

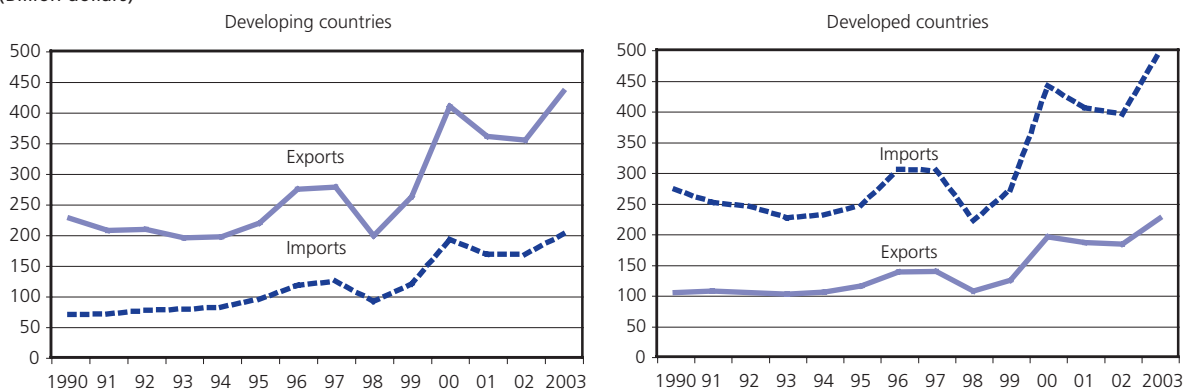
B SELECTED MEDIUM-TERM DEVELOPMENTS

International trade in fuels and pharmaceuticals has expanded at above-average rates in recent years, affecting the structure of global merchandise trade flows. These developments are examined here.

1. OIL MARKET DEVELOPMENTS AND DEVELOPING COUNTRIES

Developing countries have been the principal exporters of fuels over the last four decades, accounting for well over half of world exports of this product. This has always translated into a large surplus in trade in fuels for developing countries as a group. The surplus has fluctuated with oil price changes, in a range between \$110 billion and \$230 billion per year over the period 1990 to 2003 (see Chart 10).

Chart 10
Exports and imports of fuels of developing and developed countries, 1990-2003
(Billion dollars)



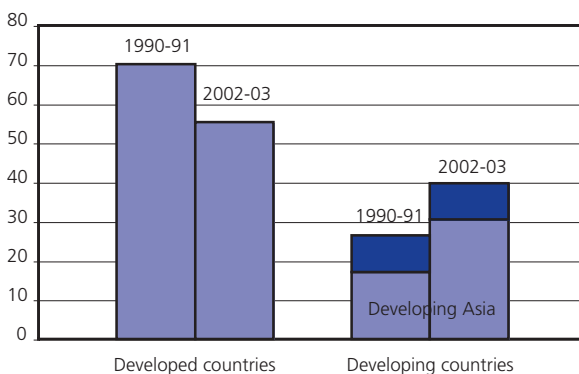
Source: WTO.

Developing countries as a group have accounted for between 58 and 63 per cent of annual world fuel exports since 1990. Clothing is the only other sector where developing countries have accounted for a dominant share of world exports. Although most developing country fuel exports are destined for developed country markets, the latter's share decreased sharply between 1990 and 2003 (from 71 to 56 per cent). Meanwhile, trade in fuels among developing countries rose from 25 to 40 per cent of the total exports of this group of countries during the same period (see Chart 11).

The increased weight of developing countries in this trade is not only limited to exports – import shares have also grown. According to WTO estimates, the share of the developing country imports in the value of world fuel exports rose from 20 per cent in 1990-91 to 27 per cent in 2002-03. The share increased further in 2004. The principal factor for this development is the large increase in import demand in Asian countries, in particular China, the Republic of Korea and India.

The marked increase in prices of fuels in 2003 and 2004 has benefited a number of net-fuel exporting developing countries by improving their terms of trade and increasing their foreign exchange earnings. However, the numerous oil-importing developing economies have been adversely affected.

Chart 11
Developing countries' fuels exports by region, 1990-2003
(Shares)

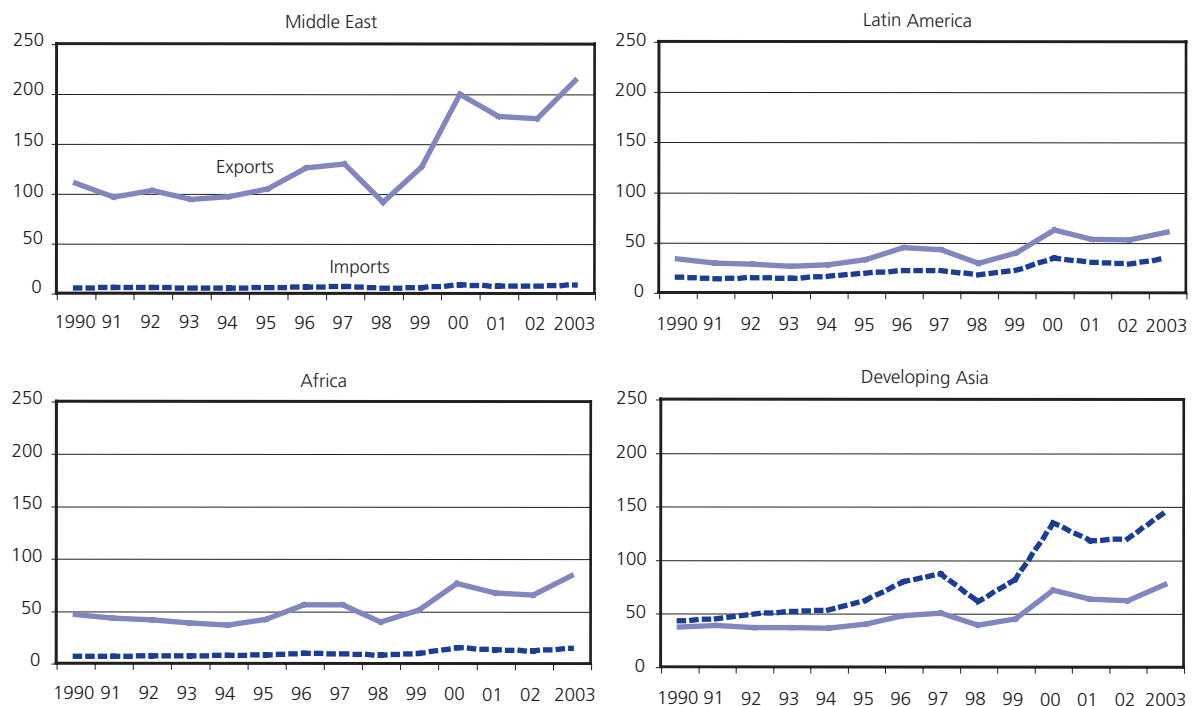


Source: WTO.

In 2004, developing country fuel exports exceeded the \$500 billion mark for the first time, more than twice the average level recorded in the 1990-99 period. The sharp rise in the value of merchandise exports of oil-exporting developing countries contributed prominently to the rise in the share of developing countries in world merchandise exports.

Among the developing regions, the Middle East and Africa are the two largest net exporters and greatly increased their export earnings in 2003 and 2004. Latin America is also a net exporter but developing Asia has become a large net importer of fuels. Chart 12 shows the development of exports, imports and the balance of fuels trade for the four developing regions. The Middle East and Africa accounted for 49 and 19 per cent, respectively, of developing country fuel exports in 2003. The net exports of fuels of the Middle East are estimated at \$205 billion in 2003, equivalent to 88 per cent of developing countries' total net exports of fuels.

Chart 12
Fuels exports and imports of four developing regions, 1990-2003
(Billion dollars)



Source: WTO.

The fact that the developing countries as a group are a large net exporter of fuels could lead an observer to conclude that higher oil/fuel prices are a largely positive development for this group. A more differentiated analysis has to take into account the great diversity of the situations in individual countries, and the rather high oil intensity of production and GDP in the developing world. A noteworthy development in global energy markets is that the energy intensity of production in developing countries has increased over the last 30 years, partly due to their industrialization, while that of the high income countries has decreased significantly.¹⁸ Some estimates have shown that the net result of an oil price hike on GDP growth in the developing world as a whole might even be slightly negative in the short run, despite the large surplus in fuels trade recorded by developing countries.¹⁹

¹⁸ OECD, OECD Economic Outlook (December 2004).

¹⁹ Simulations undertaken by the IMF Research Department suggest that a permanent oil price increase of \$5 would result in a net loss of GDP growth in subsequent years both for industrial countries and developing countries as a group. See IMF, The Impact of Higher Oil Prices on the Global Economy, Table 2, December 2000 available at <http://www.imf.org/external/pubs/ft/oil/2000/oilrep.pdf>.

Given the uneven distribution of oil production and reserves among developing countries, it is obvious that differences in the repercussions of an oil price increase are much larger on the country than on the regional level. Differences among countries in respect of their fuels trade balance illustrate the divergences in their energy situation. Appendix Tables 5 through 8 provide information on individual developing country average exports and imports of fuels in the period 2001-2003. These Tables also report the ratio of the fuels trade balance to total export earnings (merchandise and commercial services combined).

In Africa, large net-exporting positions are reported by 12 countries, while 37 other African countries are net importers of fuels.²⁰ Four African countries account for about 77 per cent of African fuel exports. The populations living in the net-fuel importing countries account for 57 per cent of the total African population. The fuel import value of net importers of fuels in Africa is rather small if compared with regional or world trade in fuels. However, even these small trade flows can represent a large share of these African countries' exports earnings. It has been estimated that 19 African countries had to spend more than 15 per cent of their export earnings (merchandise and commercial services) to finance their net imports of fuels in the 2001-03 period. Algeria, Nigeria, Libyan Arab Jamahiriya and Angola are the largest fuel exporters in Africa, reaping large benefits from high oil and gas prices. Morocco and South Africa, the two major net importers of fuels in the region stand to be adversely affected by an oil price increase (see Appendix Table 5).

In Latin America, eight countries were net exporters of fuels in 2001-03, and 25 were net importers. And like in the African region, a majority of the population (56 per cent) lives in countries which are net importers of fuels. Among the latter group, nine countries had to spend at least 15 per cent of their total export earnings to (net) import fuels. Venezuela and Mexico account for nearly two-thirds of the region's fuel exports while Brazil and Chile are the two largest importers of fuels in Latin America (see Appendix Table 6).

Among the 23 developing economies in Asia included in the sample, six were net exporters and 17 were net-importers of fuels. The population of the net exporters in Asia stood at 371 million and that the net importers at 2,948 million in 2002. Nearly 90 per cent of the population in developing Asia lives in economies which are net importers of fuels. Among the developing regions, Asia is the most adversely affected by higher fuel prices on global markets. Nepal, Mongolia, Pakistan and India spent between 20 per cent and 35 per cent of their export earnings from merchandise and commercial services on (net) imports of fuels in 2001-2003. The three biggest net importers of fuels in Asia during the same period were the Republic of Korea, India and China.²¹ Net exports of fuels from Indonesia and Malaysia were higher than those of Brunei Darussalam, although in the latter country fuels accounted for nearly 90 per cent of total merchandise exports, compared to 25 per cent for Indonesia and 10 per cent for Malaysia (see Appendix Table 7).

The Middle East is the only developing region in which the majority of countries and the majority of the population lives in countries which are net exporters of fuels (see Appendix Table 8).

Taking the developing countries together, one finds that at the beginning of this decade more than 70 per cent of them were net importers of fuels and more than three-quarters of the population of developing countries lived in net-fuel-importing economies. While the share of developing countries in world exports of fuels was roughly stable over the 1990-2003 period, their role as a consumer and importer has increased in global markets. Asian developing countries recorded the strongest expansion in energy demand and the sharpest rise in imports of fuels of all regions over this period. These developments in energy markets are linked to the extraordinary economic expansion of developing Asia over the last decades. These trends in energy markets will continue and perhaps even strengthen further if the dynamic expansion of the developing Asian economies continues unabated. In the short run, domestic energy supplies are unlikely to expand fast enough to cover the increased energy needs of this group of economies in the future. One option for Asian developing economies to assure increased and stable supplies of fuels in the years ahead is to participate more actively in exploration and in the development of transportation infrastructure and energy supplies in other countries. In particular, intra-regional cooperation in Asia has considerable potential to enhance the volume and security of future supplies of fuels from within the region.

²⁰ The reference period 2001-2003 has been chosen for the determination of the net-exporting position.

²¹ By 2004, China had overtaken both the Republic of Korea and India as developing Asia's largest fuel importer.

2. WHY IS GLOBAL TRADE IN PHARMACEUTICAL PRODUCTS EXPANDING SO FAST?

In the 1990s, world trade in pharmaceutical products²² expanded much faster than world merchandise trade and trade in chemical products. Between 1990-91 and 2001-02, the average annual growth in world exports of pharmaceutical products was close to 12 per cent, more than twice as high as the rate for chemical products. Chemicals are a rather heterogeneous product group, including inorganic chemicals, paints, detergents, fertilizers, petrochemicals, plastics, and pharmaceutical products. Among the 25 major chemical product groups, trade growth varied widely, but as already noted, of these groups pharmaceutical products grew very strongly over the decade ending 2001-02 (see Appendix Table 9).

The relative strength of global pharmaceutical trade compared to that of manufactures and other chemical products was even more pronounced in the 2000-03 period than in the 1990s. Trade in pharmaceutical products expanded at an average annual rate of 23 per cent between 2000 and 2003, twice as fast as chemicals and four times faster than global trade in manufactures. In 2003, world trade in pharmaceutical products reached \$200 billion, accounting for 3 per cent of world merchandise exports. Trade in pharmaceutical products exceeded that of textiles and iron and steel products, and remained only slightly below the world trade in clothing (see Table 4).

Table 4
World exports of chemicals and manufactured goods, 2000-2003
(Billion dollars and percentage change)

	Value	Annual percentage change			
	2003	2000-03	2001	2002	2003
Manufactures	5437	5.0	-3.8	5.2	14.5
Chemicals	794	10.7	2.6	11.0	19.0
Pharmaceutical products	200	23.0	22.4	26.3	20.3
All other chemical products	594	7.5	-1.8	6.7	18.6

Note: Pharmaceutical products are defined as SITC Rev.3 division 54.
Source: UNSD Comtrade Database; WTO.

World trade in pharmaceutical products is largely concentrated on trade among developed countries. North America, Western Europe and Japan account for about 90 per cent of world exports and more than 80 per cent of world imports of pharmaceuticals. This large share of high income countries in world pharmaceutical trade is due to the latter's dominance of global R&D, a high level of intra-industry and intra-firm trade in this industry and high health expenditures among the population. Almost all principal traders recorded strong growth in recent years. Outstanding pharmaceutical export growth since 2000 was reported by Ireland, Belgium, Canada and Israel. Intra-EU(15) and US imports more than doubled between 2000 and 2003. But strong expansion of pharmaceutical trade was not only limited to the OECD countries. China and India – both net exporters of pharmaceutical products – recorded strong export and import expansion over the 2000-2003 period. However, during the same period some others, such as Singapore and Hong Kong, China, recorded a decline in their pharmaceutical exports (see Table 5).

Although a general perception exists that the United States has the most innovative and competitive pharmaceutical industry, recent trade data reveal that the traditional US trade surplus in pharmaceuticals turned into a rapidly rising trade deficit from 2000 onwards.²³

²² Pharmaceutical products are defined to correspond to SITC Rev. 3 division 54.

²³ In R&D expenditure and in the introduction of top selling new chemical entities (NCE) US firms have a lead over European firms according to various reports. See Gambardella, A. et al. (2000) "Global Competitiveness in Pharmaceuticals A European Perspective", report prepared for the Directorate General, Enterprise and Industry, of the European Commission, November.

Table 5
Major exporters and importers of pharmaceutical products, 1990-2003
(Billion dollars and percentage change)

	Exports			Imports		
	Value	Annual percentage change		Value	Annual percentage change	
	2003	1990-00	2000-03	2003	1990-00	2000-03
United States	19.0	12.1	13.5	32.0	19.3	28.8
Canada	2.0	16.9	24.0	6.0	16.0	17.3
EU(15)	141.0	11.3	26.7	113.0	10.8	29.1
EU(15) extra	59.0	11.6	21.5	28.0	11.3	20.3
EU(15) intra	81.0	11.1	31.1	85.0	10.6	32.6
Switzerland	18.0	9.3	20.2	10.0	16.0	22.1
Japan	3.0	12.0	5.3	6.0	5.3	9.1
China	3.0	...	17.0	2.0	...	21.4
India	2.0	10.7	17.2	1.0	4.0	18.4
Israel	1.0	18.9	30.8	1.0	12.9	9.3
Memorandum item:						
Belgium	26.0	15.4	55.3	24.0	13.9	62.4
Ireland	15.0	17.7	45.4	2.0	12.8	19.6

Source: UNSD Comtrade Database; WTO.

Pharmaceuticals have now attained a prominent position in the chemical exports and imports of the major developed economies. The share of pharmaceuticals in the chemical exports and imports of the five leading traders combined reached 30 per cent in 2003, more than twice the share observed in 1990. For all major traders, with the exception of Japan, the share of pharmaceuticals in chemicals trade increased sharply in terms of both exports and imports (see Table 6).

Table 6
Share of pharmaceuticals in chemicals exports and imports of major traders, 1990-2003
(Percentage)

	Exports			Imports		
	1990	2000	2003	1990	2000	2003
EU(15)	12	23	32	10	21	32
EU(15) extra	18	28	34	16	25	31
EU(15) intra	9	19	30	9	20	32
Switzerland	32	48	54	15	38	46
United States	11	16	21	11	20	31
Canada	4	8	14	11	19	25
Japan	6	8	8	19	18	21
Total of above	12	21	30	11	21	31

Source: UNSD Comtrade Database; WTO.

What explanations can be given for the recent expansion of global trade in pharmaceuticals? A number of factors have contributed to this development, some related to demand developments and industrial restructuring, while others are likely to be due to government actions. First, demand for pharmaceutical products in the major markets (United States and Western Europe) was relatively strong. According to industry sources, global pharmaceutical sales rose by nearly 50 per cent over the 2000-2003 period, or three times faster than nominal global GDP growth.²⁴ Various factors have sustained this strong demand growth, such as the aging of the populations and the increased importance of "life-style" drugs.

²⁴ Global audited sales of pharmaceutical products rose from \$317.2 billion in 2000 to \$466.2 billion in 2003. See *IMS World Review 2004*. Nominal world GDP (valued at market exchange rates) expanded from \$31.43 trillion in 2000 to \$36.24 trillion in 2003 according to IMF (September 2004).

Second, mergers and acquisitions as well as outsourcing have led to a concentration in the production of bulk ingredients and end products on fewer plants and locations, in order to reap benefits from increasing returns to scale.²⁵ The stronger specialization of pharmaceutical plants within large multinationals and the development of production networks in this industry have led to increased shipments between the different locations and a rise in cross-border transactions.

Third, cross-border shipments have benefited from trade liberalization since 1995, following the elimination of tariffs for pharmaceutical products in the Uruguay Round negotiations in all major producing markets.²⁶ For the Quad countries (United States, EU(15), Japan and Canada), it is estimated that the average MFN bound duty of pharmaceuticals stood at 6.2 per cent in 1994 and became zero by 1999.

Fourth, the dynamic growth of Ireland's pharmaceutical industry and exports is due to a substantial FDI inflow, attracted by a well developed infrastructure and favourable tax conditions. According to the Industrial Development Agency of Ireland (IDA), 13 out of the top 15 pharmaceutical companies in the world currently have substantial operations in Ireland and employ more than 17,000 people at 82 production facilities.²⁷

Fifth, there were a number of specific developments which boosted trade flows, unrelated to strong demand growth or the re-allocation of production among affiliates or unaffiliated firms through network-related companies. At the end of 2001, Belgium became a hub for the distribution of pharmaceuticals produced in Ireland. This resulted in a jump of Belgium's imports and exports of pharmaceuticals of more than 100 per cent in 2002, and turned Belgium into the world's largest exporter of pharmaceuticals and the second largest importer (after the United States).²⁸ However, once established as a trading hub, the growth in Belgium's pharmaceutical exports and imports slowed down sharply in the subsequent year. Obviously, this rise in Belgium's pharmaceutical trade does not correspond to a rise in traded value-added but more to a shift in wholesale trading patterns and might be considered largely as a double counting of trade flows.

Sixth, extensive regulation of sales of pharmaceuticals to end-users in many developed markets has led to significant price differences among national markets, even within the European Union. In a number of countries, these price differences contributed to a rise in parallel imports and re-imports of pharmaceutical products in excess of the overall market expansion. As regards re-imports of pharmaceuticals, they are illegal in the United States and therefore not recorded in its trade returns. In Germany, re-imports from the European Union member countries are not only legally possible but in certain cases even prescribed by the German government to lower overall health costs. As a consequence, German re-imports of pharmaceuticals increased five-fold over the last four years, to €1.3 billion in 2003.^{29 30}

The above observations illustrate some of the diverse factors at play in the expansion of global pharmaceutical exports in recent years. While strong demand growth and industrial restructuring have been major factors in the dynamic growth of pharmaceuticals trade, government policies have also in some cases had a significant influence of the evolution of these trade flows. This short examination of international trade flows can, of course, only touch upon some of the forces at play in the pharmaceuticals sector. More research is required to analyse in depth the economic factors behind the trade developments within this highly regulated industry.

²⁵ United States International Trade Commission (2003), found at <http://www.usitc.gov/tradeshifts/default.htm> and accessed on 9 August 2004.

²⁶ Nine WTO Members, including Canada, the EU, Japan, Switzerland and the United States committed themselves in their tariff schedules to grant MFN duty-free access for pharmaceutical products at the end of the Uruguay Round. The Pre-Uruguay MFN bound tariff averages (arithmetic) of pharmaceutical products was 8.8 per cent for Canada, 6.3 per cent for the EU, 4.9 per cent for Japan and 4.6 per cent for the United States, according to WTO calculations.

²⁷ Industrial Development Agency of Ireland (2004) at <http://www.idaireland.com/home/index.aspx?id=64>, accessed on 16 August 2004.

²⁸ Agence pour le Commerce Extérieur (2002) at <http://www.abh.acc.org/frameset/acciframe.html>.

²⁹ IMS (2004) at <http://www.imshealth.com>, accessed on 10 August 2004.

³⁰ In order to limit the growth in health expenditure, the German Bundestag has passed a law forcing pharmacies to make at least 7 per cent of their turnover of pre-packaged drugs with lower priced imports. See Bundesverband der Pharmazeutischen Industrie e.V., Pharma-Daten (2003) at http://www.bpi.de/internet/download/pharmadaten_2003.pdf, accessed on 24 August 2004.

APPENDIX TABLES

Appendix Table 1
World merchandise trade by region and selected country, 2004
(Billion dollars and percentage)

	Exports						Imports					
	Value	Annual percentage change					Value	Annual percentage change				
	2004	1995-00	2001	2002	2003	2004	2004	1995-00	2001	2002	2003	2004
World	8880	5	-4	5	17	21	9215	5	-4	4	16	21
North America	1330	7	-6	-4	5	14	2010	11	-6	2	7	16
United States	819	6	-6	-5	4	13	1526	10	-6	2	8	17
Canada	322	8	-6	-3	8	18	276	8	-7	0	8	13
Mexico	189	16	-5	1	3	14	206	19	-4	0	1	16
South and Central America ^a	272	5	-3	0	13	28	238	3	-1	-13	5	27
Brazil	96	3	6	4	21	32	66	2	0	-15	2	30
Other South and Central America ^a	175	6	-7	-1	9	26	172	4	-1	-12	6	25
Europe	4024	2	1	7	19	19	4133	4	-2	5	20	20
European Union (25)	3708	2	1	7	19	19	3784	4	-1	5	20	19
Germany	915	1	4	8	22	22	717	1	-2	1	23	19
France	451	2	-1	3	18	15	464	3	-3	0	21	16
United Kingdom	346	4	-4	3	9	13	462	5	-3	4	13	18
Italy	346	1	2	4	18	16	349	3	-1	5	20	17
Other Western Europe	204	3	0	4	14	19	165	1	-1	2	15	18
Switzerland	118	0	1	7	15	18	111	1	1	-1	15	16
South-East Europe	112	5	10	15	29	32	183	8	-8	20	32	36
CIS	263	5	0	5	27	35	171	-3	16	9	27	31
Russian Federation	183	5	-2	4	27	35	95	-6	20	12	23	28
Africa	228	6	-6	3	23	31	207	0	4	1	22	25
South Africa	46	1	-2	2	23	26	55	-1	-5	4	40	34
Africa less South Africa	183	7	-7	3	23	32	152	1	6	0	16	22
Oil exporters ^b	113	12	-13	1	27	41	52	0	20	-5	21	32
Non oil exporters	69	0	2	7	18	19	100	1	1	2	14	18
Middle East	379	12	-11	5	21	26	243	4	6	4	13	23
Asia	2385	5	-9	8	18	25	2214	3	-7	6	19	27
Japan	565	2	-16	3	13	20	455	2	-8	-3	14	19
China	593	11	7	22	35	35	561	11	8	21	40	36
Four East Asian traders ^c	637	5	-14	5	15	26	586	2	-16	3	13	28
India	73	7	2	14	16	27	95	8	-2	12	26	34
Memorandum items:												
MERCOSUR (4)	135	4	4	1	19	28	94	2	-6	-26	10	37
ASEAN (10)	550	6	-10	5	12	20	491	1	-8	4	10	26
EU (25) extra-trade	1203	-	1	6	17	20	1279	-	-4	1	19	20
EU (15)	3447	2	0	6	19	18	3485	3	-2	4	20	18
EU (new members, 10)	260	8	11	14	29	32	299	9	6	11	26	28
Developing economies	2780	8	-7	7	18	26	2523	5	-4	4	16	27
Developing Asia	1712	7	-7	10	20	27	1629	4	-7	9	21	30

^a Includes the Caribbean.

^b Algeria, Angola, Congo, Equatorial Guinea, Gabon, Libya, Nigeria, Sudan.

^c Chinese Taipei, Hong Kong China, Rep. of Korea, and Singapore.

Source: WTO.

Appendix Table 2
World trade of commercial services by region and selected country, 2004
 (Billion dollars and percentage)

	Exports						Imports					
	Value	Annual percentage change					Value	Annual percentage change				
	2004	1995-00	2001	2002	2003	2004	2004	1995-00	2001	2002	2003	2004
World	2100	5	0	7	13	16	2081	4	1	5	14	16
North America	380	7	-4	2	5	11	334	9	-1	3	9	13
United States	319	7	-4	2	5	11	259	10	-1	2	8	13
Canada	47	9	-3	4	5	12	56	6	-1	3	12	12
Mexico	14	7	-7	-1	1	11	19	13	-1	3	4	8
South and Central America ^a	55	6	-2	-3	9	15	57	4	0	-12	5	14
Brazil	11	8	-3	1	9	20	16	3	2	-15	8	12
Other South and Central America ^a	44	6	-2	-4	9	13	41	4	0	-10	4	15
Europe	1114	4	3	9	19	16	1019	4	3	8	19	14
European Union (25)	1005	4	4	9	18	16	948	4	4	8	19	14
Germany	126	2	5	17	18	9	191	1	4	4	18	11
United Kingdom	169	9	-1	11	13	16	135	9	0	9	13	13
France	108	-1	2	5	15	10	95	-1	3	11	22	13
Italy	85	-2	2	4	18	21	80	0	3	9	20	9
Other Western Europe	64	3	-3	9	15	15	46	2	5	8	15	15
Switzerland	37	2	-6	11	14	12	21	1	6	5	12	8
South-East Europe	44	8	-11	1	35	21	24	9	-12	8	26	30
CIS	32	2	13	20	16	22	49	0	24	16	15	27
Russian Federation	20	-2	17	20	18	25	34	-4	23	15	16	27
Africa	47	3	1	4	21	22	54	2	2	5	13	19
South Africa	8	2	-7	1	40	24	9	0	-9	2	40	24
Middle East	36	10	-5	-2	11	18	66	5	-2	1	22	17
Asia	436	3	-1	8	9	21	501	2	-2	4	8	22
Japan	94	1	-6	2	8	23	134	-1	-7	0	3	21
China	59	10	9	20	18	...	70	8	9	18	19	...
Four East Asian traders ^b	156	3	-1	5	7	20	145	4	-1	6	4	22
India	32	21	19	12	20	...	38	14	16	-2	25	...
Memorandum items:												
MERCOSUR (4)	18	6	-5	-11	14	21	24	4	-2	-25	10	15
ASEAN (10)	87	-1	-1	7	-2	21	108	2	-1	4	4	18

^a Includes the Caribbean.

^b Chinese Taipei, Hong Kong China, Rep. of Korea and Singapore.

Source: WTO.

Appendix Table 3
Leading exporters and importers in world merchandise trade, 2004
(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Germany	914.8	10.0	22	1	United States	1526.4	16.1	17
2	United States	819.0	9.0	13	2	Germany	717.5	7.6	19
3	China	593.4	6.5	35	3	China	561.4	5.9	36
4	Japan	565.5	6.2	20	4	France	464.1	4.9	16
5	France	451.0	4.9	15	5	United Kingdom	462.0	4.9	18
6	Netherlands	358.8	3.9	21	6	Japan	454.5	4.8	19
7	Italy	346.1	3.8	16	7	Italy	349.0	3.7	17
8	United Kingdom	345.6	3.8	13	8	Netherlands	319.9	3.4	21
9	Canada	322.0	3.5	18	9	Belgium	287.2	3.0	22
10	Belgium	308.9	3.4	21	10	Canada	275.8	2.9	13
11	Hong Kong, China	265.7	2.9	16	11	Hong Kong, China	273.0	2.9	17
	domestic exports	22.6	0.2	15		retained imports ^a	29.9	0.3	24
	re-exports	243.1	2.7	16	12	Spain	249.8	2.6	20
12	Korea, Republic of	253.9	2.8	31	13	Korea, Republic of	224.4	2.4	26
13	Mexico	188.6	2.1	14	14	Mexico	206.4	2.2	16
14	Russian Federation	183.2	2.0	35	15	Taipei, Chinese	167.9	1.8	32
15	Taipei, Chinese	181.4	2.0	21					
16	Singapore	179.5	2.0	25	16	Singapore	163.8	1.7	28
	domestic exports	98.5	1.1	23		retained imports ^a	82.8	0.9	30
	re-exports	81.0	0.9	26	17	Austria	115.1	1.2	16
17	Spain	179.0	2.0	15	18	Switzerland	111.5	1.2	16
18	Malaysia	126.5	1.4	21	19	Australia	107.8	1.1	21
19	Sweden	121.0	1.3	19	20	Malaysia	105.2	1.1	26
20	Saudi Arabia	119.6	1.3	28					
	Total of above ^b	6823.4	74.8	-		Total of above ^b	7142.7	75.5	-
	World ^b	9123.5	100.0	21		World ^b	9458.3	100.0	21

^a Retained imports are defined as imports less re-exports.

^b Includes significant re-exports or imports for re-exports.

Source: WTO.

Appendix Table 4
Leading exporters and importers in world trade in commercial services, 2004
 (Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	United States	319.3	15.2	11	1	United States	259.0	12.4	13
2	United Kingdom	169.2	8.1	16	2	Germany	190.8	9.2	11
3	Germany	126.1	6.0	9	3	United Kingdom	134.7	6.5	13
4	France	108.4	5.2	10	4	Japan	133.6	6.4	21
5	Japan	93.8	4.5	23	5	France	94.5	4.5	13
6	Italy	84.6	4.0	21	6	Italy	79.6	3.8	9
7	Spain	84.2	4.0	10	7	Netherlands	72.4	3.5	11
8	Netherlands	72.4	3.4	15	8	China	69.7	3.3	...
9	China	58.9	2.8	...	9	Ireland	58.2	2.8	11
10	Hong Kong, China	54.0	2.6	20	10	Canada	55.9	2.7	12
11	Belgium	49.5	2.4	15	11	Spain	53.3	2.6	17
12	Austria	47.2	2.2	12	12	Korea, Republic of	49.6	2.4	24
13	Canada	46.9	2.2	12	13	Belgium	48.4	2.3	15
14	Ireland	46.2	2.2	22	14	Austria	48.0	2.3	16
15	Korea, Republic of	39.7	1.9	26	15	India	37.9	1.8	...
16	Sweden	37.8	1.8	25	16	Singapore	36.2	1.7	23
17	Denmark	37.5	1.8	18	17	Denmark	34.3	1.6	21
18	Switzerland	37.1	1.8	12	18	Russian Federation	33.5	1.6	27
19	Singapore	36.6	1.7	19	19	Sweden	33.2	1.6	16
20	Luxembourg	33.4	1.6	35	20	Taipei, Chinese	29.9	1.4	20
	Total of above	1585.0	75.4	-		Total of above	1555.0	74.6	-
	World	2100.0	100.0	16		World	2080.0	100.0	16

Note: Figures for a number of countries and territories have been estimated by the Secretariat. Annual percentage changes and ranking are affected by continuity breaks in the series for a large number of economies, and by limitations in cross-country comparability.

Source: WTO.

Appendix Table 5
Fuels trade of African countries, average 2001-2003
(Million dollars and percentage)

	Exports of fuels	Imports of fuels	Balance	Net fuel trade to exports ^a (%)	Population (Million) 2002
All net exporters	66388	1724	64664	72	355
Algeria	20459	93	20366	92	31
Nigeria	16454	545	15908	85	133
Libya	11805	...	11805	93	5
Angola	6875	...	6875	88	13
Congo	2135	...	2135	81	4
Equatorial Guinea	2037	18	2019	90	1
Gabon	1895	...	1895	73	1
Egypt	1951	563	1387	10	66
Sudan	1482	128	1354	65	33
Cameroon	991	297	694	29	16
Congo, Dem.Rep.	220	71	148	14	52
Seychelles	84	8	76	14	0
All net importers	5916	13111	-7195	-8	474
Sao Tome and Principe	0	4	-4	-21	...
Central African Republic	0	5	-5	-3	4
Eritrea	0	6	-6	-3	4
Guinea Bissau	0	7	-7	-10	1
Gambia	0	13	-13	-19	1
Cape Verde	0	15	-15	-9	1
Burundi	0	18	-18	-46	7
Comoros	0	19	-19	-47	1
Chad	27	54	-26	-11	8
Rwanda	1	36	-34	-29	8
Niger	3	65	-62	-18	11
Côte d'Ivoire	607	676	-69	-1	17
Senegal	231	315	-84	-5	10
Togo	2	88	-86	-18	5
Zambia	16	108	-93	-9	10
Sierra Leone	0	99	-99	-98	5
Malawi	1	109	-108	-22	11
Mauritania	0	112	-112	-26	3
Benin	1	115	-115	-19	7
Swaziland	8	126	-119	-11	1
Mozambique	72	200	-128	-12	18
Botswana	2	137	-135	-4	2
Guinea	3	144	-141	-16	8
Kenya	538	680	-142	-5	31
Burkina Faso	3	162	-158	-52	12
Namibia	8	172	-164	-11	2
Uganda	17	201	-184	-25	25
Mali	0	191	-191	-19	11
Tunisia	650	852	-203	-2	10
Madagascar	15	231	-216	-24	16
Mauritius	1	235	-235	-8	1
Tanzania	5	274	-269	-17	35
Ethiopia	0	276	-276	-29	67
Ghana	148	491	-344	-13	20
Zimbabwe	10	529	-519	-38	13
South Africa	3237	4303	-1067	-3	45
Morocco	312	2041	-1729	-14	30
<i>Liberia</i>				-17	3
<i>Somalia</i>				-6	9
Total of above	72304	14835	57469	31	829
Africa	72018	13244	58774	32	...

^a Exports of merchandise and commercial services.

Source: WTO; UNSD Comtrade Database; World Bank World Development Indicators.

Appendix Table 6
Fuels trade of Latin American countries, average 2001-2003
 (Million dollars and percentage)

	Exports of fuels	Imports of fuels	Balance	Net fuel trade to exports ^a (%)	Population (Million) 2002
All net exporters	51779	9730	42050	16	229.8
Venezuela	20705	380	20325	78	25.1
Mexico	15118	5375	9743	6	100.8
Colombia	4482	212	4270	30	43.7
Argentina	4654	623	4031	13	37.0
Ecuador	2189	414	1775	29	12.8
Trinidad and Tobago	2375	924	1450	30	1.3
Bolivia	358	108	250	15	8.8
Netherland Antilles	1898	1693	205	6	0.2
All net importers	5300	20823	-15523	-10	296.4
Dominica	0	13	-13	-10	0.1
Saint Kitts and Nevis	0	15	-15	-13	0.0
Saint Vincent and the Grenadines	0	17	-17	-10	0.1
Grenada	0	19	-19	-10	0.1
Saint Lucia	3	35	-33	-9	0.2
Suriname	33	87	-54	-12	0.4
Belize	0	66	-66	-19	0.3
Barbados	44	120	-76	-6	0.3
Haiti	0	95	-95	-22	8.3
Bahamas	120	250	-131	-5	0.3
Guyana	0	132	-132	-20	0.8
Nicaragua	10	280	-270	-34	5.3
Paraguay	1	325	-323	-20	5.5
Uruguay	29	394	-365	-13	3.4
Panama	38	494	-455	-15	2.9
Costa Rica	43	517	-475	-6	3.9
El Salvador	170	712	-541	-15	6.4
Jamaica	31	622	-591	-19	2.6
Peru	521	1151	-630	-7	26.7
Guatemala	172	829	-657	-19	12.0
Honduras	4	718	-714	-40	6.8
Cuba	23	919	-896	-22	11.3
Dominican Rep.	839	1916	-1077	-13	8.6
Chile	308	3172	-2865	-12	15.6
Brazil	2913	7925	-5012	-7	174.5
Total of above	57079	30553	26526	6	526.2
Latin America	55226	30957	24269	3	...

^a Exports of merchandise and commercial services.

Source: WTO; UNSD Comtrade Database; World Bank World Development Indicators.

Appendix Table 7
Fuels trade of Developing Asian economies, average 2001-2003
(Million dollars and percentage)

	Exports of fuels	Imports of fuels	Balance	Net fuel trade to exports ^a (%)	Population (Million) 2002
All net exporters	31835	13511	18324	9	371
Indonesia	14626	6570	8056	13	212
Malaysia	8875	4094	4780	4	24
Brunei Darussalam	3540	9	3531	83	0
Viet Nam	3748	2230	1518	7	80
Myanmar	705	413	293	9	49
Papua New Guinea	342	196	147	7	5
All net importers	35052	125371	-90319	-8	2948
Maldives	0	51	-51	-11	0
Fiji	32	110	-79	-8	1
Cambodia	0	116	-116	-6	13
Mongolia	6	147	-141	-22	3
Macao, China	25	191	-165	-2	0
Nepal	0	314	-314	-35	24
Bangladesh	26	566	-539	-8	136
Sri Lanka	18	725	-707	-11	19
Pakistan	219	3033	-2814	-24	145
Philippines	409	3815	-3406	-9	80
Hong Kong, China	143	4036	-3893	-6	7
Singapore	10363	15688	-5325	-3	4
Thailand	1938	8077	-6138	-7	62
Taipei, Chinese	2428	12846	-10418	-7	23
China	9478	21972	-12494	-3	1280
India	2637	18116	-15479	-21	1049
Korea, Republic of	7284	35162	-27878	-14	48
<i>Afghanistan</i>				(-9)	28
<i>Lao people's Dem. Rep.</i>				(-15)	6
<i>Korea, Dem. Rep.</i>				(-29)	22
Total of above	66887	138882	-71994	-5	3319
Developing Asia	67370	127406	-60036	-4	...

^a Exports of merchandise and commercial services.

Source: WTO; UNSD Comtrade Database; World Bank World Development Indicators.

Appendix Table 8
Fuels trade of Middle East countries, average 2001-2003
 (Million dollars and percentage)

	Exports of fuels	Imports of fuels	Balance	Net fuel trade to exports ^a (%)	Population (Million) 2002
All net exporters	181529	3301	178229	72	157
Saudi Arabia	69902	67	69835	84	22
United Arab Emirates	26342	242	26100	45	4
Iran, Islamic Rep. of	25205	872	24333	77	66
Kuwait	15651	...	15651	85	2
Iraq	13670	...	13670	96	24
Qatar	10325	25	10301	81	1
Oman	8849	184	8665	74	3
Syrian Arab Republic	4056	133	3923	55	17
Yemen	3491	...	3491	96	19
Bahrain	4037	1777	2260	33	1
All net importers	118	5466	-5348	-11	16
Jordan	2	776	-774	-19	5
Lebanon	3	1115	-1112	-97	4
Israel	112	3575	-3463	-8	7
Total of above	181647	8767	172881	59	173
Middle East	188471	7551	180921	62	...

^a Exports of merchandise and commercial services.

Source: WTO; UNSD Comtrade Database; World Bank World Development Indicators.

Appendix Table 9
World exports of chemicals by product group, 1990-1991 and 2001-2002
 (Billion dollars and percentage)

(SITC Rev.2 at 3-digit level)	Value		Annual average percentage change
	1990-91	2001-02	
All products	3326.7	5210.2	4.2
Chemicals	290.4	520.7	5.5
511 Hydrocarbons n.e.s.	15.1	17.1	1.1
512 Alcohols, phenols, etc.	8.0	11.3	3.2
513 Carboxylic acids, etc.	10.1	14.4	3.3
514 Nitrogen-function compounds	17.6	31.4	5.4
515 Organo-inorganic compounds, etc.	12.1	32.0	9.2
516 Other organic chemicals	7.0	11.6	4.8
522 Inorganic chemical elements, oxides, etc.	12.4	14.4	1.3
523 Other inorganic chemicals	8.0	11.0	3.0
524 Radioactive materials	5.0	5.1	0.0
531 Synth. dye, natural indigo, lakes	7.7	7.5	-0.2
532 Dyes n.e.s., tanning products	0.6	0.8	1.7
533 Pigments, paints, varnishes etc.	11.8	21.3	5.5
541 Medicinal, pharmaceutical products	38.7	129.0	11.6
551 Essential oils, perfume, etc.	3.7	8.3	7.6
553 Perfumery, cosmetics, etc.	10.5	24.0	7.8
554 Soap, cleansing, etc.	7.1	12.2	5.1
562 Fertilizers, manufactured	13.0	11.4	-1.2
572 Explosives, pyrotechnic products	1.5	1.1	-2.7
582 Products of condensation, etc.	16.4	26.5	4.5
583 Polymerization products	48.1	69.7	3.4
584 Cellulose, derivatives, etc.	1.8	2.3	2.6
585 Plastic materials, m.e.s.	0.3	0.7	7.6
591 Pesticides, disinfectants	7.2	9.6	2.6
592 Starches, insulin, gluten, etc.	4.9	8.0	4.5
598 Miscellaneous chemical products, n.e.s.	21.8	39.9	5.6

Source: UNCTAD, Handbook of Statistics, 2004.