although it is one in which innovation is increasingly evident.
More generally, the matrix positioning the sectors in terms of their share of total industry and their capital intensity presents an extensive and rather high scatter diagram. For the United States the biggest sectors, and also smaller industries such as precision instruments and office machinery, also have a high intensity ratio, i.e. greater than 1.2.

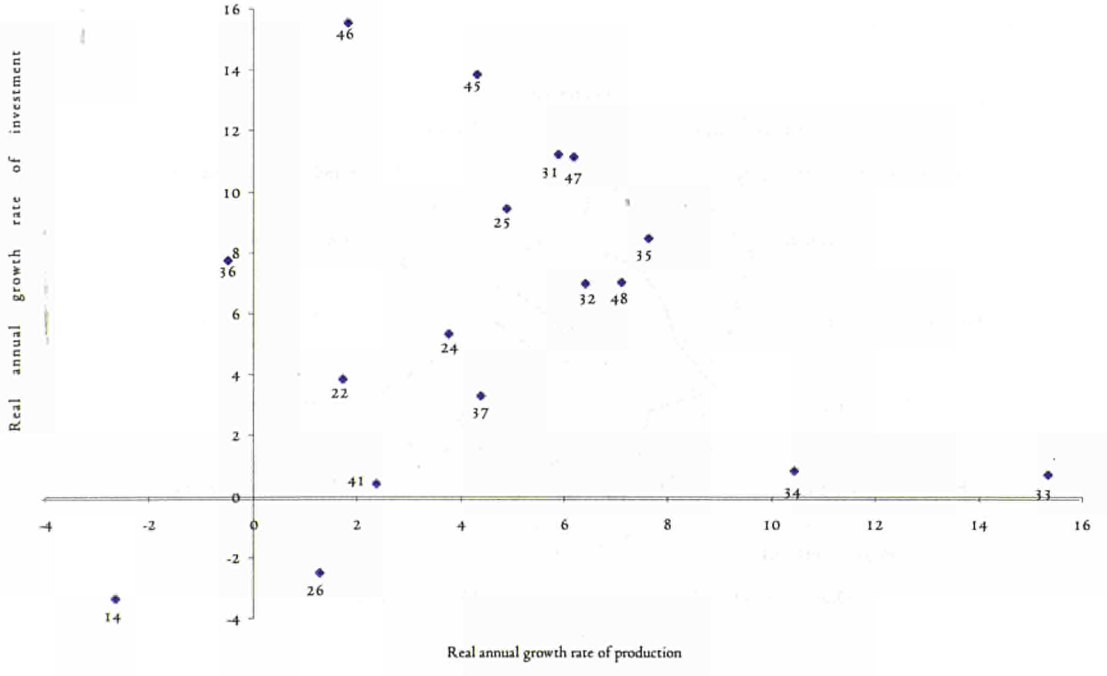


FIGURE 5.9

MATRIX OF THE JAPANESE INDUSTRIAL CYCLE 1985-1990 (%) (NUMBERS REFER TO 2-DIGIT NACE 70 GROUPINGS)

SOURCE: eurostat

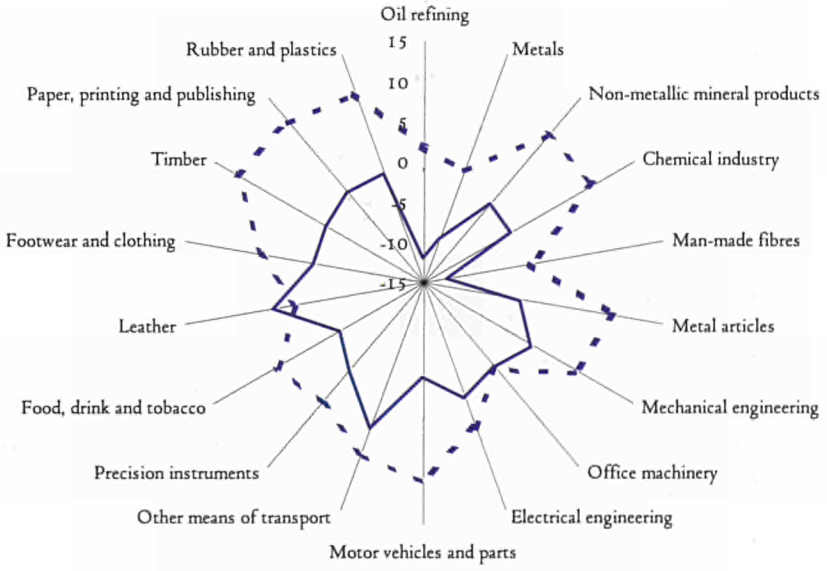
In Japan, finally, capital intensity is high for sectors accounting for an average share of total industry, low for small industries and varied for major sectors.

Lastly, we can also calculate comparative capital intensity ratios, i.e. divide the sectoral investment share of each member of the triad by the overall average intensity. If this ratio is greater than one, it means that investment effort is higher, comparatively speaking, in this country or group of countries than in the triad. This method singles out the leather and clothing sectors in Europe, the synthetic fibres and paper sectors in the United States, and electronics and office machinery in Japan. When these ratios are multiplied by the industry's global rating on the growth scale we get a scale which combines growth and the comparison of investment intensity. In this way we can identify the two scales and see the investment trend - towards current high growth sectors, sectors in the making - and the rationale behind it.

We also considered exports in our analysis, because depending on a country's strategy, investment satisfies internal demand and exports to varying degrees. Thus, for almost all industries, extra-Community export growth lags behind investment growth although the need for competitiveness has been felt principally in the electronics and mechanical engineering sectors. The exchange value of the deutschemark may account for this reduced dynamism of extra-Community exports, while simultaneously German unification has generated an increase in demand and has been an important outlet for the production of other Member States.

FIGURE 5.10

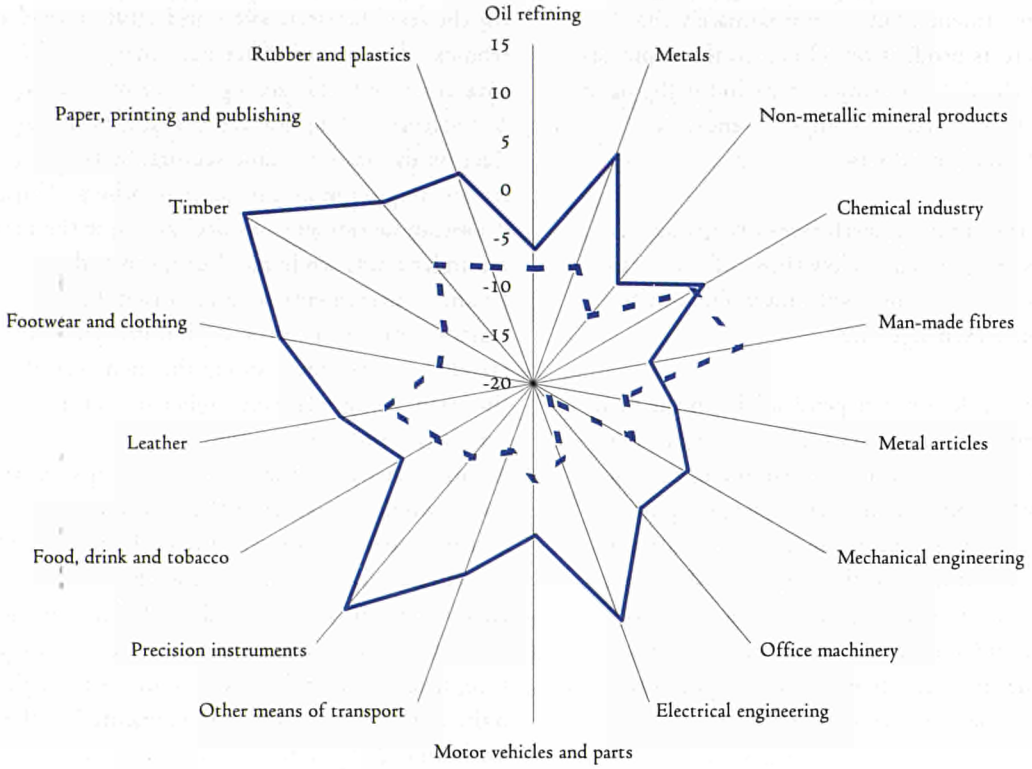
ANNUAL AVERAGE EUROPEAN GROWTH RATE 1985-1990 (%)



SOURCE: eurostat

FIGURE 5.11

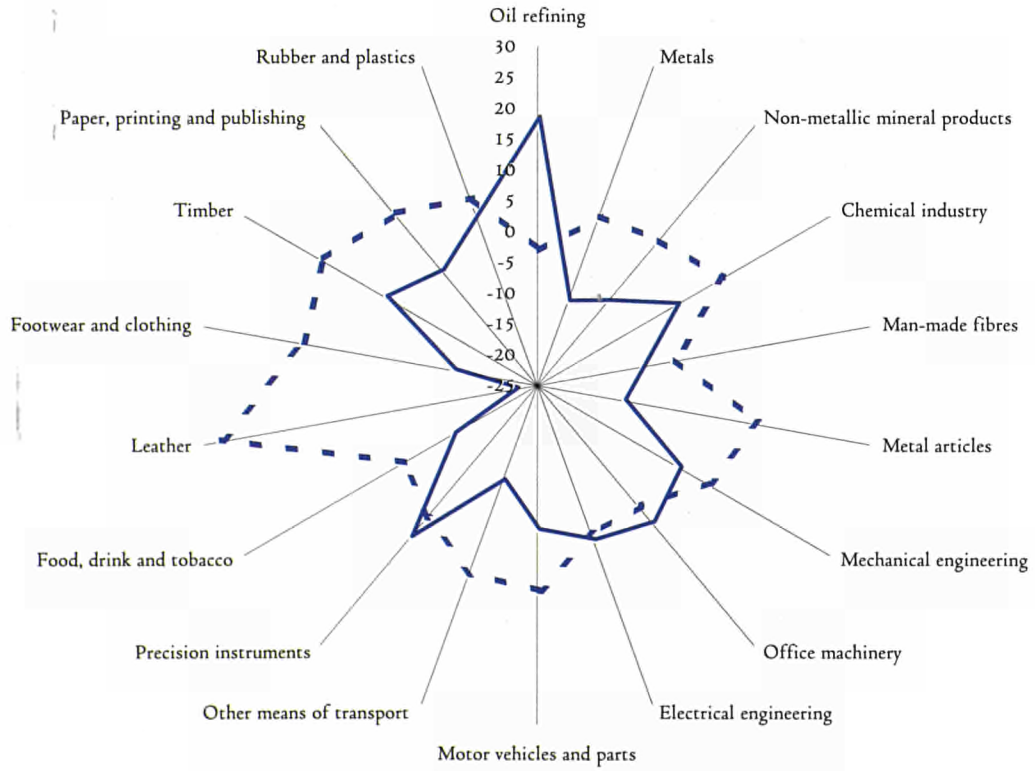
ANNUAL AVERAGE AMERICAN GROWTH RATE 1985-1990 (%)



SOURCE: eurostat

FIGURE 5.12

ANNUAL AVERAGE JAPENESE GROWTH RATE 1985-1990 (%)



SOURCE: eurostat

In the United States, exports are growing faster than investments, but at approximately the same rate as production. However, the depreciation of the dollar during this period is the main cause of the increased competitiveness of United States products.

Lastly, the annual growth rates of Japanese exports are generally below those of production and investments, the result, inter alia, of the yen/dollar exchange rate.

Investment does not depend solely on the manufacturing cycle: factors such as interest rates influence the investment decision and can significantly modify a country's - or group of countries' - position in the life cycle matrix as well as its future growth prospects. Moreover, the increase in partnership agreements leads to synergy and a decline in investment, whilst at the same time an active policy is required to promote the industries of the future.

To varying degrees the most dynamic sectors for the triad between 1985 and 1990 were electronics, plastics and office machinery. Investment efforts vary significantly in the various sectors and do not depend solely on production dynamism. Some sectors, by their nature, require more capital than others. Thus, American investment has declined over the period under study while real European and Japanese investments have increased. In contrast, in any given sector, capital intensity is relatively homogeneous among the members of the triad, being relatively higher in sectors with very high production growth.
A similar analysis of later years, perhaps 1990-1995, would be useful in that it would show sectors' movements in the life cycle matrix and the industrial cycles of each member of the triad. The components used would lend themselves to a dynamic interpretation of the industrial, investment and research policies needed, policies which can only be implemented in the medium or long term.

COMPETITIVENESS IN INDUSTRY

IN BRIEF....

- ★ CREATION OF A DATABASE ON INDUSTRIAL COMPETITIVENESS
- ★ NUMEROUS DIFFERENT INDICATORS AVAILABLE
- ★ DATA SERIES OFTEN AVAILABLE FROM 1980-1995
- ★ COUNTRY COVERAGE NORMALLY AT OECD LEVEL
- ★ PERFORMANCE, PRICE, COST, MARKETING AND MACRO-ECONOMIC INDICATORS INCLUDED

During the summer of 1995, Eurostat produced for the first time a database on industrial competitiveness. The database comprised figures across a wide variety of industrial sectors and countries, giving data for the period 1980-1995 when available. The series presented drew from an extensive number of international sources and aimed to provide the analyst with a useful tool for evaluating competitiveness in manufacturing industry. Furthermore, Eurostat hopes to develop the coverage of the existing indicators as well as increasing the number of indicators available.

With economic policy balancing a number of different objectives, including growth and employment, it is clear that one means of moving towards a respectable level of economic performance is to ensure the foundations of a competitive industrial base. During the last twenty years there has been a significant change in the competitive performance of the world's leading industrial nations. Indeed, perhaps the most marked development has been the creation and emergence of highly competitive industrial bases in a number of countries. There has been considerable competition from regions such as south-east Asia and Latin America, where labour costs and income levels are considerably lower than in the western industrialised world.

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Interpretation of data series 80
Measures and performance 81
Cost and price indicators 82
Marketing and future plans 84
Classification plan 85

The concept of competitiveness is one that remains difficult to define, with no agreed consensus. First of all, competitiveness may be considered at a number of differnet levels: ranging from an individual product to an individual enterprise to an international/multinational group to a geographical area or even a national economy.

By studying a particular product, it may be possible to say that market share gained by a European firm for one of its products will normally lead to a loss of market for another firm (European or non-European, given constant market size). Such an analysis assumes a zero-sum game, which may exist at the single product level. However, when aggregating over products, markets and industries, competitiveness should be seen as a dynamic game, with possible benefits for all parties.

A product based study is at present hampered by a lack of information. Eurostat will have product statistics available in the medium-term to carry out analysis at this level (through the PRODCOM project). Furthermore, the collection of data is hindered by the fact that many firms are now multi-national and operate in the global environment. Hence, commercial secrecy prevents large amounts of information reaching the public domain. In addition, multi-national firms are increasingly trading their own products. This has led to the devaluing of traditional foreign trade based performance measures of competitiveness, as the proportion of intra-firm trade has increased significantly.

Moving on from a product to an enterprise-based analysis, competitiveness has been defined as, the ability of the firm, on a sustainable basis, to satisfy the needs of its customers more effectively than its competitors, by supplying goods and services more efficiently, in terms of price and non-price factors, than these competitors. This approach may be seen to have its limitations too, in that the business environment is directly affected by the decisions of administrations on macro-economic policy. For example, infrastructure development or tax incentives to encourage research and development play a direct role in the competitiveness of businesses. Thus, an alternative definition of competitiveness, suited far more to the global economy can be derived: national competitiveness refers to a nation state's ability to produce, distribute, and service goods in the international economy in competition with goods and services produced in other countries, and to do so in a way that earns a rising standard of living. Therefore, it is important to note that competitiveness may be analysed across a spectrum of different domains from the product to the national economy.

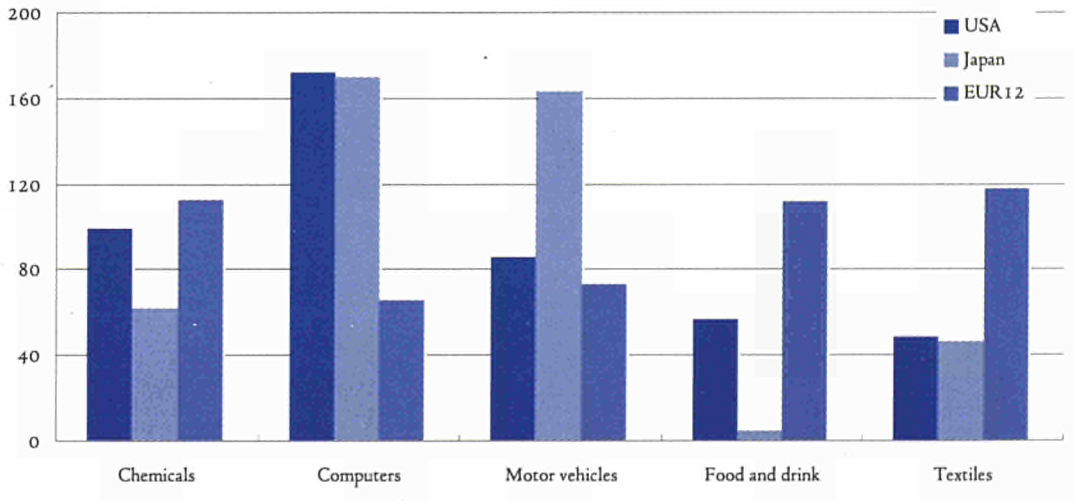
After defining the different domains which may be analysed under the term competitiveness, it is also important to look at the likely outcome of an increase/decrease in competitiveness. Whereas an uncompetitive firm is likely to go out of business, this is not the case for a national economy. However, it is important to draw attention again to the fact that competitiveness should not be viewed as a static, zero-sum game, with only winners and losers. Rather, it should be seen as a game where there may be benefits to all parties. Increased competition may engender new markets and opportunities and will certainly encourage firms to specialise in products where they have a comparative advantage. This may take the form of two distinct routes: either the firm will lower its costs per unit of output or it will create additional value-added per unit of output (through, for example, increased product development or greater customer service). This second gain in competitiveness is far more difficult to measure than the former.

The database developed by Eurostat concentrates mainly on measures of industry competitiveness at a sectoral level. The database reports data on enterprises grouped under the industrial activity classification, NACE. The scope of Eurostat's study therefore refers largely to whether or not an industrial sector is able to survive in competitive conditions. The role of structural and sectoral issues in the domain of competitiveness issues has increased significantly in recent years. This sectoral approach is of relevance to policy makers who need to assess the strengths and weaknesses of individual sectors. While aggregate indicators constitute useful information, their relevance when studying individual sectors is open to debate. Nevertheless, there are some key indicators included in the database from this category: namely data for exchange rates, interest rates and other infrastructure variables, covering aspects such as training and education.

When making analyses the user should consider a number of issues which may complicate the interpretation of data series. Firstly, industry data is classified by enterprise according to the largest share of value-added amongst the firm's activities. Secondly, with the development of the global market place (and an increasing number of multinational firms) the data reported may well be difficult to interpret clearly for many indicators (especially those relating to market share and trade performance).Therefore, in the case of a highly-globalised industry, where a large amount of intra-industry trade exists, great prudence is required in analysing data. The analyst should also be aware of the need to interpret a broad selection of indicators, due to the inter-dependencies that exist between them. Hence, it is suggested that analysis is based on several indicators concurrently. There will however still be other interpretation problems. For example, where the European presence in a market is minimal, European firms will tend to display a tendency to set prices in line with those of the global leaders. In such a case producers will be unable to pass on higher costs - hence, export price competitiveness may appear to remain quite stable over time. Nevertheless, market share and general cost competitiveness would be seen to be in decline as margins were squeezed. Indicators will not be able to show all factors regarding international competitiveness and it will not always be simple to deduce relationships between indicators. Long standing advantages such as a well developed infrastructure, high standards of education and training and more importantly executives' perceptions of these advantages are difficult to quantify. Furthermore, to assign a rating to indicators such as these and to attempt to compare them to exchange rate appreciations and domestic cost escalation is a difficult task. As regards currency fluctuations, for the purpose of international comparison, indicators on cost and price have often been converted to a standard currency, the ECU. The result of this is that when the reporting country is experiencing a strong currency, for example, the dollar in the mid-1980's, this shows up in many indicators, with the USA reporting lower indexes than its competitors.Further difficulties arise due to problems encountered during the collection of data. When trying to calculate shares in world markets, it is often impossible to construct world totals. Hence, it is sometimes the case that the OECD is taken as a proxy for the world. Indeed, for certain indicators it is only possible to give data for the TRIAD (EU, United States of America and Japan). Another point is that there has been considerable work on nomenclatures allowing data to be converted from national nomenclatures to a single harmonised system where comparisons across industries and countries is possible. Converting such nomenclatures has led to data coverage often being limited to a NACE two-digit level.

FIGURE 5.1

EXPORT SPECIALISATION RELATIVE TO OECD, 1994 (%)



SOURCE: eurostat

When measuring competitiveness it is possible to first look at how an industrial sector has performed relative to competitors over a defined time period. Performance data is largely based on the results of data collected at a specific moment - a "snapshot" in time. In order to explain the development of performance between two observations, it is necessary to look at its causal factors (traditionally price and cost indicators).

The broad family of performance indicators allows a comparison of profitability measures, market share analysis or the study of relative growth rates. If a firm is not profitable it ultimately fails to survive. Market share analysis allows us to look at the measures such as the share of world production or import penetration rates and hence identify fast growing geographical or sectoral markets. Through identifying such markets it should be comparatively simple to distinguish areas where cluster or niche specialisation are apparent. Simple market share analysis may be complemented by other measures such as the comparative cover ratio:

$$I = \frac{X_{ij} / M_{ij}}{X_{iw} / M_{iw}}$$

where X are exports, M are imports, i is the specific industry, j the country being measured and w the world. Another example could be an export specialisation index, comparative to OECD performance:

$$I = \frac{X_{ij} / X_{mj}}{X_{io} / X_{mo}}$$

where X are exports, M are imports, i is the specific industry, m is total manufacturing industry, j the country being measured and o the OECD (taken as a proxy for the world).

However, once a sector has been selected on the basis of a number of performance indicators, it is necessary to look at the underlying causal effects of this performance. To identify an industry that has performed well in recent years is a fairly straightforward exercise. To identify the causes is a much more difficult proposition. Eurostat propose three areas which may explain the performance of a particular sector: cost competitiveness, price competitiveness and competitiveness in marketing.

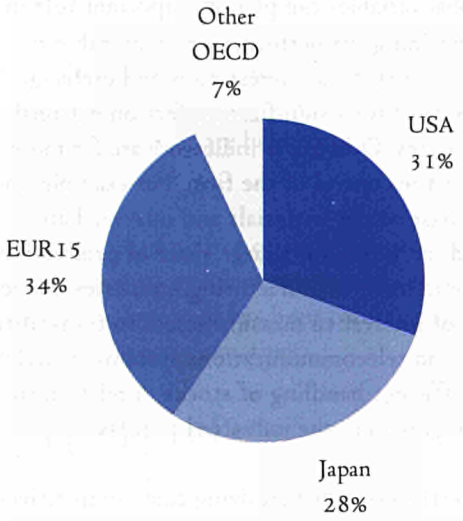


FIGURE 5.2

SHARE OF OECD PRODUCTION, 1994 (%)

SOURCE: eurostat
DEBA GEIE, OCDE, UNIDO

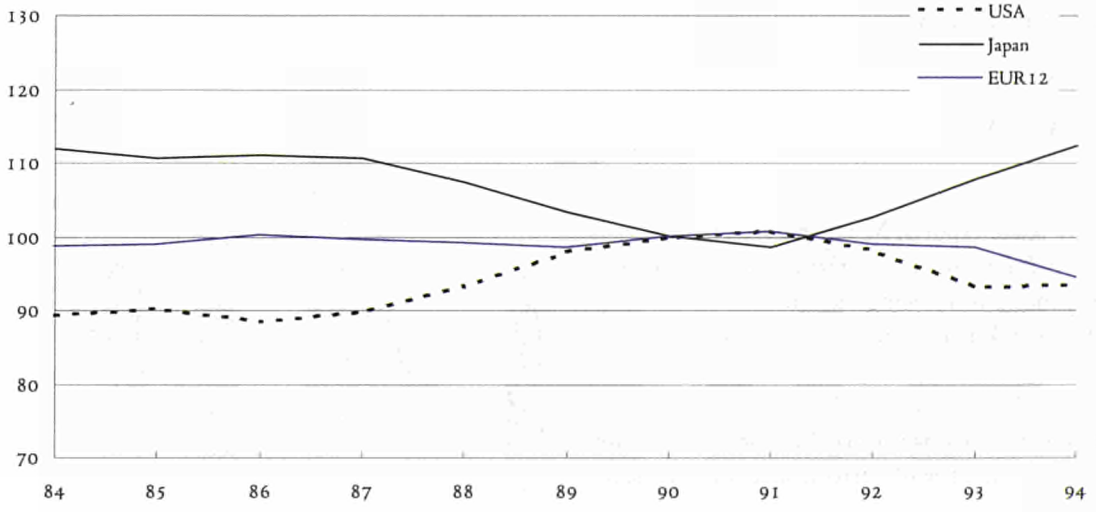
Global variables can play an important role in determining the performance of an industry. Measures such as interest rates and exchange rates can have a significant effect on national industries. Other cost indicators are far more under the control of the firm. For example, the purchase of raw materials and intermediate goods accounts for a large share of production value in many manufacturing industries. Hence, it is of interest to measure access to transportation and telecommunications systems, as well as the efficient handling of stocks in relation to throughputs in the industrial process.

Nevertheless, when studying cost competitiveness, economic literature concentrates largely on the role of labour; both in terms of labour productivity and labour costs. The database proposes a number of different indicators in this area, based not just on labour costs but also wages and salaries. Labour productivity may be defined as value-added divided by employment in constant price terms. However, the price a product is sold at will vary across countries - something the indicator fails to take account of at present. Price deflators should therefore be able to convert output data into volumes, such that comparisons can be made across countries - this work is at present being developed in academic circles (notably at Groningen University). Labour cost measures are given per unit of physical output: with the volume of output being used at an industry level. Here too there are explanatory variables: for example, labour productivity may well rise due to higher educational attainment, learning curve effects, better management or the introduction of just-in-time production facilities. These indicators are closely related to R&D, which is often recorded at either a very precise level of detail or for national aggregates. A similar comment may apply to patent applications and other measures of technological competitiveness, which in general have to be studied on a case by case basis, as there are no widely accepted indicators and a lack of pertinent data in the domain.

An industry that is competitive in terms of costs is not necessarily competitive in relation to prices. For example, in a low borrowing cost environment (with low interest rates or a patient financial backer) a firm may set prices with a long-term view, being prepared to accept lower profit margins to gain market share. However, both price and cost competitiveness indicators have been constructed using the same theoretical construction. In its simplest form the concept consists of comparing the domestic costs or prices of home producers against the costs or prices of foreign competitors. Whichever index is used as a basis for the calculation (export prices, unit labour costs.....) its domestic value is compared to a weighted

FIGURE 5.3

INDEX OF LABOUR PRODUCTIVITY RELATIVE TO EXPORT COMPETITORS (1990 = 100)



SOURCE: eurostat
DEBA GEIE

sum of its foreign competitors. The weights are proportional to the respective size of the foreign country as a trading partner. It has been impossible (due to data constraints) for Eurostat to produce data series using absolute figures. Rather the data have been collected in index form and thus can be used only to assess growth in relative terms. Trend indicators are utilised so that from a reference position changes in differentials are assessed. For the purpose of the Eurostat database all price and cost indicators are given with a base year, 1990=100. The use of indexes means that we may only make statements such as labour costs have deteriorated in the EU compared to Japan, and that we may not make statements such as labour costs are higher in the EU than in Japan. Interpreting these indicators is further complicated by their relevance: for example, the variation in wage costs is of little significance in a highly capital-intensive industry.

Price and cost competitiveness indicators that are found in the database are given for both domestic and export markets. Hence, although the same indexes are used, the weighting system is modified to take account of either the countries importing into the EU (for the example of the domestic EU market) or the countries exporting to third country markets (in the case of export markets). The weights system is therefore taking account simultaneously of the geographical specialisation of the host country, and at the same time the geographical specialisation of the major competing countries. The weights are held constant over all years and were created using an average of trade flows over the period 1990-1992. Ideally, for the export market indicators, European export prices or costs on each individual market will be compared with the average prices of the EU's competitors on that same market (in the future it is hoped that local prices of domestic producers can also be included in the formula - however, this is not yet possible due to a lack of production data for many markets). It is important to note that it is normal for exporters to discriminate between different export markets and set different prices according to local competition and demand. For the moment, due to a lack of data availability, this has not been possible to include in the indicators - in other words export price indexes are held constant across markets.

As an example of a price or cost indicator (we will take wage competitiveness on the export market), the indicator has been constructed using the following equation:

$$I_i = \frac{\prod_{m=1}^{M} \prod_{c=1}^{C} IN_c^{v_{i,m} w_{c,m}}}{IN_i}$$

where IN_i is the index for the host producer (wage costs / production at constant prices) and IN_c is the index of the competitor, i stands for the country and m stands for the market. The indicator uses a double weighted geometric mean with the host producer as the denominator. This allows the indicator to express a country becoming more competitive by seeing its index rise through time. We then attempt to sum across all markets and competitors. The first weight is given for the competitors on each export market,

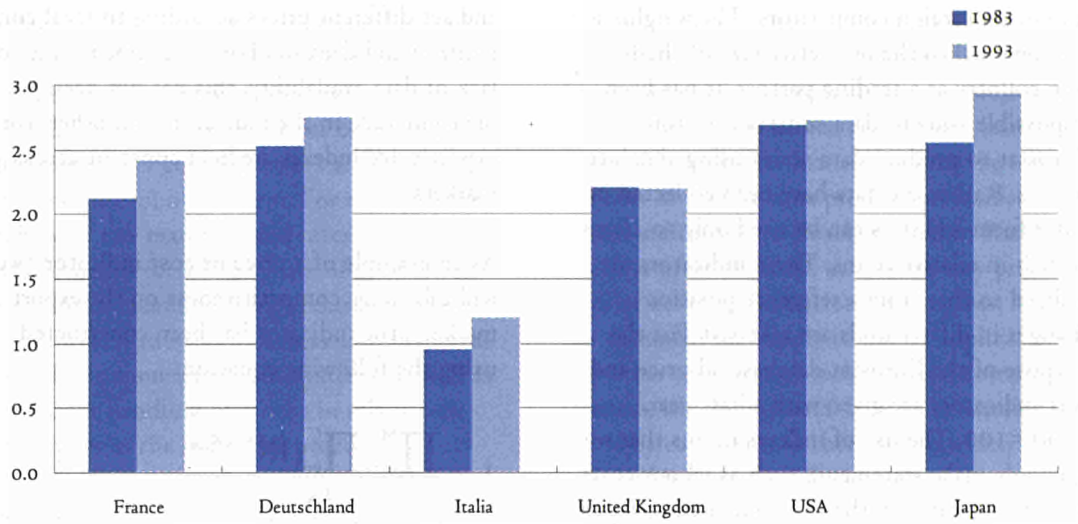
$$w_{c,m} = \frac{X_{c,m}}{\sum_{c=1}^{C} X_{c,m}}$$

whereas the second is a weight of the different markets for the host producer.

$$v_{i,m} = \frac{X_{i,m}}{\sum_{m=1}^{M} X_{i,m}}$$

FIGURE 5.4

R&D SPENDING AS A SHARE OF GDP (%)



SOURCE: OECD

Competitiveness in marketing is also a very important factor in the success of many products. Aspects such as quality, design and innovation are far more difficult to measure empirically and are normally given at an aggregated level of detail (manufacturing industry or even the total economy). It is true that a firm with better marketing can often win market share against a firm with a better product. Hence, factors such as product differentiation, barriers to entry, after sales service, advertising and pricing strategies play an increasingly important role in the development of competitiveness in the modern economic world.

In the medium-term Eurostat hopes to introduce more indicators - especially for capital stock, internationally comparable productivity series and other series that may be derived from product statistics. This article has presented Eurostat's competitiveness database from a methodological viewpoint. In forthcoming issues of the supplement it is hoped that several analytical articles will be produced, drawing on the data found in the database. In the meantime, for further details of the database, concerning data coverage or methodology, please contact Anna Abatzoglou: tel (352) 4301 3 4665.

Level of detail

The level of detail calculated is noted for each indicator. The majority of the indicators are presented at the most disaggregated level that was possible, although there are some indicators calculated only for the level of total manufacturing or the total economy.
Due to the heterogeneous sources the data come from, the level of detail provided varies. For all the indicators coming from external trade data exclusively, the level of detail is 3 digit NACE. On the other hand, for the other indicators, the level is 3 digit NACE wherever possible, although for some indicators only 2 digit NACE or below is available. To be able to compare the results, non EU data has been converted to NACE using conversion tables. Usually it was not possible to convert non-EU data to a more disaggregated level than that of 2 digit NACE.

Country coverage

Coverage is limited to OECD countries for the majority of indicators. Clearly certain comparisons would be better against world totals, but these have not been possible in this release.

Covered time-span

Many of the indicators are available from 1980 up to and including 1995. Indicators involving EUR15 and the Member States that joined the Union in 1995 (Sweden, Finland and Austria) are based on estimates for 1980 for Sweden and Finland, for 1980 to 1982 for Austria. Forecasts for the years between the last available from annual enquiries and 1995 were taken from DEBA for the EUR12 group of countries as well as for the USA and Japan. For Sweden, Finland and Austria, forecasts were made using the original data from Unido classified in the ISIC Revision 2 system and converted to NACE 1970. The competitiveness data-base will switch from the NACE 1970 classification to NACE Revision 1 in the future.

Sources of the data

As the database aims to cover many countries, both Eurostat and non-Eurostat databases have been used for the collection of the data. The main sources used are:

ANNUAL TRANSPORT STATISTICS Eurostat publication from unit D4;
DAISIE Eurostat database with data on the structure and activity of European industry;
DEBA Database for industrial data of EU countries, USA and Japan, from DEBA GEIE;
ISTI Eurostat data-base for short-term industrial indicators;
SEC1, SEC2 Eurostat databases for national accounts data;
VOLIMEX Eurostat database for the external trade data, covering all the OECD countries;
AMDATA Database of DG IV with data concerning the mergers of companies;
EUROPEAN REPORT ON SCIENCE AND TECHNOLOGY INDICATORS A publication of DG XIII;
ENERGY PRICES AND TAXES A publication of OECD;
MAIN SCIENCE AND TECHNOLOGY INDICATORS OECD database for data referring to R&D expenditure
NETWORK B Labour Force Survey from the OECD;
UNIDO Statistics on the structure of industry;
IMF International Financial Statistics;

There follows a list of indicators that are included in the database is presented. When it is necessary, a brief explanation of the meaning of the indicator is given.

Throughout this annex the following notation is used:

i = country
c = competitor
k = market
j = sector
y = year
o = OECD
w = world

The competitiveness indicators are divided up by main category, each category consisting of several subcategories. Each subcategory contains a list of variables, each of which has been allocated its own code.
For EU Member States the trade partner world has been taken, unless specified otherwise. Under "Status" we have reported for which (group or groups of) countries the indicator has been calculated. By "Triad" we mean the group of EUR (as the aggregate, either EUR12 or EUR15), the USA and Japan. For the individual Member States, the USA and Japan, we have used the abbreviation MS-Triad.

Category 1: Performance indicators
Sub category 1: Market share (Codes 2000 .. 2099)

2001 Trade balance as a share of value added
Formula: $(X_{ij} - M_{ij}) / VA_{ij}$, where X stands for exports and M for imports and VA for value-added
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE for the MS-Triad, 2 digit NACE for the others

2006 Relative trade balance
Formula: $(X_{ij} - M_{ij}) / Q_{ij}$ where Q stands for the value of production
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE for the MS-Triad, 2 digit NACE for the others

2011 Share of country's exports to OECD exports (EU Member States have extra-EU as partner)
Formula: X_{ij} / X_{oj}
Source: Volimex, Comext
Level of detail: 3 digit NACE

2013 Share of country's imports to OECD imports (EU Member States have extra-EU as partner)
Formula: M_{ij} / M_{oj}
Source: Volimex, Comext
Level of detail: 3 digit NACE

2016 Share of the domestic market
Formula: $(VA_{ij}-X_{ij}) / C_{ij}$
C stands for apparent consumption and is defined as:
C = VA-X+M
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE for the MS-Triad, 2 digit NACE for the others

Please note this and the following variable use VA and not production in their derivation

2026 Total market share
Formula: $VA_{ij} / (C_{ij} + X_{ij})$
Source: Volimex, Comext, DEBA GEIE
Level of detail: 3 digit NACE for the MS-Triad, 2 digit NACE for the others

2031 Total market share
Formula: $Q_{ij} / (C_{ij} + X_{ij})$
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit level for the MS-Triad, 2 digit level for the other countries

2036 Share of OECD production
Formula: Q_{ij} / Q_{oj}
Source: DEBA GEIE, UNIDO
Level of detail: 3 digit level for the MS-Triad, 2 digit level for the other countries

2041 Sectoral cover ratio relative to total manufacturing cover ratio
Formula: $(X_{ij} / M_{ij}) / (X_i / M_i)$
Source: Volimex, Comext
Level of detail: 3 digit NACE

2046 Import penetration
Formula: M_{ij} / C_{ij}
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE for the MS-Triad, 2 digit NACE for the other countries

2051 Export ratio
Formula: X_{ij} / Q_{ij}
Source: Volimex, Comext, DEBA GEIE, Unido
Level of detail: 3 digit NACE for the MS-Triad, 2 digit NACE for the other countries

2056 Cover ratio
Formula: X_{ij} / M_{ij}
Source: Volimex, Comext
Level of detail: 3 digit level

2061 Share of value added generated domestically by the industry in GDP
Formula: VA_{ij} / GDP_i
Source: SEC1, DEBA GEIE, UNIDO
Level of detail: 3 digit level

Sub category 2: Profitability indicators
(Codes 2101 .. 2199)

2101 Gross operating rate
Formula: $(VA_{ij} - L_{ij}) / T_{ij}$, where L stands for labour costs and T for turnover
Source: DEBA GEIE
Level of detail: 3 digit level

2106 Return on net assets
Formula: Profits before interest and taxes / fixed assets + net current assets

2111 Sales to net assets ratio
Formula: Sales / fixed assets + net current assets

2116 Cash flow to sales ratio
Formula: Profits after tax + depreciation / sales

Sub category 3: Other performance indicators
(codes 2200 .. 2299)

2201 Export specialisation (i,j) relative to total OECD (EU Member States have extra-EU as partner)
Formula: $(X_{ij} / X_i) / (X_{oj} / X_o)$
Source: Volimex, Comext
Level of detail: 3 digit NACE

2206 Import specialisation (i,j) relative to total OECD (EU Member States have extra-EU as partner)
Formula: $(M_{ij} / M_i) / (M_{oj} / M_o)$
Source: Volimex, Comext
Level of detail: 3 digit NACE

2211 Indicator of inter-sectoral specialisation in exports. Measures the weighted standard deviation of the relative shares of sectors in exports taking the distribution of exports over sectors for the OECD as a whole as the average.

Formula: $$\sqrt{\sum_j \frac{X_j^i}{X^i}\left(\frac{X_j^i X^o}{X^i X_j^o} - 100\right)^2}$$

Source: Volimex, Comext
Level of detail: 3 digit NACE

2213 Indicator of inter-sectoral specialisation in imports
Measures the weighted standard deviation of the relative shares of sectors in imports taking the distribution of imports over sectors for the OECD as a whole as the average.

Formula: $$\sqrt{\sum_j \frac{M_j^i}{M^i}\left(\frac{M_j^i M^o}{M^i M_j^o} - 100\right)^2}$$

Source: Volimex, Comext
Level of detail: 3 digit NACE

2216 Incremental contribution of an industry
The change in value added in current prices generated by an industry over a three year period is compared to the absolute value of the change in GDP in current prices for the same country over the same period

Formula: $$\frac{VA_t^{ij} - VA_{t-3}^{ij}}{GDP_t^i - GDP_{t-3}^i}$$

Source: SEC1, DEBA GEIE
Level of Detail: 3-digit NACE

Category 2: Cost and design indicators
Sub category 1: Efficiency in the usage of labour
(codes 2300 .. 2399)

2301 Index of labour cost competitiveness on export markets (1990 = 100)
Unit labour cost has been defined as the ratio of total labour costs for EUR12 Member States and gross wages and salaries for other countries, in current prices over the value of production in constant prices. These have been converted to index numbers because, though fine for comparisons across time, they are not suitable for inter country comparisons of levels. The weighted unit labour cost index of all the competitors of each country is compared with the unit labour cost index of country i.

Formula: $$\frac{ULC}{ULC_i}$$

where ULC is the average unit labour cost index of all the competitors.
To calculate this average, we firstly define for each market k, (the world is broken down into 12 market zones) of country i the average unit labour cost index of the competitors to i in that market ULC_k as:

$$ULC_k = \prod_c (ULC_c)^{\alpha_{ck}}$$

where ULC_c is the ULC index of each competing country c and α_k = exports of country c to the market k / total exports of all countries to market k
We then define ULC to be:

$$ULC = \prod_k (ULC_k)^{\beta_{ik}}$$

where β_{ik} = exports of country i to market k / total exports of country i
Level of detail: 3 digit NACE
Source: Volimex, Comext, DEBA GEIE, UNIDO

2302 Index of unit labour cost competitiveness on export markets (1990 = 100)
As 2301 but for MS-Triad

2306 Index of unit labour cost competitiveness on the domestic market (1990 = 100)
For each country i the following indicator is calculated:

Formula: $$\frac{ULC}{ULC_i}$$

$$ULC = \prod_c ULC_c^{\gamma_c}$$

$$\gamma_c = \frac{M_c}{M}$$

where,
M_c: imports of country i from country c
M: total imports of country i
ULC_c: unit labour cost index of competing country c, as defined in indicator 2301.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE

2307 Index of unit labour cost competitiveness on the domestic market (1990 = 100)
As 2306 but for MS-Triad

2311 Index of wage competitiveness on the export markets (1990 = 100)
As 2301, except that an index of average wages was used instead of unit labour costs, defined as wages in current value over employment.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE level

2312 Index of wage competitiveness on export markets (1990 = 100)
As 2311 but for MS-Triad.

2316 Index of wage competitiveness on the domestic market (1990 = 100)
Formula: As 2306, except that an index of average wages was used instead of unit labour costs.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE
Status: only the Triad are available

2317 Index of wage competitiveness on the domestic market (1990 = 100)
As 2316 but for MS-Triad.

2321 Index of labour productivity relative to export competitors (1990 = 100)
Labour productivity is defined here as the ratio of the value of production in constant prices over total employment. The formulae used are similar to those used in indicator 2301.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE

2322 Index of labour productivity relative to export competitors (1990 = 100)
As 2321 but for MS-Triad

2326 Index of labour productivity relative to import competitors (1990 = 100)
Labour productivity is as defined in 2305 and the formulae used are similar to those used for the indicator 2306
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3 digit NACE

2327 Index of labour productivity relative to import competitors (1990 = 100)
As 2326 but for MS-Triad

2331 International comparison of hourly manufacturing salaries in levels
Source: Eurostat Yearbook
Level of detail: total manufacturing

2336 Value added at factor cost in 1990 prices divided by employment
Formula: VA_{ij} / E_{ij}, where E is the employment level
This traditional indicator has a number of weaknesses as a measure of labour productivity; the numerator takes no account of differing price levels between countries; the denominator does not reflect differences in part and full time working and hours worked.
Source: DEBA GEIE
Level of detail: 3-digit NACE

2341 Value added at factor cost at 1990 prices and Purchasing Power Standards (PPS) divided by employment
Formula: VA_{ij} / E_{ij}
Unlike 2336 the PPS for GDP is used to convert sectoral value added figures from national currencies. In the medium term, it is hoped to be able to use sectoral PPS coefficients.
Source: SEC1, DEBA GEIE
Level of detail: total economy

Sub category 2: Efficiency in the use of stocks
(codes 2400 .. 2499)

2401 The ratio of stocks of finished and semi finished products manufactured by enterprises to production
Source: DAISIE, DEBA GEIE
Level of detail: 3 digit NACE
Status: only the EUR12 Member States are available

2406 The ratio of stocks to purchases of raw materials and intermediate products
Source: DAISIE, DEBA GEIE
Level of detail: 3 digit NACE
Status: only the EUR12 Member States are available

Sub category 3 Other cost and design indicators (Codes 2500 .. 2599)

2501 Index of unit intermediate cost competitiveness on export markets (1990 = 100)
Formula: Unit intermediate cost is defined as the production minus value-added divided by constant price production. The unit intermediate cost index of each country i is compared with the average of unit intermediate cost indexes of the competing countries of country i.
For explicit formulae used see 2301.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3-digit NACE

2502 Index of unit intermediate cost competitiveness on export markets (1990 = 100)
As 2501 but for MS-Triad

2506 Index of unit intermediate cost competitiveness on the domestic market (1990 = 100)
The definition of the intermediate cost is as in Indic. 2501 and the formulae used are similar to all the ones used for cost indicators in the domestic market, see 2306.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3-digit NACE

2507 Index of unit intermediate cost competitiveness on the domestic market (1990 = 100)
As 2506 but for MS-Triad.

2511 Index of unit total cost competitiveness on the export market (1990 = 100)
The total cost is equal to the sum of the cost of raw materials, labour costs and the cost of other services. The calculation of the indicator follows the formulae already described in the indicators concerning competitiveness on the export market, see 2301.
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3-digit NACE

2512 Index of unit total cost competitiveness on export markets (1990 = 100)
As 2511 but for MS-Triad

2516 Index of unit total cost competitiveness on the domestic market (1990 = 100)
For the definition of total cost and for the formulae used we refer the user to indicators 2511 (definition of total cost) and 2301 (formula used for competitiveness on the domestic market).
Source: Volimex, Comext, DEBA GEIE, UNIDO
Level of detail: 3-digit NACE

2517 Index of unit total cost competitiveness on the domestic market (1990 = 100)
As 2516 but for MS-Triad

2521 R&D spending as a share of GDP
Source: Main Science and Technology indicators of OECD
Level of detail: manufacturing industry

2523 R&D spending in each of the following industries as a percentage of total R&D spending
Aerospace industry
Electronic industry
Office machinery and computer industry
Drug industry
All other manufacturing industries
Total manufacturing industry
Non manufacturing industry
Source: Main Science and technology indicators of OECD

2525 Share of R&D made by business enterprises
Source: "European Report on Science and Technology Indicators"
Level of detail: total economy

2526 Share of R&D made by institutions in higher education
Source: "European Report on Science and Technology Indicators"
Level of detail: total economy

2527 Share of R&D made by government and non-profit organisations
Source: "European Report on Science and Technology Indicators"
Level of detail: total economy

2528 Share of R&D made by private non-profit organisations
Source: "European Report on Science and Technology Indicators"
Level of detail: total economy

2531 Number of national patent applications
Source: OECD "Main Science and Technology Indicators"
Level of detail: manufacturing industry

2536 Number of patent applications by residents
Source: OECD "Main Science and Technology Indicators"
Level of detail: manufacturing industry

2541 Number of patent applications by non residents but with the nationality of the country
Source: OECD "Main Science and Technology Indicators"
Level of detail: manufacturing industry

2546 Number of external patent applications
By the term external we mean non-resident non-national.
Source: OECD "Main Science and Technology Indicators"
Level of detail: manufacturing industry

2551 Number of patents awarded
Source: "First science and technology Indicators report" of DG XII
Level of detail: total economy

2553 Primary energy production as a percentage of gross inland consumption
Source: Eurostat, Yearly Energy Statistics
Level of detail: total economy

2556 Wholesale indices of prices of oil products
Source: OECD publication "Energy prices and taxes"
Level of detail: total economy

2561 Indices of retail prices of oil products
Source: OECD publication "Energy prices and taxes"
Level of detail: total economy

2566 Indices of wholesale prices of electricity
Source: Eurostat and the OECD publication "Energy prices and taxes"
Level of detail: total economy

2571 Indices of retail prices of electricity
Source: Eurostat and OECD publication "Energy prices and taxes"
Level of detail: total economy

2576 Indices of wholesale prices of natural gas
Source: Eurostat and OECD publication "Energy prices and taxes"
Level of detail: total economy

2581 Indices of retail prices of natural gas
Source: Eurostat and OECD publication "Energy prices and taxes"
Level of detail: total economy

2586 Indices of wholesale prices of coal
Source: Eurostat and OECD publication "Energy prices and taxes"
Level of detail: total economy

2591 Indices of retail prices of coal
Source: Eurostat and OECD publication "Energy prices and taxes"
Level of detail: total economy
Status: some OECD countries are available

2592 Percentage of capacity utilisation
Source: DG II "Business Survey"
Level of detail: 2 digit level

2593 Total investment in manufacturing as a share of GDP
Formula: Total investment / GDP
Source: SEC1
Level of detail: total manufacturing

2594 Total factor productivity
Source: Eurostat, OECD "Analytical Databank", OECD "Economic studies"

2596 3 months interest rates
Source: "European Economy" (DG II) and IMF
Level of detail: total economy

2598 Long-term interest rates
Source: "European Economy" (DG II) and IMF
Level of detail: total economy

Category 3: Price and marketing indicators (codes 2600 .. 2699)

2601 Effective exchange rate (1990 = 100)
Source :"European Economy" (DG II)
Level of detail: total economy

2606 Index of price competitiveness on export markets (1990 = 100)
All the formulae used for indicator 2301 are also used here, but Unit Labour Cost indexes are replaced with indexes of export prices
Source: Volimex, Comext
Level of detail: 2-digit NACE

2607 Index of price competitiveness on export markets (1990 = 100)
As 2606 but for MS-Triad

2611 Index of price competitiveness on the domestic market (1990 = 100)
The import price index of each country is compared with the domestic PPI (producer price index)
Formula: PM / PPI
Source: Volimex, Comext, DEBA GEIE
Level of detail: 3 digit NACE for the EU and USA, Japanese data is at a 2-digit NACE level

2612 Index of price competitiveness on the domestic market (1990 = 100)
As 2611 but for MS-Triad

2616 Consumer price index (C.P.I.)
Source: Eurostat (unit B3)
Level of detail: total economy

Category 4: Other indicators including infrastructure

Sub category 1: Human capital (codes 2700 .. 2769)

Human capital indicators: data refers to the age group 25-64 years old, some indicators include other education groups within their total; otherwise, indicators do not always sum to the total due the omission of the education group "unknown". For Germany, the United Kingdom, Denmark, Norway, Sweden, Finland, Switzerland, Austria and Australia, the education group "primary or pre-primary education" was included in the group for "lower secondary education". For the Netherlands in 1992, Spain in 1981, 1989, 1991, Italy and Turkey, the group "higher education above secondary (not leading to a university degree)" was included in the group "university degree or post-graduate degree". For Austria, the group "higher education above secondary (not leading to a university degree)" was included in the group "upper secondary education".

2701 Share of labour force having completed primary or pre-primary education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2703 Share of labour force having completed lower secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2705 Share of labour force having completed upper secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2707 Share of labour force having completed higher education above secondary (not leading to a university degree)
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2709 Share of labour force having a university degree or post-graduate degree
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy
Status: some OECD countries are available

2711 Share of male labour force having completed primary or pre-primary education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2713 Share of male labour force having completed lower secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2715 Share of male labour force having completed upper secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2717 Share of male labour force having completed higher education above secondary (not leading to a university degree)
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2719 Share of male labour force having a university degree or post-graduate degree
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2721 Share of female labour force having completed primary or pre-primary education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2723 Share of female labour force having completed lower secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2725 Share of female labour force having completed upper secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2727 Share of female labour force having completed higher education above secondary (not leading to a university degree)
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2729 Share of female labour force having a university degree or post-graduate degree
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2731 Share of people unemployed in the total labour force
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2733 Share of people unemployed in the total labour force having completed primary or pre-primary education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2735 Share of people unemployed in the total labour force having completed lower secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2737 Share of people unemployed in the total labour force having completed upper secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2739 Share of people unemployed in the total labour force having completed higher education above secondary (not leading to a university degree)
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2741 Share of people unemployed in the total labour force having a university degree or post-graduate degree
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2743 Share of people unemployed less than one year in the total labour force
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2745 Share of people unemployed less than one year in the total labour force having completed primary of pre-primary education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2747 Share of people unemployed less than one year in the total labour force having completed lower secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2749 Share of unemployed less than one year in the total labour force having completed upper secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2751 Share of unemployed less than one year in the total labour force having completed higher education above secondary (not leading to a university degree)
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2753 Share of unemployed less than one year in the total labour force having a university degree or post graduate degree
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2755 Share of people unemployed more than one year in the total labour force
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2757 Share of people unemployed more than one year in the total labour force having completed primary or pre-primary education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2759 Share of people unemployed more than one year in the total labour force having completed lower secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2761 Share of people unemployed more than one year in the total labour force having completed upper secondary level education
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2763 Share of people unemployed more than one year in the total labour force having completed higher education above secondary (not leading to a university degree)
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2765 Share of people unemployed more than one year in the total labour force having a university degree or post-graduate degree
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

2767 Share of people employed part time in the total labour force
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy
Status: some OECD countries are available

2769 Share of people employed full time in the total labour force
Source: OECD "NETWORK B - Labour force Survey"
Level of detail: total economy

Sub category 2: Infrastructure and business environment indicators (Codes 2800 .. 2899)

2801 Number of mergers and acquisitions by origin of bidder
Source: AMDATA database (DG IV)
Level of detail: total economy

2803 Number of mergers and acquisitions by destination of target
Source: AMDATA database (DG IV)
Level of detail: total economy

2806 Foreign direct investment , flows abroad
The negative (-) sign shows that flows are leaving a country. However, there may also be disinvestments effected abroad made by the declaring economy, in these cases a positive (+) sign will appear.
Source: SEC2
Level of detail: 2 digit NACE

2811 Level of taxation
Formula: Total taxes / GDP
Source: SEC1
Level of detail: total manufacturing

2813 Social charges on employers as a percentage of wages and salaries
Formula: Social charges / wages and salaries
Source: DEBA GEIE
Level of detail: NACE 3 digit

2816 Infrastructure investment (in civil engineering) as a share of GDP
Formula: Investment in civil engineering / GDP
Source: SEC1, SEC2
Level of detail: total manufacturing

2818 Investment in equipment as a share of GDP
Formula: Investment in equipment / GDP
Source: SEC1, SEC2
Level of detail: total manufacturing

2821 Road infrastructure
Formula: Km of motorways / number of vehicles in millions
Source: Eurostat (unit D4), OECD
Level of detail: total economy

2826 Rail infrastructure
Formula: Km of railway / number of inhabitants in millions
Source: Eurostat (unit D4), OECD
Level of detail: total economy

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