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EUROPEAN ECONOMY

Directorate-General for Economic and Financial Affairs

March 1989 Number 39

International trade of the European Community

A review of certain aspects of the external trade of the Community

Directorate-General for External Relations
Directorate-General for Economic and Financial Affairs

This report has been prepared by a joint team from the two Directorates-General, with assistance from Eurostat, under the responsibility of Pierre Defraigne and Michael Emerson. The report was coordinated by Michael Green, Kenneth Roberts and André Sapir. Authors of the different chapters were Francesco Bataller, Pierre Buigues, Brendan Cardiff, Michael Green, Douglas Koszerek, Angelo Reati, Klaus Reeh, André Sapir and Mirella Tieleman with assistance from Elio Nicoli and Roland Van Thuyne.

Abbreviations and symbols used

Countries

B	Belgium
DK	Denmark
D	Federal Republic of Germany
GR	Greece
E	Spain
F	France
IRL	Ireland
I	Italy
L	Luxembourg
NL	The Netherlands
P	Portugal
UK	United Kingdom
EUR 9	European Community excluding Greece, Spain and Portugal
EUR 10	European Community excluding Spain and Portugal
EUR 12	European Community, 12 Member States

Currencies

ECU	European currency unit
BFR	Belgian franc
DKR	Danish krone
DM	Deutschmark
DR	Greek drachma
ESC	Portuguese escudo
FF	French franc
HFL	Dutch guilder
IRL	Irish pound (punt)
LFR	Luxembourg franc
LIT	Italian lira
PTA	Spanish peseta
UKL	Pound sterling
USD	US dollar
SFR	Swiss franc
YEN	Japanese yen
CAD	Canadian dollar
ÖS	Austrian schilling

Other abbreviations

ACP	African, Caribbean and Pacific countries having signed the Lomé Convention
ECSC	European Coal and Steel Community
EDF	European Development Fund
EIB	European Investment Bank
EMCF	European Monetary Cooperation Fund
EMS	European Monetary System
ERDF	European Regional Development Fund
Euratom	European Atomic Energy Community
Eurostat	Statistical Office of the European Communities
GDP (GNP)	Gross domestic (national) product
GFCF	Gross fixed capital formation
LDCs	Less-developed countries
Mio	Million
Mrd	'000 million
NCI	New Community Instrument
OCTs	Overseas countries and territories
OECD	Organization for Economic Cooperation and Development
OPEC	Organization of Petroleum Exporting Countries
PPS	Purchasing power standard
SMEs	Small and medium-sized enterprises
SOEC	Statistical Office of the European Communities
toe	Tonne of oil equivalent
:	Not available

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Introduction

For some time the Commission services have felt the need for an annual report which describes and analyses the main trends in the international trade of the European Community and which considers a number of topical trade-related issues. The attached report is designed to fulfil such a need. It is the first in what, it is hoped, will be an annual series of such reports. It has been prepared jointly by the Directorate-General for External Relations and the Directorate-General for Economic and Financial Affairs, with the assistance of the Statistical Office of the European Communities.

The report is divided into two parts. The first part — Chapters I, II, III and IV — is concerned with developments at the more aggregate or macroeconomic level.

The second part — Chapters V and VI — deals with specific topics; Community trade with Latin America, and trade in certain high-technology goods. In future years different topics will be covered in this part.

The report concludes with a statistical annex which sets out historic series of basic data.

Briefly, the contents of the report may be summarized as follows:

(i) Regarding macroeconomic developments (Chapters I and II)

For perhaps a decade after the first oil price shock, and for some years after the second, the growth of world trade slowed down markedly in comparison to the more dynamic performance observed during the 1950s and 1960s. More recently however, world trade has strengthened, and this has reflected a number of developments. Two of these are of particular importance: the marked contribution to the growth of world trade made by the fast-growing newly industrialized countries in Asia, and the dynamic market for exporting countries offered by the United States of America. Taken together these developments have been reflected in the recent relatively vigorous growth of trade in manufactured goods.

The European Community is the most important trading block in world trade: extra-EC exports accounted for 20% of world exports in 1986, compared to only 13% for the United States and 12% for Japan. The Community's traue structure is intermediate to that of Japan (which imports mostly primary products and exports mostly manufactures) and the United States (which imports mostly manufactures and exports a fair deal of primary products).

The trade balance of the Community indicates an improvement in the aggregate trade performance in recent years. At the same time, the trade accounts of the United States and Japan have undergone, respectively, a severe deficit and surplus. A constant-market-share analysis reveals that the main factor responsible for the improvement of the Community's trade balance between 1980 and 1986 is the product composition of Community trade.

(ii) Regarding trade in manufactured goods (Chapter III)

Analysis of Community competitiveness regarding manufactured products shows that, despite a slowing down in the growth of the world economy since the first oil price shock, the growth of demand for a number of mainly high-technology products has been maintained. However, the Community has not taken full advantage of this and has shown a tendency to import an increasing proportion of such goods and to lose market share on the export side. This is in sharp contrast to the performance of Japan. On the other hand, for goods exhibiting less dynamic growth the Community has been more successful.

(iii) For trade analysed by stage of processing (Chapter IV)

This chapter examines the export structure of the Community according to the level of processing and compares it with that of other countries. It is found that countries which, in recent years, did not manage to increase the average level of processing of their exports lost market shares in the more processed categories. This is the case for the European Community. In contrast, Japan has gained a great deal of market share in these categories.

With regard to the specific topics mentioned above:

(a) For trade with Latin America (Chapter V)

Community trade with Latin America reflects the typical structure of trade between industrialized and developing countries. The Community exports to Latin America manufactured goods, mainly investment goods, and imports raw materials, semi-finished goods, food and agricultural products. Although Latin America's main trading partner is the USA, trade with the Community is still quite important. Latin America accounts for 4,8% of Community exports towards third countries and 6,3% of its imports. For food and agricultural products, imports from Latin America reach 24 to 25% of Community imports from third countries.

The trend in Community exports to Latin America was interrupted at the beginning of the 1980s due to the debt

problem. Indeed the growing debt burden, by imposing serious constraints on the growth of the Latin American countries, has virtually brought the growth of trade with the Community to a standstill.

(b) Trade in high-technology goods (Chapter VI)

With the exception of pharmaceuticals and aerospace, the Community's competitiveness in high-technology products has deteriorated in relative terms, as producers in the newly industrialized countries have gradually advanced the technology content of their range of exports. The Community's traditional strengths in telecommunications equipment are also being eroded as the USA and Japan increase their penetration of the Community market.

Moreover, the domestic Japanese market remains effectively closed to imports from the Community. Deficits in trade in computers and consumer electronics continue to be recorded, although some recovery may be noted in the more sophisticated branches of consumer electronics. The importance of the consumer electronics sector lies in its role as the major outlet for the Community's semiconductor and electronic components sectors. The amount of foreign direct investment and the instances of joint ventures between enterprises among the major trading partners continues to increase.

As the individual chapters, tables and diagrams indicate, various data sources have been used in the preparation of this report. One of these, the Volimex data bank, is given prominence in the statistical annex. This data bank is a trade matrix in both volume and value terms which provides a detailed picture of the OECD zone's exports to, and imports from, the world. It is not a comprehensive matrix of world trade, and some of the figures derived from the bank, and presented in this report, must be interpreted appropriately.

This manuscript was completed in September 1988, except for Chapter I which was updated in December 1988.

I — International trade and the world economy

Introduction

Over the past 15 years, world trade has been subjected to a number of shocks. First, there were the two oil crises, in 1973 and 1979, with as a corollary, world inflation and the adjustment policies that had to be adopted by most countries. Then there were the substantial exchange rate fluctuations which followed the adoption of floating rates and which led to major movements in relative prices and the competitive position of trading partners. Lastly, there was the indebtedness of the developing countries, which stemmed partly from the recycling of the oil surpluses and which continues to impose rigorous financial constraints on the trade of the countries concerned.

As a result, since 1974, growth of international trade, in volume terms, like that of the world economy, has been moderate compared with the particularly rapid expansion of the preceding decades. Furthermore, the general climate has changed dramatically; in a less dynamic macroeconomic context, there has been a resurgence of protectionism, on the fringe of the GATT rules, in the form of non-tariff barriers. Bilateral trade agreements have proliferated among developed countries, and between the latter and the developing countries. This climate of trade protection has not only harmed the expansion of multilateral trade but helped accentuate the split in world trade between developed and less-developed countries, by exacerbating the difficulties faced by the latter, which were already grappling with the problems of their indebtedness.

Over the past few years, however, despite these inhibiting factors world trade has shown renewed vigour. Among the progressive factors sustaining this trend, trade in manufactures is particularly buoyant. Some developing countries have been singularly successful in inserting themselves into this active trading network. This has been the case with the newly industrializing economies (NIEs) of Asia, partly because of the creation of an area of economic interdependence, with Japan as the hub and geared to exporting to the particularly dynamic United States market.

1. Expansion and structure of international trade

Since 1983, world trade has picked up, sustained by progressive factors inherent in the structure of trade.

1.1. Recovery of world trade since 1982

Following the recession of 1982, the world economy entered a period of recovery in 1984. Thereafter growth continued at a moderate but steady pace until there was a further acceleration in 1988. The trend of world trade has reflected this cycle of activity, without so far showing any signs of tailing off (see Table 1).

Recently, there was a vigorous expansion of trade, which was scarcely affected by substantial exchange rate fluctuations which occurred particularly in 1985 and 1986.

The developed countries' imports have remained the driving force in world trade (see Table 2). The developing countries' imports made a positive contribution to the expansion of trade only in 1984, 1987, and 1988, each time owing to an improvement in the terms of trade; in these years, the persistent decline in the OPEC countries' imports was offset by the somewhat brisker demand in other developing countries.

With regard to exports (see Table 3), those of the non-oil-producing developing countries have continued to increase sharply in recent years. A reversal in the trend of the different industrialized countries' sales has, since 1986, corresponded to exchange rate movements: US exports have grown apace, while Japanese exports have fallen and Community exports moderated.

However, in 1988, the deterioration in the competitive position of Japan and the Community came to an end as a result, in particular, of the stabilization of exchange rates, and the volume of their exports increased.

In general, until 1986, the growth of world trade can be seen as an extension of the slower trend recorded since 1973, with average growth of around 4% per year. Since then, the expansion of world trade has accelerated which could be the beginning of a new phase of rapid growth.

1.2. Structure of world trade and stimulatory factors

A. Trade in manufactures, the driving force in world trade

For a long while, trade in manufactures expanded far more quickly than trade in other product categories (see Table 4). The increase easily outstripped that in production. Over the past three decades, its elasticity in relation to the growth in the world economy has remained around the 2 mark, while the elasticity of exports of agricultural and food products, and that of mineral and energy products have steadily declined.

Table 1

Recent trend of world trade

	Average												
	1950-65	1965-73	1973-79	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988[1]
	(Variation in % compared with preceding period)												
I. **Volume of merchandise trade**													
World trade[2]	6,7	9,0	4,7	6,3	1,3	1,0	−2,0	3,0	8,7	2,8	4,5	5,8	9,0
Imports													
Developed countries	7,6	9,6	3,7	8,9	−1,5	−1,7	−0,6	4,7	12,5	4,6	8,3	6,9	9,0
Developing countries	:	8,0	6,9	3,5	7,4	8,0	−3,3	−2,4	2,7	−0,9	−4,5	4,4	9,0
Oil exporters[3]	:	11,2	15,3	−4,6	13,4	19,1	−1,3	−10,3	−6,1	−11,0	−21,9	−11,1	1,5
Non-oil exporters[3]	:	7,5	5,0	7,4	5,0	3,3	−4,2	1,7	6,7	3,2	2,1	8,9	12,0
Exports													
Developed countries	7,1	9,4	5,2	7,2	4,2	3,8	−2,1	3,0	9,9	4,7	2,6	5,3	9,0
Developing countries	:	7,1	1,5	4,4	−4,1	−5,9	−7,7	3,0	7,1	0,6	10,5	8,6	9,0
Oil exporters[3]	:	8,8	−0,1	1,9	−13,2	−14,9	−16,6	−3,7	0,8	−5,7	13,8	−0,5	7,5
Non-oil exporters[3]	:	7,3	6,0	6,9	8,3	5,4	1,6	8,3	11,5	4,5	9,4	12,1	11,0
Memorandum item													
Gross domestic product (real)													
World	4,8	5,6	3,3	3,4	2,2	1,7	0,5	2,7	4,5	3,4	3,2	3,2	3,8
Developed countries	4,5	4,4	2,6	3,4	1,4	1,5	−0,3	2,8	5,0	3,3	2,7	3,3	3,9
Developing countries	:	5,9	5,2	4,2	3,4	1,8	1,7	1,9	4,0	3,5	4,2	3,4	3,6
II. **Unit values of merchandise trade**													
Imports													
Developed countries	0,6	5,3	14,2	19,4	22,0	−2,2	−5,2	−5,0	−2,5	−1,8	4,1	11,0	4,5
Developing countries	:	4,5	13,7	19,5	23,4	2,9	−5,0	−3,7	−2,0	−5,1	:	:	:
Exports													
Developed countries	1,4	5,6	11,7	15,4	13,5	−3,9	−3,5	−3,1	−2,6	−0,3	13,8	11,0	5,5
Developing countries	:	6,5	21,8	28,9	40,0	6,0	−4,1	−9,8	−1,0	−4,6	:	:	:
Oil exporters[3]	:	8,7	34,0	43,0	64,2	12,3	−3,1	−13,0	−2,2	−2,5	:	:	:
Non-oil exporters[3]	:	5,0	11,9	16,6	14,9	−4,2	−6,2	−3,3	1,4	−8,9	:	:	:
Terms of trade													
Developed countries	0,7	0,3	−2,2	−3,3	−6,9	−1,8	1,8	−2,0	−0,1	1,5	9,3	0	1,0
Developing countries													
Oil exporters	:	1,8	7,1	7,8	13,5	3,0	0,9	−6,4	1,0	0,6	:	:	:
Non-oil exporters	:	1,8	−2,1	−2,3	−6,9	−6,9	−1,2	0,3	3,4	−4,0	:	:	:
Memorandum item													
Price of non-energy raw materials	:	:	8,5	17,0	5,5	−13,5	−9,9	6,9	4,2	−12,9	−1,2	3,4	15,7
Price of crude oil	:	:	8,8	45,0	63,5	9,9	−4,3	−11,9	−2,1	−5,0	−50,2	28,4	−14,3
Price of manufactures	:	:	12,4	15,1	10,4	−3,9	−2,1	−2,8	−3,0	1,0	17,7	12,0	8,1
Price of non-energy raw materials deflated by													
Price of manufactures	:	:	−3,5	2,0	−4,4	−10,0	0,2	10,0	7,4	−13,8	−16,1	−7,7	7,0
Price of crude oil	:	:	−0,3	−19,1	−35,5	−21,3	2,5	21,3	6,4	−8,3	98,4	−19,5	−35,0

[1] Estimates by Commission departments.
[2] Average rates of variations in world exports and imports.
[3] As defined by IMF.

Source: International Monetary Fund.

Table 2

Contribution from the main countries and groups of countries to the variation in the volume of world imports

(%)

	1982	1983	1984	1985	1986	1987	1988
World imports	−1,1	2,3	8,9	3,5	4,8	6,3	9,2
Developed countries	−0,2	3,1	8,2	3,8	5,9	5,6	7,0
USA	−0,5	1,7	3,5	0,9	2,0	1,2	1,2
Japan	−0,3	0,2	0,5	0,0	0,6	0,6	1,1
Community	1,0	0,8	2,7	2,0	2,6	3,1	3,7
Developing countries	−0,9	−0,9	0,5	−0,4	−1,0	0,8	2,1
OPEC countries	0,4	−0,7	−0,7	−1,0	−1,1	−0,5	0,0
Other countries	−1,3	−0,1	1,2	0,6	0,1	1,3	2,1
State-trading countries	0,0	0,1	0,2	0,1	−0,1	−0,1	0,1

Sources: International Monetary Fund; Commission departments.

Such a trend reflects the increase in world income, which has led to a change in the pattern of consumption. The process of economic development has also meant a growing need for capital goods. After all, technological innovation has had a major effect in accelerating demand for manufactures.

Thus during the 1980s, the countries which pursued their specialization in high-technology sectors experienced the greatest growth in exports. Generally speaking, the insertion of a country into world trade in manufactures has become the *sine qua non* for lasting export growth and improvements in its external position.

B. Dynamism of the developed countries' trade

The expansion of world trade has gone hand in hand with a concentration of trade between developed countries. In 1979, trade between countries of this group accounted for 48% of world exports. In 1986, their share increased to 54% (see Table 5).

In that year, trade between developed countries accounted for three-quarters of their exports (see Table 6), while the imports of all the developed countries from the rest of the world amounted to only 23% of their total imports.

The trend of developed countries' trade in volume terms over the past few years (see Tables 1 and 3) shows that, in so far as imports are concerned, the United States had the highest rates of increase, particularly during the recovery phase following the 1982 recession. It was the most dynamic market, not only for the other industrialized countries but also, given the relatively high share it imports from the rest of the world (34%), for other countries, particularly the Latin American and Asian countries. Japan too, albeit in a more transitory manner, sharply increased the volume of its imports, 54% of which come from developing countries.

The Community's position is different in that intra-EC trade accounts for 57% of total exports; however, it is an important market for certain developing countries and for other developed countries (mainly in Europe), absorbing 46% of their exports.

Except in 1986 and 1987, the volume of Japan's exports has consistently grown faster than that of other countries (see Tables 1 and 3). Japan's sales have been concentrated on the US market (39% of the total) and the developing countries' markets (37%), a particularly high share which is matched only by US exports. Despite a more marked cyclical trend in its exports, the United States ranks second in terms of the rate of increase. Its exports are more evenly distributed throughout the world than Japanese exports and their composition is also more diversified, given that the United States is a major supplier of agricultural products, particularly to the developing countries. A large proportion of the Community's extra-EC exports goes to other developed countries, particularly in Europe (25%), while the developing countries account for a relatively small share (around 20%).

Table 3

Volume of the main countries' exports

(variation in %)

	1984	1985	1986	1987	1988
Developed countries	9,9	4,7	2,6	5,3	8,8
USA	7,2	4,1	5,2	15,0	22,5
Japan	16,1	4,6	−0,6	−0,3	3,5
Community	8,5	4,7	1,9	3,5	6,6
Non-oil-producing developing countries	11,5	4,5	9,4	12,1	11,0

Sources: International Monetary Fund; Commission departments.

Table 4

Trend of the volume of world exports of the principal product categories

	1950-65 Average	1965-70 Average	1970-75 Average	1975-80 Average	1980-86 Average
Agricultural products and foodstuffs					
Variation in %	4,6	4,0	1,2	5,9	1,1
Share of total exports in %	25,1	19,0	15,4	14,7	15,4
Apparent elasticity in relation to GDP[1]	0,9	0,7	0,3	1,5	0,4
Mineral and energy products					
Variation in %	7,1	9,3	0,6	2,8	−1,9
Share of total exports in %	39,8	38,5	35,7	31,0	23,8
Apparent elasticity in relation to GDP[1]	1,5	1,7	0,2	0,7	−0,7
Manufactures					
Variation in %	9,0	11,5	7,4	6,8	4,5
Share of total exports in %	35,1	42,5	48,9	54,3	60,8
Apparent elasticity in relation to GDP[1]	1,9	2,1	1,9	1,7	1,7

[1] Ratio of variation in export volume to variation in world GDP.
Source: GATT.

Table 5

Trade between different zones as a percentage of world exports in 1979 and 1986

(share as % of world exports based on value in USD)

Origin \ Destination	Community	Developed countries	Developing countries			State-trading countries	World
			OPEC	Other developing countries	Total		
1979							
Community	18,9	27,4	2,4	3,4	5,8	1,9	35,2
Developed countries	26,8	47,6	4,8	9,6	14,4	3,5	65,5
Developing countries							
OPEC	3,7	9,5	0,2	2,8	3,0	0,3	12,8
Other developing countries	2,8	8,0	0,7	2,4	3,1	0,9	12,0
Total	6,5	17,5	0,9	5,2	6,1	1,2	**24,8**
State-trading countries	1,7	2,8	0,3	1,4	1,7	5,2	9,7
World	34,9	67,9	6,0	16,2	22,2	9,9	100,0
1986							
Community	21,1	30,3	1,6	3,4	5,0	1,2	**36,5**
Developed countries	29,0	53,9	3,0	9,5	12,5	2,7	**69,1**
Developing countries							
OPEC	1,5	3,6	0,2	1,7	1,9	0,2	5,7
Other developing countries	3,0	10,0	0,8	3,0	3,8	1,4	15,2
Total	4,5	13,6	1,0	4,7	5,7	1,6	20,9
State-trading countries	1,4	2,6	0,2	1,6	1,8	5,6	10,0
World	34,9	70,1	4,2	15,8	20,0	9,9	100,0

Source: United Nations, Monthly Statistical Bulletin.

C. Growth potential of developing countries' trade

Trade between non-oil-producing developing countries represents a growing share of world trade (see Table 5) but the proportion has remained extremely low (2,4% in 1979 and 3% in 1986). The same goes for those countries' share of exports to the developed countries (8% in 1979 and 10% in 1986). Participation in trade by the oil-producing countries has declined sharply (from 12% of world trade in 1979 to only 6% in 1986). Total developing country trade may, in future, exhibit major growth potential.

In 1986, exports of manufactures from developing countries as a whole accounted for only 12% of world exports of these products (see Table 7). In that year, manufactures accounted for only 34% of their exports, this proportion rising to 50% for the non-OPEC countries. Although the latter share has increased considerably over the years (see Table 8), the countries in question have remained big importers of this category of product, which represented 65% of total imports in 1986.

The geographical breakdown of the developing countries' exports and imports according to product (see Table 9) confirms the preponderance of the industrialized countries in the pattern of their trade. Of the developing countries' sales of manufactured goods, 64% go to the industrialized countries, from which they buy 77% of their own imports of these products.

2. Factors inhibiting world trade

World trade has continued to be hampered by a number of factors which, since the early 1970s, have exerted a restraining influence. These include the substantial fluctuations in exchange rates, the resurgence of protectionism and, in so

Table 6

Trade between developed countries, 1986

Exports / Origin	Destination: USA	Canada	Japan	Other developed countries (excluding EC)	Total	Community	Total developed countries: billion USD	Total developed countries: Share in %	World: billion USD	World: Share in %
USA	—	20,8	11,1	7,1	39,0	24,3	130 723	63,3	206 408	100
Canada	77,2	—	4,8	1,6	83,6	6,5	78 123	90,1	86 725	100
Japan	38,8	2,6	—	6,7	48,2	14,8	131 672	63,0	209 151	100
Other developed countries (excluding EC)	10,0	1,1	6,1	14,1	31,4	46,1	139 044	77,5	179 409	100
Total	24,4	7,4	5,6	8,1	45,5	24,9	479 562	70,3	681 693	100
Community	9,3	1,1	1,4	13,0	24,9	56,9	646 395	81,8	789 773	100
Total developed countries	16,3	4,0	3,3	10,7	34,4	42,1	1 125 957	76,5	1 471 460	100

Imports / Origin	Destination: USA	Canada	Japan	Other developed countries (excluding EC)	Total	Community	Total developed countries	World
Imports from all developed countries								
USD billion	240 036	59 506	49 243	158 110	506 895	619 062	1 125 957	1 471 460
share (%)	66,8	89,1	46,1	85,6	70,6	83,2	77,0	69,0
Imports from other countries								
USD billion	119 152	7 266	57 602	26 641	220 661	124 770	335 431	661 543
share (%)	33,2	10,9	53,9	14,4	29,4	16,8	23,0	31,0
Imports from world								
USD billion	359 188	66 772	106 845	184 751	717 556	743 832	1 461 388	2 133 003
share (%)	100	100	100	100	100	100	100	100

Source: United Nations, Monthly Statistical Bulletin, June 1987.

far as the developing countries' trade is concerned, the variations in their export earnings and their growing debt burden.

2.1. Exchange rate fluctuations and changes in competitiveness

The substantial exchange rate fluctuations have certainly been one of the factors that have caused world trade to slow down, given that exchange rate variations introduce an element of uncertainty at the microeconomic level.

Recently, there have been considerable changes in relative prices and extensive successive redistributions in the competitiveness of economies, resulting from movements on the foreign exchange markets (see Table 10).

Table 7

Exports from the main zones, for the main categories of products in 1986

(share as % of world exports)

Products[1]	0+1	2+4	3	5-9
Industrialized countries	61,2	61,0	28,5	78,9
of which				
Community	34,3	18,4	15,7	38,2
Developing countries	31,6	29,0	56,5	12,2
of which				
OPEC countries	1,8	2,2	39,9	0,6
Other developing countries	29,8	26,8	16,6	11,6
State-trading countries	7,2	10,0	15,0	8,9
World	100	100	100	100

[1] SITC categories: 0+1 = agricultural products and foodstuffs; 2+4 = raw materials and oils; 3 = energy products; 5-9 = manufactures.

Source: United Nations.

Table 8

Structure of the developing countries' imports and exports by product category in 1971, 1979 and 1986

(share as % of total imports and exports, based on value in USD)

	Imports					Exports				
		SITC category[1]					SITC category[1]			
	Total	0+1	2+4	3	5-9	Total	0+1	2+4	3	5-9
1971										
Developing countries Total	100	13,0	6,7	8,5	71,8	100	22,2	16,6	38,4	21,8
1979										
OPEC countries	100	9,9	2,7	2,2	85,2	100	2,1	2,2	93,5	2,2
Other developing countries	100	10,0	6,3	18,6	65,1	100	26,4	15,3	15,0	43,3
Total	100	10,0	5,2	13,4	71,4	100	14,7	9,0	52,8	23,5
1986										
OPEC countries	100	14,4	4,0	5,4	76,2	100	2,1	1,7	91,0	5,2
Other developing countries, of which Asian NICs[2]	100	9,3	7,1	12,3	71,4	100	4,4	2,9	4,0	89,7
Total	100	10,2	5,9	18,7	65,2	100	12,7	7,7	45,2	34,4

[1] SITC categories: 0+1 = agricultural products and foodstuffs; 2+4 = mineral products; 3 = energy products; 5-9 = manufactures.
[2] Newly industrializing countries of Asia = Hong Kong, Korea, Singapore, Taiwan.
Source: United Nations, Monthly Statistical Bulletin.

The US dollar, which appreciated sharply between 1979 and 1985, fell between the first quarter of 1985 and 1987, since when it has more or less stabilized. The real effective exchange rates of Japan and the Community — deflated by wage costs in the economy as a whole — which fell respectively by 6% between 1979 and 1985 and by nearly 30% between 1980 and 1985, increased by 40,9% and 16,0% respectively between 1985 and 1988. As a result of these changes in competitiveness, the exporting sectors and those competing with imports in the countries concerned have been subject to great pressure.

With regard to world trade, disturbances may result from asymmetrical or belated responses to the extensive exchange rate movements in real terms. While generally speaking the exports of countries whose currencies are appreciating quickly slow down, export growth in countries with a falling exchange rate may be delayed by lack of flexibility in production market penetration policies. Thus, as early as the second half of 1985, the rise in exchange rates curbed Japan's and the Community's exports to third countries, but United States exports did not start to react significantly to the decline in the dollar until the second half of 1986.

2.2. Neoprotectionism

During the slowdown in world trade after 1973, there was a proliferation of new trade protection arrangements, notably in the form of non-tariff measures and bilateral export restraint agreements.

The reasons generally given to justify such measures were the need to protect jobs, particularly in sectors experiencing difficulties or in 'infant' industries, and the desire to avoid aggravating trade deficits. Developments on the foreign exchange markets, of which certain countries took advantage to push forward rapidly with their trade expansion, created a climate conducive to a resurgence of protectionism. The restrictions imposed on trade by these new forms of protection had the substantial direct effect of limiting world trade. An indirect inhibiting effect resulted from the distortions created by these measures, namely the resulting defective allocation of resources and the creation of rents. In addition, trade deflection may arise, either because exporters relocate production to countries that are not subject to restrictions (in the case of export restraint agreements), or exports are

Table 9

Geographical breakdown of developing countries' imports and exports, products and product categories total

(share as % of total world imports and exports, based on value in USD)

Origin / Destination	Developed countries				Developing countries			State-trading countries	World
	USA	Japan	EC	Total	OPEC countries	Other developing countries	Total		
Exports									
OPEC countries:									
Total products	*10,1*	*19,9*	*25,8*	*63,5*	*2,9*	*31,1*	*34,1*	*1,8*	*100*
Energy products (3)	9,4	20,8	26,4	64,7	1,3	31,7	33,0	1,6	100
Other developing countries:									
Total products	*27,5*	*9,2*	*18,6*	*63,0*	*6,2*	*20,4*	*26,6*	*9,2*	*100*
Agricultural products and foodstuffs (0 + 1)	18,3	7,1	25,8	58,9	8,2	15,6	23,8	16,8	100
Mineral products (2 + 4)	7,8	15,4	26,1	58,6	4,7	25,4	30,1	10,8	100
Energy products (3)	29,6	17,8	9,8	64,2	3,7	26,5	30,2	3,4	100
Manufactures (5-9)	34,3	5,2	17,8	64,9	6,9	18,5	25,4	8,4	100
Total developing countries:									
Total products	*21,4*	*13,0*	*21,1*	*63,2*	*5,1*	*24,1*	*29,2*	*6,6*	*100*
Manufactures (5-9)	33,2	5,3	17,7	63,6	8,1	19,0	27,1	8,0	100

Destination / Origin	Developed countries				Developing countries			State-trading countries	World
	USA	Japan	EC	Total	OPEC countries	Other developing countries	Total		
Imports									
OPEC countries:									
Total products	*11,8*	*13,7*	*36,3*	*71,2*	*4,7*	*18,6*	*23,3*	*5,5*	*100*
Manufactures (5-9)	11,6	17,6	40,8	78,1	3,3	13,6	16,9	5,0	100
Other developing countries:									
Total products	*16,8*	*13,4*	*18,1*	*58,2*	*15,0*	*18,1*	*33,1*	*8,7*	*100*
Manufactures (5-9)	19,6	21,0	25,1	76,7	1,1	13,3	14,5	8,8	100
Total developing countries:									
Total products	*15,7*	*13,5*	*22,3*	*61,2*	*12,6*	*18,2*	*30,9*	*7,9*	*100*
Manufactures (5-9)	17,4	20,1	29,3	77,1	1,7	13,4	15,1	7,8	100

Source: United Nations, Monthly Statistical Bulletin.

Table 10

Real effective exchange rates of the United States, Japan and the Community

(indices 1970-75 = 100; variation in % compared with preceding year)

	USA			Japan			Community		
	Real effective exchange rate		Exports volume	Real effective exchange rate		Exports volume	Real effective exchange rate		Exports volume
	Index	Variation	Variation	Index	Variation	Variation	Index	Variation	Variation
1978	77,0	−8,1	7,5	148,7	17,4	0,7	100,4	2,4	4,9
1979	77,0	0,0	14,1	128,6	−13,5	0,2	109,8	9,4	7,5
1980	77,3	0,4	10,8	114,0	−11,4	17,1	116,9	6,5	1,8
1981	85,3	10,3	−1,4	123,4	8,2	10,6	100,8	−13,8	4,2
1982	97,0	13,7	−10,3	110,6	−10,4	−2,3	94,6	−6,2	1,2
1983	101,0	4,1	−3,0	119,9	8,4	8,7	89,3	−5,6	3,0
1984	108,4	7,3	7,2	122,8	2,4	16,1	82,8	−7,3	8,5
1985	113,5	4,7	4,1	121,4	−1,1	4,6	82,3	−0,6	4,7
1986	91,2	−19,6	5,2	152,8	25,9	−0,6	90,3	9,7	1,9
1987	81,2	−11,1	15,0	160,0	4,7	0,3	97,1	7,5	3,5
1988[1]	77,2	−4,9	22,5	171,1	6,9	3,5	95,5	−1,6	6,6

[1] Estimates.
Source: Commission departments.

channelled instead to unprotected countries, via active marketing practices.

In the 1970s and 1980s most countries resorted to new types of protectionist practices. The restrictions covered a wide range of products: motor vehicles, petrochemicals, synthetic fibres and, in particular, electronic equipment and semiconductors.

2.3. Fluctuations in the terms of trade — reduced demand from OPEC

The income, and hence the imports, of countries which are essentially producers of primary products depend on world commodity prices, and these have fluctuated widely (see Table 1). Between 1980 and 1985 (with a break in 1983), the rise in the dollar exchange rate contributed to the fall in prices denominated in that currency. Furthermore, as with crude oil, the upward movements recorded during the 1970s, which modified the structure of relative prices and of consumption, caused lasting reductions in demand. The recovery in world demand has produced a renewed sharp upturn in prices since 1987 which was aggravated by the reduction in production capacity which had been made in earlier years, particularly in the sector of industrial raw materials.

All the same, except in 1983 and 1984, raw material prices in real terms, deflated by the prices of manufactures or that of crude oil, continued to fall (see Table 1).

Thus the purchasing power of the non-oil-producing developing countries' exports increased only slightly during the 1980s; of the countries in question, those producing mainly primary products were the worst off.

In so far as the oil-producing countries were concerned, their export earnings were significantly cut by the fall in world oil prices after the second oil crisis, although there was a temporary respite in 1987 owing to the agreements reached by the OPEC countries. Thus these countries' imports fell dramatically in real terms and the weakening of these export markets affected the sales of industrialized countries, particularly the Community countries. This adverse effect of world trade was, however, offset by the contribution which cheaper imports of petroleum products made towards reducing world inflation. This had a positive

effect on the incomes of the petroleum-product-consuming countries, which bolstered their domestic demand and the level of their imports.

2.4. Indebtedness of the developing countries

The difficulties experienced by developing countries in financing their debt directly affect the level of their external demand. The inhibiting effect on world trade is all the more marked as measures to alleviate the burden of interest repayments on existing debt and remittances represent a loss of income for the creditor countries.

The financial situation of all the developing countries and the 15 most highly indebted countries in particular has not improved significantly since 1982 (see Table 11). Implementation of the Baker Plan, which recommended structural reforms designed to stimulate growth, with the backing of increased external financing, has had only mixed results. The economic rehabilitation programmes have generally had the effect of curtailing the expansion of domestic demand in the countries concerned. However, the current account position has improved quite significantly, although this has had very little to do with the trend of exports but more with the substantial cutback in imports; indeed imports only increased to any significant extent in 1987 and 1988, which brought them back to the level reached in 1981.

In 1988 developing country debt totalled USD 1 243 000 million. However, the ratio of debt to the value of exports of goods and services fell slightly in 1987 and in 1988, although it was still 54% higher than the 1981 level. The ratio of debt service to exports also improved quite significantly. These indicators show that the situation remains difficult and that the problem of debt relief remains unsolved.

Table 11

Indicators of the debt of the developing countries and the 15 most indebted countries[1]

	1981	1982	1983	1984	1985	1986	1987	1988
Developing country debt (billion USD)								
All developing countries	743,8	841,4	894,1	941,7	1 017,4	1 103,3	1 218,1	1 243,5
15 most indebted countries	332,4	380,1	395,9	410,1	424,5	447,5	480,2	484,4
Ratio of debt to exports of goods and services (%):[2]								
All developing countries	94,7	119,1	133,2	133,4	149,6	169,0	158,5	145,7
15 most indebted countries	202,4	267,8	290,8	271,7	289,6	347,9	336,7	108,3
Ratio of debt service to exports of goods and services (%):[2]								
All developing countries	15,7	19,1	17,8	19,2	20,6	22,2	19,5	19,3
15 most indebted countries	38,9	49,8	39,5	39,9	38,8	43,3	34,6	41,0
Gross domestic product (real terms), variation in %:								
All developing countries	1,8	1,7	1,9	4,0	3,5	4,2	3,4	3,6
15 most indebted countries	0,1	−0,5	−2,7	2,3	3,8	3,8	2,5	1,5
Balance of payments on current account as % of exports of goods and services:[2]								
All developing countries	−6,1	−12,2	−9,4	−4,7	−3,6	6,2	0,0	2,7
15 most indebted countries	−30,7	−35,8	−11,2	1,0	0,2	11,9	6,1	6,4
Imports (fob) in billion USD:								
All developing countries	582,1	539,7	504,9	506,7	489,2	490,3	553,3	635,7
15 most indebted countries	133,6	108,2	82,8	80,4	78,2	78,7	86,1	94,7

1 Fifteen most indebted countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, the Ivory Coast, Mexico, Morocco, Nigeria, Peru, the Philippines, Uruguay, Venezuela, Yugoslavia
2 Figures calculated on the basis of USD values.

Source: International Monetary Fund.

3. Salient facts of the present trend of world trade

The recent trend of world trade has been marked by the problem of the imbalances in current payments at world level. Other salient facts have been the emergence of new trade configurations. Lastly, the Uruguay Round is the most recent attempt to strengthen free trade.

3.1. The adjustment of current account balances under way at world level

In 1987, the sharp depreciation of the dollar (see Table 10) had still not led to a correction of the current payments imbalances that occurred while the currency was rising (see Table 12). After three years of a falling dollar, the United States current account deficit continued to increase, by a further USD 15 000 million in 1987, while Japan's surplus stabilized at a high level and the Community's fell by USD 6 000 million. The ratio of current balances to GNP in the countries concerned does, however, show that the correction did get under way in 1987 in Japan and the Community, and that it is the United States in particular which was lagging behind. In 1988, the adjustment of current account balances of the principal industrialized countries became more obvious.

The correction of the trend of flows in real terms and the attenuation of the effects of the terms of trade should be gradually reflected in a reduction in the current payments imbalances in the industrialized countries. Moreover, closer cooperation on economic policies got under way in 1987 (decision in principle in the United States in December 1987 to cut budget spending, programme to support domestic demand in Japan, tax reform in Germany and coordinated monetary policies). For all that, the extent of existing trade imbalances and the disturbing increase in net investment income surpluses or deficits mean that the return to more balanced positions will take longer. Furthermore, the problem of the Asian newly industrialized countries' (NICs) surpluses — with the United States in particular — is still unresolved, although these surpluses may be reduced in the near future if the countries concerned import more.

3.2. New geographical trends of trade flows

Recently, the global pattern of trade described above (Section 1.2) has covered new geographical trends, while commercial and financial interdependence has been asserting itself:

(i) Intercontinental trade has been characterized by the increase in trade flows between North America and Eastern Asia. The North American market has increasingly become the predominant export outlet for manufactures from the Asian countries. The exchange rates of the Asian countries — except for Japan — have generally followed that of the US dollar. It was only recently (end of 1986/87) that a partial appreciation of certain currencies (in Korea and Taiwan) occurred. Furthermore, the increased trade of this area has polarized around Japan, which, starting in 1986, has undertaken substantial direct investment in most Asian countries. The resulting production is largely geared to the export market, especially North America, or destined for Japan, usually in the form of semi-finished products.

(ii) Trade between the North American countries has intensified considerably. In 1986, 64% of Canada's exports went to the United States.

(iii) The Community was enlarged in 1986, to include Spain and Portugal. The creation of the single market in 1992 will also tend to boost intra-Community trade flows, while at the same time increasing the Community's trade with the rest of the world.

(iv) Trade integration is under way in Latin America, in particular between the countries of the Central American isthmus and the Andean countries.

Furthermore, a number of developing countries have, with the intention of becoming more involved in active trade flows, adopted trade liberalization measures.

3.3. The Uruguay Round negotiations

In September 1986, a new round of multilateral negotiations under the GATT got under way (the 'Uruguay Round') with the declared intention of reducing tariff barriers between contracting parties, strengthening of the bases of multilateral trade, and redefining the role of the GATT. For the first time, agricultural products have been included in the negotiations, together with services, trade-related investment measures and intellectual property rights.

Conclusions

Removal of the factors inhibiting world trade should enable the progressive factors inherent in the structure of trade to play a greater role. The debt problem is the greatest obstacle to the potential expansion of the developing countries' trade

and consequently of international trade as a whole. All the same, the gradual adjustment of the major industrialized countries' current account balances and a return to a more liberal system of trade which might ensue from the Uruguay Round, could create a climate that is more conducive to an increase in world trade.

Table 12

Recent trend of current account balances and relative variation of domestic demand in the United States, Japan, the Community and the newly industrializing countries of Asia

	1983	1984	1985	1986	1987	1988[1]
USA						
Current account balance						
in USD	− 46,3	− 107,1	− 115,1	− 138,8	− 154,0	− 134,2
as % of GNP	− 1,4	− 2,9	− 2,9	− 3,3	− 3,4	− 2,8
Relative variation of domestic demand	3,5	5,4	0,3	0	− 1,3	−
Japan						
Current account balance						
in USD	20,8	35,0	49,2	85,8	87,0	82,6
as % of GNP	1,8	2,8	3,7	4,3	3,6	2,9
Relative variation of domestic demand	− 1,7	− 1,7	0,7	0,4	2,1	−
Community						
Current account balance						
in USD	3,1	10,1	20,0	50,6	42,4	22,6
as % of GNP	0,1	0,4	0,8	1,5	1,0	0,5
Relative variation of domestic demand	− 2,0	− 3,4	− 1,4	− 0,1	0,2	−
Newly industrializing countries of Asia						
Current account balance						
in USD	1,6	6,5	10,2	22,8	29,1	36,5
as % of GNP	− 2,0	− 1,5	5,2	10,1	10,8	11,5

[1] Estimates.

Sources: International Monetary Fund; Commission departments.

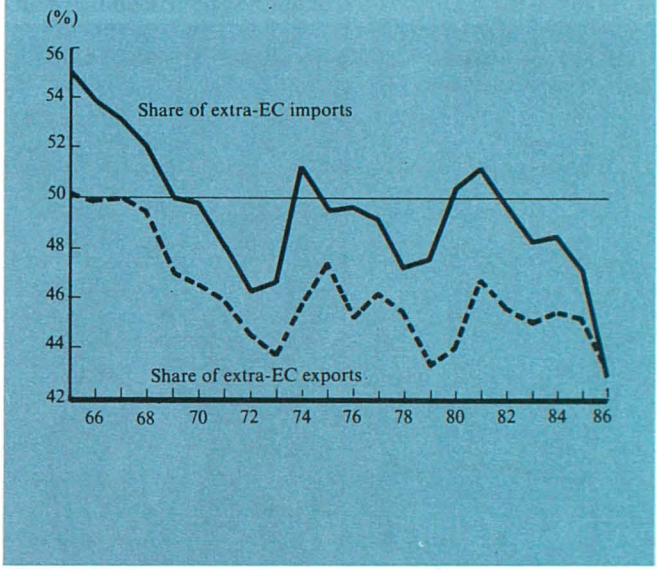
II — Structure and performance of Community trade

The purpose of this chapter is to examine the structure and performance of Community trade compared to those of the United States and Japan. Section 1 provides a brief description of the importance and structure of trade. Section 2, dealing with trade performance, is divided in three parts. The first part offers a methodological discussion on the notion of trade performance. The second part examines the aggregate trade performance of the Community since 1973, and the final one attempts to identify the sources of changes in trade balances between 1980 and 1986, using the technique of 'constant market share analysis'.

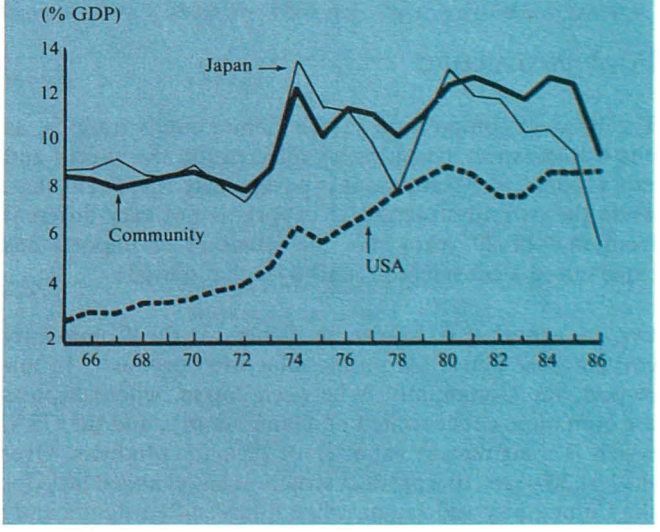
1. Importance and structure of Community trade

The European Community is the most important trading bloc in world trade: extra-EC exports accounted for 20% of world exports (excluding intra-EC trade) in 1986, compared to only 13% for the United States and 12% for Japan. Much of the Community's trade, however, is intra-EC trade. In 1980 extra-EC imports accounted for more than 50% of total Community imports but the share has dropped considerably to only 43% in 1986. For exports the share dropped only slightly from 44% to less than 43% in 1986. Extra-EC trade relations declined continuously over the last decades. Only the two oil shocks led to a jump in both extra-EC exports and imports but, once the shocks were absorbed and the adjustment process was under way, the intra-EC trade bounced back and expanded more rapidly than extra-EC trade. The remainder of this Report will be confined to extra-EC trade.

GRAPH 1: **Importance of extra-EC trade in total Community trade, 1965-86**



GRAPH 2: **Importance of imports in the Community, USA and Japan**



Importance of imports

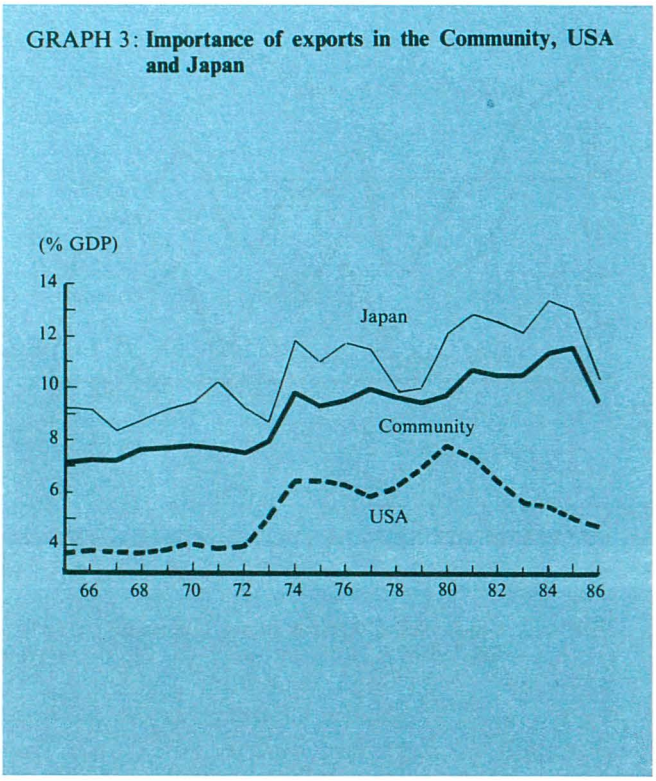
In 1986, imports accounted for 9% of GDP in the Community (excluding intra-EC trade), 6% in Japan and 9% in the United States. Looking at the entire period 1965-86, it appears that the importance of imports is very similar for the Community and Japan, being influenced in particular by the fluctuations of the oil price. On the other hand, the importance of imports of the United States has increased considerably and steadily throughout the period.

Importance of exports

In terms of her dependence on trade, the Community occupies an intermediate position between Japan and the USA. In 1986, exports accounted for 11% of GDP in Japan, down from a peak of 13% in 1984. For the Community, exports accounted for 10% of GDP in 1986, somewhat down from

the peak of 12% in 1985. The United States is far less dependent on exports, with a ratio of exports to GDP of barely 5% in 1986, down from a peak of 8% in 1980. None the less, looking at the entire period 1965-86, there has been an upward trend in the degree of dependence on exports in the United States as well as in the Community and Japan.

GRAPH 3: **Importance of exports in the Community, USA and Japan**



Product structure

The product composition of the Community's trade is, as one would expect, considerably different on the import and export sides. Furthermore, it is particularly significant that, while the current structure of exports is not very different from that of 20 years ago, the structure of imports has experienced a considerable shift over that period.

On the export side, shown in Table 13, the Community concentrates, above all, on manufactured products. In this respect, the Community is between Japan, whose exports are even more concentrated on manufactures, and the USA, which is a significant exporter of primary products. Over the last 20 years, this product structure has changed little for the Community and Japan, while it has shifted significantly toward exports of manufactured products for the USA. Indeed, while the share of manufactures in total exports has remained virtually constant and above 80% and 90%, respectively, for the Community and Japan, it has increased by 12% points (from a 64% share to 76%) for the USA; in contrast, exports of primary products by Japan, relatively small as they were in 1965, have become almost insignificant today.

Table 13

Exports by the Community, USA and Japan: product structure

(%)

Exporter	Product category	Year	
		1965	1986
Community	Non-fuel primary	15	3
	Fuel	3	4
	Manufactures	82	85
	Total	100	100
USA	Non-fuel primary	33	20
	Fuel	3	4
	Manufactures	64	76
	Total	100	100
Japan	Non-fuel primary	7	2
	Fuel	1	0
	Manufactures	92	97
	Total	100	100

On the import side, Table 14 shows that, over the last 20 years, the product structure of the Community's imports reflects the increasing relevance of manufactured products. In 1965, both the Community and Japan were mostly importers of primary products (including fuel) which represented about 70% and 80%, respectively, of their total imports. Indirect evidence of the lowering of protection of industrial, relative to agricultural, goods as well as the differences in income demand elasticities for those goods is the fact that currently almost 60% of the Community's imports are manufactured products. Something similar holds for the USA: by 1965, the value of imports of primary products (including fuel) and of manufactures was roughly the same; 20 years later, almost 80% of US imports are manufactured products. While Japan's evolution shows a similar pattern, the change is less striking, reflecting in part that country's lack of natural resources and energy sources and, as it is often perceived, its somewhat more restrictive import policies on manufactured products. Contrary to the USA and, even to the Community, where the share of fuels in total imports was roughly equal in 1965 and 1986, in the

case of Japan much of the decrease of the importance of non-fuel primary commodities in total imports is accounted for by the increasing importance of fuels.

In summary, it can be inferred from Tables 13 and 14 that the Community, the USA and particularly Japan are all significant net importers of primary products and net exporters of manufactures. However, over the last 20 years (and this is indirect evidence, even if at a very aggregate level, of the increasing relevance of intra-industry trade as well as of the larger diversification of LDCs' exports) the size of the negative balance in primary commodities has become relatively less important for these blocs while the size of the positive balance in manufactured products has become less important in relative terms.

Table 14

Imports by the Community, USA and Japan: product structure

(%)

Importer	Product category	Year	
		1965	1986
Community	Non-fuel primary	55	23
	Fuel	16	20
	Manufactures	29	57
	Total	100	100
USA	Non-fuel primary	41	23
	Fuel	11	11
	Manufactures	48	77
	Total	100	100
Japan	Non-fuel primary	61	34
	Fuel	19	31
	Manufactures	19	34
	Total	100	100

Geographical structure

The geographical composition of exports of the Community is similar to that of US exports but somewhat different from that of Japan. As shown in Table 15, its most significant trait is that the majority of EC, US and Japanese exports go to industrial countries: this was so in 1965 and remains so in 1986. For both the EC and the USA, this structure has remained remarkably stable over those 20 years; indeed, industrial countries in general are a somewhat more important market for the USA than for the EC but, in both cases, that importance has remained unchanged over the last 20 years. The case of Japan is slightly different in that the role of the industrial countries as markets for its products has increased substantially (from a 51% share to 63%) over this same period.

The geographical structure of imports shows that, in 1965, over half of the three blocs' imports came from industrial countries. By 1986, this proportion had increased somewhat for the Community, remained virtually the same for the USA and decreased for Japan.

Table 15

Exports by the Community, USA and Japan: geographical structure

(%)

Exporter	Importer	Year	
		1965	1986
Community	Industrialized countries	56	58
	Developing countries	38	36
	State-trading countries	6	6
	Total	100	100
USA	Industrialized countries	65	63
	Developing countries	32	35
	State-trading countries	1	1
	Total	100	100
Japan	Industrialized countries	51	63
	Developing countries	44	35
	State-trading countries	2	2
	Total	100	100

Table 16

Imports by the Community, USA and Japan: geographical structure

(%)

Importer	Exporter	Year	
		1965	1986
Community	Industrialized countries	51	56
	Developing countries	43	37
	State-trading countries	6	8
	Total	100	100
USA	Industrialized countries	64	65
	Developing countries	34	35
	State-trading countries	0	1
	Total	100	100
Japan	Industrialized countries	51	47
	Developing countries	40	51
	State-trading countries	4	2
	Total	100	100

2. The Community's trade performance

Many commentators and policy makers see the European Community as facing a problem of 'international competitiveness'. For some, the problem lies in the trade performance in high-technology sectors, where the United States and Japan are said to have substantially higher shares of world exports than the EC. For others, instead, the competitiveness problem is reflected in the aggregate trade performance *vis-à-vis* countries like Japan, with whom the bilateral trade deficit of the Community has grown rapidly in recent years (from USD 13 billion in 1980 to USD 23 billion in 1986).

The purpose of this section is to examine the trade performance of the Community. It begins with a brief theoretical discussion on the meaning of trade performance or competitiveness. The section then presents the aggregate trade performance of the EC since 1973 as well as the sources of changes in trade balances between 1980 and 1986.

2.1. The meaning of trade performance or competitiveness

The first meaning attached to international competitiveness refers to the trade performance of a sector in a particular country. In this case, a loss of competitiveness is reflected by a declining relative market share — in either domestic or foreign markets — or by a deteriorating net trade balance in that sector. The real concern here is about the country's pattern of specialization — i.e. its trade composition — and whether it is conducive to rising standards of living. Since the standard of living of a country ultimately depends on its level of total factor productivity (i.e. the productivity of labour and all other factors of production), the industries that generally cause the greatest concern are those associated with average to high total productivity. This is the case of certain basic industries (such as steel, cars or machinery) and, mostly, high-technology sectors (such as those based on microelectronics or aeronautics).

To the extent that competitiveness is reflected in the structure of trade, its determinants are similar to those of trade in general, namely comparative advantage (based on factor endowments and technology) and/or economies of scale. Therefore, a deterioration of competitiveness in industries that display high total productivity, generally characterized by knowledge-intensity endowment in human capital and R&D as well as from the inability to exploit economies of scale.

According to the second meaning, on the other hand, a country is said to lose international competitiveness when the appreciation of its real effective exchange rate (i.e. the multilateral nominal exchange rate corrected for inflation differentials) exceeds the average gain in total factor productivity of the tradable sector of an economy *vis-à-vis* the rest of the world. For example, a country credited with a productivity growth rate of 5% above the average of the rest of the world over a given period and whose real effective exchange appreciates at the same time by 7%, will have suffered a decline in international competitiveness of 2% over that period. Such misalignments of the exchange rate generally result from macroeconomic factors that relate to the production-consumption or savings-investment relationships.

More precisely, a loss of competitiveness according to this second meaning will normally imply two effects for a country. Firstly, its aggregate trade performance, commonly measured by the current account balance or the trade balance, will deteriorate. The precise extent and timing of this deterioration depends on the rate of appreciation of the real effective exchange rate and on the responsiveness of the components of the current account to changes in the exchange rates. It should be emphasized here that in a multilateral trading system, only overall balances matter; no meaning attaches to bilateral balances. Secondly, the country will undergo a shifting of resources from the tradables sector (which includes both import-competing and export industries) to the non-tradables sector. This is so because an appreciation of the exchange rate tends to lower the domestic currency price of tradables relative to those of non-tradables, thereby increasing the latter's profitability and supply.

In short, the first meaning of international competitiveness relates to sectoral trade performance which depends upon microeconomic conditions linked to the sectoral allocation of resources. The second meaning, on the other hand, refers to the aggregate external performance which is linked to macroeconomic conditions.

The aggregate trade performance of the Community will be examined in the remainder of this chapter. The sectoral trade performance will be studied in the following two chapters.

2.2. The aggregate trade performance since 1973

This section examines the aggregate trade performance of the Community since 1973 and compares it with the results for Japan and the United States. The analysis is divided into

three subperiods: 1973-80 (an era of two oil price shocks), 1981-85 (an era of external imbalance) and 1986 (the last year under review).

Between 1973 and 1980, a period encompassed by two upward oil price shocks, the trade balances of the European Community and Japan evolved in parallel fashion (see Graph 4). Both the Community and Japan experienced a deterioration in 1974, followed by a recovery, the pace of which was much faster in Japan than in the Community. The trade balance of these two countries again deteriorated in the latter years, with the deficit reaching more than 1% of GDP in 1980. It is interesting to note that after 1975 the evolution of the US trade balance exhibited the opposite cyclical nature.

Another similarity between the Community and Japan lies in the composition of their trade balance. Both countries exhibit a strong surplus in manufacturing trade, although to a differing degree, that partly compensates a strong deficit in primary products. Graphs 4 and 6 reveal that the 1973 and 1978 oil price rises — and the resulting changes in the primary product trade balances — provide most of the explanation for the trade deficits of the Community and Japan during the period 1973-80. By contrast, the composition of the US trade account was different (Graph 5), in those years, from that of the Community and Japan. With its vast endowments of oil and other natural resources, it had a relatively small deficit in primary products. The oil shocks, especially the second one, have had, therefore, a relatively small impact on the US trade account.

The period since 1981 has been characterized by the emergence of excessive external imbalances, particularly on the part of the United States and Japan. In just five years, between 1981 and 1985, the trade account of the United States moved from a slight deficit to a deficit equivalent to roughly 4% of that country's GDP. At the same time, Japan went from a small surplus to a surplus equivalent to about 4% of its GDP. At the same time, the Community's trade balance improved steadily.

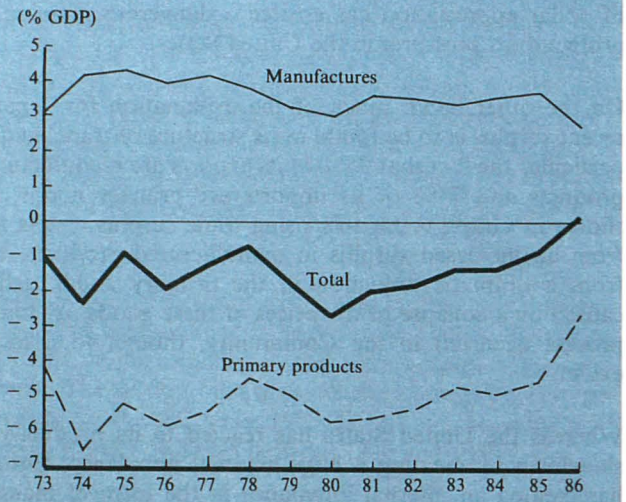
In order to judge the impact of these imbalances on Community trade performance, one needs to understand their origin. In the United States, the standard of living has been preserved since 1982 by keeping private and public spending greatly in excess of that warranted by domestic income. The associated rise in US interest rates, which was accompanied by substantial appreciation of the dollar (see Graph 7) enabled the gap to be filled by massive foreign borrowing. Given that the rate of growth of productivity in the United States was generally lower than elsewhere (which should normally have been offset by a depreciation of the exchange rate), this perverse appreciation of the dollar translated into a sharp and substantial loss of international competitiveness and the US trade balance deteriorated substantially. As documented by economists at the Institute for International Economics in Washington and others, this recent episode of dollar appreciation has created a dangerous increase in protectionist pressures in the United States.

On the other hand, much of the explanation for Japan's recent surplus is to be found in its structure of trade, and in particular the fact that 95% of its exports are manufactured products and 75% of its imports are primary goods. As shown in Graph 6, Japan's rising trade surplus results not from an increased surplus in manufactured products, but from a dramatic reduction in the primary goods deficit caused by a collapse of the prices of these goods. A similar process occurred in the Community, though to a lesser extent.

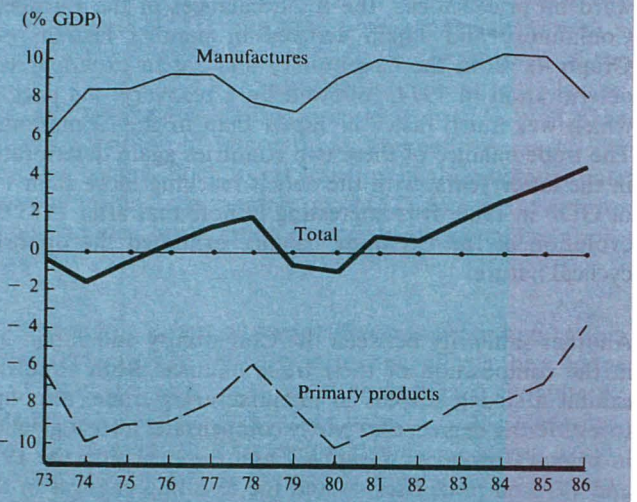
Whereas the United States has reacted to its productivity slowdown by creating a huge external imbalance, Europe has created an internal imbalance in the form of massive unemployment coupled with slow economic growth, especially since 1981. As is now widely perceived, the root of the European problem lies in the rigidities which have prevented a reallocation of resources in the face of growing competition in traditional areas. Essentially, many European countries suffer from a lack of social cohesion which prevents the necessary structural adjustments from taking place in adverse circumstances. The Community is now in a high unemployment trap resulting from the fact that workers who have been out of a job for a long time become (or are regarded as) unemployable. The solution to this problem is an appropriate structural change.

In 1986, the dollar continued its fall started in the spring of 1985. Yet, the US trade account failed to improve, because foreign suppliers managed not to increase their dollar prices despite the real depreciation of the dollar (see Graph 7). This surprising behaviour has been ascribed by some economists to a phenomenon of 'hysteresis' or lagged asymmetric reaction. This means that the exchange rate at which a foreign supplier will leave a market is not the rate at which it entered, because of sunk costs. For instance, if a German company entered the US market at DM 3 to the dollar, it may not leave until the dollar falls to, say, DM 1,5 if its non-recoverable costs are sufficiently important. In 1987 and 1988, as the dollar continued to slide down, the price of foreign goods started to rise in the United States and the trade balance began to show signs of improvement. In 1989, a gradual shift of resources from non-tradables to tradables can, therefore, be expected to continue as the United States regains its international competitiveness and activity in export and import-competing industries picks up.

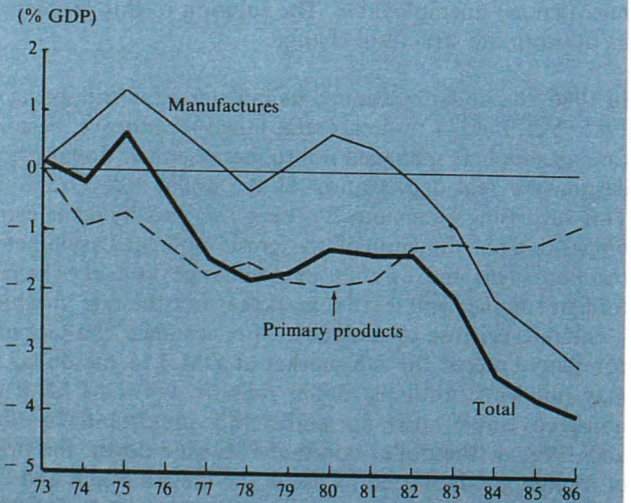
GRAPH 4: **Components of EC trade balance**



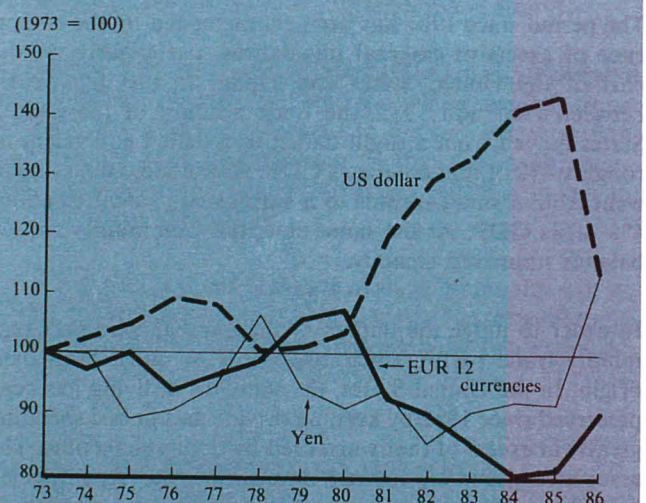
GRAPH 6: **Components of Japan's trade balance**



GRAPH 5: **Components of US trade balance**



GRAPH 7: **Real effective exchange rates**



In 1986, there has been a growth recovery in the EC, which has led its imports to increase. At the same time, European currencies have sharply appreciated, leading to an important decline in the manufacturing trade balances of the Community. Altogether, the trade account has, none the less, continued to improve as a result of the collapse in oil prices. The gradual shift of the United States from a trade deficit to a trade surplus is likely, however, to reduce this surplus.

2.3. The sources of changes in trade balances, 1980-86

The purpose is to examine the changes, between 1980 and 1986, in merchandise trade with the help of a decomposition method, the so-called 'constant-market-share analysis' (CMSA) methodology. (The reader should keep in mind that all the trade figures in this section are expressed in current prices and current dollars as well as on a fob/cif basis).

The CMSA methodology starts with the underlying assumption that a country's trade evolves in line with world trade, i.e. that it maintains its share in world trade over time. A country's exports may, however, grow faster than world trade for three reasons: (a) they may be concentrated on particular products for which trade is growing relatively rapidly; (b) they may be going to geographical markets whose demand is relatively expanding; or (c) they may be influenced by a host of other, unaccounted factors mostly related to supply conditions, such as an increase in production capacity or changes in relative prices.

Similarly, a country's imports may grow faster than world trade for three reasons: (a) they may be concentrated on products for which trade is growing relatively rapidly; (b) that country's demand is expanding relative to other countries'; or (c) imports may be affected by other, residual factors.

In other words, the actual change in a country's exports or imports can be attributed to four effects or components:

(i) the growth of world trade;

(ii) the product composition;

(iii) the geographical market distribution;

(iv) other factors.

The European Community

The trade balance of the Community has improved considerably between 1980 and 1986, moving from a deficit equal to 2% of GDP to a position of equilibrium (see Graph 4). In dollar terms, the balance has improved by USD 91,7 billion during that period, resulting from an increase in exports of USD 34,2 billion and a fall in imports of USD 57,5 billion. Table 17 decomposes these changes into the four CMSA components.

Looking first at the export side, the figures in Table 17 (line 1) indicate that, had the Community maintained exactly its 1980 share in world trade, its exports would have increased by only USD 12,4 billion between 1980 and 1986. In reality, however, these exports have increased by USD 34,2 billion. This relatively good performance of EC exports can be ascribed entirely to the product composition effect (which has a positive sign in Table 17, line 2). By contrast, the geographical market distribution effect and the residual factors have partly mitigated the influence of the product composition effect (they both have a negative sign in Table 17, lines 3 and 4).

The strongly positive product composition effect results from the concentration of Community exports on manufactures which, compared with primary products, have enjoyed a rapid increase in world trade during the period 1980-86.

The overall negative geographical market composition effect hides two contrasting factors which are revealed in Table 18. On the one hand, Community exports during the period 1980-86 have profited greatly (a positive contribution of USD 29,5 billion) from the demand expansion in the United States. On the other hand, EC exports have suffered from the collapse of the developing country market (a negative contribution to the change in EC exports of USD 42,6 billion) prompted by the debt crisis and the fall in commodity prices. On the whole, the Community has been penalized, during the period in question, by its concentration on relatively stagnant geographical export markets.

With respect to the import side, line 1 in Table 17 indicates that Community imports would have increased by USD 16,1 billion from 1980 to 1986 had they evolved at the same pace as world trade. In fact, these imports have fallen by USD 57,5 billion. Both the product composition and the geographical market effects (each has a negative sign in Table 17, lines 2 and 3) have contributed to the decline of Community imports during this period.

The negative product composition effect is, mostly, the reflection of the fall in world trade of primary commodities (in value terms) due to the drop in their prices.

The negative geographical market effect translates the relatively weak demand in the European Community already

pointed out in a previous section. The figures in Table 18 indicate that this effect has been especially felt by the developing countries which suffered a shortfall of exports to the EC of USD 23,3 billion attributable to this factor.

Altogether, the analysis indicates that the improvement of USD 91,7 billion in the trade balance between 1980 and 1986 (instead of the deterioration of USD 3,7 that would have occurred if EC trade had followed the pattern of world trade) results, above all, from the product composition of Community trade. This composition has proved to be particularly helpful during these years characterized by a strong world market for manufactures (which account for over 80% of EC exports) combined with a weak world market for primary products (which represent about 50% of EC imports).

The USA

The trade balance of the USA underwent a sharp deterioration during the period 1980-86, moving from a deficit equal to barely 1% of GDP to one of 4% (see Graph 5). In dollar terms, the balance worsened by USD 135,4 billion, emanating from a fall in exports of USD 9,4 billion and a huge increase of imports of USD 126,0 billion. Table 19 provides a decomposition of these changes into the four CMSA components.

On the export side, line 1 in Table 19 shows that US exports would have increased by USD 8,8 billion between 1980 and 1986 had they grown in line with world trade. Instead, they fell by USD 9,4 billion. Line 3 indicates that the geographical market composition effect played an important role in the decline of exports (with a negative contribution of USD 17,9 billion).

The figures in Table 20 detail the overall geographical market composition effect by individual markets. They show that the United States has suffered a great deal, albeit to a lesser extent than the Community, from the reduced import capacity of the developing countries.

The major trade change in the United States during the period 1980-86 occurred on the import side. As line 1 in Table 19 shows, imports would have increased by barely USD 10,4 billion if the USA had maintained exactly its 1980 share of world trade. In reality, these imports leapt by USD 126,0 billion. Line 3 indicates that the major force behind this development was the market component which reflects the buoyancy of demand in the United States discussed earlier. The figures in Table 20 reveal that the Community, Japan and the other industrialized countries (mainly

Table 17

CMSA decomposition of changes in Community trade, 1980-86

(billion USD)

	Change in		
	exports	imports	balance
Change due to:			
1. Growth in world trade	12,4	16,1	−3,7
2. Product composition	52,6	−29,8	82,4
3. Geographical market distribution	−13,8	−42,2	28,4
4. Other factors	−17,0	−1,5	−15,5
Actual change	34,2	−57,5	91,7

Table 18

Components of the geographical market distribution effect on changes in Community trade, 1980-86

(billion USD)

Trade partner	Geographical market effect on		
	exports	imports	balance
USA	29,5	−6,0	35,5
Japan	1,0	−1,4	2,5
Other industrialized countries	−4,4	−8,3	3,9
Industrialized countries	26,2	−15,7	41,9
Developing countries	−42,6	−23,3	−19,4
State-trading countries	2,7	−3,3	5,9
World	−13,8	−42,2	28,4

Table 19

CMSA decomposition of changes in US trade, 1980-86

(billion USD)

	Change in		
	exports	imports	balance
Change due to:			
1. Growth in world trade	8,8	10,4	−1,5
2. Product composition	10,7	−16,7	27,4
3. Geographical market distribution	−17,9	132,4	−150,3
4. Other factors	−11,1	−0,1	−11,0
Actual change	−9,4	126,0	−135,4

Table 20

Components of the geographical market distribution effect on changes in US trade, 1980-86

(billion USD)

Trade partner	Geographical market effect on		
	exports	imports	balance
EC	−2,7	30,7	−33,3
Japan	2,6	30,5	−27,9
Other industrialized countries	−1,1	31,8	−32,9
Industrialized countries	−1,1	93,0	−94,1
Developing countries	−18,5	38,5	−57,0
State-trading countries	1,7	1,0	0,8
World	−17,9	132,4	−150,3

Canada) have equally shared this market opportunity. The developing countries have also benefited from the expansionary US demand.

In conclusion, the CMSA points out to the overwhelming role played by the rapid growth in domestic demand in explaining the acute deterioration of the US merchandise trade balance.

Japan

The trade balance of Japan improved dramatically between 1980 and 1986, jumping from a small deficit to a surplus equal to more than 4% of GDP (see Graph 6). In dollar terms, the balance improved by USD 100,2 billion, as a result of an increase in exports of USD 78,9 billion and a drop in imports of USD 21,3 billion. Table 21 provides a decomposition of these changes into the four CMSA effects.

Table 21

CMSA decomposition of changes in Japan's trade, 1980-86

(billion USD)

	Change in		
	exports	imports	balance
Change due to:			
1. Growth in world trade	5,4	5,9	−0,5
2. Product composition	32,7	−41,5	74,2
3. Geographical market distribution	4,5	13,7	−9,7
4. Other factors	36,2	0,6	35,7
Actual change	78,9	−21,3	100,2

The export side of Table 21 indicates that Japan's exports would have increased by only USD 5,4 billion between 1980 and 1986 (line 1), had they evolved at the same pace as world trade. In fact, these exports experienced a huge increase of USD 78,9 billion. This impressive performance can be credited to both the product composition effect (line 2) and the other, residual factors (line 4). On the other hand, there was little geographical market distribution effect.

The positive product composition effect resulted from the concentration of Japan's exports on manufactures. It is similar to the effect observed for the Community. For its part, the positive effect of the residual factors reflected partly the rapid increase in production capacity of Japan in recent years.

The insignificant overall geographical market distribution effect masks, as in the case of the Community, strongly contrasted patterns. Table 22 shows that Japan benefited a great deal from the expansion of demand in the USA (a positive contribution of USD 29,3 billion on the change of Japan's exports), but suffered almost equally from the collapse of the developing country market (a negative contribution of USD 23,3 billion).

With respect to the import side, line 1 in Table 21 indicates that Japan's imports would have increased by USD 5,9 billion from 1980 to 1986, had they varied at the same rate as world trade. Instead, these imports fell by USD 21,3 billion, mostly as a result of the product composition effect (which has a negative sign in Table 21, line 2).

Table 22

Components of the geographical market distribution effect on changes in Japan's trade, 1980-86

(billion USD)

Trade partner	Geographical market effect on		
	exports	imports	balance
EC	**−1,2**	1,5	−2,7
USA	**29,3**	**3,1**	**26,2**
Other industrialized countries	**−0,5**	1,5	−2,1
Industrialized countries	**27,5**	6,1	21,4
Developing countries	−23,3	7,4	−30,6
State-trading countries	**0,2**	0,2	0,0
World	**4,5**	13,7	−9,2

As in the case of the Community, the negative product composition effect resulted, mainly, from the fall in the price of primary commodities between 1980 and 1986.

The product composition effect was, partly, mitigated by a positive geographical market effect (which has a positive sign in Table 21, line 3) that reflected the relatively rapid rise in domestic demand by Japan already observed earlier.

In conclusion, the CMSA shows that the improvement of USD 100,2 billion in Japan's trade balance between 1980 and 1986 resulted from two factors: the product composition of trade and an expansion of the country's production capacity.

2.4. Conclusion

In recent years the demand for protectionism has increased both in the European Community and in the United States. Although the reasons have been different in the two cases — internal imbalance in the Community and external imbalance in the USA — these demands share a common underlying cause: the difficulty of adjusting to structural changes in an environment of sluggish growth. It has become clear that the prevailing imbalances are unsustainable and that wide-ranging structural changes are needed (changes are also required in Japan to eliminate excessive external surpluses). Several initiatives have been taken in response to these pressures. The European Commission has presented, in 1985, the White Paper on the internal market containing a programme of structural measures to complete the internal market. In the United States, efforts have been launched to reduce the budget deficit and, more generally, 'domestic absorption' (i.e. private plus public spending). In addition, the member nations of GATT have launched the Uruguay Round in 1986 with a view to reducing trade tensions.

III — The Community's industrial competitiveness and international trade in manufactures

Introduction

The aim of this chapter is to examine the European Community's trade situation since the first oil price shock, then to present the main results obtained and lastly to identify the broad trends in the context of which the prospects for the development of world trade should be seen. Here, the analysis will focus exclusively on manufactures, i.e. the hard core of international trade, since manufactures account for 85% of the total trade in goods, and goods for approximately 78% of the total trade in goods and services.[1] Certain growth-related problems encountered by developed countries clearly have to do with the fact that they are insufficiently specialized in a changing world. According to the classical theory of international trade, the composition by product and area of destination depends mainly on a country's 'factor endowment' (Heckscher/Ohlin) and its technology. Analyses of demand as a determinant of international trade fit in well with this classical approach, since international trade favours those countries for whose products demand is greatest. The most common assumption made here is that consumer tastes in the industrialized countries are identical internationally, i.e. given comparable incomes, consumption patterns are similar (Leontief, W., 1983). From this point of view, there has been an increase in recent years in such analyses of demand (CEPII, 1983; EEC, 1986).

The approach adopted in this chapter stems from the observation that since 1973, despite sluggish economic growth, demand for a small number of industrial products has held up, with growth rates worthy of the 1960s. The great success of a number of industrialized countries, especially Japan, stems from the fact that they have been able to adjust particularly well to the structural changes in world demand. The more flexible and innovative they have shown themselves to be, the better they have adapted to these structural trends by making changes as and when necessary in the allocation of their inputs to the growth sectors.

1. Trend of world demand

On the basis of a breakdown of industry into 14 branches, it is possible to compare and classify the branches in question according to the rate of growth of domestic demand over the period 1972-85 (Table 23).

[1] The source of data used in this chapter is the Volimex data bank which is a trade matrix, in both volume and value terms, of the OECD's exports to, and imports from, the world. It is not therefore a comprehensive matrix of world trade and so some of the figures presented in this chapter, such as export market share for example, must be interpreted appropriately.

Table 23

Trend of domestic demand in volume terms by branch of industry in the Community, USA and Japan
Average annual growth rate, 1972-85

(%)

	EUR 7[1]	USA	Japan
Strong-demand sectors	**5,0**	**5,2**	**14,3**
Office machines, data-processing equipment	9,0	6,5	7,2
Electrical and electronic equipment and supplies	3,5	7,2	20,7
Chemicals and pharmaceuticals	5,3	2,3	9,9
Moderate-demand sectors	**1,2**	**2,8**	**3,1**
Rubber, plastics	2,8	5,4	2,0
Transport equipment	1,7	2,7	5,2
Foodstuffs, beverages, tobacco	1,2	0,4	0,0
Paper, printing	1,6	2,9	2,7
Industrial and agricultural machinery	−0,1	5,6	5,6
Weak-demand sectors	**−0,3**	**0,5**	**2,4**
Metal products	−0,5	−0,4	3,4
Miscellaneous industrial products	−0,6	2,1	1,9
Ores and ferrous and non-ferrous metals	0,6	−1,8	2,0
Textiles, leather, clothing	−0,2	2,0	2,2
Non-metallic minerals (construction materials)	0,1	1,7	1,1

NB: The sectors are divided into those for which, between 1972 and 1985, demand in the OECD countries increased by more than 5% (strong demand), around 3% (moderate demand), or less than 2% (weak demand).
[1] EUR 7 where production data are used (B, D, DK, F, I, NL, UK), i.e. more than 85% of Community production.
Sources: Volimex, Commission services.

The definition of demand used here for each of the three major zones (Europe, the United States and Japan) is a classical one: domestic demand = share of domestic production intended for the national market + imports. This domestic demand, or apparent consumption, is a far wider concept than final domestic demand, since it also includes intermediate consumption. Three categories of branches will be used systematically in the presentation:

(i) **Sectors where demand is going from strength to strength.** The branches grouped together in the strong-demand sectors category are the least affected (by a long way!) by the cyclical fluctuations observed in the industrialized economies. This applies, for instance, to data processing, office automation and precision equipment, where the average annual growth rate has remained virtually unchanged since the early 1970s. Moreover, it is interesting to note that data-processing requirements have increased more rapidly in Europe (9%)

than in the United States and Japan (6,5% and 2,2% respectively). European firms have therefore been equipping themselves at a very sustained pace. The question remains as to whether the supply from European producers has been able to keep pace with this strong increase in demand.

The case of electrical goods (electrical equipment, heavy appliances) and electronic goods (consumer electronics, telecommunications equipment) is somewhat different. Here, the growth in Europe (3,5% a year) is appreciably below that in Japan (20,7% a year). A more detailed analysis of the trends of world demand shows, however, that demand for electronic components is increasing rapidly, while that for heavy electrical equipment is to some extent slowing down.

With regard to chemicals, a similar phenomenon of differentiation of production has occurred. Pharmaceuticals have not been affected by the recession, but the whole petrochemicals sector has suffered from the repercussions of higher oil prices. Here, the strength of the European chemicals market should be emphasized compared with that of the US market.

This group of products for which demand is very strong is characterized by the very high content in terms of new technologies. This group of industries alone accounts for more than half the spending on research and development and around 25% in terms of added value.

(ii) **Moderate demand sectors.** This group includes branches which are very different with regard to both their function in the productive system and the nature of the customers. On the one hand, there are capital goods intended for the productive system, demand for which is closely related to the trend of gross fixed capital formation for the industry in question (industrial and agricultural machinery). The differences between the rates of growth in demand in Europe (−0,1% a year), the United States and Japan (5,6% a year) clearly show the extent of the investment problem encountered by the European countries.

On the other hand, this group includes the agri-foodstuffs, beverages and tobacco industries, which are directly linked to household consumption and whose growth (the extent of which is average: around 1% a year) remains very steady over time and is not much affected by crises. The situation is similar for papers and printed materials and for rubber and plastics. With regard to transport equipment, a finer distinction should be made. Shipbuilding has felt the full effect of the recession, while aeronautical engineering, for instance, has withstood it well. Demand for motor vehicles, which is of considerable importance in European industry, has not attained the levels of growth it experienced in the 1970s, when households were equipping themselves. Demand for motor vehicles is slowing down today and is often confined to mere replacement of existing vehicles, particularly in the United States.

(iii) **Weak demand sectors (less than 1% a year on average over the long term).** These sectors include a number of characteristic subdivisions. Demand for textiles, leather and clothing declined in volume terms in Europe between 1973 and 1985. This branch is typified by both a very weak-demand growth trend and fairly acute sensitivity to economic recessions. The case of iron and steel and metal products is in many respects similar to that of textiles, although here the sensitivity to crises is more marked. The downstream markets (motor vehicles and construction) are now also replacement markets and the medium-term growth prospects should hardly differ from the trends observed over the past decade. Lastly, the construction materials and non-metallic ores sector depends very much on trends in the building industry and public works, which explains why demand has remained stagnant over the period in question.

The sectoral classification in the different countries sometimes shows fairly notable discrepancies. Overall, growth in the strong-demand sectors in Japan has been considerably in excess of that observed in other countries. A similar phenomenon has, however, occurred with regard to the moderate and weak-demand sectors. The demand growth rate for each sector should therefore be related to that of industry as a whole for each of the economic zones in question, which amounts to substantiating the classification obtained.

2. Contribution of imports to meeting domestic demand

A country's domestic demand is met either by domestic production or by imports (Graph 8). In an open economy, in a free-trade system, economic agents make a choice between home-produced and foreign products in the light of certain crucial criteria, such as price, quality and technology.

2.1. Rising penetration rates

For industrial products as a whole, the Community's dependence on imports increased over the period 1973-85 (+4,5 points in 12 years — see Table 24). The situation in the United States was similar. In these two areas — Europe and the United States — domestic production satisfied just under 90% of domestic demand, the remainder coming from imports. In contrast, the trend of the penetration rate for Japan clearly shows the extent to which the Japanese economy remained a closed economy up until 1986. For 12 years, the

Table 24

Penetration rates — Contribution of imports to meeting domestic demand

(%)

	1973	1979	1980	1981	1982	1983	1984	1985	Difference 1979/1973	Difference 1985/1979
Industry total										
EUR 7[1]	8,7	10,4	11,1	11,3	11,4	11,9	13,1	13,1	+1,7	+2,7
USA	6,3	8,7	9,3	9,5	9,6	10,0	11,7	12,3	+2,4	+3,6
Japan	4,9	5,1	5,2	4,9	5,2	4,9	5,1	4,8	+0,2	−0,3
Strong demand										
EUR 7[1]	10,0	13,0	14,1	15,9	16,7	17,4	19,5	19,9	+3,0	+6,9
USA	6,3	9,3	9,8	10,2	10,7	12,2	14,6	15,0	+3,0	+5,8
Japan	4,2	5,1	4,9	4,7	5,1	4,9	5,1	4,9	+0,9	−0,2
Moderate demand										
EUR 7[1]	7,1	7,7	8,1	8,6	8,5	8,7	9,6	9,7	+0,6	+2,0
USA	5,9	7,7	8,3	8,3	8,2	8,3	9,5	10,3	+1,9	+2,6
Japan	4,0	4,3	4,6	4,3	4,2	4,3	4,3	4,1	+0,3	−0,2
Weak demand										
EUR 7[1]	10,0	12,5	13,4	12,4	12,4	13,1	13,9	13,8	+2,4	+1,3
USA	6,9	9,8	10,3	10,8	11,3	11,4	13,4	13,9	+2,9	+4,1
Japan	5,8	5,7	5,9	5,4	6,0	5,6	5,8	5,4	−0,1	−0,3

[1] In the case of EUR 7, this applies to extra-Community trade.

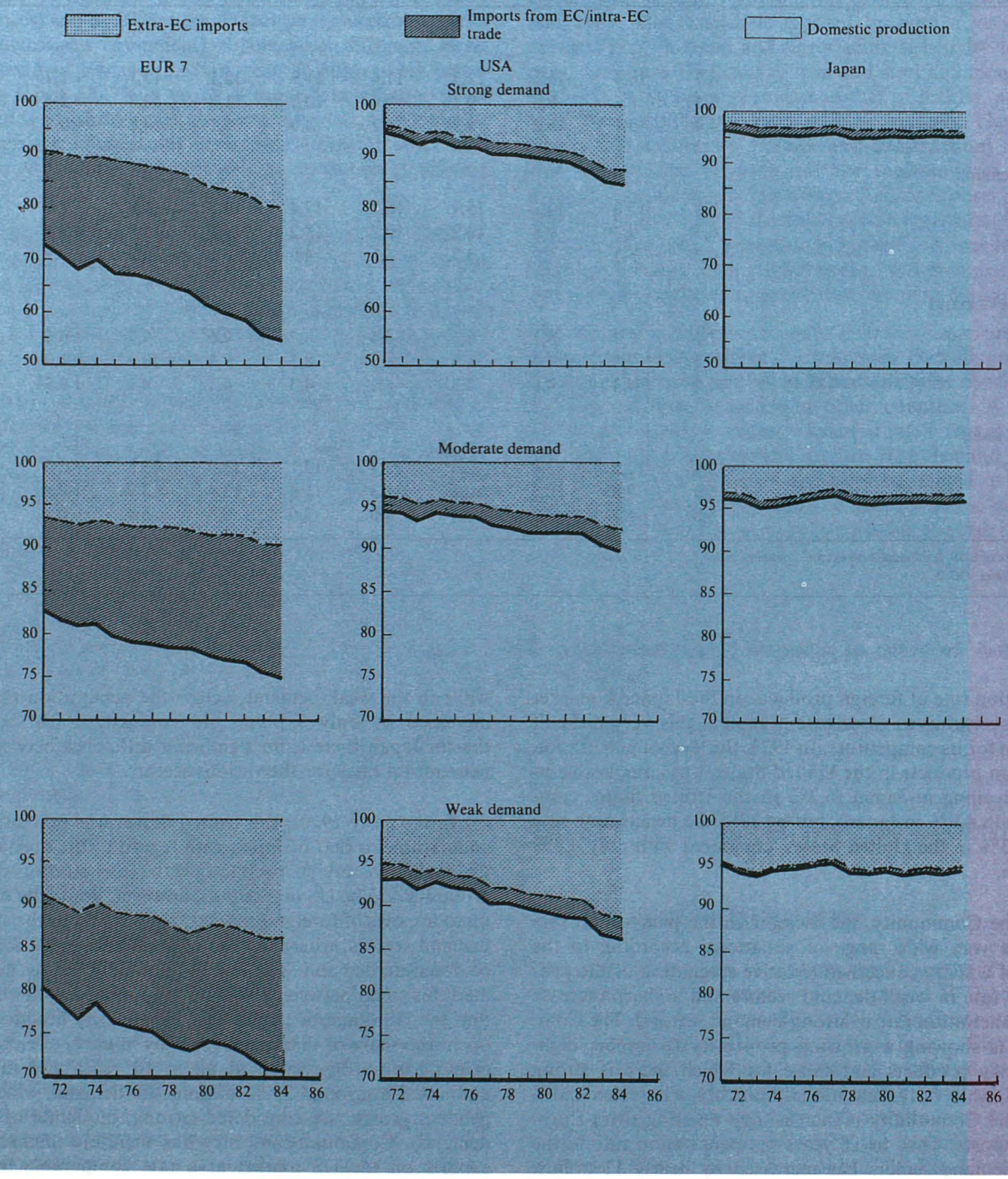
Sources: Volimex, DG II.

penetration rate of foreign products on the Japanese market may conceivably to some extent explain this very difficult situation for its competitors. In 1973, the level of penetration of foreign products in the United States was comparable to that prevailing in Japan (6,3% in the United States compared with 4,9% in Japan), but by 1985 the penetration rate was 12,3% in the United States, compared with only 4,8% in Japan.

(a) In the Community, the increase in the penetration rate covers a very wide range of situations, according to the sector of activity concerned (relative stagnation of the penetration rate in weak-demand sectors and a sharp increase in the penetration rate in strong-demand sectors). The Community is showing a growing propensity to import high-technology products and those for which there is strong demand, while in the traditional branches, where demand is weak, the Community is increasingly resisting extra-European imports. Thus in 12 years the penetration rate in the strong-demand sectors has increased by nearly 11 points, while in the weak-demand sectors the penetration rate has increased by only 3 points. In contrast, it can be seen that in Japan there is no significant difference between the penetration rates for the various sectors.

(b) In the early 1970s, the United States was in a situation comparable to that of Japan with regard to the openness of its market to foreign products, with a penetration rate of around 5%. The US market has, however, gradually opened up to imports of foreign products, particularly in the strong-demand sectors, where in 1985 imports accounted for 15% of domestic demand. The rise in the dollar further accelerated this trend between 1982 and 1985, but, despite the fact that the US domestic market has increasingly become more open, the share of that market met by imports of European origin has hardly varied at all in 10 years and in 1985 amounted to around 2,5% of domestic demand, whichever product groups are considered (strong, moderate or weak demand). Community industry has therefore increased its exports on the US market at a rate comparable to that

GRAPH 8: **Satisfying domestic demand for strong-, moderate- and weak-demand products**



of the growth in domestic demand. In the strong-demand branches, however, imports from outside Europe, as a proportion of US domestic demand, rose from 4,8% in 1973 to 12,2% in 1985. In the weak-demand sectors too, the growth in US imports from outside Europe has been particularly vigorous, from 5,2% in 1973 to 11,2% in 1985. It is therefore mainly producers outside Europe, particularly Japanese firms, which have benefited most from the growing openness of the US market.

(c) In the case of Japan, products of European origin account for less than 1% of domestic demand for manufactures, whichever product category is considered. Only two branches have a penetration rate in Japan in excess of 10%, namely (i) iron and steel and (ii) office and data-processing equipment. The firms benefiting from this relative openness of the Japanese market in these branches are not, however, European firms.

2.2. Marked differentiation between intra- and extra-Community trade

There are new lessons to be learned from a comparative analysis of intra and extra-Community trade. In some branches, intra-Community imports have increased faster than extra-Community imports. This applies mainly to foodstuffs, beverages and tobacco, i.e. a sector in which the common agricultural policy has encouraged intra-Community trade. The results confirm the conclusions reached in the study by Jacquemin and Sapir (1987), which also showed that Community imports are encouraged, compared with extra-Community imports, in the highly capital-intensive (human and physical capital) industries. This is the case with the chemical, paper, and iron and steel industries.

However, in branches with a high technological content, such as office machines, data-processing equipment, electrical and electronic equipment, extra-Community imports have increased more rapidly than intra-Community imports. This applies also to industrial machinery and transport equipment. Thus, in branches affected by public procurement (telecommunications, aeronautics, electronics), where there is recourse to external markets, this is preferably with extra-Community partners. The creation of the large, internal market could, however, alter some of the trends recently observed, as the removal of non-tariff barriers, particularly technical standards and the opening up of public contracts, should give a considerable boost to intra-Community trade in the branches concerned.

2.3. Source of imports very different according to type of product

The OECD countries account for two thirds of the Community's imports of manufactured goods. However, in the strong-demand sectors, the United States and Japan play a dominant role (54% of the total), although their share falls significantly in the moderate-demand sectors (37,3% of the total) and becomes virtually marginal in the weak-demand sectors (10,2% of the total). Here the link of technological dependence that is characteristic of strong-demand products is very clear.

Table 25

Comparison of trends of intra- and extra-Community imports, 1979-86

Branches in which intra-Community imports have increased faster than extra-Community imports		Branches in which intra-Community imports have increased more slowly than extra-Community imports	
Foodstuffs, beverages, tobacco	+2,6	Office machinery, data-processing equipment	−7,0
Chemicals, pharmaceuticals	+0,3	Electrical and electronic equipment	−6,0
Paper	+0,3	Industrial machinery	−3,1
Iron and steel	+0,1	Motor vehicles, aeronautics, other transport equipment	−2,2
Metal products	0,0	Textiles, leather, clothing	−1,2
		Rubber, plastics	−0,3

NB: The figures correspond to the difference between the trends of the intra and extra penetration rates between 1979 and 1986.
Sources: Volimex, Commission services.

Table 26

Structure and geographical breakdown of the Community's industrial imports in 1986

(%)

	Industry total	Strong demand	Moderate demand	Weak demand
OECD	67,7	78,5	76,8	47,4
USA	19,9	31,3	20,4	7,6
Japan	14,5	22,6	16,9	3,6
Other OECD (including EFTA)	33,3	24,6	39,5	36,2
Eastern bloc countries	4,8	2,7	3,5	8,4
Developing countries: of which:	18,9	11,4	14,5	31,2
South-East Asia	6,1	6,7	2,3	9,2
Africa (non-OPEC)	2,9	0,4	2,3	6,3
OPEC	1,4	0,9	1,3	2,0
Latin America	4,6	1,3	6,6	6,1
Rest of world	8,6	7,4	5,2	13,0
Total	100	100	100	100

Source: Volimex.

Table 27

Structure and geographical breakdown of US industrial imports in 1986

(%)

	Industry total	Strong demand	Moderate demand	Weak demand
OECD	71,0	68,3	88,4	47,5
Japan	26,7	37,7	31,4	9,2
EUR 12	22,2	18,9	25,3	20,6
Other OECD (including EFTA)	22,1	11,7	31,7	17,7
Eastern bloc countries	0,4	0,5	0,3	0,7
Developing countries of which:	20,6	23,8	8,5	35,6
Latin America	6,8	7,6	5,0	8,9
South-East Asia	9,9	14,5	2,5	16,4
Africa (non-OPEC)	1,0	0,4	0,3	2,6
OPEC	0,6	0,3	0,2	1,7
Rest of world	8,0	7,4	2,8	16,2
Total	100	100	100	100

Source: Volimex.

The newly industrializing countries of South-East Asia are beginning to play a role in the strong-demand sectors (6,1% of the total) and have a substantial presence in the weak-demand sectors, where they have now overtaken the United States (9,2% compared with 7,6%). The Eastern bloc countries only really play a role in the weak-demand sectors. It is also clear that imports from the OPEC countries as a whole are clearly underestimated, as no account is taken of imports of energy products. In the long term, the extent to which structural modifications will occur in the structure of the Community's imports will vary according to the trend of relative exchange rates and the improvement in the competitiveness of certain zones.

A comparison between the structure and geographical breakdown of US and Community imports is particularly interesting (Tables 26 and 27).

Note first the importance of Japan (26,7% of total imports of industrial products compared with only 14,5% for European Community imports). An analysis of the profile of imports from these two zones (the European Community and Japan) is particularly revealing. Thus in the strong-demand sectors Japan plays a dominant role (37,7% of imports) but in the weak-demand sectors its share of imports falls significantly (9,2%). In contrast, the Community's share of US imports in the moderate-demand sectors is particularly high (25,3% of the total) but declines appreciably in the strong-demand sectors (18,9% of the total). In conclusion, on the US market it would appear that European industry has been gradually concentrating on less elaborate products, where there is not so much competition from Japan or the new South-East Asian producers but which suffer from low growth in demand. It is revealing that in 1986 imports in the strong-demand sectors from the South-East Asian countries already accounted for 14,5% of the US market, compared with only 18,9% for the Community countries.

3. Response from Community exporters

3.1. Significant increase in the share of production exported

In parallel with the growing share of the Community's domestic demand accounted for by foreign production, particularly with regard to high-technology products and those

for which there is strong demand there has, throughout the period 1972-85, been a very marked increase in the share of the Community's industrial production that is exported.

In 1985, firms in European industry exported 17,4% of their output, compared with 7,7% for the United States and 14,6% for the Japanese.

Table 28

Share of production exported, in value terms, 1985

(%)

	Industry total	Strong demand	Moderate demand	Weak demand
EUR 7	17,4	24,9	15,7	14,9
USA	7,7	13,0	7,4	3,4
Japan	14,6	19,3	18,6	6,9

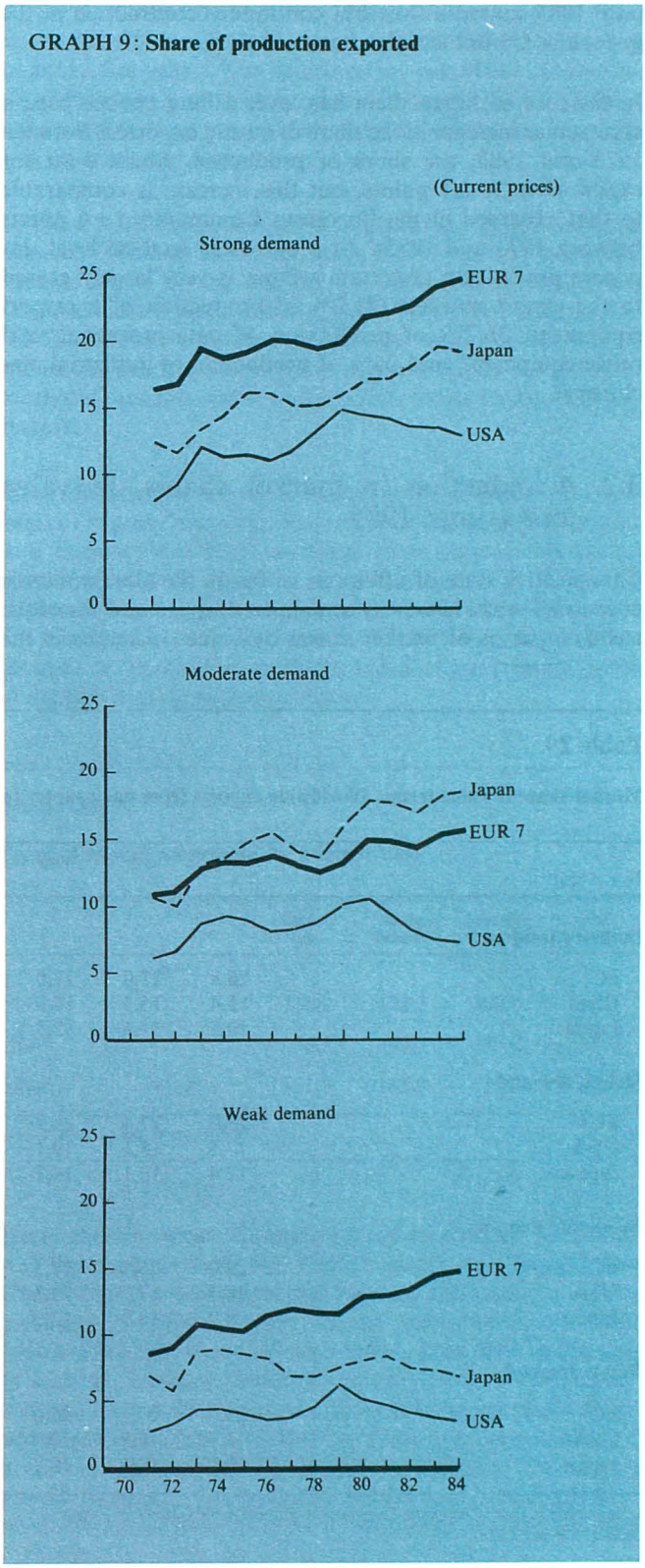
Sources: Sectoral data bank, Volimex.

In all cases, the strong-demand sectors are those where the share of production exported is highest, which confirms that these sectors are very open to international competition. For all categories of industrial products, the share of output which goes for export is higher in Europe than in the other economic zones, apart from in the moderate-demand sector, where the share of production exported by Japan is higher than for the Community (owing, of course, to exports of Japanese motor vehicles). At first sight, the Community's export performance is satisfactory, increasing from 11,4% in 1973 to 14,2% in 1978 and 17,4% in 1985. This export success is all the more significant in that here the share of production exported relates exclusively to extra-Community trade. If exports by the Member States within the Community were also to be included in these figures, the percentages of Community production exported would be virtually doubled.

The situation in the United States is quite different. In 1980, the proportion of US industrial production exported peaked at 10,1%. Between 1980 and 1985, that proportion steadily declined, to 7,7% in 1985, a level comparable with that obtained in the early 1970s. This trend can be explained on the one hand by rapid growth in domestic demand, which led US firms to favour the domestic market at the expense of exports.

On the other hand, the steady increase in the value of the dollar compared with the currencies of its competitors up

GRAPH 9: **Share of production exported**



until 1985 caused a slow but continuous contraction of the growth in US industrial exports.

In the case of Japan there has, over a long period, been a spectacular increase in the share of output exported. Between 1973 and 1985, the share of production which went for export rose by 6,1 points, but this increase is comparable to that observed in the European Community (+6 points between 1973 and 1985). At a narrower sectoral level, Japanese production in certain sectors is very largely geared to the export markets (41,2% of production of transport equipment, 36,7% of production of data-processing and office equipment, and 25% of production of industrial machinery).

3.2. A reduction in market shares, in value terms, until 1985

This positive state of affairs in so far as the Community is concerned must, however, be tempered by an analysis of the trends in terms of market shares by value. Increases in the share of production exported do not in practice lead to an increase in the market share in value terms unless Community exports grow at a faster pace than those of their trading partners. However, it can be seen that this greater opening up of production to external markets has been accompanied by a steady reduction in the market shares held by the European Community in the world.

The analysis of market shares by value given in Table 29 makes it possible to measure the trend of worldwide exports from one zone against total worldwide exports from all OECD countries.

Overall, the Community's market share in respect of manufactures fell steadily between 1979 and 1984 (down 2 market share points). The recovery started in 1984 and in two years the Community regained 1 market share point. This trend was observed in all sectors (strong, weak or moderate demand). Over the long term, however (between 1973 and 1986), the Community lost 2,4 market share points in the strong-demand sectors, 1,8 points in the moderate-demand sectors and gained 3,9 points in the weak-demand sectors.

Table 29

Market share in value terms. Worldwide exports from one country (area)/worldwide exports from all OECD countries

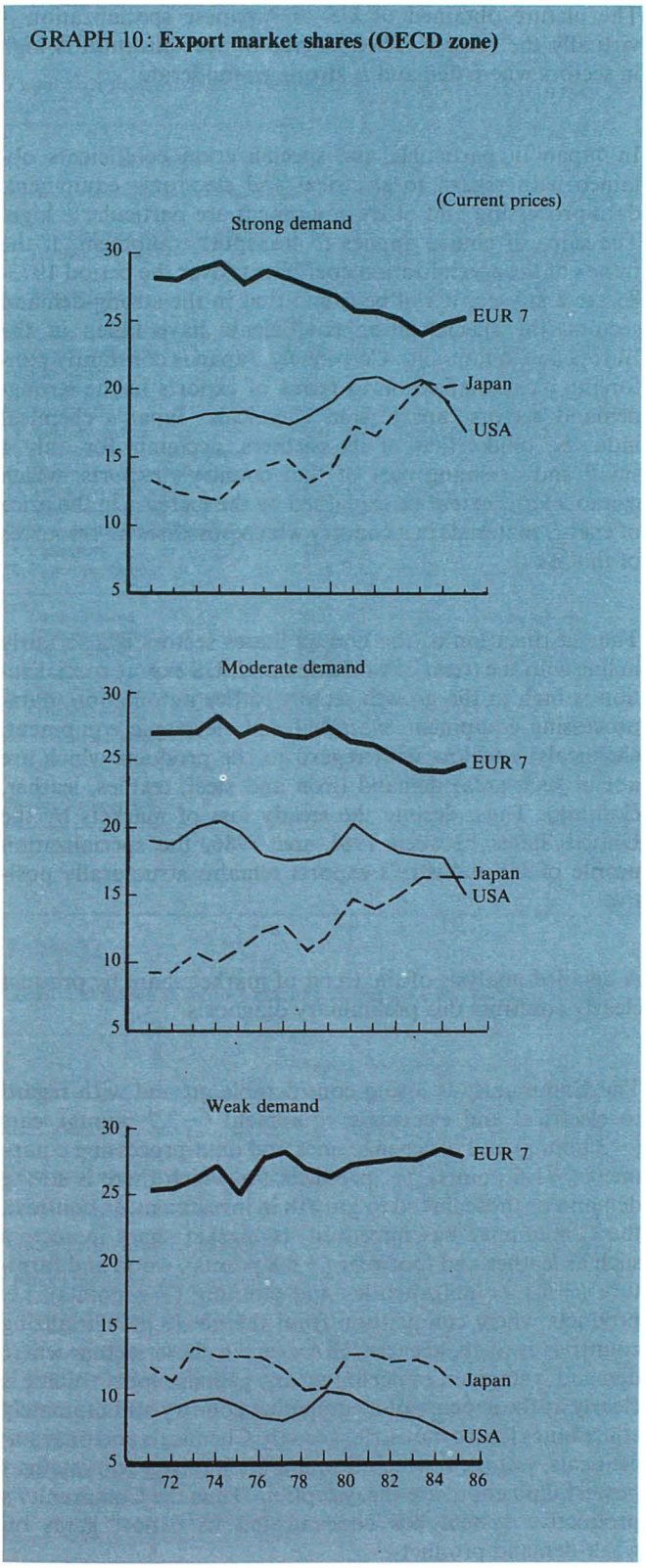
(%)

	1973	1979	1980	1981	1982	1983	1984	1985	1986	Difference 1979/1973	Difference 1986/1979
Industry total											
EC[1]	26,8	27,0	27,0	26,4	26,6	26,0	25,2	25,6	26,3	+0,2	−0,7
USA	15,4	15,3	16,2	17,8	17,2	16,5	16,6	16,0	13,9	−0,1	−1,4
Japan	10,5	11,4	12,3	15,0	14,6	15,6	16,9	16,8	16,8	+0,9	+5,4
Strong demand											
EC[1]	28,0	27,4	26,9	25,6	25,8	25,2	24,0	24,9	25,6	−0,6	−1,8
USA	17,5	18,1	19,1	20,6	20,9	20,1	20,7	19,3	17,0	+0,6	−1,1
Japan	12,4	13,1	14,1	17,2	16,5	18,5	20,6	20,2	20,8	+0,7	+7,6
Moderate demand											
EC[1]	27,0	26,7	27,5	26,3	26,3	25,3	24,3	24,3	25,2	−0,3	−1,5
USA	18,7	17,7	18,1	20,3	19,1	18,2	18,0	17,9	15,1	−1,0	−2,6
Japan	9,2	10,9	12,2	14,7	14,0	15,0	16,4	16,5	16,8	+1,7	+5,9
Weak demand											
EC[1]	25,5	27,2	26,6	27,6	28,1	28,3	28,5	29,2	29,4	+1,7	+2,2
USA	8,9	8,8	10,5	10,3	9,4	8,8	8,5	7,8	7,0	−0,1	−1,8
Japan	10,9	10,5	10,9	13,3	13,5	12,9	13,0	12,4	10,9	−0,4	+0,4

[1] In the case of the EC, only extra-Community exports have been taken into account.

Sources: Volimex, DG II.

GRAPH 10: **Export market shares (OECD zone)**



As for the United States, after 1981, which was a good year, its market share steadily declined up until 1986 (by nearly 4 points in five years). The deterioration was visible across the whole range of industrial products (between 1981 and 1986, a 3,6 point loss on strong-demand products and a 5,2 point loss on moderate-demand products).

In the case of Japan the increase in market shares occurred between 1979 and 1984 (5,5 points in five years). Since 1984, Japan's share of the market for industrial products has stagnated at a high level of around 17%. Over a long period (1973-86), the weak-demand sectors were the only ones where the market share was stagnant, while the gains in market shares amounted to 8,3 points in the strong-demand sectors.

Since the market shares by value were calculated on the basis of exports measured in current dollars, the movements in a currency's relative exchange rates play an important part in the trends observed. It is therefore a good idea to augment this analysis of market shares in value terms with the trends of exports by volume (Table 30), which enables account to be taken of both the trend of the relative prices of exports and of exchange rates.

Table 30

Trend of exports worldwide, by volume: 1986

(1980 = 100)

	Industry total	Strong demand	Moderate demand	Weak demand
EUR 7	116,2	131,7	109,6	112,9
USA	86,5	99,7	87,2	61,4
Japan	131,8	183,9	116,8	93,5

Source: Sectoral data bank, Volimex.

Here, the European Community's performance falls mid-way between that of the United States and Japan. The United States is clearly the big loser on the export markets, given that in 1986 its export volume was lower than in 1980 (down 14% between 1980 and 1986). It is also interesting to look at Japanese industry's performance in the strong-demand sectors (in six years, export volume up nearly 84%, compared with only 32% for the European Community). It is also in Japan that the differences between the export growth rates for strong-demand products and weak-demand products are at their greatest, a testimony to the structural adjustment to constantly changing world demand.

3.3. Poor export specialization

The specialization index (si) used is an indicator of the revealed competitive advantage. It is calculated as the ratio between two relative market shares, in relation to the world: the share of EUR 12 exports of a given product compared with the Community's total visible exports, and the corresponding share of OECD countries:

$$si = \frac{X^{k}_{eur}\ world}{X_{eur}\ world} \Big/ \frac{X^{k}_{oecd}\ world}{X_{oecd}\ world}$$

in which

X^{k}_{eur} world represents worldwide exports from EUR 12 of the product k at current prices;

X_{eur} world represents total worldwide exports of industrial products from EUR 12;

X^{k}_{oecd} world and X_{oecd} world have a corresponding meaning, referring to the OECD, including intrazonal trade.

Where the value of the index is 1, the results for worldwide exports from EUR 12 for product k (results gauged in terms of market share) are equal to those of all its competitors in the zone in question. Where the index is more than 1, the Community is above the average of its foreign competitors for product k, and the reverse is true if the index is less than 1. Of course the competitive advantage (or disadvantage) which appears in the comparison of these two market shares tells us nothing about the causes which actually determine this result. While good export performance normally occurs because the firms concerned are more efficient, it could also result from public support, which distorts competition. When the abovementioned specialization index is used, we therefore refer to the *revealed* competitive advantage.

Table 31 shows that the specialization of Community industry in its trade with the outside world gives cause for concern. On the one hand, the Community's export specialization is weak with regard to products for which demand is strong or moderate (specialization coefficient substantially less than 1 for electrical and electronic equipment and for data-processing and office equipment). On the other hand, the degree of specialization is high in the case of products for which demand has remained stagnant or is declining (metal products, leather, footwear, non-metallic ores).

The picture obtained of US or Japanese specialization is virtually the reverse. Their degree of specialization is high in sectors where demand is strong or moderate.

In Japan in particular, the specialization coefficients obtained with regard to electrical and electronic equipment, data-processing and office equipment are particularly high. The same of course applies to transport equipment. If the trends of the specialization coefficients over the period 1973-86 are analysed, it will be found that in the strong-demand sectors, the specialization coefficients have fallen in the European Community. Conversely, Japan is constantly reinforcing its specialization in terms of exports in the strong-demand sectors, apart from chemicals. Japan's chemical industry, unlike that of its partners, accounts for only a small and declining part of that country's exports, which can to a large extent be explained by the increase in the price of energy materials in a country which possesses no resources of that kind.

The classification of the United States sectors is also fairly in line with the trend of world demand. US export specialization is high in the growth sectors (office automation, data-processing equipment, electrical and electronic equipment, chemicals) and low with regard to the products which are not in such great demand (iron and steel, textiles, leather, clothing). Thus, despite the steady loss of markets by the United States between 1981 and 1986, the specialization profile of US industry's exports remains structurally positive.

A detailed analysis of the trend of market share by product clearly confirms this preliminary diagnosis.

The Community is losing considerable ground with regard to electrical and electronic equipment (−3,7 points), cars (−3 points) and office machines and data-processing equipment (−1,6 points), i.e. products for which there is strong demand or those linked to growth in investment. In contrast, the Community has improved its market share in sectors such as leather and footwear (+6,8 points), wood and furniture (+5,1 points), textiles and clothing (+4 points), i.e. products where competition from the newly industrializing countries is at its keenest. However, in these sectors where demand is stagnant or declining, any gain in export volume is clearly at the expense of a competing country and ultimately contributes less to industrial growth. Chemicals and pharmaceuticals, sectors in which Community industry still retains a powerful position, are the exception. Thus the Community's productive system has concentrated its export gains on weak-demand products.

Table 31

Export specialization of the Community, USA and Japan compared to the OECD zone

(1986 and variation compared to 1973)

EUR 10[1]		Level 1986	Variation[2] 1986/73	USA		Level 1986	Variation[2] 1986/73	Japan		Level 1986	Variation[2] 1986/73
1. Miscellaneous industrial products	WD	1,7	−0,0	1. Transport equipment	MD	2,6	−0,2	1. Electric and electronic equipment	SD	1,9	+0,2
2. Leather, footwear	SD	1,4	+0,2	2. Data-processing, office precision equipment	SD	1,6	+0,2	2. Motor vehicles and cars	MD	1,7	+0,7
3. Metal products	WD	1,3	+0,2	3. Industrial machinery	MD	1,1	−0,1	3. Data-processing, office precision equipment	SD	1,5	+0,1
4. Industrial machinery	MD	1,3	0,0	4. Electric and electronic equipment	SD	1,1	+0,0	4. Transport equipment	MD	1,1	−1,5
5. Non-metallic ores	WD	1,2	+0,2	5. Chemicals	SD	1,1	+0,0	5. Iron, steel and metallic ores	WD	1,0	−0,4
6. Chemicals	SD	1,2	+0,0	6. Foodstuffs	MD	1,1	−0,0	6. Industrial machinery	MD	0,9	+0,3
7. Textiles, clothing	WD	1,1	+0,2	7. Paper, packaging	MD	0,9	−0,0	7. Rubber, plastics	MD	0,7	−0,2
8. Foodstuffs	MD	1,0	+0,1	8. Motor vehicles and cars	MD	0,8	−0,3	8. Metal products	WD	0,7	−0,4
9. Rubber, plastics	MD	1,0	−0,1	9. Rubber, plastics	MD	0,8	−0,0	9. Non-metallic ores	WD	0,6	−0,1
10. Iron, steel and metallic ores	WD	0,9	+0,1	10. Metal products	WD	0,6	−0,0	10. Miscellaneous industrial products	WD	0,6	−0,2
11. Electric and electronic equipment	SD	0,9	−0,1	11. Non-metallic ores	WD	0,6	+0,0	11. Textiles, clothing	WD	0,5	−0,6
12. Transport equipment	MD	0,9	+0,1	12. Miscellaneous industrial products	WD	0,6	−0,0	12. Chemicals	SD	0,5	−0,2
13. Motor vehicles and cars	MD	0,8	−0,3	13. Iron, steel and metallic ores	WD	0,5	−0,0	13. Leather, footwear	WD	0,2	−0,3
14. Data-processing, office precision equipment	SD	0,7	−0,1	14. Textiles, clothing	WD	0,4	+0,0	14. Paper, packaging	MD	0,2	−0,0
15. Paper, packaging	MD	0,6	+0,1	15. Leather, footwear	WD	0,3	+0,1	15. Foodstuffs	MD	0,1	−0,1
Strong demand	(SD)	1,0	−0,1	Strong demand	(SD)	1,2	+0,1	Strong demand	(SD)	1,2	+0,1
Moderate demand	(MD)	1,0	−0,1	Moderate demand	(MD)	1,1	−0,1	Moderate demand	(MD)	1,0	+0,1
Weak demand	(WD)	1,0	+0,2	Weak demand	(WD)	0,5	−0,1	Weak demand	(WD)	0,7	−0,4

[1] Extra-EC trade for the Community of Ten.
[2] Variation: difference in the specialization indices between 1986 and 1973.

NB: Export specialization:

$$\frac{\text{exports from one branch of a country's industry}}{\text{that country's total exports}} \Big/ \frac{\text{total exports from that branch for the OECD zone}}{\text{total OECD exports}}$$

Sources: Volimex, DG II.

Table 32

Gains and losses in export market shares over the period 1979-86

(Changes in EC share of total OECD exports)

Gains (+) and losses (−) in the Community's market shares in non-EC countries over the period 1979-86[1]
(in descending order)

Branches	Losses	Branches	Gains
Electrical equipment and supplies	−3,7	Leather and footwear	+6,8
Motor vehicles and cars	−3,0	Wood, furniture	+5,1
Rubber and plastic products	−2,3	Textile products and clothing	+4,0
Other transport equipment	−2,1	Minerals and non-metallic mineral-based products	+2,8
Other industrial products	−1,7	Paper articles, printed articles	+1,7
Office machines, data-processing equipment, precision, optical and other similar instruments	−1,6	Chemicals	+1,5
Metal products, excluding machines and transport equipment	−1,2	Ores and ferrous and non-ferrous metals other than fertile and fissile materials	+1,3
Industrial and agricultural machinery	−0,5	Foodstuffs, beverages and tobacco-based products	+0,7

[1] The market share is defined as EUR 10's worldwide exports compared with the OECD countries' worldwide exports.
Sources: Volimex, Commission services.

3.4. Extra-Community exports bound for the wrong countries

The geographical pattern of extra-Community exports partly explains why the Community has opted to specialize in products for which demand in stagnant. Thus, while Japan accounted for 14,5% of the Community's imports of manufactures in 1986, only 3,2% of the Community's exports in that year went to the Japanese market. Conversely, the developing countries account for 18,9% of Community imports but more than 30% of its exports. Only the newly industrializing countries of South-East Asia have a profile comparable to that of Japan (6% of EC imports but only 3,5% of its exports). Thus, by channelling a growing proportion of their exports to the non-industrialized countries, the Community countries are managing to keep the share of their production that goes for export at a high level, but the products marketed in the areas in question do not have the same technological content. In particular, it is clear that demand in the industrialized countries (Japan and the United States) for high technology and strong-demand products is not the same nature as that in the industrializing countries.

Thus the Community is compounding its weaknesses, in that the products for which there is less demand account for a larger share of its exports than in Japan or the United States.

Table 33

Structure and geographical breakdown of Community exports in 1986

(%)

Partner	Industry total	Strong demand	Moderate demand	Weak demand
OECD	55,9	51,0	56,1	61,5
of which:				
USA	20,8	15,8	24,1	21,5
Japan	3,2	3,7	2,8	3,4
Rest of OECD	31,9	31,5	29,2	36,6
Eastern bloc countries	5,5	5,7	4,9	6,3
Developing countries	30,1	30,0	32,1	26,9
of which:				
South-East Asia	3,5	4,6	2,9	3,3
Latin America	4,4	4,9	5,0	2,9
Africa (non-OPEC)	4,5	4,5	5,2	3,3
OPEC	10,6	9,9	11,7	9,6
Rest of world	8,5	13,4	7,0	5,3
Total	100	100	100	100

Source: Volimex.

It exports less to the Japanese market than the USA and less to the US market than the Japanese. Community exports to the developing countries, particularly OPEC, account for a large share of its sales abroad and make it very dependent on the trend of those countries' incomes. And yet its presence in the newly industrializing countries, particularly in South-East Asia or Latin America, which are the expanding Third World markets, still remains very limited. In Latin America, it is easily outstripped by the United States, and in South-East Asia, it is left a long way behind by Japan.

3.5. The Community's own market more protected than other major world export markets

Community firms have, however, generally stood their ground better on the Community market than on the third-country markets. The Community countries' market share on their own internal Community market stood at 72,1% in 1986, i.e. 1 point higher than in 1973 and at roughly the same level as in 1979, but their share on third-country (non-EC) markets amounted to 42,9% in 1986, i.e. 3,0 points lower than in 1979.

Admittedly, the general order to the positions of weakness in terms of market shares is broadly speaking comparable on the Community market on the one hand and outside the Community market on the other. In certain sectors, such as foodstuffs, leather, skins and hides, footwear, textiles and clothing, the Community is in a strong position on both its internal market and the major export markets. In sectors where demand is strong, such as electrical and electronic equipment, office machines and data-processing equipment, European firms are in a weak position on the intra- and extra-Community markets alike.

However, the trends observed at sectoral level in these two markets are different. The greatest resistance shown by Community firms on their own internal market can be seen at a narrower sectoral level (Table 34). Thus in the case of electrical and electronic equipment, the Community countries lost, over seven years (1979-86) 8 market share points on the extra-Community markets, while on the Community market the firms in question lost only 4,1 points. This phenomenon can also be seen in the case of office machines and data-processing equipment (−4,3 points on the extra-Community market, compared with −0,4 points on the intra-Community market) and cars (−8,4 points on the extra-Community market compared with −1,6 points on the intra-Community market).

Table 34

Market shares on the intra- and extra-Community markets, 1986

(EC share of total OECD exports, in %)

Community market	1986	1986/79[1]	Non-Community market	1986	1986/79[1]
Foodstuffs	89,0	+3,0	Leather, skins, footwear	75,4	+7,9
Leather, skins, footwear	84,7	+2,5	Textiles, clothing	60,3	+5,4
Non-metallic ores	82,9	+4,0	Foodstuffs	57,8	+2,7
Textiles, clothing	82,4	+0,6	Chemicals	55,5	+2,2
Rubber, plastics	82,2	−1,2	Non-metallic ores	55,4	+3,4
Motor vehicles, cars	80,7	−1,6	Metal products	54,0	+0,2
Metal products	80,2	+4,0	Rubber and plastics	49,5	−4,8
Metallic ores	78,5	+6,0	Agricultural and industrial machinery	48,9	−0,5
Chemicals, pharmaceuticals	76,5	−0,5	Metallic ores	42,1	+2,3
Agricultural and industrial machinery	66,8	−3,8	Wood, furniture	37,4	+5,8
Wood and furniture	61,6	+7,9	Electrical and electronic equipment	35,0	−8,0
Electrical and electronic equipment	60,4	−4,1	Office machinery, data-processing equipment	32,4	−4,3
Office machinery, data-processing equipment	53,9	−0,4	Transport equipment	30,4	−3,2
Other transport equipment	51,8	+1,6	Motor vehicles, cars	28,6	−8,4
Paper, printing	51,7	+5,5	Paper, printing	27,1	+2,5

1 Difference in market share between 1986 and 1979.
Source: Volimex.

4. Conclusions

1. For the Community, the way to consolidate future growth is to adapt European supply to the structural changes in world demand. Against a background of sluggish economic growth, demand for a small number of industrial products (office machines and data-processing equipment, electrical and electronic equipment, chemicals and pharmaceuticals) has held up and grown at an average rate of more than 5% annually in volume terms.

2. The Community is exhibiting an increasing propensity to import high-technology products for which demand is strong. In 12 years, the penetration rate has increased by nearly 11 points in these sectors, while in the sectors where demand is weak, the penetration rate has increased by only 3 points. Admittedly, the US market has also gradually opened up to imports of foreign products, a trend which was accelerated by the increase in the value of the dollar between 1982 and 1985. However, on the US market, all sectors have been equally affected by this increase in imports. Furthermore, European firms have gained little, if anything at all, from this opening up of the US domestic market, given that our market share has stagnated at around the 2,5% mark. Lastly, in the case of Japan, imports, as a share of domestic demand, have remained at the same level over the past 15 years.

3. In parallel with these trends, intra-Community trade has increased less rapidly than extra-Community imports in the most dynamic sectors, namely office machines and data-processing equipment (−7% a year), and electrical and electronic equipment (−6% a year). Only the products connected with the common agricultural policy have been a clear exception (difference between intra- and extra-Community trade +2,6% a year).

4. As the Community market has increasingly opened up to imports, European firms have exported a growing share of their production to extra-Community markets. In 1985, European firms exported 17,4% of their production, compared with 7,7% in the case of US and 14,6% in the case of Japanese firms.

5. However, it has to be said that this growing opening up of production towards external markets has been accompanied by a steady reduction in the market shares held by the Member States worldwide. This trend has gone hand in hand with an unfavourable structural effect, namely a 2,4 point fall in market shares in the sectors where demand is strong between 1973 and 1986, compared with a 3,9 point gain in market shares over the same period in those sectors where demand is weak. In contrast, Japan gained 8,3 points in market shares in the strong-demand sectors, compared with stagnation in the weak-demand sectors.

6. The analysis of market shares by value can be rounded off by looking at the export trends in volume terms. These clearly show the considerable decline of US industry which, in six years (between 1980 and 1986), lost nearly 15% of its export volume. Over the same period, the Community's exports increased by 16%, compared with nearly 32% in the case of Japanese exports.

7. The geographical pattern of extra-Community exports reflects the specializations the Community has opted for. Thus Japan accounts for 14,5% of the Community's imports of manufactures, but takes only 3,2% of its exports for the same year. In contrast, the developing countries supply 18,9% of Community imports, but account for more than 30% of its exports.

8. For European firms, the Community market remains more protected than major export markets, even in sectors where demand is strong. In the case of electrical and electronic equipment, the losses of market shares on the Community market amounted to 4,1 points in seven years (1979-86), compared with an 8 point loss on the extra-Community markets. However, the fact that the Community is less competitive on external markets is crucial in the long term.

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IV — Trade by level of processing

1. Introduction

The purpose of this chapter is to examine the export structure of the Community according to the level of processing and to compare it with that of other countries. The underlying assumption is that a greater specialization in highly processed products is more conducive to raising standards of living.

The classification of the level of processing that is used is the one constructed by Firebaugh and Bullock (1986). It gives six levels, as follows:

Level	*Description*
1	Unprocessed primary products
2	Semi-processed primary products
3	Highly processed primary products
4	Basic industrial products
5	More elaborate industrial products
6	Complex industrial products

Firebaugh and Bullocks' definitions have been extended by the Commission to cover a wider range of products. They took as the starting point the SITC revision 1 classification, for which trade data are available for the whole period under consideration. Products were allocated to the different levels taking into account the amount of processing typically involved to produce them, the number of stages needed, their component count, etc. Inevitably such a classification is going to be imperfect, with some difficult decisions to be made in allocating some of the products. The definitions used are given in the Annex at the end of this chapter.

Level 1 represents unprocessed primary products. Perhaps its most important component is crude petroleum, but it also covers agricultural raw materials, minerals and ores. Semi-processed primary products (Level 2) include lightly processed agricultural produce, coal, leather, non-synthetic textiles, precious stones, and unrefined non-ferrous metals. Level 3 consists of highly processed primary products such as confectionery, petroleum products, synthetic fibres and refined unwrought metals. Basic industrial products (Level 4) is a category covering a wide range of common articles such as bulk chemicals and manufactured goods of wood and metals. Level 5, more elaborate industrial products, includes pharmaceuticals, plastics, electrical machinery, batteries and electronic components. Finally, Level 6 covers complex industrial products such as telecommunications equipment, electro-medical equipment, transport equipment, and sound and video recorders and players.

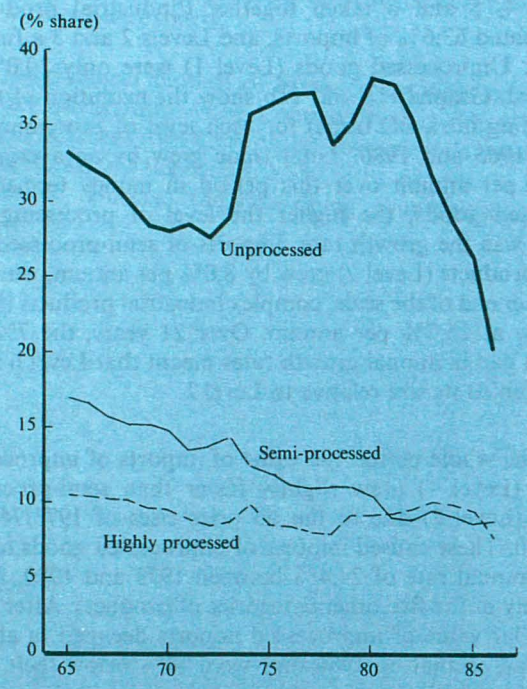
Since figures for total world trade by detailed product are not available, the analysis is based on the imports of industrialized countries. In 1986, complex industrial products (Level 6) accounted for 31,6% of industrialized countries' imports. Levels 4, 5 and 6 taken together ('industrial products') represented 63,6% of imports, and Levels 2 and 3 a further 16,4%. Unprocessed goods (Level 1) were only 20,0% of the total. Graphs 11a and 11b show the evolution of trade (excluding intra-EC trade) for each level of processing between 1965 and 1986. Total trade grew by an average of 12,2% per annum over this period in money terms. For processed goods, the higher the level of processing, the higher was the growth rate. Imports of semi-processed primary products (Level 2) grew by 8,8% per annum, whilst at the other end of the scale, complex industrial products (Level 6) grew at 15,7% per annum. Over 21 years, the 7% per annum gap in annual growth rates meant that Level 6 more than trebled its size relative to Level 2.

Over the whole period the value of imports of unprocessed goods (Level 1) grew slightly faster than semi-processed goods (Level 2) due to the oil price rises of 1973/74 and 1979/80. These caused imports of unprocessed goods to rise at an annual rate of 24,4% between 1973 and 1980, faster than any of the five other categories of products. After 1980 the dollar value of unprocessed imports declined in all but one year, so that by 1986 they were 44% below their 1980 value. Factors influencing this were the halving of oil prices in 1986, the decline in both the IMF's food and metal price indices by 34%, and the reduction in the price of agricultural raw materials by 21%. These also contributed to the decline in the dollar value of imports of other primary products (Levels 2 and 3) between 1980 and 1986.

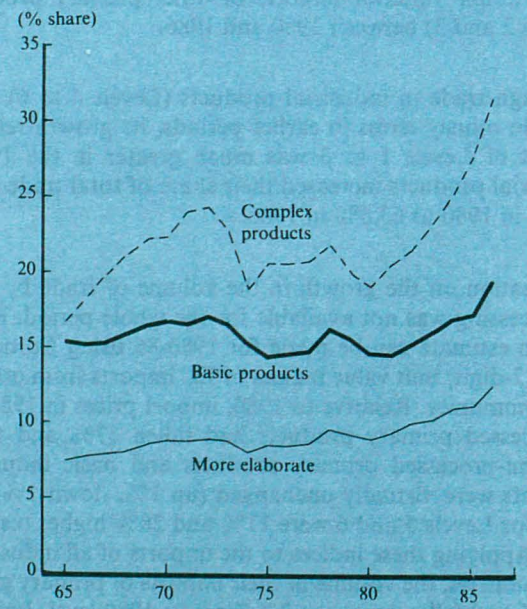
Although trade in industrial products (Levels 4 to 6) grew faster in money terms in earlier periods, its growth relative to that of Levels 1 to 3 was much greater in the 1980s. Industrial products increased their share of total trade from 42,4% in 1980 to 63,6% in 1986.

Information on the growth in the volume of trade by level of processing was not available for the whole period. However an estimate can be made for 1980-86 using Eurostat's SITC (2-digit) unit value indices of EC imports from outside the Community. Relative to 1980, import prices in 1986 for unprocessed primary products had fallen 37% and those for semi-processed primary products and basic industrial products were virtually unchanged (up 1%, down 1%) but those for Levels 5 and 6 were 11% and 28% higher respectively. Applying these indices to the imports of all industrialized countries, the volume of their imports of primary goods in 1986 had fallen by about 7% from its 1980 level. Imports of unprocessed and highly processed primary products were

GRAPH 11a: **Imports of primary products Share by level of processing**



GRAPH 11b: **Imports of industrial products Share by level of processing**



both 11% lower in volume, and the 13% rise in volume for semi-processed goods did not fully compensate for the fall in prices. In contrast, the volume of imports of industrial goods had risen 40%. The volume of imports of basic industrial products rose 45% over the six years whilst Levels 5 and 6 were 35% and 38% higher.

2. Structural change

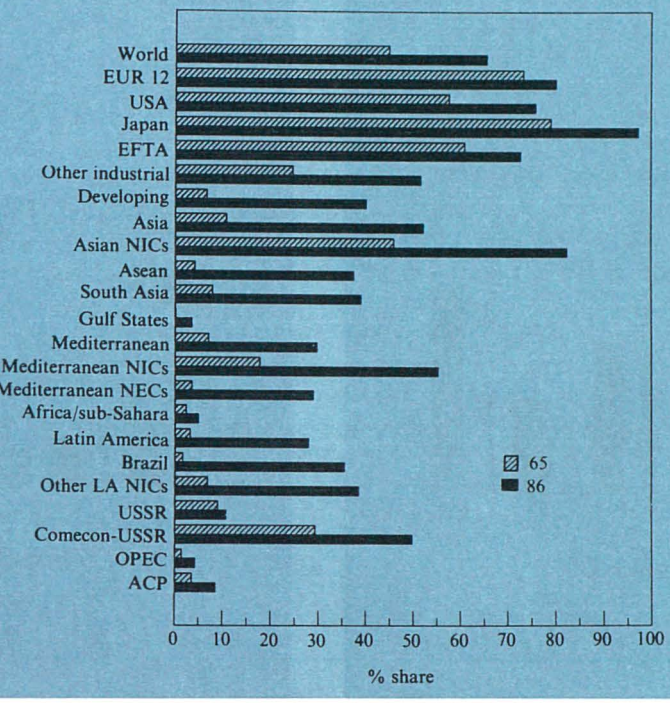
This section will examine how the export composition of the Community and other countries has changed in the last 20 years. Clearly shifts in composition do not necessarily imply anything about the absolute rates of growth of each category. For example, the fall in oil prices in 1986 generally boosted the share of the non-oil products. Section 3 will look at how far the zones which were successful in increasing the average level of processing of their exports were able to increase their market share.

The share of industrial products (Levels 4 to 6) in the total imports of industrialized countries rose from 44,9% in 1965 to 65,5% in 1986. From Graph 12 it is clear that some countries have succeeded in shifting the structure of their exports towards products with higher levels of processing better than others. In 1965 six zones had more than 25% of their exports in industrial products. These were the European Community, Japan, the USA, EFTA, the Asian NICs and the State-trading countries other than the USSR. By 1986 they had been joined by the remaining industrialized countries, several Mediterranean and Asian countries, and the Latin-American NICs. Most of the rest of the developing world failed to make the switch, along with the USSR. Graph 13 shows how the share of each level has changed between 1965 and 1986 for various zones.

European Community

The share of industrial goods in Community exports to industrialized countries (including exports to other EC Member States) grew by 0,6% per annum between 1965 and 1986, from 65,1% in 1965 to 73,1% in 1986. The equivalent shares for Community trade with industrialized countries (other than EC Member States) were somewhat higher (73,3% in 1965 and 80,1% in 1986) but the average growth rate was lower (0,4% per annum). Whichever set of figures is taken, the Community increased the share of industrial products in its exports slower than any of the other zones considered. The average rate for the period for all exporting zones was 1,8% per annum. The Community's relative growth rate was particularly poor in the 1980s, some 3,9%

GRAPH 12: **Share of industrial products in exports — 1965 versus 1986**



below the world growth rate. There was also not much movement to higher average levels of processing within this category. Exports of complex industrial products (Level 6) were already higher than those of the other levels in 1965. Their share rose by 3,4% from 28,1% in 1965 to 31,5% in 1986. Many other countries increased the relative importance of this group by much more. Basic industrial products (Level 4) took the second largest share of EC exports in both 1965 and 1986. Many of the products in this group faced fierce competition from new sources of supply. Nevertheless their share rose 1,1% from 24,8% to 25,9%. The share of more elaborate industrial products (Level 5) rose 3,7% to 15,8%, to make it the third largest group. North Sea oil contributed to restraining the relative decline in unprocessed primary products, whose share went down by 2,2% to 8,2% for exports to all industrialized countries (and by just 0,8% to 5,3% for exports to industrialized third countries). The share of semi-processed products fell by 4,2%, and that of highly processed primary products by 1,7%.

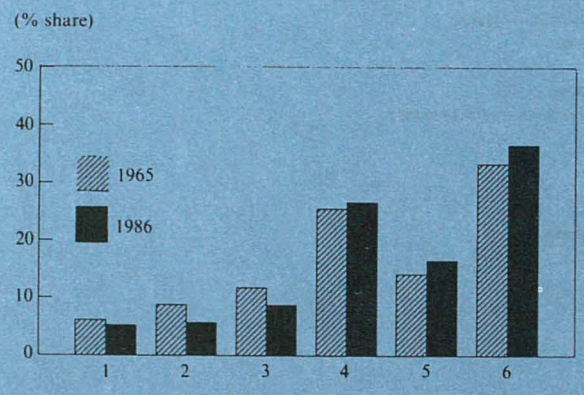
USA

Between 1965 and 1986, the share of Levels 4 to 6 in US exports to industrialized countries increased from 57,5% to 75,8%, an annual growth rate of 1,3% per annum. The most significant structural change was the 18,8% shift in US exports towards the more elaborate and complex industrial products (see Graph 12). The share of Level 6 rose from 32,8% to 47,0% and that of Level 5 rose from 12,1% to 16,7%. Unprocessed primary products (of which food items are the most important) which had accounted for 23,0% of exports in 1965 remained the second largest group until 1982, but have since declined in value until their share was just 11,4% in 1986.

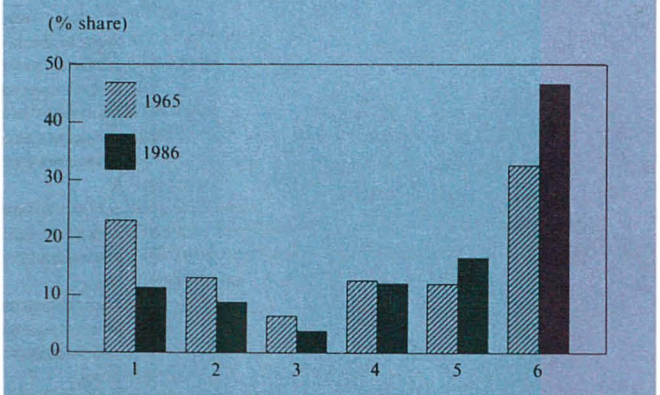
Japan

Japan has been very successful in changing the structure of its exports towards higher levels of processing. In 1965, Levels 4 to 6 accounted for 79,0% of Japan's exports. This is a proportion that only two other of the zones examined have attained, and then only in 1986. The absence of natural resources and the supposed inefficiency of Japanese agriculture can only be a partial explanation for the low (13,5%) share of unprocessed and simply processed primary products. There has also been a consistent policy of shifting the structure of Japanese industry towards new growth sectors. By 1986 the share of Levels 4 to 6 had risen a further 18,3%

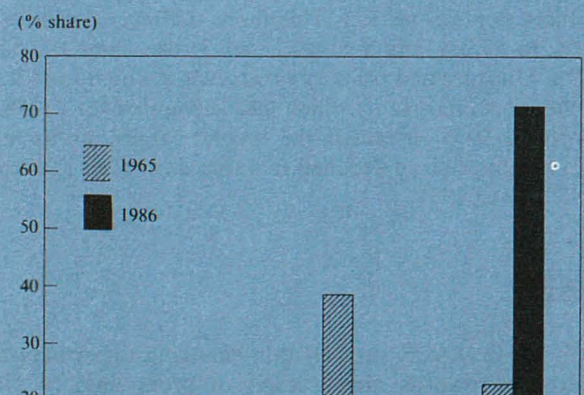
GRAPH 13a: **EUR 12 — Share of exports by level of processing**



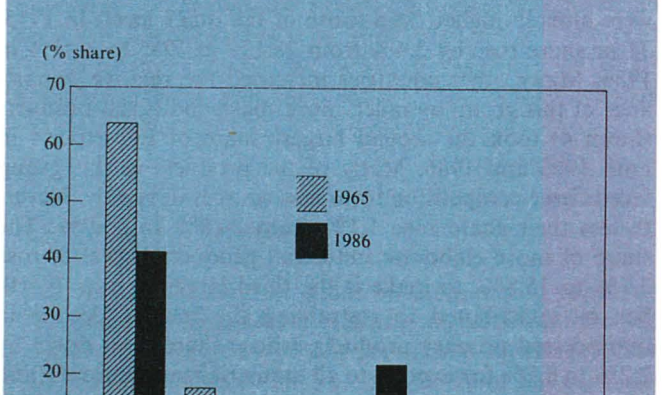
GRAPH 13b: **USA — Share of exports by level of processing**



GRAPH 13c: **Japan — Share of exports by level of processing**



GRAPH 13d: **Developing countries — Share of exports by level of processing**



to 97,3%. The share of complex industrial products (Level 6) rose 48,4% to 71,6% of Japanese exports, at the expense of Levels 1 to 3 and basic industrial products (Level 4), whose share declined from 38,8% in 1965 to 8,6% in 1986.

Developing countries

Looking now at the progress of developing countries, there have been large differences in the speed of industrialization, but all zones have made some progress. In 1965, industrial products were only 6,6% of their sales to industrialized countries. By 1986, manufactures accounted for 40,1% of developing country exports. This implies an average growth rate of 12,4% per annum. The share of basic industrial products was 21,9% and that of complex industrial products 10,4%. Unprocessed primary products, however, still represented 41,4% of exports.

State-trading countries

Turning finally to State-trading countries, we see that the USSR has not made substantial progress in increasing the average level of processing of its exports. In 1965, 9,0% of the USSR's exports were industrial products. This share had risen to only 10,7% in 1986. Unprocessed primary products (of which fuels were the most important) represented 44,3% of the country's 1986 exports, some 10% higher than in 1965. The second largest category of exports were highly processed primary products, with a 29,4% share of trade. The other State-trading countries have been more successful in increasing their exports of industrial products, which rose from 29,4% of their sales in 1965 to 49,8% in 1986. Their leading category of exports in 1986 was basic industrial products (Level 4), with a 34,4% share, followed by Level 3 with 20,9%.

3. Trends in market share

Turning now to the share of the above zones in the imports of the industrialized countries, it can be seen from Tables 7A and 7B in the Statistical annex that the established industrial countries still account for nearly two thirds of all trade and nearly four fifths of trade in industrial products. It should be added that trade figures by themselves give only a partial picture. Ideally domestic production by level of processing would have been taken into account so that the market share of each zone in total apparent consumption could have been examined. Looking at trade alone tends to understate the importance of countries with lower external trade to GDP ratios (such as the USA). In order to equalize this effect, intra-EC trade has been excluded when calculating market shares. This of course makes a substantial difference to the Community's share, since intra-EC trade is about twice the size of Community exports to industrialized third countries. With intra-EC trade included in the figures, the Community would have had the largest share for five out of the six categories, and would have been second only to OPEC as a supplier of unprocessed primary products.

Unprocessed primary products

In 1986, developing countries furnished nearly two thirds of industrialized countries' imports of unprocessed primary products. Among the industrialized countries, Australia, Canada, New Zealand, and South Africa together supplied 10,3% of unprocessed goods, with the USA providing a further 8,0% of the total. EFTA (5,0%), EUR 12 (4,7%), and State-trading countries (4,6%) are also important sources.

Semi-processed primary products

In contrast to unprocessed goods, industrialized countries supplied a much greater share (61,5%) of their imports of semi-processed products in 1986. Australia, Canada, New Zealand and South Africa supplied 23,3%, up 3,7 percentage points since 1965. The USA, EUR 12 and EFTA accounted for 14,2%, 11,8% and 11,1% respectively. Developing countries provided 31,8% of imports.

Highly processed primary products

About half of highly processed primary products came from industrialized countries in 1986. The Community supplied 20,3%, EFTA 10,6%, Australia, Canada, New Zealand and South Africa 8,8% and the USA 6,9%. Developing countries provided a further 38,9% of imports. State-trading countries represented 10,9%.

Basic industrial products

The developing countries' market share in basic industrial products has grown from 11,3% in 1965 to 35,0% in 1986. There has been a corresponding drop in the share of the industrialized countries. The Community, with a 24,2% share, was still ahead of the Asian NICs, who had a 22,2% market share. In 1965, their market share had been 5,0%.

Next came EFTA (14,9%), the USA (8,7%), Australia, Canada, New Zealand and South Africa (7,7%), and Japan (5,7%).

More elaborate industrial products

The industrialized countries still had a large (78%) share of the market for more elaborate industrial products in 1986. However the shares of the Community, the USA and EFTA (23,5%, 18,5% and 13,4% respectively) has diminished substantially since 1965. In the same period Japan has increased its share from 9,6% to 17,6%, the Asian NICs from 1,2% to 12,1% and Asean from 0,1% to 3,7%.

Complex industrial products

Twenty years ago, virtually all the imports of the products with the highest level of processing came from industrialized countries. Their market share has fallen by nine points to 88,7%, but this disguises the major change. In 1965, three quarters of the market was shared by the USA and the Community. In the intervening period Japan increased its market share fivefold to 29,3% and the USA and the Community saw their shares fall to 20,7% and 20,5% respectively. The Asian NICs also increased their market share from 0,3% to 6,6%.

4. Conclusions

The speed of transfer of new technology to developing countries has increased rapidly in the last 20 years due to the nature of these technologies, improved levels of education and infrastructure, and transfer via the subsidiaries of multinational companies. This has meant that one aspect of the established industrial countries' comparative advantage *vis-à-vis* the developing world has diminished. The zones which did not increase the average level of processing of their exports substantially, lost a great deal of their market share in Levels 4, 5 and 6 during the period under consideration. The converse was not always true. The ability to gain market share depends on competitivity, which is influenced by industrial structure and by many other factors (marketing, prices, quality, delivery dates, etc.). Market share in primary products remained less dependent on competitivity and more on natural resource endowments, climatic variables and the state of various commodity prices.

Thus it is not surprising that the Community and EFTA saw their share of the market for industrial products eroded, given their failure to change the structure of their exports substantially. Their overall market shares were maintained in spite of a lower (but still high) share of the market for industrial products because of the high growth of the latter relative to primary products, i.e. the Community and EFTA were strong in 1965 in those products which grew the fastest in the succeeding two decades. The USA's loss of share was not due to lack of change. A high level of home demand and an overvalued dollar were probably more significant factors.

Japan has reaped the benefit of a considered policy of industrial flexibility and modernization (for example, the shift out of basic industrial products and into those of the highest level). If the demand for more sophisticated products continues to grow faster than average, it is well placed to enlarge its market share further.

The Asian NICs have also emerged as major competitors to the established industrial countries. Four fifths of their exports are industrialized products. Moreover the proportion of their output represented by complex industrial products has grown considerably. Their growing competitivity in advanced manufacturing has enabled them to expand their market share to nearly 10% of trade. There are a host of other developing countries who are making the transition to industrially based economies, and competition particularly in basic industrial products will continue to intensify.

The countries of the world which remained dependent on exports of unprocessed primary products continued to be vulnerable to swings in demand and production in the short term, and to a continued loss of market share in the longer run as the market for more highly processed goods raced ahead.

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Annex — Definition of six levels of processing by SITC classification

1. Unprocessed primary products

001	054	261	281
025	071	262	283
031	072.1	263	285
041	074	264	286
042	121	265	291
043	211	271	292
044	212	273	331.01
045	221	274	341.1
051	242	275.2	411
052	244.01	276	

2. Semi-processed primary products

011	061.5	241	422	653.2
012	061.6	243	431	653.3
022	072.2	251	611	653.4
032	072.3	267	651.1	653.9
046	075	275.1	651.2	661.1
047	081	282	651.3	667
048	091	284	651.4	681
053	099	321	651.5	682.11
055	122.3	331.02	651.9	683.1
061.1	231	421	653.1	685.1
				687.1

3. Highly processed primary products

013	111	341,2	651.6	682.12
023	112	351	651.7	682.13
024	122.1	512.1	652	684.1
061.2	122.2	512.3	653.5	686.1
061.9	244.02	531	653.6	688
062	266	532	653.7	689
073	332	613	671	

4. Basic industrial products

512.2	554	653.8	672	812
512.4	561	654	673	821
512.5	571	655	674	841
512.6	599	656	675	842
512.7	612	657	679	851
512.8	621	661.2	682.2	891.9
512.9	629	661.3	683.2	894
513	631	661.8	684.2	896
514	632	662	685.2	897
521	633	663	686.2	899
533	641	664	687.2	
551	642	665	694	
553	651.8	666	697	

5. More elaborate industrial products

515	691	722	86	895
541	692	723	891.2	
581	693	729.1	891.4	
676	695	729.2	891.8	
677	696	729.3	892	
678	698	831	893	

6. Complex industrial products

71	726	729.6	73
724	729.4	729.7	891.1
725	729.5	729.9	

V — Trade with Latin America

1. Major trends

1.1. Latin America: overall view and macroeconomic situation

As a trading partner, Latin America[1] possesses the features characteristic of the Third World. In 1984, the continent's per capita GDP was approximately USD 1 540, which, although higher than that of Africa and the less developed Asian countries, means that all the Latin American countries should be regarded as 'relatively poor'.[2] This overall figure, however, conceals certain disparities, for, alongside the least developed countries such as Bolivia, Guyana, Haiti and Peru, there are four 'newly industrializing countries', namely Argentina (where in 1984 per capita GDP was USD 2 232), Brazil (per capita GDP USD 1 579 for the same year), Mexico (per capita GDP USD 2 067) and Colombia (per capita GDP USD 1 370).

The Community's visible trade with this group of countries reflects the typical structure of industrialized countries' trade with developing countries: the Community exports manufactures, particularly capital goods, to Latin America and imports agri-foodstuffs, raw materials (including oil from Ecuador, Mexico and Venezuela) and semi-finished products.

Although its trade with the Community absorbs an appreciable part of Latin America's visible imports and exports,[3] its trade relations are currently directed more towards the United States (Table 35). These preferential relations with the United States are a relatively recent phenomenon for, even as late as 1970, the share of Latin America's total exports bound for the United States was equal to its share of exports to EUR 12, although the composition by major sector was slightly different. It was not until the 1980s that links with the United States were further strengthened, to the detriment of exports to the Community (Table 35).

On the import side, however, at the start of the period a bias in favour of the United States was already in evidence.

In 1986 the Community's visible trade with Latin America accounted for 4,8% of its exports to non-member countries and 6,3% of its imports (Table 36). The level of trade had declined appreciably, given that in the 1960s Latin America accounted for 8 to 8,5% of the Community exports and 10% of its imports. The biggest drop in the share of Community exports occurred in 1983, when it fell to 4,7% and has stagnated ever since. We shall see below that this abrupt change can be related to the debt problem, which has forced Latin American countries to cut their imports in order to create a trade surplus to enable them to service their debts.

The decline in the share of Community imports has not been so sudden. Table 36 provides other details on the importance of the major product categories. Note in particular the high level of agricultural products and foodstuffs, each of which accounts for around a quarter of Community imports from non-member countries.

The Community's principal trading partners in Latin America are Brazil (2,2% of the Community's imports from non-member countries in 1986 and 1% of its exports to non-member countries in that year), Argentina (0,7% of imports and 0,5% of exports), Mexico (0,7% of imports and 0,6% of exports), Colombia (0,6% of imports and 0,3% of exports), Chile (0,5% of imports 0,2% of exports) and Venezuela (0,4% of imports and 0,6% of exports). The member countries which trade most, in relative terms, with Latin America are Spain, Germany, France and Italy (Table 37). However, in absolute terms Germany's trade is much greater than that of the other Member States.

Trade relations with Latin America are, to the United States, far more important than they are to the Community. Latin America's share of US imports is virtually twice that of its share of EC imports and, on the exports side, the trade links are even stronger. For instance, in 1986 14,5% of US exports went to Latin America, compared with 4,8% for the EC.

Japan, however, is less dependent than the Community on trade with Latin America. In 1986, only 4,2% of its exports went to, and only 5% of its imports came from, Latin-American countries. Unlike the United States, the share of energy imports has always been low, the 1986 figure (3,2%) being the maximum for the period in question.

Latin America's macroeconomic situation is characterized by the following features (Tables 38 and 39):

(i) throughout the period in question growth has been faster in Latin America than in the Community, but the effects of the long stagnation which started in 1974 have been more marked;

(ii) the balance of payments, which in the 1970s tended to be in surplus, went into deficit in the 1980s;

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[1] Latin America is defined as South America plus Central America, which are included together in the Volimex data base used here.

[2] As a comparison, for EUR 12 per capita GDP stood at USD 7 626 in 1984, ranging from USD 1 991 in Portugal to USD 10 627 in Denmark.

[3] Except where otherwise indicated, only visible trade is considered in this chapter. All the basic data are in dollars.

Table 35

Geographical breakdown of Latin America's trade with the OECD countries

(zone or country as % of total — current prices)

	1965	1970	1975	1980	1982	1984	1986
Latin-American exports[1]							
Total:							
to EUR 12	41,0	39,1	33,9	34,1	31,9	28,1	28,2
to USA	41,3	39,9	47,0	49,9	52,1	56,8	56,8
to Japan	6,7	10,0	8,1	7,4	8,3	8,2	7,9
to other OECD	11,0	11,0	11,0	8,6	7,7	6,9	7,1
Agriculture:							
to EUR 12	45,8	41,1	49,3	46,1	42,1	42,1	38,9
to USA	35,3	35,2	31,1	35,9	39,5	39,8	42,0
to Japan	7,8	11,4	7,9	6,5	7,4	8,0	7,9
to other OECD	11,1	12,3	11,7	11,5	11,0	10,1	11,2
Energy:							
to EUR 12	24,2	17,8	12,4	22,9	24,7	22,7	18,0
to USA	57,5	59,7	72,4	65,2	62,2	65,8	70,7
to Japan	1,7	0,9	0,5	3,2	5,5	6,2	7,1
to other OECD	16,6	21,6	14,7	8,7	7,6	5,3	4,2
Manufacturing industry:							
to EUR 12	47,8	45,3	39,2	39,6	36,4	27,6	28,0
to USA	35,8	35,7	39,4	41,3	45,1	55,2	57,1
to Japan	8,9	12,1	12,8	12,0	11,9	10,2	8,3
to other OECD	7,5	6,9	8,6	7,1	6,6	7,0	6,6
Latin-American imports[1]							
Total:							
origin EUR 12	33,6	33,5	31,3	29,3	27,2	24,7	27,4
origin USA	50,8	47,6	46,2	50,6	50,6	52,4	48,9
origin Japan	5,6	8,1	13,0	11,5	13,9	14,8	14,3
origin other OECD	10,0	10,8	9,5	8,6	8,3	8,1	9,4
Agriculture:							
origin EUR 12	13,1	14,8	6,5	5,9	9,2	5,5	11,0
origin USA	66,0	66,0	82,1	80,6	76,2	80,5	68,9
origin Japan	1,1	1,1	0,4	0,2	0,6	0,5	0,8
origin other OECD	19,8	18,1	11,0	13,3	14,0	13,5	19,3
Energy:							
origin EUR 12	10,8	9,1	10,0	30,9	11,0	18,8	14,0
origin USA	87,4	89,7	80,1	54,7	82,6	71,0	74,1
origin Japan	0,3	0,8	6,0	5,2	0,9	0,7	1,4
origin other OECD	1,5	0,4	3,9	9,2	5,5	9,5	10,5
Manufacturing industry:							
origin EUR 12	35,4	35,4	33,5	31,3	29,2	27,1	29,1
origin USA	48,6	45,1	42,6	47,6	47,2	48,3	46,0
origin Japan	6,0	8,7	14,1	12,7	15,5	17,1	15,8
origin other OECD	10,0	10,8	9,8	8,4	8,1	7,5	9,1

[1] Since the Volimex data bank is limited to transactions between the OECD area and the world, we have taken, to give an approximate idea of Latin-American exports, the OECD countries' imports from this zone. A similar practice was adopted with regard to Latin-American imports.

Sources: Volimex data bank, DG II.

Table 36

The Community's visible trade with Latin America

(market shares at current prices)[1]

	1965	1970	1975	1980	1982	1984	1986
EUR 12 exports							
(a) Total	8,2	8,1	7,6	7,1	6,1	4,7	4,8
(b) Agricultural products	4,1	5,2	3,3	3,9	4,5	2,9	3,3
(c) Manufactures	8,6	8,4	8,0	7,5	6,7	5,1	5,1
of which:							
Intermediate goods[2,3]	10,0	9,0	9,4	7,3	7,1	5,5	5,7
Investment goods	9,3	9,9	8,6	8,6	7,1	5,6	5,4
Consumer goods	6,0	4,6	4,5	5,4	5,3	3,5	3,8
EUR 12 imports							
(a) Total	10,5	8,5	6,5	6,7	7,3	7,8	6,3
(b) Agricultural products	19,0	18,4	18,2	19,7	19,0	23,6	24,2
(c) Manufactures	7,9	7,4	6,6	5,7	6,0	5,8	4,7
of which:							
Foodstuffs	19,8	23,1	24,9	22,8	24,9	25,7	25,1
Intermediate goods[2]	9,9	10,1	8,7	9,6	9,7	9,2	8,3
(d) Energy	9,4	3,5	2,0	4,9	6,4	7,2	4,4

[1] EUR 12 exports to (imports from) Latin America as a percentage of Community exports to (imports from) non-EC countries.

[2] Excluding energy. The proportion of exports of energy products is low (less than 2% in 1986).

[3] These groupings are defined as follows (NACE R44 codes in brackets):
Investment goods: 1. metal products (19); 2. agricultural and industrial machinery (21); 3. office machines (23); 4. electrical goods (25); 5. motor vehicles (27); 6. other means of transport (29).
Intermediate goods: 1. ferrous and non-ferrous ores and metals (13); 2. non-metallic minerals and mineral products (15); 3. chemicals (17).
Consumer goods: 1. food, beverages and tobacco (31; 33; 35; 37; 39); 2. textiles and clothing (41); 3. leather, skins and footwear (41); 4. timber and wooden furniture (45); 5. paper and printing products (47); 6. rubber and plastics (49); 7. products of other manufacturing industries (51).

Sources: Volimex data base, DG II; the basic data are in dollars.

(iii) the foreign debt burden has become overwhelming in the 1980s, thus imposing a very tight constraint on the possibilities for developing Latin America internally.

With regard to the first aspect, during the long-term period of expansion, GDP growth in Latin America in volume terms averaged 6,1% a year between 1965 and 1973, compared with 4,6% a year in EUR 12. Between 1973 and 1980, GDP in Latin America increased at a substantial rate (averaging 5,4% annually), while in the Community it fell to 2,2% a year. It is only in the last five years that the stagnation of the world economy has had its full effects on Latin America. Over the period 1980-85, Latin America's GDP grew by only 0,4% a year on average (with a fall between 1981 and 1983), compared with 1,5% a year in EUR 12.

The external account is full of contrasts. During the period of strong growth, there was initially a trade surplus (up until 1970; see Table 38). The trade balance then went into the red, the deficit lasting up until 1981. Between 1982 and 1986 — when growth was at its lowest and even negative — there was a large trade surplus (Table 38). As we shall see below, this turnaround reflects the constraints of the external debt.

There has, however, consistently been a current account deficit. Between 1970 and 1981, the current account deficit was far larger than the trade deficit, in particular because of the repatriation of profits by the large multinational firms. From 1982 to 1986, the current account deficit persisted, side by side with the large trade surplus. This result is related to the level of debt service which, in 1986, amounted to 30,3% of Latin America's exports of goods and services, 20,4% of which consisted solely of interest repayments (Table 39).

Between 1970 and 1982, Latin America was a net importer of capital. The extent of the flows was considerable, so that up until 1979 it had a balance of payments surplus (except in 1975). This was the period during which Latin America

Table 37

Trade of the principal Member States with Latin America

(market shares at current prices)[1]

	Exports to Latin America			Imports from Latin America		
	1965	1986	value in 1986 (million USD)	1965	1986	value in 1986 (million USD)
Germany	4,6	1,9	4 629	6,8	3,3	6 210
Spain	12,7	5,6	1 520	8,9	7,1	2 506
France	3,9	3,3	3 964	4,6	2,4	3 092
Italy	4,6	2,3	2 229	7,6	3,1	3 046
The Netherlands	2,2	1,1	896	4,1	2,6	1 923
United Kingdom	5,4	2,0	2 116	6,8	2,0	2 436

[1] Member country's share of exports to (imports from) Latin America in relation to its total exports to (imports from) the rest of the world (including the Community).
Source: Volimex.

got heavily into debt abroad. Since the outlook for profits in the long term was still favourable, a number of Latin-American countries launched major capital projects involving mining, forestry, railway and road construction. In addition to these schemes, which were carried out in the least industrialized countries, there were projects in the newly industrializing countries to improve the system of production and replace imports with domestic production, plus energy-related infrastructure schemes (dams in Argentina and Brazil). All this probably helps explain why, in the second half of the 1970s, the effects of the long-term world stagnation were not felt so acutely in Latin America.

The implementation of these schemes was facilitated by the financing available, which was provided mainly from the Eurodollar market where, in the 1970s, there was considerable liquidity. Eager to invest their capital, a number of banks granted loans to private and public Latin-American bodies without worrying too much about obtaining all the required repayment guarantees. Debt servicing then became an increasingly heavy burden, partly because the interest rates on the loans granted in the 1970s were indexed according to the London market and because, between 1980 and 1983, those rates increased considerably. Thus, despite the appreciable trade surpluses, there were still large balance-of-payments deficits. The flight of capital caused by Latin America's deteriorating economic and financial situation has also contributed to the deficits of recent years.

The most indebted countries are Brazil (USD 116 900 million in 1987), Mexico (USD 105 600 million in the same year), Argentina (USD 54 500 million) and Venezuela (USD 32 200 million).

The scale of the debt at present imposes a severe constraint on Latin America's scope for internal development and adversely affects the outlook for Community trade with the countries concerned, given that (a) substantial inroads are being made into Latin America's export earnings by the need to pay for the debt, and export revenue cannot therefore finance imports, and (b) imports must be curbed in order to produce trade surpluses that are sufficiently large to finance debt service transfers (interest and principal). The restrictive economic policies that a number of Latin-American countries have implemented in recent years have exacerbated the effects of the stagnation that was already under way. This has resulted in a deterioration in the amount of disposable income of households and an even greater deterioration in available per capita income owing to the very high birth-rate. The risk of an intensification of social conflict is therefore particularly high, especially as there is an enormous variation in incomes and wealth in Latin America.

The trend of the Community's terms of trade[1] with Latin America varies considerably according to whether all products are considered or whether oil is excluded. Over the period 1965-84, the terms of trade for all goods fluctuated around a basic trend which was slightly unfavourable to the Community (Graph 14). In 1985, and above all in 1986, the trend was positive. If oil is excluded, however, the Community's terms of trade improve very significantly. Thus, with 1965 as the base year, the index of the terms of trade as an index reached 158 in 1986: this means that in order

[1] Price of exports divided by the price of imports.

Table 38

Latin America's macroeconomic situation

(Data at current prices — million USD)

	External position				GDP in volume 1965 = 100	
	Trade balance		Current balance	Total balance of payments[2]	Latin America	EUR 12
	With EUR 12	World[1]				
1965	+ 1 566	+ 1 822	:	:	100	100
1966	+ 1 405	+ 1 507	:	:	105,6	103,8
1967	+ 1 362	+ 1 020	:	:	110,0	107,3
1968	+ 710	+ 643	:	:	117,5	112,9
1969	+ 959	+ 695	:	:	124,9	119,5
1970	+ 931	+ 201	− 3 573	+ 712	131,2	125,2
1971	+ 294	− 810	− 4 897	+ 185	139,9	129,5
1972	+ 148	− 375	− 4 397	+ 2 502	149,4	135,2
1973	+ 1 633	+ 1 499	− 3 706	+ 3 995	160,8	143,3
1974	+ 227	− 343	− 7 508	+ 3 626	172,0	145,9
1975	− 691	− 5 849	− 13 854	− 378	178,3	144,4
1976	+ 817	− 2 185	− 11 080	+ 4 741	189,3	151,6
1977	+ 1 343	− 519	− 11 567	+ 5 328	197,9	155,2
1978	+ 347	− 3 679	− 18 090	+ 7 079	206,8	159,9
1979	+ 1 852	− 122	− 19 428	+ 8 441	220,5	165,0
1980	+ 4 379	− 1 741	− 27 488	− 394	233,1	167,1
1981	+ 3 914	− 2 767	− 40 067	− 4 528	232,6	167,4
1982	+ 6 759	+ 7 176	− 41 723	− 33 232	229,8	168,6
1983	+ 10 973	+ 29 585	− 7 955	− 24 325	224,2	171,1
1984	+ 10 996	+ 37 618	− 153	− 11 988	232,2	175,2
1985	+ 11 087	+ 31 988	− 2 639	− 19 450	237,8	179,5
1986	+ 4 851	+ 15 580	− 16 335	− 26 361	:	184,1

[1] The total trade balance (worldwide) is calculated according to the balance-of-payments definition, in which imports and exports are fob. In the trade balance with EUR 12, however, imports are cif. Over the period in question, the difference between the cif and fob values was 10 to 15%.
[2] Total balance of payments = current balance + long- and short-term capital + errors and omissions.

Sources: For the trade balance with EUR 12: Volimex.
For EUR 12 GDP: Eurostat.
For the other data: IMF, *International Financial Statistics Yearbook*, 1987 and 1986.

to obtain the same quantity of European goods, the non-oil Latin-American countries had to supply 58% more products at the end of the period than in 1965.

1.2. Trend of trade and balance of trade

Over the period 1965-85, the trend of Community imports, in volume terms, exhibits three phases (Table 40):

(i) during the first 10 years, growth was sluggish (1,3% a year for total imports);

(ii) between 1974 and 1980, there was a marked acceleration (6,5% a year);

(iii) between 1980 and 1985, growth slowed down (3,5% a year), although it was well above the level obtained during the first phase. In 1986, growth was sharply down on 1985 (− 10,2%), following cutbacks in imports of agri-foodstuffs and energy products.

If the period as a whole is considered, there is apparently no significant correlation between the Community's internal development and the trend of its imports from Latin America. This aspect is particularly evident for the initial period, when Community industries' growing need for raw materials was met mainly by the African countries.

At current prices, a similar pattern was observed for the first two phases but, for 1980-85, the price trend reversed the results in terms of quantities (Table 40); under the combined effect of the fall in the prices of raw materials and agricultural products from the Third World and the appreciation of the dollar, the value of imports declined (by 1,1% a year), although, as we have just seen, the quantities increased. The fall in total imports in 1986 stemmed from the cutback in energy imports, the quantity involved (− 22%) being more than doubled by the drop in oil prices.

Table 39

Latin America's external debt

	Total debt[1]			Debt service		
	million USD	% of GNP	% exports (goods and services)	million USD	% of GNP	% exports (goods and services)
1971	25 110	14,6	129,3	2 675	1,6	13,8
1972	37 113	19,2	164,6	3 076	1,6	13,6
1973	41 495	17,3	132,3	4 312	1,8	13,7
1974	57 507	17,7	116,8	5 549	1,7	11,3
1975	65 046	19,4	140,6	6 726	2,0	14,3
1976	80 637	21,6	153,5	8 078	2,0	15,1
1977	98 885	24,0	159,9	11 497	2,7	18,3
1978	124 991	26,3	179,5	16 369	3,6	26,2
1979	145 989[2]	26,5[2]	156,6[2]	24 998	4,0	26,6
1980	242 176	35,7	191,0	27 065	4,0	21,4
1981	295 502	38,2	212,4	30 094	3,9	21,6
1982	332 029	48,4	268,9	32 216	4,7	26,1
1983	359 650	60,7	304,7	29 729	5,0	25,2
1984	376 902	60,9	287,9	30 670	5,0	23,4
1985	386 438	62,3	308,9	32 381	5,2	25,9
1986	399 424	61,3	367,4	32 964	5,1	30,3

[1] Long- and short-term public and private debt, including IMF credits.
[2] Break in series: the figures for 1971-79 refer to credits actually used, while the data for 1980-86 refer to all credits granted.
Source: World Bank, 'External debt of developing countries'. World debt tables, 1987-88, 1982-83 and 1981.

The trend of Community exports, by volume and value, exhibits four phases (Table 40):

(i) rapid growth from 1965 to 1974 (7,5% a year by volume and 15,5% a year at current prices);

(ii) a slowdown from 1974 to 1981 (3% a year by volume and 11,2% a year by value);

(iii) a very large fall in 1982 and 1983 (down 19,6% a year by volume and 22,5% by value);

(iv) a recovery from 1984 to 1986.

The first two phases are linked to Latin America's industrial growth which, over the period 1950-73, was running at 6,9% a year,[1] a rate similar to that of the European countries, and, from 1973 to 1980, at 5,2% a year. The downturn in 1981-83 was connected to a small extent with the decline in the level of industrial activity (down 2,9% a year[1]) but mainly with the level of the Latin-American countries' external debt, which forced them to cut back their imports. The period 1981-83 was also characterized by the fact that, following the appreciation of the dollar, the prices of Community exports, in dollars, fell (see Table 40, which shows that the decline in value was greater than that in volume).

As we have already seen above, the Community has tended to run a trade deficit with Latin America (Table 41 and Graph 15). Over the period in question, only in 1975 did it achieve a trade surplus. In relative terms, the deficit has always been modest, peaking in 1984 at only −0,45 of the Community's GDP. During the first decade, the deficit tended to decline, while during the second decade the reverse occurred (Table 8). In 1986 there was a considerable reduction in the deficit which, as a percentage of GDP, returned to the 1980-81 level (Graph 15).

The Community deficit is dependent on three categories of product (see Table 41), namely agricultural products, which are the most important item, consumption goods (primarily foodstuffs) and energy, particularly in the 1980s. On manufactures as a whole, there is a surplus, above all because of investment goods, which more than make up for the agricultural deficit.

[1] Fajnzylber, F. 'Charactéristiques de l'industrialisation en Amérique latine – Notes et études documentaires', *Problèmes d'Amérique latine*, 77, No 4788, 1985, p. 10.

GRAPH 14: **EUR 12 — Trade with Latin America — Terms of trade**

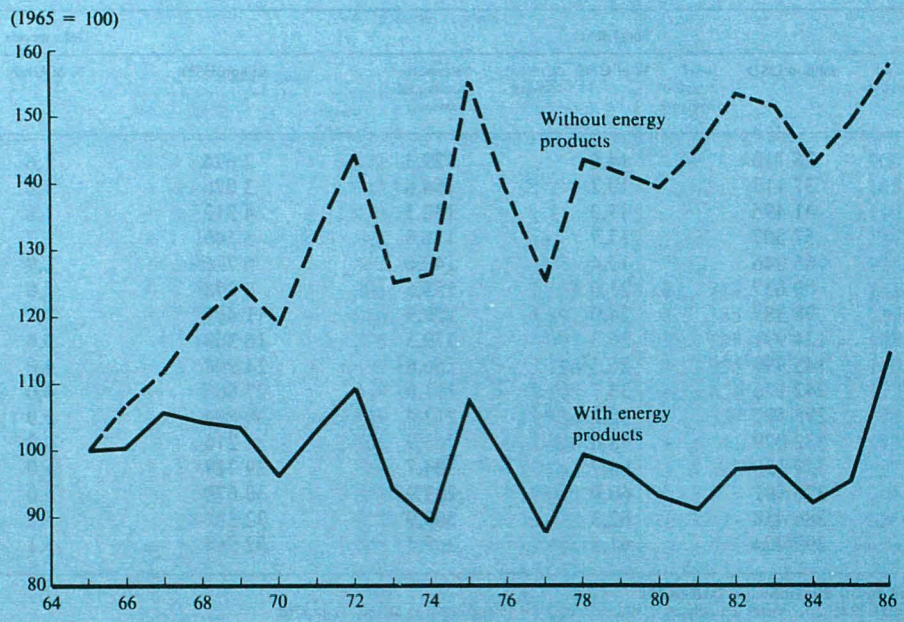


Table 40

The Community's visible trade with Latin America

(average annual % rates of change)

EUR 12 imports	Volume				Value			
	1965/74	1974/80	1980/85	1985/86	1965/72	1972/80	1980/85	1985/86
(a) Total	1,3	6,5	3,5	− 10,2	4,4	20,7	− 1,1	− 13,5
(b) Agricultural products	2,1	2,1	3,7	− 14,6	2,2	17,1	− 0,6	4,2
(c) Manufactures	3,9	5,3	3,6	0,1	8,3	17,1	− 2,7	4,4
of which: Foodstuffs	− 1,2	1,7	6,5	− 5,5	7,9	10,9	− 0,9	3,2
Intermediate goods[1]	9,5	5,8	2,1	4,0	7,0	20,2	− 4,6	3,6
(d) Energy	− 10,3	17,7	3,0	− 22,0	− 7,2	44,3	0,8	− 57,3

EUR 12 exports	Volume				Value			
	1965/74	1974/81	1981/83	1983/86	1965/74	1974/81	1981/83	1983/86
(a) Total	7,5	3,0	− 19,6	6,2	15,5	11,2	− 22,5	9,1
(b) Manufactures	7,7	2,0	− 18,4	5,5	15,5	10,8	− 21,8	9,0
of which: Intermediate goods[1]	10,4	− 1,2	− 17,0	6,2	19,2	4,0	− 20,2	9,9
Investment goods	7,0	2,2	− 19,9	4,0	14,4	13,6	− 22,1	8,0
Consumer goods	4,3	8,1	− 15,8	8,9	10,5	16,8	− 22,9	11,1

[1] Excluding energy.

Source: Volimex data bank, DG II; the basic data are in dollars.

Table 41

Trade balance of EUR 12, USA and Japan with Latin America

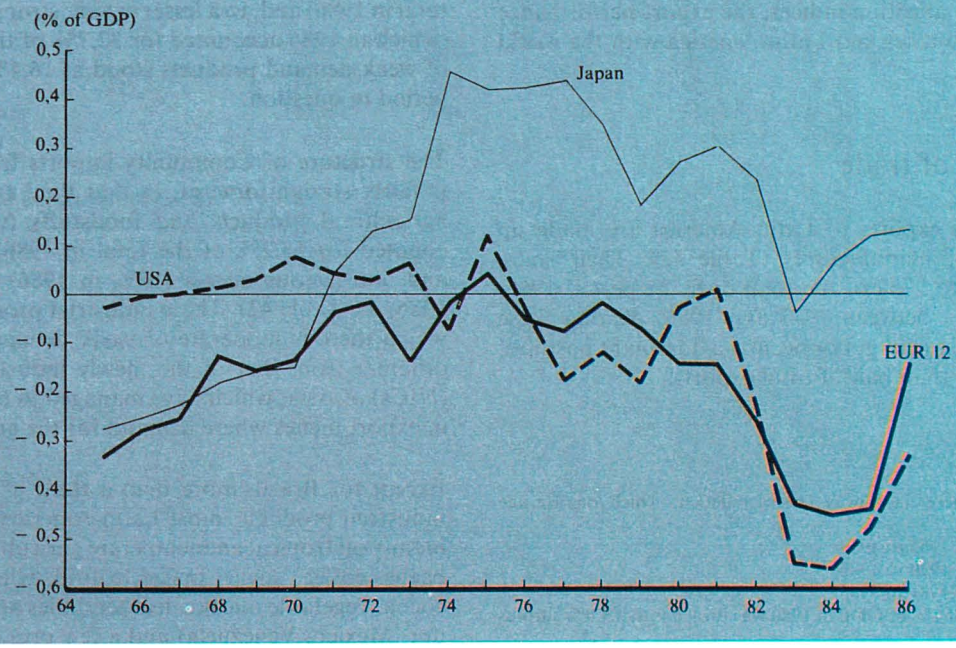
(million USD at current prices and exchange rates)

	1965	1970	1975	1980	1985	1986
EUR 12						
All products[1]	− 1 566	− 931	691	− 4 379	− 11 087	− 4 851
as % of GDP	− 0,33%	− 0,13%	0,04%	− 0,14%	− 0,44 %	− 0,14%
(a) Agricultural products	− 1 719	− 1 818	− 3 612	− 6 933	− 6 821	− 7 056
(b) Energy	− 602	− 357	− 986	− 6 371	− 6 965	− 2 801
(c) Manufactures	739	1 224	5 146	8 727	2 624	4 960
of which:						
Investment goods	1 367	2 444	6 053	11 174	6 032	7 674
Consumer goods	− 692	− 961	− 2 037	− 2 435	− 3 003	− 2 822
Intermediate goods	64	− 259	1 130	− 12	− 406	108
USA						
All products	− 194	787	1 935	− 661	− 18 941	− 13 639
As % of GDP	− 0,03%	0,08%	0,12%	− 0,02%	− 0,48%	− 0,33%
Japan						
All products	− 250	− 305	2 102	2 886	1 615	2 657
As % of GDP	− 0,28%	− 0,15%	0,42%	0,27%	0,12%	0,14%

[1] Differs from the sum of items (a), (b) and (c) because of an adjustment item.

Source: Volimex.

GRAPH 15: **Trade balance of EUR 12, USA and Japan with Latin America — Current prices**



A comparison with the Community's balance of trade with non-member countries[1] shows that there is no correlation with the net result of transactions with Latin America. In particular, the considerable narrowing of the overall trade gap in the 1980s (from −2,7% of GDP in 1980 to +0,15% in 1986) is not reflected in the accounts with Latin America.

It is only since 1982, which marked a clean break with the preceding trend, that there has been a certain imbalance in US trade with Latin America (−0,4% of GDP). This deficit in trade with Latin America coincided with the worsening of the overall US trade deficit, which in 1986 stood at −4,2% of GDP (compared with −1,4% in 1980). Between 1965 and 1976 US trade with Latin America remained more or less in balance. Between 1977 and 1980, there was a very slight deficit (Graph 15).

Since the early 1970s, Japan has tended to run a surplus in its trade with Latin America (Graph 15). That surplus is, however, very small (0,14% of GDP in 1986; see Table 41) and has followed a separate trend from that of Japan's trade transactions as a whole.[2]

2. Analysis by branches of production and by product

This analysis will be undertaken in two ways: first, by examining the structure of Community exports to and imports from Latin America and, second, by comparing, with the aid of the specialization indices, the export performance of the member countries and Latin America with the world average.

2.1. Structure of trade

The Community's exports to Latin America are made up almost entirely of manufactures (Table 42). Their share accounted for 96 to 97% of the total over the period 1965-76 and 94 to 95% between 1977 and 1986. Among these commodities, investment goods occupy a dominant position, representing more than half of total exports.

The type of investment goods which contribute most to Community exports are agricultural and industrial machinery (20,6% of the total in 1986), motor vehicles (9,1% at the end of the period) and electrical goods (11,2%). The importance of this last branch has increased considerably (in 1965, it accounted for only 6,7% of the total), probably as a result of the structural changes that have occurred in Latin-American industry.

The trend of the investment goods share falls into two phases, separated by an erratic movement in 1973 and 1974. The first phase was an upward trend, from 1965 to 1971, when the share of this branch of production increased from 50 to 58,2%, followed by a downturn from 1976 to 1986, when the share in question fell from 58,2 to 52,1%.

Over the period as a whole, intermediate goods lost a certain amount of ground since, in 1986, they accounted for 26,6% of Community exports, compared with 29,5% in 1965. Chemicals, however, which are the main exports in this category, became increasingly important in the 1980s.

Community exports of consumer goods account for a significant share of the total (17,2% in 1986; see Table 42). Foodstuffs are the most important item in this category, with a relative share of 7,9% in 1986. This figure partly reflects the growing dependence of most Latin-American countries on imported foodstuffs.

From the point of view of the type of demand, the Community's exports of industrial products to Latin America consist mainly of moderate-demand products (46,7% of the total in 1986) and, to a lesser extent, strong-demand products (which in 1986 accounted for 32,7% of the total). The share of weak-demand products stood at 16,4% at the end of the period in question.

The structure of Community imports from Latin America is fairly straightforward, in that they are concentrated on agricultural products and foodstuffs (which together accounted for 53,2% of the total in 1986), ores and ferrous and non-ferrous metals (16% in 1986) and oil (14,4% in 1986; see Table 42). These industrial products are goods for which there is moderate or weak demand; this situation is different from that of the 'newly industrializing countries' (NICs) of Asia, which have managed to establish themselves in export niches where demand for the goods is strong.

Except for Brazil, more than a third of whose exports are industrial products, most Latin-American countries depend mainly on tropical and temperate agricultural products (soya beans, coffee, sugar, maize, cotton, wheat, beef, bananas, cocoa, vegetable oilcake, leather, hides and skins), oil (Ecuador, Mexico, Venezuela) and a few ores and metals (copper

[1] Except in 1986, there has always been a deficit, which on average amounted to:
1,2% of GDP from 1965 to 1969;
1,3% of GDP from 1970 to 1980;
1,4% of GDP from 1981 to 1985.

[2] The overall deficit of 1% of GDP in 1980 was turned into a 4,6% surplus by 1986.

Table 42

Structure of Community trade with Latin America

(relative shares—current prices)

	1965	1970	1975	1980	1982	1984	1986
Exports[1]							
Agriculture	1,7	1,9	1,2	1,6	2,1	1,9	1,9
Energy	0,7	0,5	0,6	2,4	1,5	3,0	1,7
Manufacturing industry	97,0	97,0	96,5	94,8	95,7	94,1	95,8
(a) Investment goods	50,0	57,2	56,3	54,4	53,0	51,1	52,1
of which:							
Metal goods	5,0	4,0	4,2	4,2	4,6	3,5	3,2
Agricultural and industrial machinery	20,1	25,9	27,4	24,1	21,9	18,4	20,6
Office machines	3,0	3,4	2,5	2,7	2,4	2,3	2,8
Electrical goods	6,7	9,6	8,8	10,5	10,2	10,6	11,2
Motor vehicles	9,6	8,4	6,5	8,2	6,9	7,9	9,1
Other transport equipment	5,6	5,9	6,9	4,6	7,0	8,4	5,0
(b) Intermediate goods	29,5	26,9	29,2	24,0	25,0	27,2	26,6
of which:							
Ores and metals	10,3	7,5	10,9	7,0	7,3	5,7	6,0
Mineral and non-metal products	2,1	1,8	1,6	2,1	1,9	1,6	1,9
Chemicals	17,0	17,6	16,8	14,8	15,9	20,0	18,7
(c) Consumer goods	17,5	12,9	11,0	16,4	17,6	15,8	17,2
of which:							
Foodstuffs	6,9	5,2	4,8	7,8	7,5	7,0	7,9
Textiles, clothing	3,3	1,9	1,3	1,8	1,7	1,6	1,8
Paper, printing	2,9	2,6	2,2	2,7	2,8	2,6	2,5
Rubber, plastics	1,5	1,3	1,2	1,4	1,4	1,4	1,4
Other manufacturing industry	2,1	1,0	1,0	1,5	3,0	1,9	2,2
Imports[1]							
Agriculture	40,8	36,0	35,9	27,7	23,5	27,2	34,4
Energy	14,3	7,2	10,1	26,3	33,9	30,4	14,4
Manufacturing industry	44,8	56,8	53,6	45,7	42,4	42,2	51,0
(a) Investment goods	0,3	0,9	2,0	2,7	3,8	3,7	4,4
of which:							
Agricultural and industrial machinery	0,1	0,3	0,6	0,8	1,0	1,1	1,6
Motor vehicles	0,0	0,0	0,4	0,8	1,6	1,2	1,0
(b) Intermediate goods	17,3	27,1	20,3	20,0	16,4	16,1	20,1
of which:							
Ores and metals	15,3	24,0	16,5	16,5	13,4	12,7	15,9
Chemicals	1,6	2,7	3,5	3,2	2,7	3,0	3,6
(c) Consumer goods	27,1	28,8	31,3	22,9	22,2	22,4	26,5
of which:							
Foodstuffs	24,2	25,3	24,9	15,6	16,1	16,1	18,8
Textiles, clothing	1,2	1,0	3,5	3,3	2,5	2,5	2,8
Leather, skins, footwear	0,2	0,8	1,2	1,5	1,3	1,2	1,8
Timber and furniture	0,1	1,2	1,0	1,1	0,8	0,8	1,0
Paper, printing	0,1	0,1	0,2	0,9	1,1	1,3	1,5

[1] The figures for agriculture, energy and manufacturing industry do not add up to 100 because of a statistical adjustment.

Source: Volimex.

in Chile, tin in Bolivia, iron in Brazil). Note that virtually all the sales of some of these products are often attributable to a single country, which makes its economy particularly vulnerable to the vagaries of the world market.

Community oil imports mushroomed shortly after the second oil price shock (see, in Table 42, the figures for 1980 and 1982) but in 1986, following the collapse of oil prices, their share dropped dramatically, reaching the level obtaining at the start of the period.

The structure of the United States' and Japan's trade with Latin America is quite different from that of the Community.

(a) With regard to the United States, note the following (Table 43):

Exports

Agricultural and energy products play a far bigger role than in the case of the Community. In 1986, for instance, agricultural exports accounted for 6,8% of US exports, while the corresponding share was 1,9% in the case of EUR 12, and the share of US energy products stood at 4,9%, compared with 1,7% for the Community.

Consequently, the share of manufactures is lower than for EUR 12: 84,8% compared with 95,8% for the Community. However, the share of investment goods (48,4% in 1986) is similar to the Community's; as with the EC, US exports are concerned mainly with agricultural and industrial machinery and electrical goods, whose respective shares were 16,3% and 14,5% in 1986.

Imports

At the end of the period in question, the share of manufactures was virtually the same as for EUR 12, but its composition was different. In the case of the United States, imports of investment goods (21,1%, consisting largely of electrical goods, products which by themselves represented 11,2% of imports in 1986) accounted for a far larger share than in the case of EUR 12 (4,4%, see Table 42).

(b) Japan's trade with Latin America is characterized by the following features (Table 43):

Table 43

Structure of US and Japanese trade with Latin America

(relative shares in % — current prices)

	United States				Japan			
	1965	1975	1980	1986	1965	1975	1980	1986
Exports[1]								
Agriculture	5,8	10,3	12,4	6,8	0,9	0,2	0,2	0,3
Energy	3,5	3,4	2,5	4,9	0,1	0,9	1,1	0,3
Manufacturing industry	88,0	83,4	83,4	84,8	98,9	98,6	98,3	99,2
(a) Investment goods	49,3	49,3	47,1	48,4	45,6	60,1	70,8	86,3
(b) Intermediate goods	21,5	22,5	22,1	19,0	29,7	32,3	21,8	9,0
(c) Consumer goods	17,2	11,6	14,2	17,4	23,7	6,2	5,7	3,8
Imports[1]								
Agriculture	31,2	16,3	14,8	18,4	42,6	24,1	18,2	24,7
Energy	33,8	42,7	51,2	28,0	6,2	1,9	16,8	20,3
Manufacturing industry	33,2	38,8	32,6	51,4	51,1	72,7	64,5	53,9
(a) Investment goods	0,3	8,1	8,3	21,1	0,5	3,1	3,3	2,7
(b) Intermediate goods	19,5	11,8	9,6	11,9	39,9	39,5	48,9	39,8
(c) Consumer goods	13,4	18,9	14,6	18,4	10,7	30,2	12,2	11,4

[1] The figures for agriculture, energy and manufacturing industry do not add up to 100 because of a statistical adjustment.

Source: Volimex.

Exports

Japan's exports consist almost entirely of manufactures and these in turn are clearly dominated by investment goods (86,3% in 1986). The products in question come from the following branches: transport equipment other than cars and motorcycles (33,3% in 1986), electrical goods (21,2% in the same year), cars and motorcycles (14,4%), and agricultural and industrial machinery (10,6%). If these figures are compared with those in Table 43, it will be seen that the structure of sales of Japanese investment goods to Latin America is very different from that of Community exports in that category, which are dominated by agricultural and industrial machinery.

Imports

The main area where Japan's imports differ from those of the Community is with regard to agricultural products and energy (in this connection, compare the data in Tables 42 and 43). The share of manufactured products, however, is similar (just over 50%), but the sectoral composition of Japanese imports differs from that of Community imports in terms of the relative importance of intermediate goods (nearly 40% in 1985, compared with 20% for EUR 12).

2.2. Specialization indices

The specialization index used here is the same as that referred to in Chapter III, the reference zone of course being Latin America. Furthermore, the market shares have been calculated as a proportion of total visible exports rather than of industrial products alone.

Since the analysis in terms of specialization indices is really significant only for exports, instead of considering Community imports, we have looked at things from the Latin-American point of view, and taken into account its exports to EUR 12. As the Volimex data base does not include all trade translations but is limited to those between OECD and the world, we have taken EUR 12 imports from the area in question as indicators of Latin-American exports.

Latin-American imports

In the case of manufactures, Community exports to Latin America show a significant revealed competitive advantage compared with OECD countries as a whole, for, over the total period, the Community's market share in Latin America was 5 to 10% greater than that of its competitors (Table 44). With regard to agricultural products and energy, however, the Community has not done nearly so well as its competitors on the Latin-American market, the specialization indices generally being well below 1 (Table 44). Nevertheless, this unsatisfactory result has to be looked at in the overall context, given that exports of agricultural and energy products to the area in question account for only a tiny proportion of the total (1,9 and 1,7% respectively in 1986; see Table 42).

The relative position of the Community is strongest in the intermediate goods category (specialization index 1,31 in 1986) and the consumer goods category where, in 1986, its market share was 15% higher than that of its competitors (Table 44). In recent years, the Community has tended to do less well than its competitors with regard to investment goods. Certain branches of this category have, however, achieved good performances, such as metal products, where in 1986 the revealed competitive advantage was considerable (specialization index 1,51), agricultural and industrial machinery and motor vehicles. The second branch accounted for the largest share of total exports (20,6% in 1986; see Table 42) and the third also occupies an important position (11,2% of the total in 1986).

The favourable results obtained in the consumer goods category are attributable mainly to the foodstuffs and 'other manufacturing industries' branches.

The United States occupies a strong position on the Latin-American market in respect of agricultural and energy products (which accounted for 6,8% and 4,9% respectively of total exports in 1986) but one which is lower than the international average in respect of manufactures, which in 1986 accounted for 84,8% of the total (Table 43). US competitiveness is least assured in the investment goods category, where its position has slowly deteriorated since 1965. In the consumer goods category, however, there has, since 1965, been a significant improvement in the market share which, at the end of the period, was higher than the average of its competitors (specialization index 1,17). The best performing branches in this category have been textiles and clothing (specialization index 1,45 in 1986) and wood and furniture (specialization index 1,41 for the same year), which in 1986 accounted for 4 and 1,1% respectively of total exports to Latin America.

Japan has considerably improved its relative position with regard to investment goods (which account for most of its exports to Latin America: see Table 43), their level being far higher in 1986 than the international average (specialization index 1,58 in 1986). For intermediate and consumer goods, however, there has been a very marked deterioration in Japan's position, the specialization indices for 1986 being 0,44 and 0,25 respectively. This trend has gone hand in hand

Table 44

Specialization indices of Community, US and Japanese exports to Latin America[1]

	1965	1970	1975	1980	1982	1984	1986
EUR 12 exports							
Agriculture	0,39	0,44	0,21	0,20	0,34	0,22	0,40
Energy	0,32	0,27	0,32	1,05	0,40	0,76	0,51
Manufacturing industry	1,05	1,06	1,07	1,07	1,08	1,10	1,06
(a) Investment goods	1,03	1,09	1,05	1,05	0,97	1,00	0,95
of which:							
Metal goods	1,16	1,25	1,45	1,38	1,53	1,49	1,51
Agricultural and industrial machinery	1,06	1,23	1,27	1,25	1,15	1,29	1,26
Office machines	0,97	0,91	0,81	0,75	0,68	0,62	0,61
Electrical goods	0,88	0,97	0,92	0,95	0,86	0,84	0,80
Motor vehicles	0,96	0,96	0,81	0,93	0,92	1,06	1,10
Other transport equipment	1,25	1,00	0,83	0,75	0,73	0,79	0,54
(b) Intermediate goods	1,19	1,09	1,14	1,07	1,25	1,33	1,31
of which:							
Ores and metals	1,24	0,87	1,06	0,98	1,22	1,35	1,39
Minerals and non-metal products	1,00	1,05	1,07	1,34	1,26	1,18	1,45
Chemicals	1,20	1,24	1,20	1,08	1,26	1,34	1,27
(c) Consumer goods	0,93	0,87	0,98	1,16	1,21	1,09	1,15
of which:							
Foodstuffs	0,99	1,06	1,34	1,57	1,50	1,38	1,51
Textiles, clothing	0,84	0,69	0,67	0,71	0,73	0,70	0,66
Paper, printing	0,66	0,63	0,71	0,87	0,86	0,81	0,83
Rubber, plastics	1,00	0,98	0,96	1,01	0,95	0,93	0,90
Other manufacturing industry	1,70	1,15	1,34	1,31	2,07	1,77	1,87
US exports							
Agriculture	1,30	1,39	1,78	1,59	1,50	1,53	1,41
Energy	1,72	1,88	1,73	1,08	1,63	1,35	1,52
Manufacturing industry	0,96	0,95	0,92	0,94	0,93	0,92	0,94
(a) Investment goods	1,02	0,96	0,92	0,91	0,91	0,84	0,88
(b) Intermediate goods	0,87	0,88	0,88	0,98	0,98	0,97	0,94
(c) Consumer goods	0,92	1,00	1,03	1,00	1,05	1,15	1,17
Japanese exports[2]							
Manufacturing industry	1,08	1,08	1,09	1,11	1,12	1,16	1,10
(a) Investment goods	0,94	0,95	1,13	1,36	1,42	1,67	1,58
(b) Intermediate goods	1,20	1,41	1,26	0,97	0,92	0,53	0,44
(c) Consumer goods	1,26	0,95	0,55	0,40	0,27	0,22	0,25

[1] The specialization indices for EUR 12 have been calculated as follows:

$$si = \frac{X^{k}_{cur\ 1a}}{X_{cur\ 1a}} \Big/ \frac{X^{k}_{oecd\ 1a}}{X_{oecd\ 1a}}$$

where $X^{k}_{cur\ 1a}$ are exports at current prices of the product k from EUR 12 to Latin America
$X_{cur\ 1a}$ are total EUR 12 exports to Latin America

$X^{k}_{oecd\ 1a}$ and $X_{oecd\ 1a}$ are defined in a similar manner, but with reference to the OECD.
The indices for the United States and Japan are also calculated in a similar manner.

[2] Since their importance is negligible, agricultural and energy imports have been omitted.

Source: Volimex.

Table 45

Specialization indices of Latin-American exports[1]

	1965	1970	1975	1980	1982	1984	1986
Exports to EUR 12							
Agriculture	1,82	2,15	2,80	2,94	2,61	3,04	3,83
Energy	0,90	0,41	0,30	0,73	0,88	0,92	0,69
Manufacturing industry	0,76	0,87	1,02	0,85	0,83	0,74	0,75
(a) Investment goods	0,03	0,05	0,12	0,15	0,19	0,16	0,15
(b) Intermediate goods	0,94	1,18	1,34	1,43	1,33	1,18	1,32
of which:							
Ores and metals	1,28	1,55	1,88	2,12	2,23	2,00	2,43
(c) Consumer goods	0,95	1,13	1,48	1,09	1,20	1,12	1,15
of which:							
Foodstuffs	1,89	2,71	3,83	3,40	3,42	3,32	3,96
Textiles, clothing	0,35	0,29	0,83	0,73	0,56	0,54	0,47
Leather, skins, footwear	0,40	1,16	1,48	1,49	1,26	0,96	1,10
Timber and furniture	0,26	0,35	0,43	0,40	0,36	0,36	0,39
Exports to US							
Agriculture	2,18	3,29	2,86	3,07	2,89	2,98	4,14
Energy	3,22	3,03	1,57	1,55	1,96	2,33	2,68
Manufacturing industry	0,46	0,55	0,60	0,54	0,48	0,56	0,62
(a) Investment goods	0,02	0,12	0,28	0,29	0,31	0,35	0,44
(b) Intermediate goods	0,87	1,02	0,78	0,73	0,65	0,92	1,03
(c) Consumer goods	0,43	0,74	0,91	0,78	0,67	0,73	0,81
Exports to Japan							
Agriculture	1,32	1,57	1,32	1,29	1,18	1,24	1,53
Energy	0,31	0,06	0,04	0,33	0,57	0,62	0,64
Manufacturing industry	1,08	1,10	1,97	1,84	1,53	1,36	1,06
(a) Investment goods	0,05	0,01	0,40	0,45	0,25	0,36	0,20
(b) Intermediate goods	1,62	1,54	2,64	3,21	2,84	2,52	2,12
(c) Consumer goods	0,82	1,20	2,13	1,00	0,72	0,64	0,61

[1] Since the Volimex data base is limited to transactions between the OECD and the world, we have used, in order to get an approximate idea of Latin-American exports to EUR 12, the United States and Japan, imports (M) from Latin America by the countries in question. The specialization indices have therefore been calculated as follows:

(i) for exports to EUR 12:

$$\frac{M^{k}_{cur\ la}}{M_{cur\ la}} \Big/ \frac{M^{k}_{cur\ world}}{M_{cur\ world}}$$

(ii) for exports to the USA:

$$\frac{M^{k}_{usa\ la}}{M_{usa\ la}} \Big/ \frac{M^{k}_{usa\ world}}{M_{usa\ world}}$$

(iii) for exports to Japan:

$$\frac{M^{k}_{ja\ la}}{M_{ja\ la}} \Big/ \frac{M^{k}_{ja\ world}}{M_{ja\ world}}$$

Source: Volimex.

with a loss in the relative importance of these two categories which, in 1986, accounted for only 9,0 and 3,8% of exports, compared with 29,7 and 23% respectively at the beginning of the period in question (Table 43).

Latin-American exports

On the Community market Latin America occupies a very strong position with regard to agricultural products, a position which has further improved in recent years (Table 45). The Latin-American performance in respect of manufactures, however, is below that of other competitors, the specialization index being 0,75 in 1986.

The intermediate goods category has been above the international average since 1967, thanks to the good performance of the ores and metals branch, whose specialization indices have always been considerably higher than 1 (2,43 in 1986; see Table 45). The consumer goods category has also performed better than the international average, because of the dynamism shown by the exports of foodstuffs.

On the United States market, Latin America's relative position is even stronger than in the Community with regard to agricultural products (see Table 45) but weaker with regard to manufactures.

The investment goods category, which accounts for a negligible share of the Community market, occupies a more important position in the United States (specialization index 0,44 in 1986), thanks to exports in the electrical goods branch, which in 1986 accounted for 11,2% of US imports and had a specialization index of 0,89. With regard to intermediate and consumer goods, Latin America's specialization indices on the United States market are lower than in the case of the Community market. Furthermore, in so far as Latin America is concerned, exports of these categories of products to the United States are less important, relatively speaking, than its exports to the Community (see Tables 42 and 43).

3. Conclusions

The Community's trade with Latin America reflects the typical structure of trade between industrialized and developing countries: the Community exports manufactures, particularly investment goods, to Latin America, and imports agricultural products and foodstuffs, raw materials and semi-finished products. Although Latin America includes four 'newly industrializing countries' (Argentina, Brazil, Colombia and Mexico) they are not, at present, sufficiently important to be able to influence appreciably the structure of its external trade flows.

Trade with the Community in products other than oil revealed, for the period 1965-86, a downward trend in Latin America's terms of trade, which reflects a problem with which developing countries are very familiar.

Although Latin America's external trade is geared more to the United States than the Community, trade with the Community is far from negligible, from both parties' points of view. In 1986 EUR 12 exports to Latin America accounted for 4,8% of its exports to non-EEC countries and imports from that region 6,3% of its total imports. For certain groups of products, the Community's imports are of considerable importance. This is the case for imports of agricultural products and foodstuffs, which in 1986 accounted for 24,2% and 25,1% respectively of the Community's visible imports from non-member countries.

Community exports to Latin America dropped dramatically in the early 1980s, mainly because of the Latin-American countries' external debt problem. The crushing burden of debt commitments forced a number of these countries to restrict their imports in order to create trade surpluses, to enable them to finance debt service transfers (interest and principal). Thus, from 1982 to 1986 (when Latin America's growth was at its lowest point), a substantial trade surplus was achieved. These external constraints severely limit the possibilities of internal development in Latin America and may give rise to serious social conflicts, since there are enormous differences in wages and personal wealth. Latin America ran a balance-of-payments surplus in the 1970s, but this turned into a deficit in the 1980s since, in addition to debt service, there were substantial flights of capital.

A more disaggregated analysis of the Community's trade with Latin America shows in particular that the Community is in a fairly favourable relative position with regard to its exports of manufactures. This revealed comparative advantage — gauged using a specialization index which compares the EUR 12 share with that of the OECD countries — is more evident in respect of the intermediate and consumer goods categories.

All its competitors are in a better position than the United States with regard to manufactures, but the United States does occupy a relatively strong position with regard to agricultural exports and energy products, although these accounted for only a small share of the total.

Japan has considerably strengthened its relative position in the investment goods category and has gradually disengaged

from exports of intermediate and consumer goods where, at the end of the period in question, its export performance was well below average compared with its competitors.

In so far as Latin America's exports are concerned, in the Community market this group of countries occupies a very strong relative position with regard to agricultural products, a situation which is even more pronounced in the US market. In the case of manufactures, however, Latin America's share on the Community market and the US market is substantially below the international average. This unsatisfactory performance reflects the structural weakness of Latin-American industry, which stems from the fact that it is insufficiently diversified and has specialized in products for which there is moderate or weak demand (foodstuffs, ores and metals). Unlike the 'newly industrializing countries' of Asia, the Latin-American countries have therefore not managed to establish themselves in niches where there is strong international demand.

In Japan, Latin America occupies a relatively strong position only with regard to intermediate goods and agriculture.

The debt problem has dragged the Community's trade relations with Latin America into an impasse. On the one hand, it will be hard to develop Community exports because of the difficulties experienced by the Latin-American countries in paying for their purchases abroad, difficulties which the lenders are increasingly less prepared to ease by granting new credits.

On the other hand, the international insolvency of the countries in question means that the effort made by the Community to encourage productive investment by European firms in Latin America is in vain, and we are now witnessing a number of cases of disinvestment.

It is now accepted that, in order to restore the long-term solvency of the Latin-American countries, it is necessary to concentrate on their development rather than on reducing their domestic consumption and investment. The pursuit of this objective calls for two types of action, namely action by the Latin-American countries and action by the international community. Thus the former must carry out far-reaching reforms, capable of radically changing the way in which their economies operate by means of a redistribution of income, assets and power. Trade liberalization within the continent, by means of regional economic integration, should also play an important part in rectifying the present situation.

The industrialized countries should support the reformist measures which have been set in train by providing the countries concerned with appropriate financial support, phased over a long period of time. This double approach, involving action by both the Latin-American countries and the international community, will be able to restore confidence among private investors and creditors, so that the present vicious circle of debt rescheduling and an internal stop-go policy, which has failed to resolve any of the basic problems, can be broken.

VI — Community competitiveness in high technology

1. The economic role of technology

This chapter attempts to assess the Community's competitiveness relative to its main trading partners in technology-intensive products. High-technology products are defined here as those which either directly, or indirectly through process technology and advanced instrumentation, require a significantly higher level of R&D expenditure intensity than other products. Patterns of R&D intensities vary between economies reflecting, in part, existing levels of comparative advantage. So the dividing line between what is and what is not considered high technology is eventually arbitrary and will differ across economic frontiers. In this section five R&D intensive sectors, pharmaceuticals, computers, telecommunications equipment, consumer electronics and aerospace have been chosen as a broad representative sample of the major high-technology products traded internationally.

Relative competitiveness in such product sectors is important since technological change engenders a diverse series of economic effects, not only at the macrosectoral level but also at the macroeconomic level.

At the macrosectoral level technical innovations upset the set of relationships in the production function, so that more output is derived from a given level of inputs and, for example, output of a higher quality is achieved, reject rates lowered, the process executed at a faster pace and new products introduced with increasing frequency. New technologies embodied in product innovations can lead to structural adjustment when they replace existing products or improve on them, or can create entirely new branches of economic activity either directly or indirectly in the intermediate goods sectors. Successful intellectual property protection will grant the innovator a temporary monopoly and the resulting rents, or royalties from licences, may contribute towards the fixed costs of R&D. Relative differences between economies in ability to introduce product and process innovations are perceived as a major determinant of changing patterns of trade specialization. Specialization in exporting high value-added, knowledge-intensive products will lead subsequently to advanced domestic growth through the foreign trade multiplier, especially as high-technology sectors usually coincide with the highest growth rate sectors.

At the macroeconomic level technological advance can enhance aggregate productivity, especially when new pervasive technologies, such as information technology, are diffused across the gamut of manufacturing and services sectors. Since new technology is usually embodied in new capital equipment, including instrumentation, such advance can have a twofold effect at the 'macro' level: an autonomous increase in investment will provide the economy with a once-and-for-all increase in GDP through the multiplier effect; allied to the productivity-enhancing effects of new process innovation the economy can then be positioned on a higher growth rate trajectory.

An interesting approach to trade analysis is that suggested by Winters (1985), following Hufbauer (1970) and Hirsch (1974), in which they distinguish three classes of goods on the basis of the source of comparative advantage:

(i) Ricardo goods, including natural resource industries, allocated over countries on the basis of production conditions;

(ii) Heckscher-Ohlin goods, especially mature technology goods, which are free to migrate around the world in search of ideal factor endowments;

(iii) Technological goods, produced by the most developed nations, some of which could mature into Heckscher-Ohlin goods, but some of which, as a result of the remorseless advance of technology, are likely to remain constantly in this category.

If comparative advantage in the production of technological goods is a characteristic of the most developed economies then the relative competitiveness of the major trading partners in selling such products in the international marketplace should provide evidence of how effective such economies are at converting the fruits of scientific insight and technological development into welfare advances. The five high-technology sectors selected for analysis here (pharmaceuticals, electronic data-processing equipment, telecommunications equipment, consumer electronics and aerospace) include those in which the main developed trading partners record a variety of degrees of specialization. Their definition in terms of the NACE is given in the Statistical annex.

2. Recent trends in high-technology trade: the Community, the USA and Japan

By 1986 total Community extra-EC exports of the selected high-technology products under study amounted to USD 41,1 billion while total imports were USD 46,8 billion. Exports of this high-tech subgroup represented about 13% of EC manufactured exports and 12% of total exports. On the other hand, imports of this category of high-tech products were about 20% of all manufactured imports and almost 14% of all imports.

The above figures contrast significantly with the cases of the USA and Japan. For the USA, exports and imports of this category of high-tech products were about 26 and 22% of manufactured and all exports respectively, and around 17 and 14% of manufactured and all imports respectively. On the exports side, the figures for Japan are similar. However, for imports, high-technology goods account for only 8% of the total (Table 46).

Table 46

Relative importance of trade in the selected high-technology sectors, 1986 (for EUR 12: extra-EC trade only)

(%)

	EUR 12	USA	Japan
Share of high-tech exports in manufactured exports	13,1	25,9	23,6
Share of high-tech exports in total exports	12,0	21,6	23,2
Share of high-tech imports in manufactured imports	20,2	16,9	15,2
Share of high-tech imports in total imports	13,8	14,0	7,7

While the EC figures above refer to external Community trade, the role of intra-EC trade in this sector needs to be emphasized. As shown below (Table 47), when intra-EC trade is taken into account, more than 50% of the EC exports of this subgroup of high-tech products have EC member countries as their destination, while only about 10% of those exports go to the USA, the EC's next largest importer. Similarly, almost 50% of all EC imports of high-tech products originate from member countries, while imports from the USA and Japan represent less than 25 and 15% respectively of the total.

As may be seen in Table 47, the proportion of total EC exports of high-technology products which go to Member States (about 50%) is very similar to the shares of intra-EC exports for all manufactures and for all commodities. However, as far as imports are concerned, the proportion of intra-EC trade is significantly smaller for high-tech products than for the other two groupings shown in the table, thus indicating that foreign suppliers are more important for high-tech commodities than for the rest of the economy.

The role of intra-EC trade is particularly relevant, as well, when analysing the relative importance of the EC *vis-à-vis* the other two main world trade powers in the international market for high-tech products. Indeed, as shown in Table 48, Japan and the USA are the largest exporter and importer respectively of those commodities when only extra-EC trade is considered. However, when both internal and external EC trade are taken into account, the EC is far more important than either of these two in terms of their participation in world trade in those products.

Table 47

The importance of the Community, USA and Japan as trade partners: shares of those blocs in EC trade, 1986

(extra-EC plus intra-EC trade)

	Exports to	Imports from
In the selected high-tech sectors		
EUR 12	50,9	46,8
USA	11,1	22,5
Japan	1,5	12,8
All other countries	36,5	17,9
In all manufacturing sectors		
EUR 12	54,9	62,2
USA	20,8	16,2
Japan	3,2	10,0
All other countries	21,2	11,6
In all trade sectors		
EUR 12	56,2	56,3
USA	20,6	16,2
Japan	3,2	10,0
All other countries	20,0	17,5

Table 48

Exports and imports by the Community, USA and Japan in selected high-technology sectors, 1986

(billion USD)

	Exports	Imports
EUR 12		
Extra-EC trade	41,1	46,8
Intra-EC trade	42,6	41,3
Total EC trade	83,7	88,1
USA	44,1	53,3
Japan	48,6	9,3

As shown below (Table 49), when excluding intra-EC trade from the analysis, the major markets for EC high-tech goods are the other industrialized countries (ICs) which in 1986 accounted for more than 50% of EC exports, and particularly the USA and the EFTA countries which imported almost 25 and about 20% respectively of those exports; Japan was the destination of only 3% of those exports while the newly industrialized economies (NIEs) and newly exporting countries (NECs) received about 12 and 6% respectively.

Table 49

Structure of Community trade (extra-EC trade only)

(% of total high-tech trade)

	Exports to	Imports from
Industrialized countries	50,7	80,2
of which:		
USA	22,7	42,3
Japan	3,1	24,1
EFTA	20,3	12,4
Developing countries	34,4	14,7
of which:		
NIEs	11,5	11,1
NECs	5,8	3,2
State-trading countries	2,6	0,4

On the other hand, most EC imports come from the other ICs, which in 1986 accounted for 80% of imports; the major exporters were the USA and Japan with more than 40 and almost 25% respectively of total EC imports of high-tech products. Almost 15% of EC imports originated in LDCs, mostly (a 10% share) from the main four Asian NIEs (Hong Kong, Korea, Singapore and Taiwan).

3. Sectoral characteristics of Community trade in the selected high-technology sectors

Trade balances

In 1970 the EC extra-trade in the high-technology products under consideration was close to balance. Since then, the EC has increasingly become a net importer of such goods.

As the figures of high-tech extra-EC imports and exports mentioned above indicate, the EC had in 1986 a balance-of-trade deficit of USD 5,7 billion in this group of products.

The picture is not homogeneous at the subsector level and, as shown below, the deficit arises from the office and data-processing machines (USD 7,3 billion) sector and the consumer electronics sector (USD 6,1 billion); in both cases trade imbalances were relatively small in 1970, but they have become increasingly larger and negative since then. The deficit in those two sectors is partially compensated by the surpluses in the other three sectors (Table 50).

Table 50

EC trade balances in the selected high-technology sectors (extra-EC trade only)

(billion USD)

	1970	1986
Pharmaceuticals	+0,60	+3,56
Office, data-processing machines	−0,27	−7,34
Telecommunications, electronic precision instruments	+0,29	+2,14
Consumer electronics	+0,39	−6,10
Aerospace	−0,52	+1,96

The size and sign of high-tech trade imbalances differ considerably across trade partners. At the aggregate level, the EC had in 1986 a USD 16,7 billion deficit with the rest of the industrialized countries as a group. This was the result of deficits of about USD 10 billion with the USA and Japan respectively, which were compensated in part by surpluses of USD 2,5 and USD 1,3 billion with EFTA and the remaining industrialized countries respectively. While the magnitude of these imbalances has increased over the years, their relative importance is not substantially different from that in 1970. On the other hand, the EC had in 1986 a USD 7,2 billion surplus in high-tech products trade with the developing countries, of which USD 5,5 billion corresponded to trade with countries that were neither NIEs nor NECs; with the latter the EC also had a surplus of USD 2,1 billion while with the former, the balance of trade has oscillated around USD 0,5 billion during the 1980s. Finally, trade with State-trading countries has consistently exhibited a positive and slowly increasing balance which amounted to USD 0,9 billion in 1986.

Geographic structure of trade in the selected high-technology sectors

The main traits of the EC trade structure for 1986 of the five sectors under analysis are illustrated in Table 51.

As the table shows, high-tech imports are more geographically concentrated than their exports since, as industrialized countries, they have a comparative advantage in their production so that world exports originate mostly from those countries. On the other hand, the consumption of these commodities is not limited to those countries and LDCs represent substantive markets for most of these products.

More precisely, the EC main export markets are almost always the other industrial countries except in the case of pharmaceuticals in which case LDCs are the largest market. Japan is still a relatively unimportant customer that receives a very small percentage of EC exports except in the case of pharmaceuticals of which exports to that country represent almost 10% of EC exports in this sector. LDCs as a group are a very important outlet for EC high-tech exports since their purchases represent between 18 and 47% of all Community exports; within this group the main customers are the NIEs and NECs except in the case of aerospace in which the group encompassing the remaining LDCs comprises a bigger market for EC exports.

EC imports have their origin almost exclusively in the industrialized countries. Within these, there is considerable specialization depending on the type of product: the major supplier of pharmaceuticals is the EFTA group (particularly Switzerland) while that of consumer electronics is Japan; in the remaining three sectors the major supplier is the USA (Table 51).

Relative competitiveness of the selected high-tech sectors

The analysis in the previous section has provided indirect evidence concerning the comparative advantage of the EC in various high-tech sectors. For the purpose of determining in a more formal manner the comparative advantage which the EC, the USA and Japan have with respect to each of these high-tech sectors, an index of revealed comparative advantage has been computed. The index used, ICA, is given by the following formula:

$$ICA = (X' - M') / (X' + M')$$

where: $X' = X (\Sigma X + \Sigma M) / 2 \Sigma X$

$M' = M (\Sigma X + \Sigma M) / 2 \Sigma M$

X = exports

M = imports

Hence, the index for each sector of a given country is measured by the relative (i.e. weighted by the sum of exports and imports) balance of the trade of each sector of that country with the rest of the world. In order to neutralize the effect of unbalanced trade, corrected measures for exports and imports (X' and M') have been used.

Computed values can vary between +1 (when the country does not import a given product at all) and −1 (when the country does not export at all). Therefore, a value of +1 reveals the country has a strong comparative advantage relative to other sectors in that country while a value of −1 reveals a strong comparative disadvantage. However, it should be emphasized that by the nature of the index comparisons across countries are meaningless.

The values obtained for the high-tech sectors by applying the ICA formula are given in Table 52.

From this table it can be inferred that the EC has a comparative advantage in pharmaceuticals followed by telecommunications and precision instruments and by aircraft and a comparative disadvantage in the production of office and data-processing machinery and of electronics. This pattern of comparative advantage has varied somewhat over time. Thus while pharmaceuticals and telecommunications and precision instruments have always had higher ICA values, the position of the electronics sector has deteriorated over the years and that of aircraft has improved.

In contrast, the USA has a comparative advantage in the production of aircraft followed by pharmaceuticals and by office and data-processing machines, and telecommunications and precision instruments; it has a comparative disadvantage in the production of consumer electronics. Japan has a very clear comparative disadvantage in the production of aircraft and pharmaceuticals and a clear comparative advantage in consumer electronics.

Intra-industry trade

In order to determine the extent to which EC international trade is of an intra-industry nature, an index, ITI, was used:

$$ITI = 1 - |X' - M'| / (X' + M')$$

where X', M', X and M have the same meaning as before and $|X' - M'|$ measures the absolute value of the trade balance for each given sector.

The value of the ITI can vary from 0 to +1. A value of zero for the ITI of a given sector is an indication that all trade

Table 51

Geographical structure of Community trade in the selected group of high-technology subsectors, 1986 (extra-EC trade only)

(% of total high-tech trade)

	Pharmaceutical products	Office & data-processing machines	Telecommunications & electronic precision instruments	Consumer electronics	Aerospace
Exports to:					
Industrialized countries	43	78	48	39	47
of which:					
USA	9	30	22	12	36
Japan	9	2	3	2	2
EFTA	20	39	18	22	6
Other ICs	5	7	5	3	3
Developing countries	47	18	38	37	33
of which:					
NIEs, NECs	16	11	23	21	14
Other LDCs	31	7	15	16	19
State-trading countries	3	2	6	2	0
Unallocated	6	2	8	22	20
World total	100	100	100	100	100
Imports from:					
Industrialized countries	92	85	90	70	78
of which:					
USA	31	54	46	16	71
Japan	5	22	17	43	1
EFTA	55	8	24	10	3
Other ICs	1	1	3	1	3
Developing countries	6	13	8	23	10
of which:					
NIEs, NECs	5	12	7	18	4
Other LDCs	1	1	1	5	6
State-trading countries	1	0	1	0	0
Unallocated	1	2	1	6	12
World total	100	100	100	100	100

Table 52

Indices of revealed comparative advantage for the Community, USA and Japan in the selected high-technology sectors

	1970	1975	1980	1986
EUR 12				
Pharmaceuticals	0,581	0,557	0,573	0,427
Office, data-processing machines	−0,085	−0,103	−0,169	−0,327
Telecommunications and electronic precision instruments	0,254	0,314	0,313	0,144
Electronics	0,210	0,111	−0,103	−0,248
Aerospace	−0,257	0,061	0,088	0,110
USA				
Pharmaceuticals	NA	0,777	0,570	0,467
Office, data-processing machines	NA	0,360	0,620	0,395
Telecommunications and electronic precision instruments	NA	0,483	0,581	0,383
Electronics	NA	−0,137	−0,059	−0,168
Aerospace	NA	0,782	0,517	0,568
Japan				
Pharmaceuticals	−0,633	−0,071	−0,714	−0,783
Office, data-processing machines	−0,017	0,229	0,409	0,581
Telecommunications and electronic precision instruments	0,163	0,344	0,333	0,370
Electronics	0,812	0,817	0,859	0,794
Aerospace	−0,815	−0,894	−0,856	−0,908

Table 53

Indices of intra-industry trade for the Community, USA and Japan in the selected high-technology sectors

	1970	1975	1980	1986
EUR 12				
Pharmaceuticals	0,419	0,443	0,427	0,573
Office, data-processing machines	0,915	0,897	0,831	0,673
Telecommunications and electronic precision instruments	0,746	0,686	0,687	0,856
Electronics	0,790	0,889	0,897	0,752
Aerospace	0,743	0,939	0,912	0,890
USA				
Pharmaceuticals	NA	0,223	0,430	0,533
Office, data-processing machines	NA	0,640	0,380	0,605
Telecommunications and electronic precision instruments	NA	0,517	0,419	0,617
Electronics	NA	0,863	0,941	0,832
Aerospace	NA	0,218	0,483	0,432
Japan				
Pharmaceuticals	0,367	0,290	0,286	0,217
Office, data-processing machines	0,983	0,771	0,591	0,419
Telecommunications and electronic precision instruments	0,837	0,656	0,667	0,630
Electronics	0,188	0,183	0,141	0,206
Aerospace	0,185	0,106	0,144	0,092

in that sector is of an inter-industry nature, i.e. that the country only either imports or exports but not both. On the other hand, a value of 1 means that the value of imports and exports within the sector is the same so that intra-industry trade is at its maximum.

The computed values for the index of intra-industry trade in the EC, USA and Japan are given in Table 53.

The values in the table show that, in what refers to the USA and the EC, much trade in high-tech products has an intra-industry trade nature, particularly in the electronics and in the telecommunications and precision instruments sectors. Japanese trade, on the other hand, tends to have a more inter-industry character, particularly in the aerospace sector; the most notable exception to this is the telecommunications and precision instruments sector, the trade in which is more intra-industrial.

4. The determinants of competitiveness

The above sections describe the outcome of merchandise trading in the selected sectors. This outcome has been determined by a wide variety of factors, historical, cultural and institutional, which differ considerably from one sector to another. In the case of a sector such as consumer electronics the major proportion of consumption in the Member States is supplied by imports, whereas in the case of pharmaceuticals almost half of supply is provided by firms indigenous to the local market. Whereas the degree of concentration is extremely high in aerospace it is far less so in electronic data-processing (EDP) and consumer electronics. The private ownership and degree of internal financing of R&D in the pharmaceutical sector contrasts with the degree of public financing of space programmes. Comparative advantage has remained relatively stable among the partners in pharmaceuticals but has shifted greatly for consumer electronics and

EDP. Though all five sectors share the characteristic of being knowledge-intensive rather than resource-intensive, the underlying factors which determine past and future competitiveness thus vary considerably from sector to sector.

4.1. Pharmaceuticals

The international competitiveness of an economy in this sector is largely determined by economies of scale, ability to invent new formulae, and the degree to which government policies affect profitability in the domestic market. Technological advances, especially biotechnology, could have a long-term impact on the distribution of comparative advantage.

The importance of economies of scale results mainly from the high level of long-term fixed cost investment. The cost of developing a new drug, ECU 75 to 100 million, and time, 9 to 12 years between discovery and marketing, form the main barrier to entry in the most important and profitable part of the sector — the production of the biologically active compounds. The small number of firms successful internationally employ thousands of researchers: success is as likely to result from serendipity, or trial and error, as from scientific insight. A promising compound may fail years after discovery during clinical trials. But development of a useful new patented drug can be extremely profitable. R&D expenditure in the sector is intense, averaging 11% of sales in the Community in 1984 (Economists' Advisory Group, 1988), with British and German firms averaging 14% and the French 13%. Japanese firms have recently augmented their hitherto low level of R&D and introduced new products based mainly on existing compounds. R&D in the US sector is as intense as in Europe: US firms conduct a considerable amount of research in Europe due to the availability of a cadre of good scientists.

Economies of scale are such that few firms produce these highly profitable active compounds, most buy them in for preparation into dosage form. Of the world's 60 most important producers of the active compounds 33 are Community firms (op. cit.), the other 2 200 Community firms being mainly involved in dosage preparation where economies of scale are comparatively low.

The relative competitiveness of firms in the Member States depends also on particular demand propensities, government controls on introduction of new drugs and their pricing, and the institutional arrangements for their sale. Per capita expenditure on drugs and physical consumption varies enormously between the Member States, ranging from ECU 125 in Germany in 1984 to ECU 35 in Portugal. Prices vary greatly and are twice as high in Germany as in Italy where dosage firms specialize mainly in out-of-patent, or generic drugs. Physical quantity consumed ranges from that in Italy where per capita consumption is four times that in the Netherlands and Ireland.

Government policies directly affect location of firms and profitability in a wide variety of ways: through the level of expenditure on national health care; the length of time taken before testing and certification of a new compound; through price control, and rules regarding the length of patent protection. In the UK, for example, the public authorities control the overall rate of profitability in the sector, Germany has a system of voluntary price restraint and France controls price increases.

The price elasticity of demand is low. Medical practitioners have a tendency to prescribe known and, frequently, indigenously-produced compounds. So firms undertake a high level of direct investment in dosage preparation plants in individual economies. These factors combine to greatly reduce competition in the sector. As the level of public funding of health care is relatively low in the USA price competition is far more common there and the cheaper generic and over-the-counter drugs account for a substantial proportion of total expenditure.

The existing patterns of international competitiveness are unlikely to be disturbed in the long term unless a firm in a particular economy discovers a successful, patentable drug offering significant therapeutic relief for a disease affecting affluent patients, e.g. for cancer. Changes in firms' R&D strategies should also influence future competitiveness in a sector where shifts in comparative advantage occur very slowly (*The Economist*, 1988). Firms are now devoting one third of their R&D budgets to biotechnology. Advances in the understanding of biological reactions, in computer programming and simulation, in genetic engineering, now enable researchers to increasingly substitute a process of scientific design of new formulations for the older trial and error method.

4.2. Electronic data-processing equipment

Among the factors mainly responsible for determining past and present international competitiveness in this sector are: development assistance from national administrations via programmes for defence and space procurement, and those for development of the semiconductor subsector; barriers to entry in the form of high R&D and production facility costs; customer loyalty to historic suppliers of proprietary operating systems and software; the commercial impact of

patents and copyright; and the effects on the equipment price/performance ratio of recent technological developments.

During the 1960s and 1970s the US computer industry established a commanding lead in trade in the sector as demand in the large internal US market boomed, military research and the Apollo space programme financed new hardware, software and data transmission standards, and the technical leadership of American semiconductor producers provided the key building blocks for data-processing devices. The Japanese strategy was quite different: here demand in the consumer goods market provided demand for, at first, simple logic and memory devices and, as a result of the Ministry for International Trade and Industry (MITI) VLSI (very large scale integration) chip programme, provided the building blocks for consumer electronics, office equipment, digital controllers for machine tools and, later, computers.

Although technically as advanced as US machines in the 1960s European producers lacked economies of scale in their fragmented domestic markets and the dynamic push of major defence and space programmes. Regional development agencies in Europe actively encouraged US producers to establish production facilities in development regions.

By the early 1980s US firms accounted for some 75% of world mainframe computer production. The IBM company globally accounted for over 60% of such production. This firm accounts for a large proportion of direct exports of mainframe computers from the USA to the Community, but also supplies a large share of demand for production facilities located within the Community. Global annual turnover of this one firm was, in 1987, USD 54 billion (IBM, 1988), with USD 5,4 billion devoted to R&D. (It is interesting to contrast this level of R&D to that of Esprit I (1984-88) and Esprit II (1988-92), which cost ECU 1,5 and 3,2 billion respectively, half of which is contributed by Community funds and half by participant firms.)

Considerable barriers to entry exist in the hardware sector, resulting from a high and growing level of R&D expenditure, the increasing cost of technically advanced production facilities, and distribution and service networks. So high are the market entry costs that almost all manufacturers have entered strategic alliances to share the costs of technology development and marketing. The majority of firms buy in a large proportion of components from original equipment manufacturers, especially semi-conductor devices.

Because of the technical complexity of computers and their importance for industrial and commercial operations, users have preferred, at least in the past, to purchase from firms with an extensive library of software programmes and efficient service facilities. Since such software and the computer's operating systems are protected by intellectual property rights the position of the international market leader who set the technical standards tended to be greatly enhanced. The greater the tendency to standardize on such proprietary operating systems the greater the degree of concentration in the market, which fed fears in the early 1980s that one firm could achieve a dominant position. More recent trends towards open international standards, allied to greater competition in the mini and micro ranges, have reduced this possibility and earlier trends in international specialization now appears to be reversing.

Technological progress has thus forced a restructuring of the competitive position within the sector and a reduction in concentration. By reducing size and cost *pari passu* with increases in computing power, user-friendliness and reliability, the highest market growth has occurred in the small categories, minicomputers and microcomputers. The market for minicomputers (machines costing less than USD 1 million) grew much more rapidly than that for mainframes in the 1970s, led by the US-based Digital Equipment Corporation. Today they account for almost 40% of the computer market worldwide. New technology next stimulated the growth of the microcomputer market in the early 1980s: these machines have now become sufficiently powerful that they are, in turn, affecting the growth of the minicomputer market.

Community firms seem set to continue to develop further joint ventures with firms from the USA and Japan as a result of the growing convergence of data-processing and digital telecommunications technologies. Overseas direct investors will continue to supply a significant proportion of the Community market from local production facilities. Suppliers of equipment for niche sectors, such as Nixdorf of Germany, should expand their share of a growing market. The existing competitiveness of Community producers of custom chips and logic devices used for advanced parallel processing could enable the Community to maintain a presence in the higher-value end of the market for the next generation of devices.

Community stimulation programmes, especially Esprit, RACE and the proposed Community telecommunications standards institution, should serve as important catalysts to strengthen the position of Community producers in the large internal market for 1992.

4.3. Telecommunications equipment

Among the factors determining the competitiveness of the sector are public procurement and certification policies;

technical standards; economies of scale for different categories of equipment; derived demand effects of policies for telecommunications services; and pricing policy in domestic and export markets.

Because of the high level of investment in the national networks the telecommunications services sector has been traditionally considered a classic case of a natural monopoly. The practice has been for these telephone authorities to impose national technical standards for transmission, switching and customer premises equipment (CPE) and to control by certification any equipment which is attached to the network. Procurement of equipment is generally conducted with a limited number of designated suppliers to facilitate design, ensure security of supply and, not infrequently, to generate local employment creation in a high value-added sector.

In the past, national technical standards evolved independently, especially in those countries with their own domestic suppliers, except for those common technical standards agreed internationally for linking the various national networks. With the introduction of digital switching supplier firms in the USA, Europe and Japan devised a range of technically incompatible switching systems, most of which could only be adapted to joint use after expensive modification. Restrictions on open procurement and the imposition of unique national technical standards help explain the oligopolistic structure of the market for telecommunications equipment in almost all the developed economies and why Community producers tend to export more to established third country markets than to other members.

Economies of scale in the production of different items of equipment, allied to the size of the domestic or captive markets, continue to play a key role in determining competitiveness. Thus many newly industrialized countries of South-East Asia produce telephone handsets, but only a limited number of the world's largest producers have been able to risk the massive development costs of the new central office digital switching systems. Economies of scale in development of the new central office digital switching equipment are very high: the cost of a new system is estimated at in excess of ECU 1 billion. Scale economies at the production stage of such equipment are also high. (In the USA one plant produces 7 million access lines per annum compared to less than 1 million in most large European countries (Müller, 1988), occasioning cost disadvantages of 20 to 30%). Thus the sector is potentially liable to a much greater degree of international specialization as procurement markets are progressively opened. The ratio of fixed cost to marginal cost is less in the case of transmission equipment but are still significant, though cost penalties are not as great. Markets for such equipment are traditionally more open than those for switching. Markets for customer premises equipment are also relatively open and competitiveness determined by economies of scale in production. Though scales are lower than those for transmission equipment they can still be significant, especially for private branch exchange equipment. Demand for equipment is derived from demand for telecommunications services; so when charges for network use diverge significantly from marginal cost, demand for equipment is penalized. Rebalancing of tariffs could increase demand and, consequently, competitiveness in the equipment sector in a number of producer countries.

Producers in some countries charge as little as half as much for equipment offered on third country export markets as they do on the home market, where absence of open public procurement allows the writing off of such fixed costs as R&D. More open public procurement could, in the case of some producers, result in a greater rebalancing of sales prices between domestic and export markets, thereby affecting existing patterns of comparative advantage.

4.4. Consumer electronics

The economic importance of this sector results from the increasing technological interdependence of EDP and consumer electronics technologies, and the degree to which competitiveness in supply of the final product stimulates demand upstream from the strategically important electronic components sector. The latest products, especially digitally-enhanced colour televisions (CTVs), have a voracious appetite for state-of-the-art electronic components.

The health of the US micro-electronics components industry is assured by its large defence and data-processing sectors: the economic health of the Community electronics components sector is similarly dependent on a continued high volume of demand originating in the consumer electronics sector.

The determinants of competitiveness of the sector are varied. The overall level of demand in an economy affects demand for products which are highly price and income elastic. Innovation is perennial as high-cost producers compete on the basis of product innovations, introduced with increasing frequency by means of advanced flexible production innovations. Economies of scale for many products are sufficiently large as to be considered global, i.e. no single market is large enough to offset fixed costs. The patenting of innovations and ability to set industry standards can greatly enhance the competitivity of a firm through receipts from royalties. The relative level of VAT imposed in different

markets will, *ceteris paribus*, determine the rate of penetration into households (units sold per number of households) and the speed with which a firm can reduce costs along its learning curve compared to foreign competitors experiencing lower VAT regimes in their domestic markets.

Variations in the level of national disposable income in home or export markets have an immediate effect on the level of demand, profitability and competitiveness in a sector characterized by high income elasticities of demand. In recent years there has been a falling off in the rate of annual growth of the sector: this is partly explained by price effects as intense competition induced price reductions and the number of innovations, with the exception of digital audio, has slowed. However, a wide range of major innovations is now imminent which should stimulate a consumer boom and lead to substantial investments.

The sector is one characterized by high economies of scale and scope. For example, minimum economic output for CTVs is estimated at 250 000 annually and that for VCRs at 200 000. Profitable output levels are much higher still. Yet there are a number of EC firms producing less than 200 000 CTV units annually, many located in Italy. This explains why the number of Community CTV plants dropped from over 40 in 1984 to just over 30 now. This trend was exacerbated by a significant increase in Japanese and Korean direct investment in CTV plants in recent years. Japanese plants in Europe account for some 2 million units annually, compared to some 16 million produced by Community firms internally. The two top Community firms produce, globally, 8 million and 7 million units respectively each year, compared to 4 million and over 3 million globally in the case of the two top Japanese firms.

The proportion of VCRs made in the Community in Japanese-owned plants is far higher at over 2 million units annually compared to just over 4 million units produced by Community firms.

The Community maintains a highly competitive position internationally in production of CTVs: the two largest world producers are now Thomson of France (since its takeover of the US firm GE/RCA) and Philips of the Netherlands. But patents on the two Community colour standards have now expired, eliminating a key element of competitive advantage and source of royalties. Meanwhile, Japan has built up a leadership position in the production of VCRs, outsells the inventor-firm Philips in production of digital audio (CD players) and has a technology lead in production of many electronic components.

The decline of the US consumer electronics sector severely affected demand for US commodity chips to the benefit of the new semiconductor sector established in Japan in the early 1970s. A similar decline in the Community would, in the absence of a highly developed EDP sector, eliminate the major outlet for domestic electronic component producers. As a result of the close technological interrelationships between the electronic data-processing, consumer electronics, telecommunications and components sectors, the various Community strategic programmes such as Esprit, Brite and RACE, should interact with Member State's programmes to encourage a substantial degree of synergy.

4.5. Aerospace

At the end of 1988 the total number of civilian passenger aircraft in service or on order in the West amounted to 12 109 of which Community producers accounted for 3 049 or almost 25,2% (CEC, 1989). The Community share of aircraft ordered each year has risen considerably in recent years to 34,3% in 1987. The vast majority of EC craft ordered are in the short- to medium-haul category, with US manufacturers dominating the long-haul category.

In 1987 16,5% of the world's civilian helicopters were from EC origin. Many EC helicopters are built under US licence.

In the civil aerospace sector Community producers have recorded successes recently, turning a deficit of over ECU 1 billion in 1981 into a growing surplus in recent years. In the civil aeronautics equipment sector the Community records a deficit which has fluctuated between ECU 100 and 200 million annually in the 1980s.

The value of final output of the aerospace sector in the USA was ECU 86,5 billion in 1986, or over two times that of the Community. During the period 1978 to 1986 sectoral output in the EC grew at a substantial rate of 7% annually in real terms, compared to a figure of 5,8% in the USA.

Among the distinctive factors affecting competitiveness of the sector are: its strategic nature both economically and militarily; the possibility of commercial exploitation of fixed development costs financed by defence budgets; economies of scale in production in excess of potential demand in all but the largest economy in the Western world; the exceptional long-term financial liquidity requirements.

Economies of scale in the production of civilian airframes and power plants are exceptionally high. A new airframe or power plant now costs almost ECU 2 billion to develop: a commercial failure of a new product risks bankrupting the innovating firm. Economies of scale in production facilities for airframes are probably the highest of any manufacturing sector.

In order to maintain a presence in a sector where Community firms have been traditionally represented but where scale has grown so dramatically in the post-war period, it became obvious that such firms could only survive by entering into trans-frontier cooperative programmes. Hence the establishment of such intra-European programmes as the Airbus, Gazelle helicopter and European Space Agency.

The Airbus programme, for example, has recently recorded considerable commercial success. Though initially sales of the new Airbus models proceeded slowly as airlines overcame their reluctance to add new maintenance facilities and spares, and as demand for air travel was severely affected by the oil price shocks, orders rose substantially in the 1980s. These now stand at over 1 000 units, with over 400 craft already delivered.

Sales of European aeroengines have also risen significantly in recent years. Already in 1988 the major British producer Rolls-Royce had registered orders from US airlines in excess of ECU 1 billion.

The ESA Ariane satellite launcher has secured over half the orders for civilian satellite launches since 1980, and has orders for over 40 satellites worth some ECU 2 billion. The latest, and extremely versatile model, Ariane 4, was successfully launched recently.

The recent performance of the sector provides grounds for belief that the present range of products should continue to maintain its attractiveness in international markets. However, a number of factors will determine whether present favourable trends continue, especially the dollar/ecu exchange rate and heavy levels of investment needed to replenish the technology base. The recent sharp fall in the dollar rate has made the US sector much more price-competitive and increased the already substantial amount of sub-contracting for Community projects granted to US firms, reducing the Community share of value-added in the final product.

5. Conclusions

The above statistical analysis shows a relative falling-off in the Community's comparative advantage in high technology trade. This development may be expected to the degree that the world economy is growing and new trading partners are advancing their range of products into more technology-intensive areas. This is the case for example, in relation to the more mature subsectors of consumer electronics. But the trend is also reinforced by the impenetrability of certain export markets, whose indigenous producers have relatively free access to the Community market.

The falling specialization of the Community in semi-conductor technology is, however, a source for concern since this technology serves as the building block for a widening range of consumer and producer goods which are increasingly dependent on digital electronic technology. Nevertheless, experience has shown that the flagging competitiveness of Community producers may be revived if firms devise the appropriate strategies, and competitive institutional arrangements and infrastructures exist. Recent successes of the collaborative civil airframe and satellite-launching sectors show what may be achieved on a pan-European basis in sectors where economies of scale are in excess of those of even the largest member economies.

Whilst, for total high-tech trade, the Community's relative specialization has shown an overall decline, evidence that Europe continues to excel in originality and creativity is provided by the high level of comparative advantage in pharmaceuticals, new genetically-engineered components and, for example, at the most exigent end of the audio reproduction market. The Community's relative disadvantage in the EDP hardware market, especially that for mainframe computers, highlights the importance, *inter alia*, of exploiting a large internal market where economies of scale are largely determined by technical standards and intellectual property right protection.

As international trade theory suggests the Community records a variety of degrees of comparative advantage in the most technologically-advanced sectors. With the achievement of the large, competitive internal market in 1992, Community producers should enjoy opportunities equal to those of our major trading partners in those new sectors which are now emerging, as a result of the advance of science and technology. The removal of the internal trade barriers, opening-up of public procurement, economic case law decisions of the European Court combined with GATT commitments, and general growth of world intra-sectoral trade should increase the competitive pressure on Community firms considerably in the 1990s.

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Statistical annex

List of tables

Table 1A

Exports of goods, imports of goods, trade balance

(current prices million USD)

Year	EUR 12			USA			Japan		
	Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1970	54 144	61 953	−7 809	42 590	39 952	2 639	19 318	18 881	437
1971	61 303	66 876	−5 573	43 492	45 563	−2 071	24 010	19 715	4 294
1972	71 355	76 236	−4 881	48 979	55 563	−6 585	28 591	23 471	5 120
1973	95 795	107 399	−11 604	70 246	69 477	769	36 772	38 134	−1 363
1974	131 204	161 706	−30 503	97 143	100 972	−3 829	55 598	62 035	−6 437
1975	146 043	160 603	−14 561	106 157	96 941	9 215	55 754	57 865	−2 110
1976	153 306	183 967	−30 660	113 323	121 793	−8 470	67 203	64 505	2 698
1977	182 875	204 373	−21 498	117 963	147 848	−29 885	80 470	70 560	9 910
1978	219 757	233 567	−13 810	140 024	182 196	−42 171	97 501	78 731	18 770
1979	262 526	306 933	−44 407	173 649	217 462	−43 813	102 964	110 108	−7 144
1980	306 730	391 453	−84 723	212 887	250 280	−37 393	129 542	139 892	−10 349
1981	299 447	354 770	−55 323	225 190	271 212	−46 022	151 909	140 829	11 080
1982	281 391	328 831	−47 440	205 475	253 033	−47 559	138 584	130 319	8 266
1983	273 443	306 863	−33 420	193 983	267 971	−73 988	146 804	125 017	21 787
1984	282 161	313 248	−31 087	209 516	338 190	−128 674	170 038	134 257	35 780
1985	296 550	317 807	−21 257	205 226	358 895	−153 669	175 858	127 512	48 346
1986	343 508	338 377	5 131	204 654	381 363	−176 708	209 081	119 424	89 657

For definitions and sources see notes at the end of the tables.

Table 1B

Exports of goods, imports of goods, gross domestic product

(constant (1980) prices million USD)

Year	EUR 12			USA			Japan		
	Exports	Imports	GDP	Exports	Imports	GDP	Exports	Imports	GDP
1970	177 453	288 886	2 342 480	105 246	148 576	2 044 330	60 540	96 441	675 660
1971	187 463	293 913	2 423 220	103 441	163 230	2 111 360	70 254	99 551	704 230
1972	197 863	320 331	2 529 750	114 192	188 123	2 219 670	72 901	109 287	763 250
1973	220 289	353 022	2 681 690	138 787	213 292	2 326 290	75 643	132 489	823 370
1974	247 695	333 817	2 731 030	143 526	204 900	2 309 310	87 043	132 538	813 340
1975	237 881	304 905	2 703 550	141 181	191 109	2 286 400	82 886	116 430	834 490
1976	252 714	341 443	2 838 170	157 014	235 576	2 398 460	100 128	124 461	874 410
1977	274 006	338 894	2 905 640	155 202	267 158	2 505 850	111 477	127 598	920 660
1978	288 929	361 105	2 992 490	178 120	286 419	2 635 110	113 006	133 887	967 630
1979	297 758	390 172	3 088 590	194 907	273 253	2 688 500	110 069	147 306	1 017 830
1980	306 730	391 453	3 127 010	212 887	250 280	2 688 470	129 542	139 892	1 063 060
1981	323 222	352 820	3 132 170	208 880	250 663	2 788 400	141 386	132 052	1 104 090
1982	316 808	348 539	3 156 230	191 792	240 771	2 719 660	137 343	132 373	1 135 430
1983	324 279	346 803	3 202 290	179 770	267 130	2 829 490	146 914	134 416	1 171 220
1984	349 783	360 545	3 278 630	200 954	331 665	3 027 500	168 381	146 671	1 229 950
1985	362 974	373 006	3 358 650	179 668	338 725	3 122 200	175 131	144 265	1 285 280
1986	349 989	404 594	3 445 510	184 087	369 046	3 215 200	170 337	160 149	1 316 620

For definitions and sources see notes at the end of the tables.

Table 2A

Exports of goods, imports of goods, trade balance: disaggregated by broad product group

(current prices million USD)

Year	Product group	EUR 12			USA			Japan		
		Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1971	Agriculture	1 661	10 776	−9 115	5 670	3 639	2 032	214	4 829	−4 615
	Energy	1 904	13 917	−12 013	1 706	3 725	−2 019	70	4 815	−4 745
	Manufactures	57 160	41 150	16 010	35 309	36 763	−1 453	23 540	9 943	13 597
1973	Agriculture	3 181	17 117	−13 936	14 480	5 320	9 160	391	9 673	−9 282
	Energy	3 089	21 393	−18 304	1 983	8 171	−6 188	92	8 445	−8 352
	Manufactures	88 765	68 013	20 753	52 595	54 227	−1 632	35 908	19 875	16 033
1975	Agriculture	4 070	20 551	−16 481	18 060	5 539	12 521	276	10 523	−10 247
	Energy	5 839	53 365	−47 525	4 932	26 451	−21 520	218	25 776	−25 558
	Manufactures	134 600	84 675	49 925	81 398	62 476	18 922	54 536	21 366	33 170
1977	Agriculture	4 143	28 551	−24 408	18 730	9 693	9 037	326	13 571	−13 246
	Energy	8 617	63 898	−55 282	4 888	44 233	−39 345	153	31 422	−31 269
	Manufactures	167 669	110 062	57 607	92 803	91 276	1 528	79 318	25 281	54 037
1979	Agriculture	6 865	34 564	−27 699	28 770	12 112	16 657	386	20 301	−19 914
	Energy	14 037	96 091	−82 054	6 923	63 829	−56 907	335	45 519	−45 184
	Manufactures	238 072	173 174	64 898	135 683	138 125	−2 443	101 198	43 269	57 929
1980	Agriculture	8 712	36 946	−28 234	33 574	12 058	21 516	470	19 645	−19 175
	Energy	18 913	141 482	−122 569	9 209	82 349	−73 140	492	70 477	−69 985
	Manufactures	275 284	209 142	66 142	167 357	151 774	15 583	127 251	48 930	78 321
1981	Agriculture	9 433	31 795	−22 362	34 216	12 042	22 174	438	19 106	−18 668
	Energy	22 984	139 153	−116 169	10 904	84 479	−73 575	516	73 026	−72 509
	Manufactures	261 492	179 058	82 434	176 966	169 774	7 192	149 691	47 722	101 969
1982	Agriculture	7 931	29 590	−21 659	29 345	11 811	17 534	432	17 548	−17 115
	Energy	22 353	126 165	−103 812	13 040	67 572	−54 531	383	66 410	−66 027
	Manufactures	245 997	168 157	77 840	160 602	168 152	−7 550	136 502	45 479	91 023
1983	Agriculture	8 119	27 485	−19 366	28 635	12 660	15 975	473	17 449	−16 976
	Energy	19 761	105 707	−85 946	10 060	60 108	−50 048	383	59 812	−59 429
	Manufactures	239 175	169 115	70 060	152 829	189 497	−36 668	144 528	46 801	97 727
1984	Agriculture	8 776	28 056	−19 280	30 447	14 473	15 974	512	19 108	−18 596
	Energy	18 645	103 122	−84 476	9 846	63 261	−53 414	443	61 557	−61 114
	Manufactures	248 573	177 503	71 070	164 005	253 765	−89 760	167 486	52 533	114 953
1985	Agriculture	9 178	27 488	−18 311	22 608	15 099	7 509	486	17 723	−17 237
	Energy	19 030	101 169	−82 139	10 569	55 854	−45 286	473	56 695	−56 222
	Manufactures	262 705	184 238	78 466	165 305	279 695	−114 390	173 186	51 508	121 678
1986	Agriculture	9 591	30 437	−20 846	18 764	16 969	1 794	588	19 346	−18 758
	Energy	13 873	70 011	−56 138	8 594	39 876	−31 282	507	37 768	−37 261
	Manufactures	312 711	231 418	81 293	170 377	315 579	−145 202	206 012	60 744	145 268

For definitions and sources see notes at the end of the tables.

Table 2B

Exports of goods, imports of goods, trade balance: disaggregated by broad product group

(constant (1980) prices million USD)

Year	Product group	EUR 12			USA			Japan		
		Exports	Imports	Balance	Exports	Imports	Balance	Exports	Imports	Balance
1971	Agriculture	4 604	31 563	−26 959	13 464	12 426	1 038	670	15 263	−14 592
	Energy	15 008	145 740	−130 732	7 261	43 107	−35 846	278	57 156	−56 878
	Manufactures	173 643	114 908	58 734	80 800	102 552	−21 753	68 762	26 485	42 278
1973	Agriculture	5 957	33 472	−27 515	23 121	13 236	9 885	681	19 024	−18 343
	Energy	16 996	172 794	−155 798	6 924	75 931	−69 007	314	71 518	−71 204
	Manufactures	203 665	145 894	57 771	106 394	118 725	−12 330	73 864	41 455	32 409
1975	Agriculture	6 168	31 566	−25 398	20 259	12 121	8 138	404	16 321	−15 918
	Energy	14 132	139 890	−125 758	6 324	72 507	−66 183	268	64 870	−64 602
	Manufactures	222 553	137 368	85 184	112 248	101 602	10 645	81 137	34 837	46 299
1977	Agriculture	5 524	33 401	−27 877	22 655	10 948	11 707	397	19 169	−18 772
	Energy	18 295	147 524	−129 229	6 191	108 387	−102 195	283	71 030	−70 747
	Manufactures	253 056	158 863	94 192	124 327	143 042	−18 715	109 864	36 884	72 980
1979	Agriculture	7 360	36 885	−29 525	31 368	12 744	18 624	420	21 658	−21 238
	Energy	19 818	153 290	−133 473	7 844	102 173	−94 330	433	74 936	−74 503
	Manufactures	270 204	194 811	75 393	153 143	154 070	−927	108 098	49 347	58 752
1980	Agriculture	8 712	36 946	−28 234	33 574	12 058	21 516	470	19 645	−19 175
	Energy	18 913	141 482	−122 569	9 209	82 349	−73 140	492	70 477	−69 985
	Manufactures	275 284	209 142	66 142	167 357	151 774	15 583	127 251	48 930	78 321
1981	Agriculture	10 607	35 091	−24 483	31 879	12 770	19 108	397	17 353	−16 955
	Energy	21 896	125 542	−103 646	9 938	74 841	−64 904	479	65 958	−65 479
	Manufactures	285 526	188 123	97 403	164 185	158 508	5 677	139 333	47 826	91 506
1982	Agriculture	9 778	35 849	−26 071	30 971	12 959	18 013	416	18 231	−17 816
	Energy	22 923	120 244	−97 321	11 761	64 660	−52 899	360	64 241	−63 881
	Manufactures	279 126	187 055	92 072	146 739	157 920	−11 181	135 311	49 005	86 307
1983	Agriculture	10 702	34 072	−23 369	28 932	13 947	14 986	420	18 620	−18 200
	Energy	22 269	112 910	−90 642	9 791	63 205	−53 414	394	64 156	−63 762
	Manufactures	285 672	195 001	90 672	138 768	184 290	−45 522	144 679	50 613	94 066
1984	Agriculture	11 701	33 359	−21 658	30 076	15 378	14 698	447	19 211	−18 765
	Energy	22 661	114 375	−91 714	9 564	67 940	−58 375	471	69 341	−68 870
	Manufactures	312 419	207 609	104 809	156 308	241 785	−85 476	165 883	56 962	108 921
1985	Agriculture	12 617	34 256	−21 639	24 979	15 996	8 983	405	19 599	−19 194
	Energy	24 515	115 479	−90 964	10 476	60 194	−49 718	485	66 455	−65 970
	Manufactures	325 955	217 646	108 309	138 308	254 751	−116 443	172 536	56 417	116 119
1986	Agriculture	11 386	34 056	−22 670	22 557	16 018	6 539	411	21 015	−20 603
	Energy	28 338	129 178	−100 840	10 507	73 643	−63 136	659	74 680	−74 021
	Manufactures	314 093	234 585	79 508	144 799	270 735	−125 936	167 658	62 354	105 304

For definitions and sources see notes at the end of the tables.

Table 3A

External trade of the European Community: exports and imports of goods by destination and origin

(current prices — million USD)

Year		Industrialized countries					Developing countries							State-trading countries	Total
		USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
1971	Exports	11 341	1 412	14 901	7 607	35 260	4 982	4 338	1 872	3 289	4 693	7 506	21 698	4 345	61 303
	Imports	13 252	2 527	11 641	6 515	33 935	5 276	4 730	1 761	3 365	11 959	6 923	28 738	4 203	66 876
1973	Exports	16 622	2 952	24 714	10 425	54 712	6 691	5 755	2 791	4 528	8 191	11 521	32 786	8 297	95 795
	Imports	19 973	4 788	19 030	9 741	53 532	8 324	7 723	3 776	5 504	18 749	10 883	46 635	7 231	107 399
1975	Exports	17 412	2 899	32 285	16 939	69 535	11 127	9 440	3 876	6 506	23 375	18 224	61 421	15 086	146 043
	Imports	28 040	6 846	24 327	12 016	71 228	10 436	9 199	5 298	6 644	42 251	15 132	78 524	10 851	160 603
1977	Exports	24 722	3 684	41 976	17 741	88 124	13 228	10 191	4 875	8 228	36 562	19 103	78 959	15 792	182 875
	Imports	32 415	10 539	32 809	15 760	91 523	14 570	13 658	8 244	9 464	54 480	12 246	98 092	14 757	204 373
1979	Exports	35 399	6 746	62 452	23 142	127 739	18 851	15 906	9 247	10 733	42 609	35 428	113 922	20 865	262 526
	Imports	49 316	15 067	52 072	21 092	137 548	20 703	18 856	13 892	10 966	74 527	28 688	146 929	22 457	306 933
1980	Exports	37 534	6 617	74 927	25 913	144 991	21 853	18 869	10 124	12 676	55 270	41 094	138 033	23 706	306 730
	Imports	63 667	19 653	61 569	23 650	168 539	26 233	22 786	16 776	12 521	106 057	37 136	195 275	27 639	391 453
1981	Exports	41 580	6 416	59 521	17 735	125 251	21 307	18 419	8 651	18 057	61 348	48 458	154 933	19 263	299 447
	Imports	57 493	19 457	54 041	16 562	147 552	25 220	21 142	12 068	14 249	95 611	40 712	183 782	23 436	354 770
1982	Exports	41 742	6 281	57 074	16 798	121 894	17 146	13 883	8 528	16 261	56 717	47 441	142 830	16 666	281 391
	Imports	53 647	18 270	51 278	15 952	139 147	23 905	20 878	10 828	13 003	80 783	39 167	164 659	25 025	328 831
1983	Exports	44 682	6 649	56 764	16 635	124 730	12 788	11 118	8 779	13 942	48 697	48 674	131 211	17 502	273 443
	Imports	49 268	19 846	53 649	15 268	138 032	23 761	20 429	11 133	12 161	63 464	37 211	144 397	24 434	306 863
1984	Exports	55 721	7 165	57 946	19 111	139 943	13 323	11 477	9 142	14 718	43 193	47 386	125 916	16 302	282 161
	Imports	49 756	20 808	54 013	16 328	140 906	24 320	21 436	11 877	14 033	57 778	40 763	145 886	26 456	313 248
1985	Exports	63 134	7 696	62 757	22 365	155 952	13 699	11 648	9 555	13 791	37 989	50 359	123 343	17 255	296 550
	Imports	50 092	22 489	57 136	17 178	146 894	24 786	21 645	11 410	15 198	55 561	43 095	146 908	24 004	317 807
1986	Exports	70 920	10 903	82 986	25 778	190 587	16 586	14 334	11 410	14 872	34 879	58 398	133 892	19 030	343 508
	Imports	54 730	33 734	71 453	20 014	179 931	21 437	19 800	14 939	15 112	38 350	47 445	135 646	22 800	338 377

For definitions and sources see notes at the end of the tables.

Table 3B

External trade of the European Community: exports and imports of goods by destination and origin

(constant (1980) prices million USD)

Year		Industrialized countries					Developing countries							State-trading countries	Total
		USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
1971	Exports	35 933	3 874	47 900	22 122	109 829	14 859	13 146	5 553	10 457	14 641	8 424	52 221	11 934	187 463
	Imports	32 305	7 168	34 650	18 394	92 517	17 449	14 089	5 230	12 195	122 180	8 414	162 108	17 542	293 913
1973	Exports	40 184	6 240	59 350	23 656	129 430	14 692	12 767	6 380	10 168	19 298	11 189	59 802	17 051	220 289
	Imports	40 242	10 147	43 177	19 338	112 905	18 453	15 359	8 180	14 181	146 278	9 427	193 425	20 941	353 022
1975	Exports	30 266	4 622	54 815	28 437	118 140	17 251	14 726	6 430	10 045	38 715	14 560	84 476	21 942	237 881
	Imports	41 679	11 134	37 355	18 751	108 918	18 723	16 102	9 018	12 700	108 775	9 303	155 898	21 084	304 905
1977	Exports	38 995	5 173	64 596	26 608	135 372	18 651	14 069	7 207	12 062	55 594	16 132	105 063	22 026	274 006
	Imports	43 694	14 558	47 017	22 520	127 789	19 338	17 679	11 937	11 921	122 308	11 596	175 440	26 762	338 894
1979	Exports	41 778	7 492	71 229	25 727	146 226	21 151	17 887	10 375	12 307	48 488	20 499	109 556	22 940	297 758
	Imports	54 998	15 607	60 319	23 936	154 860	24 329	21 610	15 297	11 932	122 276	14 370	185 485	27 492	390 172
1980	Exports	37 534	6 617	74 927	25 913	144 991	21 853	18 869	10 124	12 676	55 270	20 542	117 481	23 706	306 730
	Imports	63 667	19 653	61 569	23 650	168 539	26 233	22 786	16 776	12 521	106 057	15 160	173 300	27 639	391 453
1981	Exports	42 592	7 005	66 822	18 910	135 329	22 646	19 581	8 936	19 921	66 482	21 125	136 045	20 889	323 222
	Imports	54 631	19 128	59 108	17 653	150 520	26 250	22 544	12 443	17 330	85 335	14 419	152 070	23 763	352 820
1982	Exports	43 102	7 320	66 972	18 766	136 161	18 764	15 240	9 410	18 511	64 769	22 019	129 949	19 120	316 808
	Imports	51 679	19 293	59 589	18 333	148 894	27 342	24 357	12 015	17 441	76 284	13 655	143 752	27 255	348 539
1983	Exports	48 946	7 756	70 163	19 332	146 197	14 656	12 738	10 029	17 450	58 958	22 991	122 166	21 248	324 279
	Imports	46 277	20 967	66 672	18 982	152 898	28 554	25 015	12 988	16 782	66 998	14 260	136 043	29 066	346 803
1984	Exports	62 931	8 639	75 819	23 389	170 778	16 061	14 036	11 024	19 417	54 937	24 104	123 518	20 951	349 783
	Imports	45 303	21 535	70 113	20 892	157 842	29 028	26 035	12 881	19 110	64 026	15 393	137 445	32 610	360 545
1985	Exports	69 770	9 134	80 778	27 472	187 154	16 787	14 461	11 612	18 043	47 746	26 676	118 537	22 122	362 974
	Imports	45 499	23 045	74 492	22 652	165 689	31 145	27 815	12 925	21 361	63 315	15 928	141 345	30 675	373 006
1986	Exports	69 518	10 149	84 517	26 281	190 465	17 529	15 221	11 526	15 755	36 228	24 960	103 689	20 187	349 989
	Imports	46 385	26 686	79 081	24 392	176 544	27 956	25 163	16 721	21 892	71 568	17 748	153 092	34 483	404 594

For definitions and sources see notes at the end of the tables.

Table 4A1

European Community: exports of goods, disaggregated by product

(current prices million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	1 661	3 181	4 070	4 143	6 865	8 712	9 433	7 931	8 119	8 776	9 178	9 591
Energy	1 904	3 089	5 839	8 617	14 037	18 913	22 984	22 353	19 761	18 645	19 030	13 873
Total manufactures	57 160	88 765	134 600	167 669	238 072	275 284	261 492	245 997	239 175	248 573	262 705	312 711
Ferrous ores	5 219	8 464	13 685	13 370	21 565	24 356	23 172	19 455	18 858	20 340	20 819	20 316
Non-metallic minerals	1 374	2 112	3 180	4 370	6 553	7 821	7 424	6 943	7 254	7 224	7 080	8 181
Chemical products	7 638	12 250	17 669	22 498	35 000	39 447	36 707	34 270	36 689	39 055	41 118	48 703
Metal products	2 278	3 146	6 376	8 108	10 406	11 637	11 824	11 709	10 575	9 870	9 474	10 781
Agricultural and industrial machinery	10 982	16 228	28 706	33 941	44 557	52 380	48 809	46 386	41 676	41 047	45 007	56 990
Office machines	1 874	2 799	3 777	4 672	6 949	8 386	7 586	7 634	8 143	9 368	11 264	13 826
Electrical goods	5 228	7 806	12 903	17 390	23 492	26 891	26 374	26 016	25 202	25 811	28 520	35 595
Vehicles, cars	6 939	9 868	15 304	18 254	24 084	27 425	26 452	25 374	23 346	24 076	26 326	33 033
Other transport equipment	1 897	4 122	5 877	7 091	9 239	10 842	11 197	11 302	11 642	11 828	10 237	10 687
Food, beverages	3 882	6 098	7 868	10 532	15 045	19 461	20 719	17 924	16 435	16 999	17 051	18 735
Textiles, clothing	3 641	5 648	6 511	8 714	12 214	13 623	13 071	12 181	12 233	13 436	14 530	18 155
Leather, footwear	1 193	1 668	1 984	2 590	3 952	3 749	3 722	3 826	3 967	4 506	5 066	6 034
Wood, furniture	594	1 033	1 422	2 315	3 398	3 949	3 996	3 752	3 801	4 027	4 362	5 360
Paper and printing	1 141	1 693	2 362	3 022	4 507	5 369	5 112	4 771	4 714	5 265	5 712	6 887
Rubber, plastic products	1 120	1 746	2 616	3 283	4 627	5 467	5 071	4 483	4 415	4 676	5 035	6 109
Other manufactured products	2 161	4 084	4 357	7 520	12 485	14 480	10 256	9 971	10 225	11 044	11 102	13 319
Adjustment	578	759	1 534	2 446	3 552	3 821	5 537	5 110	6 388	6 166	5 637	7 333
Total	61 303	95 795	146 043	182 875	262 526	306 730	299 447	281 391	273 443	282 161	296 550	343 508
Intermediate goods	14 230	22 825	34 535	40 238	63 118	71 625	67 303	60 667	62 801	66 619	69 018	77 199
Investment goods	29 198	43 970	72 944	89 455	118 727	137 562	132 243	128 421	120 585	122 001	130 830	160 913
Consumer goods	13 732	21 970	27 121	37 976	56 227	66 097	61 946	56 908	55 789	59 953	62 857	74 599
Weak-demand growth	16 459	26 154	37 516	46 987	70 572	79 615	73 464	67 837	66 912	70 447	72 433	82 145
Moderate-demand growth	25 961	39 756	62 734	76 123	102 058	120 944	117 360	110 241	102 228	103 892	109 369	132 441
Strong-demand growth	14 740	22 856	34 349	44 559	65 442	74 725	70 667	67 920	70 035	74 234	80 903	98 124

For definitions and sources see notes at the end of the tables.

Table 4A2

European Community: imports of goods, disaggregated by product

(current prices — million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	10 776	17 117	20 551	28 551	34 564	36 946	31 795	29 590	27 485	28 056	27 488	30 437
Energy	13 917	21 393	53 365	63 898	96 091	141 482	139 153	126 165	105 707	103 122	101 169	70 011
Total manufactures	41 150	68 013	84 675	110 062	173 174	209 142	179 058	168 157	169 115	177 503	184 238	231 418
Ferrous ores	7 649	11 681	14 038	16 018	23 490	30 441	21 051	19 812	19 504	19 838	20 316	22 125
Non-metallic minerals	1 119	1 616	2 630	2 936	4 147	5 135	4 350	3 914	3 753	3 871	3 783	4 508
Chemical products	3 758	5 587	7 614	9 756	16 742	19 246	18 349	16 829	17 417	18 981	20 731	25 017
Metal products	659	1 068	1 588	1 900	3 008	3 810	3 274	3 377	3 335	3 294	3 356	4 325
Agricultural and industrial machinery	3 811	5 851	8 173	10 040	14 209	17 703	16 649	16 374	15 466	15 768	17 430	22 885
Office machines	1 865	2 966	4 191	5 726	9 917	12 318	12 270	12 409	13 871	16 306	17 594	22 323
Electrical goods	2 673	5 202	6 949	9 920	16 145	20 464	20 840	21 061	21 079	22 956	24 468	31 939
Vehicles, cars	670	1 593	2 248	3 582	6 989	7 821	7 427	7 084	7 534	7 677	8 139	12 837
Other transport equipment	1 943	2 728	3 214	4 552	7 612	9 864	8 221	6 375	6 670	6 343	7 302	7 291
Food, beverages	6 159	10 198	10 441	13 044	17 307	17 955	16 179	15 471	15 069	15 245	14 447	16 083
Textiles, clothing	2 583	5 118	6 829	9 754	15 366	17 740	15 656	14 457	13 868	14 390	14 767	20 047
Leather, footwear	515	1 104	1 279	2 025	3 761	3 880	3 376	3 297	3 374	3 771	4 078	5 388
Wood, furniture	2 256	4 478	3 857	5 967	9 705	10 834	8 249	7 231	7 604	7 243	6 660	8 819
Paper and printing	2 969	4 377	6 547	7 228	10 381	12 179	11 564	10 578	9 963	11 028	10 791	13 769
Rubber, plastic products	372	603	832	1 154	1 914	2 362	2 067	2 065	2 086	2 216	2 355	3 215
Other manufactured products	2 148	3 842	4 245	6 459	12 480	17 389	9 535	7 822	8 521	8 576	8 022	10 849
Adjustment	1 033	876	2 014	1 862	3 104	3 883	4 764	4 919	4 556	4 567	4 911	6 511
Total	66 876	107 399	160 603	204 373	306 933	391 453	354 770	328 831	306 863	313 248	317 807	338 377
Intermediate goods	12 526	18 884	24 282	28 710	44 379	54 821	43 750	40 555	40 674	42 691	44 829	51 649
Investment goods	11 622	19 407	26 363	35 721	57 881	71 980	68 681	66 680	67 956	72 344	78 290	101 600
Consumer goods	17 002	29 721	34 030	45 631	70 914	82 341	66 626	60 922	60 485	62 469	61 119	78 170
Weak-demand growth	16 929	28 908	34 467	45 060	71 958	89 229	65 491	59 910	59 959	60 984	60 982	76 059
Moderate-demand growth	15 925	25 350	31 453	39 600	58 413	67 885	62 107	57 949	56 789	58 276	60 464	76 080
Strong-demand growth	8 296	13 755	18 755	25 403	42 804	52 028	51 460	50 298	52 367	58 243	62 793	79 279

For definitions and sources see notes at the end of the tables.

Table 4A3

European Community: exports of goods, disaggregated by product

(constant (1980) prices — million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	4 604	5 957	6 168	5 524	7 360	8 712	10 607	9 778	10 702	11 701	12 617	11 386
Energy	15 008	16 996	14 132	18 295	19 818	18 913	21 896	22 923	22 269	22 661	24 515	28 338
Total manufactures	173 643	203 665	222 553	253 056	270 204	275 284	285 526	279 126	285 672	312 419	325 955	314 093
Ferrous ores	16 113	19 623	20 174	20 586	24 485	24 356	26 289	22 299	24 521	27 100	27 125	23 402
Non-metallic minerals	3 926	4 770	5 351	6 803	7 524	7 821	7 842	7 800	8 882	9 540	9 388	8 651
Chemical products	22 314	28 704	27 186	34 182	39 963	39 447	40 383	39 784	45 583	50 666	52 849	52 567
Metal products	6 630	6 894	9 655	11 814	11 551	11 637	13 233	13 283	12 728	12 547	12 233	11 028
Agricultural and industrial machinery	33 474	36 203	49 690	50 762	48 818	52 380	53 357	51 463	47 628	49 613	53 349	52 633
Office machines	4 543	5 571	6 064	6 531	7 424	8 386	7 932	8 243	8 908	10 750	12 364	12 334
Electrical goods	15 133	17 835	21 096	24 730	25 438	26 891	28 262	28 560	28 255	30 553	33 200	32 839
Vehicles, cars	25 345	25 790	28 023	28 239	26 535	27 425	29 184	28 371	26 110	27 700	29 231	27 334
Other transport equipment	6 770	9 337	11 793	11 285	11 934	10 842	11 557	12 263	12 673	13 582	13 178	13 282
Food, beverages	11 003	12 330	11 273	14 927	17 264	19 461	21 625	20 736	20 465	22 402	22 754	21 863
Textiles, clothing	9 583	11 185	10 212	12 622	13 477	13 623	14 562	14 382	15 343	18 009	18 997	18 832
Leather, footwear	3 651	4 010	3 967	4 136	4 525	3 749	4 144	4 294	4 638	5 288	5 845	5 430
Wood, furniture	1 604	2 049	2 202	3 394	3 769	3 949	4 726	4 599	5 102	5 818	6 034	5 781
Paper and printing	3 141	3 617	3 532	4 351	4 997	5 369	5 603	5 524	5 863	6 971	7 454	7 371
Rubber, plastic products	2 967	3 772	4 020	4 689	5 337	5 467	5 637	5 367	5 654	6 289	6 685	6 378
Other manufactured products	7 788	12 360	8 356	14 068	17 984	14 480	10 975	12 093	13 179	15 594	15 753	15 731
Adjustment	−5 792	−6 329	−4 972	−2 868	377	3 821	5 193	4 980	5 636	3 003	−113	−3 827
Total	187 463	220 289	237 881	274 006	297 758	306 730	323 222	316 808	324 279	349 783	362 974	349 989
Intermediate goods	42 360	53 093	52 698	61 579	71 968	71 625	74 524	69 859	79 040	87 352	89 397	84 711
Investment goods	91 864	101 655	126 254	133 348	131 310	137 562	143 685	142 268	136 423	144 846	153 235	148 478
Consumer goods	39 737	49 323	43 563	58 187	67 353	66 097	67 272	66 994	70 244	80 371	83 521	81 387
Weak-demand growth	48 950	60 446	59 910	73 343	82 883	79 615	81 831	78 685	84 341	93 729	95 171	88 549
Moderate-demand growth	82 705	91 134	108 318	114 254	114 524	120 944	127 100	123 837	118 577	126 674	132 343	127 867
Strong-demand growth	41 959	52 085	54 350	65 413	72 737	74 725	76 550	76 549	82 639	91 852	98 239	97 490

For definitions and sources see notes at the end of the tables.

Table 4A4

European Community: imports of goods, disaggregated by product

(constant (1980) prices million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	31 563	33 472	31 566	33 401	36 885	36 946	35 091	35 849	34 072	33 359	34 256	34 056
Energy	145 740	172 794	139 890	147 524	153 290	141 482	125 542	120 244	112 910	114 375	115 479	129 178
Total manufactures	114 908	145 894	137 368	158 863	194 811	209 142	188 123	187 055	195 001	207 609	217 646	234 585
Ferrous ores	21 654	25 984	24 479	26 384	28 253	30 441	24 411	25 354	25 790	27 307	28 429	28 805
Non-metallic minerals	3 533	4 078	3 459	4 108	4 869	5 135	4 392	4 192	4 310	4 677	4 595	4 721
Chemical products	10 645	12 550	11 759	14 443	18 983	19 246	19 596	18 962	20 788	23 514	25 875	27 692
Metal products	1 680	2 188	2 392	2 544	3 177	3 810	3 377	3 674	3 601	4 178	4 706	4 666
Agricultural and industrial machinery	10 341	12 779	13 443	13 319	15 594	17 703	16 647	16 400	15 501	16 130	17 752	19 165
Office machines	3 760	5 310	6 092	7 302	10 420	12 318	12 319	12 421	14 015	16 637	17 764	19 120
Electrical goods	6 245	10 580	10 872	14 131	17 715	20 464	20 453	20 830	20 878	21 870	22 980	25 768
Vehicles, cars	2 034	3 667	3 826	5 014	7 456	7 821	7 592	7 823	8 275	8 753	9 256	10 944
Other transport equipment	4 547	6 108	6 618	6 681	8 630	9 864	8 573	7 218	7 885	7 077	7 362	7 509
Food, beverages	17 151	18 323	16 790	17 326	18 347	17 955	17 141	18 221	18 670	18 530	19 609	20 241
Textiles, clothing	8 066	11 030	11 863	13 938	17 022	17 740	16 695	16 477	17 083	18 157	18 709	21 452
Leather, footwear	1 735	2 357	2 301	3 032	4 078	3 880	3 752	3 907	4 181	4 547	4 822	5 388
Wood, furniture	7 761	10 184	6 739	8 903	11 388	10 834	9 498	9 405	10 372	10 168	9 793	10 786
Paper and printing	8 572	10 336	8 574	9 929	12 212	12 179	12 190	11 755	12 480	13 383	13 446	14 490
Rubber, plastic products	868	1 201	1 196	1 575	2 118	2 362	2 238	2 352	2 543	2 796	2 940	3 259
Other manufactured products	6 989	9 575	7 446	10 300	15 128	17 389	9 281	8 124	8 898	9 918	9 229	10 669
Adjustment	1 702	862	−3 920	−894	5 186	3 883	4 064	5 392	4 821	5 203	5 625	6 774
Total	293 913	353 022	304 905	338 894	390 172	391 453	352 820	348 539	346 803	360 545	373 006	404 594
Intermediate goods	35 844	42 624	39 625	44 892	52 090	54 821	48 387	48 504	50 905	55 546	58 968	61 351
Investment goods	28 626	40 633	43 239	48 990	62 890	71 980	68 886	68 199	69 813	74 513	79 946	87 065
Consumer goods	51 143	63 004	54 909	65 003	80 292	82 341	70 795	70 240	74 225	77 500	78 548	86 285
Weak-demand growth	51 121	64 976	58 475	69 235	83 673	89 229	71 530	71 322	74 385	79 528	81 031	87 543
Moderate-demand growth	43 492	52 747	50 402	53 870	64 330	67 885	64 344	63 642	65 202	66 683	70 737	75 356
Strong-demand growth	20 636	28 429	28 717	35 874	47 096	52 028	52 380	52 261	55 645	61 956	66 475	72 444

For definitions and sources see notes at the end of the tables.

Table 4B1

European Community: exports of goods by product and by destination: 1975

(current prices million USD)

Product group	Industrialized countries					Developing countries							State-trading countries	Total
	USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
Agriculture	499	137	1 256	297	2 189	134	107	24	155	290	865	1 441	440	4 070
Energy	540	54	2 197	173	2 964	70	63	11	148	370	2 105	2 697	178	5 839
Total manufactures	16 227	2 680	28 535	16 321	63 763	10 742	9 108	3 818	6 184	22 469	14 873	56 452	14 385	134 600
Ferrous ores	1 692	72	2 724	1 239	5 727	1 207	998	129	326	2 109	1 633	5 195	2 763	13 685
Non-metallic minerals	390	41	785	373	1 589	179	150	95	131	672	331	1 379	212	3 180
Chemical products	1 471	574	3 859	2 142	8 046	1 865	1 629	570	733	2 107	2 267	7 306	2 317	17 669
Metal products	438	53	1 212	546	2 249	472	410	146	317	1 443	723	3 039	1 088	6 376
Agricultural and industrial machinery	2 577	443	4 450	4 304	11 774	3 047	2 576	1 055	948	5 310	2 967	12 856	4 076	28 706
Office machines	716	203	937	559	2 415	279	234	122	91	385	291	1 123	239	3 777
Electrical goods	1 039	164	3 070	1 932	6 205	984	860	550	498	2 440	1 433	5 781	917	12 903
Vehicles, cars	3 043	127	2 904	1 937	8 011	718	598	272	698	3 821	1 352	6 741	552	15 304
Other transport equipment	501	46	1 003	364	1 914	766	722	188	1 049	769	838	3 566	397	5 877
Food, beverages	1 227	317	1 305	573	3 422	537	388	228	589	1 516	1 247	3 968	478	7 868
Textiles, clothing	571	289	2 279	909	4 048	146	97	129	343	600	581	1 750	713	6 511
Leather, footwear	760	58	561	203	1 582	28	21	25	51	81	76	254	148	1 984
Wood, furniture	198	24	555	124	901	29	24	14	40	258	136	472	49	1 422
Paper and printing	227	43	673	345	1 288	241	201	49	160	260	220	890	184	2 362
Rubber, plastic products	420	25	768	347	1 560	137	115	52	147	351	186	851	205	2 616
Other manufactured products	960	200	1 452	422	3 034	108	84	193	64	348	587	1 276	47	4 357
Adjustment	146	28	296	148	618	182	162	23	19	246	382	832	84	1 534
Total	17 412	2 899	32 285	16 939	69 535	11 127	9 440	3 876	6 506	23 375	18 225	61 422	15 086	146 043
Intermediate goods	3 552	688	7 368	3 754	15 362	3 251	2 777	795	1 190	4 888	4 230	13 880	5 293	34 535
Investment goods	8 313	1 037	13 575	9 641	32 566	6 265	5 400	2 334	3 601	14 168	7 607	33 110	7 268	72 944
Consumer goods	4 362	956	7 592	2 924	15 834	1 226	931	689	1 393	3 413	3 036	9 462	1 825	27 121
Weak-demand growth	5 007	737	9 567	3 819	19 130	2 169	1 784	731	1 271	5 510	4 070	13 366	5 020	37 516
Moderate-demand growth	7 995	1 002	11 102	7 869	27 968	5 445	4 600	1 844	3 591	12 027	6 812	28 874	5 892	62 734
Strong-demand growth	3 225	941	7 866	4 633	16 665	3 128	2 723	1 243	1 322	4 932	3 991	14 211	3 473	34 349

For definitions and sources see notes at the end of the tables.

Table 4B2

European Community: imports of goods by product and by origin: 1975

(current prices million USD)

Product group	Industrialized countries					Developing countries							State-trading countries	Total
	USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
Agriculture	6 339	87	723	2 840	9 989	3 746	3 598	752	2 265	647	2 365	9 627	935	20 551
Energy	1 667	62	573	699	3 001	1 056	179	14	679	40 453	5 139	46 464	3 900	53 365
Total manufactures	19 442	6 673	22 182	8 421	56 718	5 596	5 384	4 519	3 587	1 133	7 401	22 024	5 933	84 675
Ferrous ores	1 416	923	3 002	3 010	8 351	1 719	1 553	148	1 718	317	987	4 723	964	14 038
Non-metallic minerals	497	92	478	336	1 403	33	32	31	221	10	639	933	294	2 630
Chemical products	2 905	507	2 300	268	5 980	369	366	42	78	51	513	1 050	584	7 614
Metal products	449	191	666	57	1 363	7	7	87	1	3	46	144	81	1 588
Agricultural and industrial machinery	3 583	595	3 069	249	7 496	61	60	45	14	48	79	246	431	8 173
Office machines	1 914	790	968	108	3 780	25	25	269	2	7	36	339	72	4 191
Electrical goods	2 699	1 210	1 839	227	5 975	28	27	496	12	32	184	751	223	6 949
Vehicles, cars	356	846	762	72	2 036	45	45	1	2	1	7	56	156	2 248
Other transport equipment	1 577	703	598	55	2 933	45	19	17	33	46	52	167	114	3 214
Food, beverages	1 320	144	592	1 526	3 582	2 596	2 591	512	1 224	305	1 182	5 814	1 045	10 441
Textiles, clothing	610	182	1 011	757	2 560	366	366	1 878	50	215	1 011	3 520	749	6 829
Leather, footwear	37	41	153	174	405	123	123	288	16	34	271	732	142	1 279
Wood, furniture	231	32	1 740	326	2 329	108	104	345	132	47	129	757	771	3 857
Paper and printing	1 083	89	4 217	1 008	6 397	17	16	26	5	2	1	50	100	6 547
Rubber, plastic products	262	96	349	45	752	3	3	58	2	2	−17	46	34	832
Other manufactured products	504	231	439	204	1 378	49	46	275	77	13	2 283	2 694	173	4 245
Adjustment	592	24	848	56	1 520	39	37	13	113	17	231	411	83	2 014
Total	28 040	6 846	24 327	12 015	71 228	10 436	9 199	5 298	6 644	42 251	15 132	78 524	10 851	160 603
Intermediate goods	4 817	1 522	5 781	3 614	15 734	2 121	1 951	221	2 018	378	2 138	6 706	1 842	24 282
Investment goods	10 578	4 336	7 901	768	23 583	212	184	915	66	138	401	1 704	1 076	26 363
Consumer goods	4 047	815	8 501	4 038	17 401	3 263	3 249	3 382	1 504	618	4 861	13 614	3 015	34 030
Weak-demand growth	3 742	1 692	7 489	4 864	17 787	2 406	2 231	3 052	2 215	640	5 367	13 505	3 175	34 467
Moderate-demand growth	8 182	2 474	9 586	2 955	23 197	2 767	2 735	659	1 279	403	1 300	6 376	1 880	31 453
Strong-demand growth	7 518	2 507	5 107	602	15 734	422	418	807	93	90	735	2 143	878	18 755

For definitions and sources see notes at the end of the tables.

Table 4B3

European Community: exports of goods by product and by destination: 1980

(current prices — million USD)

Product group	Industrialized countries					Developing countries						State-trading countries	Total
	USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
Agriculture	1 094	254	2 314	492	4 154	340	290	87	385	900	1 435	3 097	1 461	8 712
Energy	2 510	159	6 288	622	9 579	534	517	79	659	1 067	6 263	8 585	749	18 913
Total manufactures	33 424	6 128	65 494	24 560	129 606	20 708	17 805	9 880	11 501	34 075	51 107	124 368	21 310	275 284
Ferrous ores	3 170	230	7 411	1 390	12 201	1 543	1 297	343	589	2 306	3 897	8 432	3 723	24 356
Non-metallic minerals	892	145	1 797	700	3 534	469	369	273	298	1 642	1 336	3 918	369	7 821
Chemical products	3 266	1 404	8 857	4 093	17 620	3 232	2 872	1 574	1 604	2 935	8 284	17 269	4 558	39 447
Metal products	746	108	2 449	833	4 136	914	750	347	656	3 036	1 907	6 696	805	11 637
Agricultural and industrial machinery	6 372	879	8 917	6 567	22 735	5 272	4 453	2 130	1 920	6 729	9 583	24 815	4 830	52 380
Office machines	1 517	369	2 447	963	5 296	584	521	360	235	736	868	2 720	370	8 386
Electrical goods	2 309	417	6 283	2 606	11 615	2 306	2 023	1 674	1 043	4 636	4 474	13 850	1 426	26 891
Vehicles, cars	5 765	384	6 143	2 823	15 115	1 803	1 628	656	1 411	3 923	4 163	11 781	529	27 425
Other transport equipment	1 214	115	908	355	2 592	1 013	962	538	771	781	4 834	7 886	364	10 842
Food, beverages	2 034	687	2 389	1 080	6 190	1 714	1 362	577	1 351	3 072	4 830	11 192	2 079	19 461
Textiles, clothing	1 083	599	5 299	1 151	8 132	386	322	380	664	1 329	1 651	4 346	1 145	13 623
Leather, footwear	975	176	1 364	241	2 756	119	94	126	118	190	248	776	217	3 749
Wood, furniture	404	47	1 497	218	2 166	123	110	48	117	1 086	338	1 699	84	3 949
Paper and printing	412	93	1 571	614	2 690	588	503	115	334	361	1 034	2 347	332	5 369
Rubber, plastic products	722	98	1 778	488	3 086	308	260	128	292	616	703	1 999	382	5 467
Other manufactured products	2 543	377	6 385	435	9 740	335	279	610	97	695	2 961	4 642	98	14 480
Adjustment	507	76	831	238	1 652	271	257	79	131	531	984	1 982	187	3 821
Total	37 534	6 617	74 927	25 913	144 991	21 853	18 869	10 124	12 676	36 573	59 791	138 033	23 706	306 730
Intermediate goods	7 328	1 779	18 064	6 185	33 356	5 243	4 537	2 190	2 491	6 883	13 519	29 620	8 649	71 625
Investment goods	17 923	2 272	27 147	14 148	61 490	11 892	10 338	5 706	6 036	19 842	25 826	67 748	8 324	137 562
Consumer goods	8 173	2 077	20 283	4 228	34 761	3 573	2 930	1 984	2 974	7 349	11 763	27 000	4 336	66 097
Weak-demand growth	9 812	1 683	26 202	4 968	42 665	3 888	3 220	2 127	2 540	10 284	12 339	30 510	6 440	79 615
Moderate-demand growth	16 519	2 255	21 706	11 929	52 409	10 699	9 168	4 144	6 079	15 483	25 144	60 018	8 517	120 944
Strong-demand growth	7 092	2 190	17 586	7 663	34 531	6 121	5 417	3 609	2 882	8 308	13 625	33 841	6 353	74 725

For definitions and sources see notes at the end of the tables.

Table 4B4

European Community: imports of goods by product and by origin: 1980

(current prices million USD)

Product group	Industrialized countries					Developing countries							State-trading countries	Total
	USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
Agriculture	10 050	151	1 671	4 460	16 332	7 273	7 074	1 473	5 202	31	5 393	19 173	1 441	36 946
Energy	3 441	72	8 488	2 239	14 240	6 905	4 055	105	1 167	82 065	25 497	112 889	14 353	141 482
Total manufactures	49 042	19 386	50 513	16 829	135 770	11 981	11 589	15 155	5 541	1 040	28 365	61 690	11 682	209 142
Ferrous ores	4 530	928	6 848	5 333	17 639	4 333	4 074	570	2 548	375	3 150	10 717	2 085	30 441
Non-metallic minerals	988	255	1 072	686	3 001	91	91	213	245	9	1 104	1 662	472	5 135
Chemical products	7 208	1 119	5 673	772	14 772	830	808	176	126	106	1 685	2 901	1 573	19 246
Metal products	833	411	1 555	168	2 967	25	25	405	2	3	223	658	185	3 810
Agricultural and industrial machinery	6 854	1 696	6 585	530	15 665	212	206	184	21	260	678	1 349	689	17 703
Office machines	6 115	2 612	2 013	203	10 943	88	87	1 005	7	15	139	1 253	122	12 318
Electrical goods	7 037	4 865	4 285	568	16 755	110	102	2 654	22	106	350	3 234	475	20 464
Vehicles, cars	729	3 804	2 210	239	6 982	200	197	42	7	7	118	371	468	7 821
Other transport equipment	3 233	1 734	739	134	5 840	83	80	157	80	57	3 443	3 817	207	9 864
Food, beverages	3 352	146	1 295	2 792	7 585	4 087	4 029	983	1 790	30	2 499	9 331	1 039	17 955
Textiles, clothing	1 544	497	2 535	1 587	6 163	865	863	4 325	186	9	4 748	10 131	1 446	17 740
Leather, footwear	149	72	444	352	1 017	387	387	1 236	46	11	867	2 547	316	3 880
Wood, furniture	894	66	4 404	1 239	6 603	291	286	1 342	314	3	618	2 563	1 668	10 834
Paper and printing	2 000	198	7 490	1 757	11 445	238	238	119	8	4	118	487	247	12 179
Rubber, plastic products	609	232	837	103	1 781	21	20	320	1	3	128	472	109	2 362
Other manufactured products	2 967	751	2 528	365	6 611	118	95	1 425	139	44	8 494	10 197	581	17 389
Adjustment	1 134	44	897	122	2 197	73	67	42	610	68	735	1 522	164	3 883
Total	63 667	19 653	61 569	23 650	168 539	26 233	22 786	16 776	12 521	83 203	59 989	195 275	27 639	391 453
Intermediate goods	12 726	2 302	13 593	6 792	35 413	5 255	4 973	960	2 918	489	5 939	15 279	4 129	54 821
Investment goods	24 801	15 122	17 387	1 842	59 152	718	697	4 446	139	448	4 952	10 682	2 146	71 980
Consumer goods	11 515	1 962	19 533	8 195	41 205	6 008	5 919	9 749	2 484	103	17 475	35 730	5 406	82 341
Weak-demand growth	11 906	2 980	19 386	9 729	44 001	6 111	5 821	9 515	3 479	453	19 207	38 475	6 753	89 229
Moderate-demand growth	16 777	7 810	19 156	5 556	49 299	4 841	4 771	1 805	1 907	359	6 985	15 827	2 759	67 885
Strong-demand growth	20 359	8 596	11 972	1 543	42 470	1 028	997	3 835	155	227	2 174	7 388	2 170	52 028

For definitions and sources see notes at the end of the tables.

Table 4B5

European Community: exports of goods by product and by destination: 1986

(current prices — million USD)

Product group	Industrialized countries					Developing countries							State-trading countries	Total
	USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
Agriculture	1 959	448	2 636	578	5 621	320	298	209	394	966	843	2 710	1 260	9 591
Energy	3 507	339	4 423	821	9 090	275	255	115	302	700	3 123	4 495	288	13 873
Total manufactures	65 026	10 068	75 420	24 166	174 680	15 889	13 689	11 018	14 066	33 010	48 988	120 771	17 260	312 711
Ferrous ores	3 925	279	5 271	1 477	10 952	992	816	472	570	1 808	3 265	6 931	2 433	20 316
Non-metallic minerals	1 805	232	2 090	725	4 852	312	275	327	325	1 126	1 010	3 063	266	8 181
Chemical products	5 991	2 432	10 247	3 877	22 547	3 107	2 712	2 236	2 211	4 581	10 679	22 419	3 737	48 703
Metal products	1 355	156	3 101	828	5 440	526	448	381	665	2 163	757	4 414	927	10 781
Agricultural and industrial machinery	12 053	1 142	10 901	5 238	29 334	3 429	2 789	2 144	2 451	7 027	8 923	23 334	4 322	56 990
Office machines	4 117	427	4 457	1 130	10 131	458	412	488	621	836	925	3 282	413	13 826
Electrical goods	5 398	719	8 529	2 624	17 270	1 858	1 633	1 740	1 617	4 285	7 567	16 842	1 483	35 595
Vehicles, cars	12 471	1 048	8 613	2 425	24 557	1 514	1 295	405	1 652	2 749	1 998	8 099	377	33 033
Other transport equipment	2 140	212	1 182	521	4 055	842	738	326	558	1 067	3 605	6 294	338	10 687
Food, beverages	3 190	1 026	2 790	1 102	8 108	1 314	1 193	621	1 544	3 401	3 040	9 799	828	18 735
Textiles, clothing	3 051	939	7 122	1 673	12 785	303	256	615	657	1 085	1 713	4 326	1 044	18 155
Leather, footwear	2 018	326	1 757	599	4 700	97	84	312	136	222	235	989	345	6 034
Wood, furniture	1 258	114	2 195	340	3 907	122	115	106	138	755	285	1 399	54	5 360
Paper and printing	1 037	112	2 407	689	4 245	417	369	188	410	563	831	2 361	281	6 887
Rubber, plastic products	972	178	2 268	489	3 907	230	200	138	327	656	560	1 881	321	6 109
Other manufactured products	4 246	727	2 491	425	7 889	369	355	518	184	684	3 598	5 339	91	13 319
Adjustment	427	48	506	215	1 196	102	92	67	109	203	5 443	5 914	223	7 333
Total	70 920	10 903	82 986	25 778	190 587	16 586	14 334	11 410	14 872	34 879	58 396	133 891	19 030	343 508
Intermediate goods	11 720	2 942	17 607	6 083	38 352	4 411	3 803	3 035	3 106	7 515	14 952	32 411	6 436	77 199
Investment goods	37 533	3 704	36 783	12 768	90 788	8 626	7 314	5 486	7 564	18 128	23 773	62 265	7 860	160 913
Consumer goods	15 773	3 421	21 030	5 316	45 540	2 852	2 572	2 498	3 396	7 367	10 263	26 096	2 963	74 599
Weak-demand growth	17 658	2 773	24 028	6 065	50 524	2 721	2 349	2 731	2 675	7 844	10 862	26 461	5 160	82 145
Moderate-demand growth	31 863	3 718	28 160	10 466	74 207	7 746	6 583	3 823	6 942	15 464	18 955	51 767	6 467	132 441
Strong-demand growth	15 506	3 577	23 233	7 633	49 949	5 422	4 757	4 464	4 449	9 702	19 171	42 543	5 632	98 124

For definitions and sources see notes at the end of the tables.

Table 4B6

European Community: imports of goods by product and by origin: 1986

(current prices – million USD)

Product group	Industrialized countries					Developing countries							State-trading countries	Total
	USA	Japan	EFTA	Other	Total	Latin America, total	Latin America, non-OPEC	Asian NICs	Africa	OPEC	Other	Total		
Agriculture	4 826	135	1 579	3 181	9 721	7 376	7 138	843	5 758	1 238	4 475	19 452	1 264	30 437
Energy	3 388	28	7 422	1 957	12 795	3 076	1 975	20	2 482	33 827	8 589	46 893	10 323	70 011
Total manufactures	46 074	33 543	62 262	14 826	156 705	10 929	10 634	14 004	6 809	3 258	28 837	63 542	11 171	231 418
Ferrous ores	1 561	467	6 949	2 901	11 878	3 408	3 211	242	2 987	520	1 401	8 361	1 886	22 125
Non-metallic minerals	641	273	1 225	398	2 537	123	123	53	292	18	1 054	1 540	431	4 508
Chemical products	6 874	2 090	8 292	963	18 219	772	746	246	212	553	3 472	5 229	1 569	25 017
Metal products	637	366	2 329	156	3 488	26	23	268	16	26	295	628	209	4 325
Agricultural and industrial machinery	6 856	3 548	8 949	783	20 136	347	341	306	81	316	1 138	2 182	567	22 885
Office machines	9 732	6 090	2 943	305	19 070	80	80	1 759	39	39	1 243	3 160	93	22 323
Electrical goods	8 194	9 746	6 256	765	24 961	200	195	3 278	53	154	2 816	6 496	482	31 939
Vehicles, cars	500	7 354	3 364	450	11 668	220	219	63	36	15	312	645	524	12 837
Other transport equipment	3 407	1 216	804	172	5 599	79	75	221	65	136	1 107	1 604	88	7 291
Food, beverages	2 393	125	1 585	1 971	6 074	4 038	4 009	706	1 471	503	2 358	9 047	962	16 083
Textiles, clothing	711	784	3 111	2 697	7 303	594	593	3 719	434	374	6 160	11 280	1 464	20 047
Leather, footwear	202	61	546	803	1 612	376	370	907	109	150	1 887	3 423	353	5 388
Wood, furniture	609	37	3 754	779	5 179	215	212	773	338	376	473	2 172	1 468	8 819
Paper and printing	1 671	202	9 357	1 342	12 572	321	320	127	84	6	287	824	373	13 769
Rubber, plastic products	682	419	1 124	144	2 369	34	33	294	9	6	376	718	128	3 215
Other manufactured products	1 403	766	1 675	196	4 040	96	84	1 042	584	65	4 460	6 235	574	10 849
Adjustment	443	28	190	50	711	56	53	72	62	26	5 544	5 757	43	6 511
Total	54 730	33 734	71 453	20 014	179 931	21 437	19 800	14 939	15 112	38 350	47 445	135 646	22 800	338 377
Intermediate goods	9 077	2 829	16 466	4 263	32 635	4 303	4 080	542	3 491	1 092	5 923	15 128	3 886	51 649
Investment goods	29 326	28 320	24 644	2 631	84 921	952	932	5 895	289	687	6 913	14 716	1 963	101 600
Consumer goods	7 670	2 394	21 152	7 933	39 149	5 674	5 622	7 567	3 030	1 480	16 001	33 700	5 321	78 170
Weak-demand growth	5 764	2 753	19 589	7 931	36 037	4 838	4 616	7 004	4 759	1 530	15 728	33 637	6 385	76 059
Moderate-demand growth	15 509	12 863	25 183	4 863	58 418	5 038	4 998	1 718	1 746	982	5 576	15 020	2 642	76 080
Strong-demand growth	24 800	17 926	17 491	2 033	62 250	1 053	1 021	5 283	304	746	7 531	14 885	2 144	79 279

For definitions and sources see notes at the end of the tables.

Table 5A1

European Community: exports to Latin America

(current prices — million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	82	146	134	198	333	340	353	359	235	252	256	320
Energy	25	53	70	240	412	534	831	267	211	401	231	275
Total manufactures	4 827	6 425	10 742	12 542	17 844	20 708	20 015	16 400	12 256	12 542	13 097	15 889
Ferrous ores	331	538	1 207	779	1 273	1 543	1 780	1 257	665	761	822	992
Non-metallic minerals	88	105	179	270	430	469	446	322	213	207	234	312
Chemical products	859	1 337	1 865	2 184	3 005	3 232	2 987	2 721	2 445	2 661	2 692	3 107
Metal products	213	212	472	582	685	914	928	797	639	466	406	526
Agricultural and industrial machinery	1 391	1 622	3 047	3 259	4 564	5 272	4 984	3 763	2 440	2 447	2 707	3 429
Office machines	152	222	279	303	456	584	467	409	271	308	358	458
Electrical goods	474	647	984	1 360	1 840	2 306	2 022	1 751	1 441	1 417	1 575	1 858
Vehicles, cars	447	503	718	881	1 433	1 803	1 665	1 174	903	1 049	1 212	1 514
Other transport equipment	223	393	766	1 074	1 385	1 013	1 232	1 195	1 159	1 120	839	842
Food, beverages	281	384	537	847	1 193	1 714	1 590	1 290	978	931	913	1 314
Textiles, clothing	85	115	146	218	338	386	370	289	206	220	247	303
Leather, footwear	21	23	28	57	97	119	114	109	67	77	97	97
Wood, furniture	18	18	29	60	90	123	115	105	93	82	82	122
Paper and printing	137	181	241	289	492	588	579	475	329	354	388	417
Rubber, plastic products	60	72	137	168	260	308	275	233	174	186	197	230
Other manufactured products	48	52	108	211	303	335	461	508	234	256	327	369
Adjustment	47	67	182	248	262	271	107	121	86	128	116	102
Total	4 982	6 691	11 127	13 228	18 851	21 853	21 307	17 146	12 788	13 323	13 699	16 586
Intermediate goods	1 278	1 979	3 251	3 234	4 708	5 243	5 212	4 300	3 323	3 629	3 748	4 411
Investment goods	2 900	3 600	6 265	7 459	10 363	11 892	11 298	9 090	6 852	6 807	7 097	8 626
Consumer goods	649	845	1 226	1 850	2 773	3 573	3 504	3 010	2 081	2 106	2 252	2 852
Weak-demand growth	804	1 064	2 169	2 177	3 216	3 888	4 214	3 388	2 117	2 069	2 216	2 721
Moderate-demand growth	2 538	3 155	5 445	6 518	9 326	10 699	10 325	8 131	5 983	6 087	6 256	7 746
Strong-demand growth	1 485	2 206	3 128	3 847	5 301	6 121	5 476	4 881	4 156	4 387	4 625	5 422

For definitions and sources see notes at the end of the tables.

Table 5A2

European Community: imports from Latin America

(current prices million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	1 936	3 045	3 746	6 421	7 331	7 273	5 795	5 615	6 049	6 623	7 077	7 376
Energy	445	441	1 056	970	2 806	6 905	8 871	8 100	7 822	7 399	7 196	3 076
Total manufactures	2 883	4 816	5 596	7 145	10 512	11 981	10 514	10 144	9 831	10 252	10 473	10 929
Ferrous ores	1 050	1 286	1 719	1 998	3 196	4 333	3 183	3 211	2 971	3 081	3 235	3 408
Non-metallic minerals	20	20	33	53	68	91	62	66	86	102	119	123
Chemical products	196	231	369	391	676	830	692	638	679	729	799	772
Metal products	2	4	7	9	17	25	20	25	29	22	29	26
Agricultural and industrial machinery	11	27	61	113	193	212	243	245	190	264	348	347
Office machines	20	14	25	40	75	88	115	138	126	105	95	80
Electrical goods	14	24	28	76	102	110	95	91	104	128	142	200
Vehicles, cars	7	16	45	51	173	200	242	377	297	282	276	220
Other transport equipment	48	71	45	83	174	83	152	41	99	86	174	79
Food, beverages	1 311	2 533	2 596	3 204	4 028	4 087	4 146	3 845	3 840	3 925	3 912	4 038
Textiles, clothing	63	266	366	581	770	865	676	593	558	603	557	594
Leather, footwear	36	120	123	283	517	387	275	301	265	281	260	376
Wood, furniture	75	143	108	160	255	291	240	189	200	201	179	215
Paper and printing	4	8	17	50	145	238	256	266	264	325	244	321
Rubber, plastic products	2	2	3	4	12	21	14	12	14	26	27	34
Other manufactured products	25	52	49	49	111	118	102	107	109	92	76	96
Adjustment	13	22	39	34	53	73	39	46	59	46	41	56
Total	5 276	8 324	10 436	14 570	20 703	26 233	25 220	23 905	23 761	24 320	24 786	21 437
Intermediate goods	1 265	1 537	2 121	2 442	3 939	5 255	3 937	3 915	3 736	3 912	4 154	4 303
Investment goods	102	155	212	372	734	718	868	915	845	887	1 064	952
Consumer goods	1 516	3 124	3 263	4 331	5 838	6 008	5 709	5 313	5 250	5 453	5 255	5 674
Weak-demand growth	1 270	1 891	2 406	3 133	4 933	6 111	4 558	4 491	4 219	4 382	4 456	4 838
Moderate-demand growth	1 383	2 656	2 767	3 505	4 725	4 841	5 054	4 786	4 704	4 908	4 981	5 038
Strong-demand growth	230	268	422	507	854	1 028	902	867	908	962	1 036	1 053

For definitions and sources see notes at the end of the tables.

Table 5B1

European Community: exports to Latin America

(constant (1980) prices million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	240	297	191	268	371	340	380	421	296	329	355	391
Energy	170	218	133	518	616	534	871	286	244	455	271	526
Total manufactures	14 539	14 838	17 221	18 004	20 169	20 708	21 560	18 303	14 341	15 391	16 417	16 846
Ferrous ores	900	1 154	1 592	1 138	1 429	1 543	1 999	1 359	818	966	1 018	1 125
Non-metallic minerals	248	229	292	406	489	469	465	364	264	272	313	329
Chemical products	2 637	3 175	2 758	3 392	3 547	3 232	3 239	3 063	2 847	3 209	3 233	3 247
Metal products	598	460	758	834	775	914	997	846	691	536	463	466
Agricultural and industrial machinery	4 444	3 460	5 278	4 648	5 108	5 272	5 387	4 049	2 678	2 951	3 361	3 382
Office machines	376	421	461	435	499	584	475	429	338	368	460	442
Electrical goods	1 409	1 420	1 701	1 968	1 924	2 306	2 211	1 952	1 547	1 621	1 563	1 539
Vehicles, cars	1 358	1 223	1 215	1 231	1 538	1 803	1 762	1 268	960	1 173	1 400	1 729
Other transport equipment	810	1 509	1 252	1 052	1 503	1 013	1 439	1 699	1 658	1 581	1 699	1 334
Food, beverages	758	810	815	1 265	1 399	1 714	1 523	1 339	1 159	1 170	1 168	1 666
Textiles, clothing	197	228	224	316	364	386	403	338	268	306	342	343
Leather, footwear	68	55	55	88	105	119	120	114	76	97	128	95
Wood, furniture	49	38	46	93	103	123	129	126	117	114	115	130
Paper and printing	373	382	361	398	537	588	602	512	406	461	490	439
Rubber, plastic products	169	161	208	239	306	308	306	261	213	237	247	236
Other manufactured products	151	147	206	490	547	335	505	584	300	329	446	369
Adjustment	−90	−661	−294	−139	−5	271	−164	−245	−225	−113	−256	−233
Total	14 859	14 692	17 251	18 651	21 151	21 853	22 646	18 764	14 656	16 061	16 787	17 529
Intermediate goods	3 785	4 558	4 643	4 936	5 465	5 243	5 702	4 786	3 929	4 447	4 564	4 701
Investment goods	8 990	8 460	10 665	10 180	11 346	11 892	12 272	10 243	7 871	8 230	8 916	8 865
Consumer goods	1 765	1 822	1 914	2 888	3 360	3 573	3 586	3 274	2 540	2 714	2 936	3 277
Weak-demand growth	8 990	8 460	10 665	10 180	11 346	11 892	12 272	10 243	7 871	8 230	8 916	8 865
Moderate-demand growth	1 765	1 822	1 914	2 888	3 360	3 573	3 586	3 274	2 540	2 714	2 936	3 277
Strong-demand growth	2 211	2 310	3 172	3 364	3 809	3 888	4 617	3 731	2 535	2 619	2 826	2 856

For definitions and sources see notes at the end of the tables.

Table 5B2

European Community: imports from Latin America

(constant (1980) prices - million USD)

Product group	1971	1973	1975	1977	1979	1980	1981	1982	1983	1984	1985	1986
Agriculture	5 553	5 871	6 463	6 521	7 878	7 273	6 709	6 600	7 319	7 647	8 712	7 438
Energy	3 842	3 007	2 545	2 242	4 082	6 905	8 119	8 294	8 695	8 099	8 007	6 243
Total manufactures	8 009	9 189	9 497	10 364	12 027	11 981	11 297	12 282	12 278	13 099	14 294	14 310
Ferrous ores	2 631	2 646	3 074	3 345	3 954	4 333	3 750	4 304	3 970	4 472	4 734	4 948
Non-metallic minerals	47	40	40	73	77	91	61	67	90	111	130	124
Chemical products	516	513	569	563	759	830	683	666	772	829	957	979
Metal products	4	6	9	12	18	25	22	30	40	37	41	36
Agricultural and industrial machinery	30	48	94	154	208	212	239	257	189	285	336	304
Office machines	40	16	24	54	78	88	115	159	174	136	125	85
Electrical goods	26	46	38	88	112	110	113	118	129	159	216	233
Vehicles, cars	17	47	69	69	189	200	255	393	336	344	334	236
Other transport equipment	97	57	70	112	97	83	172	43	121	85	103	147
Food, beverages	3 938	4 590	4 258	4 249	4 438	4 087	4 224	4 502	4 610	4 781	5 610	5 303
Textiles, clothing	256	551	744	871	913	865	733	730	737	759	707	713
Leather, footwear	156	238	219	391	559	387	317	364	366	339	320	427
Wood, furniture	165	220	164	222	307	291	235	196	212	224	217	247
Paper and printing	6	15	22	68	177	238	259	307	361	379	327	379
Rubber, plastic products	6	4	5	6	13	21	16	13	17	39	37	38
Other manufactured products	56	152	95	84	127	118	106	132	154	117	90	113
Adjustment	46	385	217	211	343	73	125	165	262	184	131	-35
Total	17 449	18 453	18 723	19 338	24 329	26 233	26 250	27 342	28 554	29 028	31 145	27 956
Intermediate goods	3 194	3 199	3 682	3 984	4 790	5 255	4 495	5 037	4 834	5 415	5 821	6 052
Investment goods	216	221	302	488	703	718	911	1 000	987	1 047	1 160	1 035
Consumer goods	4 582	5 770	5 506	5 892	6 534	6 008	5 890	6 243	6 457	6 636	7 309	7 218
Weak-demand growth	3 314	3 851	4 345	5 001	5 957	6 111	5 227	5 823	5 567	6 060	6 241	6 610
Moderate-demand growth	4 117	4 763	4 520	4 658	5 123	4 841	5 158	5 516	5 634	5 914	6 754	6 403
Strong-demand growth	582	577	631	705	949	1 028	911	944	1 076	1 124	1 299	1 297

For definitions and sources see notes at the end of the tables.

Table 6A

European Community: exports of certain high-tech products by destination

(current prices — thousand USD)

Year	Product group	EUR 12	USA	Japan	Others	Total
1970	Pharmaceutical products	452 098	27 494	77 595	746 336	1 303 523
	Office and electronic data-processing equipment	1 072 952	208 852	76 569	518 391	1 876 764
	Telecommunications, measuring and electromedical equipment	648 047	111 815	14 567	758 944	1 533 373
	Consumer electronics	1 213 073	145 927	17 074	1 307 467	2 683 541
	Aerospace	601 904	148 083	12 352	416 686	1 179 025
1975	Pharmaceutical products	1 266 357	84 129	134 376	1 814 967	3 299 829
	Office and electronic data-processing equipment	2 580 083	352 636	116 390	1 144 110	4 193 219
	Telecommunications, measuring and electromedical equipment	1 875 902	372 960	45 987	2 286 770	4 581 619
	Consumer electronics	3 157 518	257 066	45 937	3 412 515	6 873 036
	Aerospace	1 462 836	666 121	80 662	1 637 065	3 846 684
1980	Pharmaceutical products	2 770 672	140 493	296 384	3 906 077	7 113 626
	Office and electronic data-processing equipment	7 178 020	795 146	141 049	2 797 955	10 912 170
	Telecommunications, measuring and electromedical equipment	3 861 333	744 525	133 945	4 931 402	9 671 205
	Consumer electronics	7 273 111	578 602	106 714	5 776 423	13 734 850
	Aerospace	4 291 223	1 815 506	131 132	6 507 309	12 745 170
1985	Pharmaceutical products	3 103 122	422 759	341 712	3 859 227	7 726 820
	Office and electronic data-processing equipment	12 294 960	1 965 852	104 221	4 294 277	18 659 310
	Telecommunications, measuring and electromedical equipment	3 850 064	1 498 407	171 517	5 197 782	10 717 770
	Consumer electronics	7 831 056	925 661	114 713	6 388 670	15 260 100
	Aerospace	5 177 570	3 340 951	143 884	5 641 905	14 304 310
1986	Pharmaceutical products	4 192 006	525 581	543 738	4 874 085	10 135 410
	Office and electronic data-processing equipment	15 816 950	2 258 875	157 377	5 200 688	23 433 890
	Telecommunications, measuring and electromedical equipment	5 398 576	1 804 202	225 371	6 365 131	13 793 280
	Consumer electronics	11 194 090	1 169 398	156 577	8 033 185	20 553 250
	Aerospace	6 000 594	3 545 530	179 809	6 034 097	15 760 030

For definitions and sources see notes at the end of the tables.

Table 6B

European Community: imports of certain high-tech products by origin

(current prices thousand USD)

Year	Product group	EUR 12	USA	Japan	Others	Total
1970	Pharmaceutical products	510 869	104 751	7 387	142 298	765 305
	Office and electronic data-processing equipment	1 181 816	789 725	78 397	204 850	2 254 788
	Telecommunications, measuring and electromedical equipment	733 672	367 662	31 242	194 620	1 327 196
	Consumer electronics	1 339 532	443 011	155 793	483 771	2 422 107
	Aerospace	592 628	876 578	17 728	206 051	1 692 985
1975	Pharmaceutical products	1 274 689	238 091	19 358	380 218	1 912 356
	Office and electronic data-processing equipment	2 682 587	1 410 110	242 481	535 551	4 870 729
	Telecommunications, measuring and electromedical equipment	1 997 644	854 528	92 420	609 060	3 553 652
	Consumer electronics	3 606 022	920 472	920 489	1 435 062	6 882 045
	Aerospace	1 506 838	2 009 681	3 120	312 778	3 832 417
1980	Pharmaceutical products	2 751 054	541 668	41 419	935 168	4 269 309
	Office and electronic data-processing equipment	6 455 589	4 902 296	706 499	1 141 056	13 205 440
	Telecommunications, measuring and electromedical equipment	4 121 283	2 190 033	277 989	1 445 415	8 034 720
	Consumer electronics	7 446 314	2 389 907	3 876 824	3 952 155	17 665 200
	Aerospace	3 922 402	3 847 988	16 688	5 250 672	13 037 750
1985	Pharmaceutical products	3 093 728	664 474	81 130	1 002 899	4 842 231
	Office and electronic data-processing equipment	11 265 280	7 378 349	2 103 026	2 588 885	23 335 540
	Telecommunications, measuring and electromedical equipment	4 038 494	2 673 200	609 627	1 730 736	9 052 057
	Consumer electronics	7 908 198	2 427 287	4 906 204	4 384 651	19 626 340
	Aerospace	4 072 657	4 092 983	21 233	3 871 377	12 058 250
1986	Pharmaceutical products	4 255 527	749 758	121 571	1 506 318	6 633 174
	Office and electronic data-processing equipment	14 175 620	8 073 906	3 323 735	3 560 099	29 133 360
	Telecommunications, measuring and electromedical equipment	5 778 203	2 891 313	1 053 175	2 315 019	12 037 710
	Consumer electronics	11 560 250	2 541 978	6 719 716	6 196 616	27 018 560
	Aerospace	5 443 872	5 553 640	51 983	2 190 285	13 239 780

For definitions and sources see notes at the end of the tables.

Table 6C

European Community: balance of trade in certain high-tech products

(current prices thousand USD)

Year	Product group	EUR 12	USA	Japan	Others	Total
1970	Pharmaceutical products	−58 771	−77 257	70 208	604 038	538 218
	Office and electronic data-processing equipment	−108 864	−580 873	−1 828	313 541	−378 024
	Telecommunications, measuring and electromedical equipment	−85 625	−255 847	−16 675	564 324	206 177
	Consumer electronics	−126 459	−297 084	−138 719	823 696	261 434
	Aerospace	9 276	−728 495	−5 376	210 635	−513 960
1975	Pharmaceutical products	−8 332	−153 962	115 018	1 434 749	1 387 473
	Office and electronic data-processing equipment	−102 504	−1 057 474	−126 091	608 559	−677 510
	Telecommunications, measuring and electromedical equipment	−121 742	−481 568	−46 433	1 677 710	1 027 967
	Consumer electronics	−448 504	−663 406	−874 552	1 977 453	−9 009
	Aerospace	−44 002	−1 343 560	77 542	1 324 287	14 267
1980	Pharmaceutical products	19 618	−401 175	254 965	2 970 909	2 844 317
	Office and electronic data-processing equipment	722 431	−4 107 150	−565 450	1 656 899	−2 293 270
	Telecommunications, measuring and electromedical equipment	−259 950	−1 445 508	−144 044	3 485 987	1 636 485
	Consumer electronics	−173 203	−1 811 305	−3 770 110	1 824 268	−3 930 350
	Aerospace	368 821	−2 032 482	114 444	1 256 637	−292 580
1985	Pharmaceutical products	9 394	−241 715	260 582	2 856 328	2 884 589
	Office and electronic data-processing equipment	1 029 680	−5 412 497	−1 998 805	1 705 392	−4 676 230
	Telecommunications, measuring and electromedical equipment	−188 430	−1 174 793	−438 110	3 467 046	1 665 713
	Consumer electronics	−77 142	−1 501 626	−4 791 491	2 004 019	−4 366 240
	Aerospace	1 104 913	−752 032	122 651	1 770 528	2 246 060
1986	Pharmaceutical products	−63 521	−224 177	422 167	3 367 767	3 502 236
	Office and electronic data-processing equipment	1 641 330	−5 815 031	−3 166 358	1 640 589	−5 699 470
	Telecommunications, measuring and electromedical equipment	−379 627	−1 087 111	−827 804	4 050 112	1 755 570
	Consumer electronics	−366 160	−1 372 580	−6 563 139	1 836 569	−6 465 310
	Aerospace	556 722	−2 008 110	127 826	3 843 812	2 520 250

For definitions and sources see notes at the end of the tables.

Table 7A

Exports by the European Community and other zones, analysed by degree of processing: 1965

(billion USD)

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
World	31,2	15,9	9,9	14,4	7,0	15,6
EUR 12	1,0	1,5	2,0	4,3	2,4	5,6
USA	4,1	2,3	1,1	2,2	2,1	5,8
Japan	0,1	0,4	0,3	1,5	0,7	0,9
Other industrialized countries[1]	5,4	5,0	2,1	4,0	1,5	2,9
Developing countries[2]	19,2	5,3	3,6	1,6	0,2	0,2
Asian NICs	0,6	0,2	0,2	0,7	0,1	0,0
Africa	2,7	0,9	0,5	0,1	0,0	0,0
Latin America	5,8	1,6	1,3	0,2	0,1	0,0
State-trading countries	1,1	1,3	0,8	0,5	0,1	0,1

[1] Industrialized countries less EUR 12, USA and Japan.

[2] Latin America + Asian NICs + Africa + other developing countries.

The definitions of levels of processing are as follows:
1. Unprocessed primary products
2. Semi-processed primary products
3. Highly processed primary products
4. Basic industrial products
5. More elaborate industrial products
6. Complex industrial products.

For other definitions see notes at the end of the tables.

Table 7B

Exports by the European Community and other zones, analysed by degree of processing: 1986

(billion USD)

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
World	212,4	92,8	81,5	207,8	133,0	336,1
EUR 12	10,0	10,9	16,5	50,2	31,2	69,1
USA	16,9	13,2	5,7	18,0	24,7	69,5
Japan	0,5	1,0	2,2	11,8	23,4	98,6
Other industrialized countries[1]	32,4	31,9	15,7	46,9	24,3	61,1
Developing countries[2]	137,4	29,5	31,7	72,5	25,9	34,5
Asian NICs	8,1	4,6	5,3	46,0	16,1	22,0
Africa	20,1	2,6	1,9	0,6	0,4	0,3
Latin America	33,9	8,5	9,1	8,0	3,9	8,0
State-trading countries	9,9	5,8	8,9	6,8	1,6	2,0

[1] Industrialized countries less EUR 12, USA and Japan.

[2] Latin America + Asian NICs + Africa + other developing countries.

The definitions of levels of processing are as follows:
1. Unprocessed primary products
2. Semi-processed primary products
3. Highly processed primary products
4. Basic industrial products
5. More elaborate industrial products
6. Complex industrial products.

For other definitions see notes at the end of the tables.

Notes to the tables

General

In certain tables the effects of rounding give rise to small differences between the totals given and the sum of the individual figures. With the exception of Tables 6A, 6B and 6C, the trade data for the Community refer to extra-Community trade. It should be noted that the differences between the values of intra-EC exports and imports in the three tables mentioned above are due to valuation differences (imports are in cif terms while exports are in fob terms) as well as to other discrepancies (commodity classification disparities, gaps in the data, distortions imposed by the requirements of confidentiality and national defence considerations).

Geographical analysis: definitions

European Community:	the Community of 12.
Industrialized countries:	OECD plus South Africa.
Latin America:	Central and South America including the Caribbean islands.
Latin America, non-OPEC:	Latin America less Venezuela and Ecuador.
Asian NICs:	Singapore, Taiwan, Philippines, South Korea, Hong Kong, Malaysia.
Africa:	All countries except South Africa, North African Mediterranean countries, and members of OPEC.
Other developing countries:	Mediterranean countries, China and rest of the world. For Table 3B: Mediterranean countries and China but not rest of the world.
State-trading countries:	USSR, Mongolia, German Democratic Republic, Poland, Czechoslavakia, Hungary, Romania, Bulgaria, Albania.

Product analyses

The classification of goods presented in the tables is derived from the NACE-CLIO R44 nomenclature of products and branches The links between the classification used and the NACE-CLIO R44 codes are set out in the attached table.

The high-technology products considered in Chapter VI of the report are the principal products of the following NACE activities as defined at the 3-digit level.

Product	*NACE activity number*
Pharmaceuticals	257
Office and electronic data-processing equipment	330
Telecommunications equipment, measuring and electrical equipment	344
Consumer electronics (audiovisual equipment, including TVs, radio-recorders, high-fidelity equipment)	345
Aerospace	364

In Table 7 the definitions of levels of processing are as follows:

1. Unprocessed primary products
2. Semi-processed primary products
3. Highly processed primary products
4. Basic industrial products
5. More elaborate industrial products
6. Complex industrial products

Sources

Table 1B: Volimex and Eurostat National Accounts.

Tables 1A, 2A, 2B, 3A, 3B, 4A1, 4A2, 4A3, 4A4, 4B1, 4B2, 4B3, 4B4, 4B5, 4B6, 5A1, 5A2, 5B1, 5B2: Volimex.

Tables 6A, 6B, 6C: Comtrade.

Table

Definition of product classification used in the Statistical annex in terms of the NACE-CLIO R44 codes[1]

	NACE-CLIO R44 code[1]
Agricultural products	01
Energy products	03 + 05 + 07 + 09 + 11
Total manufactures	
Metalliferous ores	13
Non-metallic minerals	15
Chemical products	17
Metal products	19
Agricultural and industrial machinery	21
Office machines	23
Electrical goods	25
Motor vehicles	27
Other transport equipment	29
Food, beverages	31 + 33 + 35 + 37 + 39
Textiles, clothing	41
Leather, footwear	43
Wood, furniture	45
Paper and printing	47
Rubber, plastic products	49
Other manufactured products	51
Intermediate goods	13 + 15 + 17
Investment goods	19 + 21 + 23 + 25 + 27 + 29
Consumer goods	31 + 33 + 35 + 37 + 39 + 41 + 43 + 45 + 47 + 49 + 51
Weak demand	13 + 15 + 19 + 41 + 43 + 45 + 51
Moderate demand	21 + 27 + 29 + 31 + 33 + 35 + 37 + 39 + 47 + 49
Strong demand	17 + 23 + 25

[1] For fuller definitions see Annex to *European system of integrated economic accounts*, Eurostat, Luxembourg 1979.

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