

Technical Notes

This Note details the definitions, methods and sources of the statistics used in *International Trade Statistics 2004*.

I. Composition of geographical and other groupings

1. Regions

North America: Canada, United States of America, and territories in North America n.e.s.

Latin America: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela and other countries and territories in Latin America n.e.s.

Western Europe: Austria, Belgium, Bosnia and Herzegovina, Croatia, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Macedonia (former Yugoslav Republic of), Malta, Netherlands, Norway, Portugal, Serbia and Montenegro, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and territories in Western Europe n.e.s.

Central and Eastern Europe, the Baltic States and the Commonwealth of Independent States (transition economies), of which *Central and Eastern Europe:* Albania, Bulgaria, Czech Republic, Hungary, Poland, Romania and the Slovak Republic; *the Baltic States:* Estonia, Latvia and Lithuania; and *the Commonwealth of Independent States (CIS):* Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Africa, of which *North Africa:* Algeria, Egypt, Libyan Arab Jamahiriya, Morocco and Tunisia; and *Sub-Saharan Africa comprising:* *Western Africa:* Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo; *Central Africa:* Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda, and Sao Tome and Principe; *Eastern Africa:* Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Somalia, Sudan, United Republic of Tanzania and Uganda; and *Southern Africa:* Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe and territories in Africa n.e.s.

The Middle East: Bahrain, Iraq, Islamic Republic of Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen and other countries and territories in the Middle East n.e.s.

Asia, of which *West Asia:* Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka; and *East Asia (including Oceania):* Australia; Brunei Darussalam; Cambodia; China; Fiji; Hong Kong Special Administrative Region of China (Hong Kong, China); Indonesia; Japan; Kiribati; Lao People's Democratic Republic; Macao, China; Malaysia; Mongolia; Myanmar; New Zealand; Papua New Guinea; Philippines; Republic of Korea; Samoa; Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu (Taipei, Chinese); Singapore; Solomon Islands; Thailand; Tonga; Tuvalu; Vanuatu;

Viet Nam and other countries and territories in Asia and the Pacific n.e.s..

2. Regional integration agreements

ANDEAN: Bolivia, Colombia, Ecuador, Peru and Venezuela.

ASEAN/AFTA: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

CACM: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua

CARICOM: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

CEFTA: Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovenia and the Slovak Republic.

CEMAC: Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon.

COMESA: Angola, Burundi, Comoros, Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia, Zimbabwe.

ECCAS: Angola, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda, Sao Tome and Principe.

ECOWAS: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.

EFTA: Iceland, Liechtenstein, Norway, Switzerland.

EUROPEAN UNION: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

GCC: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates.

MERCOSUR: Argentina, Brazil, Paraguay and Uruguay.

NAFTA: Canada, Mexico and the United States of America.

SAARC/SAPTA: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka.

SADC: Angola, Botswana, Democratic Republic of the Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia, Zimbabwe.

WAEMU: Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo.

3. Other groups

ACP: Angola, Antigua and Barbuda, Bahamas, Barbados, Belize, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Democratic Republic of the Congo, Cook Islands, Côte d'Ivoire, Cuba, Djibouti, Dominica, Dominican Republic, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Grenada, Guinea, Guinea-Bissau, Guyana, Haiti, Jamaica, Kenya, Kiribati, Lesotho, Liberia, Madagascar, Malawi, Mali, Marshall Islands, Mauritania, Mauritius, Micronesia, Mozambique, Namibia, Nauru, Niger, Nigeria, Niue, Palau, Papua New Guinea, Rwanda, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, Sudan, Suriname, Swaziland, United Republic of Tanzania, Timor Leste, Togo, Tonga, Trinidad and Tobago, Tuvalu, Uganda, Vanuatu, Zambia, Zimbabwe.

APEC: Australia; Brunei Darussalam; Canada; Chile; China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; Philippines; Russian Federation; Singapore; Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu (Taipei, Chinese); Thailand; United States of America and Viet Nam.

European Union new member States: Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia.

European Union applicant countries: Bulgaria, Croatia, Romania and Turkey.

Least-developed countries: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

Six East Asian traders: Hong Kong, China; Malaysia; Republic of Korea; Singapore; Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu (Taipei, Chinese) and Thailand.

WTO members are frequently referred to as "country", although some members are not countries in the usual sense of the word but are officially "customs territories". The definition of geographical and other groupings in this report does not imply an expression of opinion by the Secretariat concerning the status of any country or territory, the delimitation of its frontiers, nor on the rights and obligations of any WTO Member in respect of WTO Agreements. The colours, boundaries, denominations, and classifications in the maps of this publication do not imply, on the part of the WTO, any judgement on the legal or other status of any territory, or any endorsement or acceptance of any boundary.

The Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu is referred to as Taipei, Chinese throughout this report.

II. Definitions and methods

II.1 Merchandise trade

1. Exports and imports

Two systems of recording merchandise exports and imports are in common use. They are referred to as *general trade* and *special trade* and differ mainly in the way warehoused and re-exported goods are treated. General trade figures are larger than the corresponding special trade figures because the latter exclude certain trade flows, such as goods shipped through bonded warehouses.

To the extent possible, total merchandise trade is defined in this report according to the general trade definition. It covers all types of inward and outward movement of goods through a country or territory including movements through customs warehouses and free zones. Goods include all merchandise that either add to or reduce the stock of material resources of a country or territory by entering (imports) or leaving (exports) the country's economic territory. For further explanations, see United Nations *International Trade Statistics, Concepts and Definitions*, Series M, N° 52, Revision 2.

Unless otherwise indicated, exports are valued at transaction value, including the cost of transportation and insurance to bring the merchandise to the frontier of the exporting country or territory (f.o.b. valuation). Imports are valued at transaction value plus the cost of transportation and insurance to the frontier of the importing country or territory (c.i.f. valuation).

2. Products

All product groups are defined according to Revision 3 of the Standard International Trade Classification (SITC).

The following groupings are used in this report:

A. Primary products

(i) Agricultural products

- *Food:* food and live animals; beverages and tobacco; animal and vegetable oils, fats and waxes; oilseeds and oleaginous fruit (SITC sections 0, 1, 4 and division 22).

- *Raw materials:* hides, skins and furskins, raw; crude rubber (including synthetic and reclaimed); cork and wood; pulp and waste paper; textile fibres and their wastes; crude animal and vegetable materials, n.e.s. (SITC divisions 21, 23, 24, 25, 26, 29).

(ii) Mining products

- *Ores and other minerals:* crude fertilizers (other than those classified in chemicals) and crude minerals; metalliferous ores and metal scrap (SITC divisions 27, 28).

- *Fuels:* (SITC section 3).

- *Non-ferrous metals:* (SITC division 68).

B. Manufactures: (SITC sections 5, 6, 7, 8 minus division 68 and group 891)

(i) *Iron and steel:* (SITC division 67).

(ii) *Chemicals:* organic chemicals (SITC division 51); plastics (SITC divisions 57, 58); inorganic chemicals (SITC division 52); pharmaceuticals (SITC division 54); other chemicals (SITC divisions 53, 55, 56, 59).

(iii) *Other semi-manufactures:* leather, leather manufactures, n.e.s., and dressed furskins; rubber manufactures, n.e.s.; cork and wood manufactures (excluding furniture); paper, paperboard and articles of paper pulp, of paper or of paperboard; non-metallic mineral manufactures, n.e.s.; manufactures of metals, n.e.s. (SITC divisions 61, 62, 63, 64, 66, 69).

(iv) *Machinery and transport equipment:* power generating machinery; other non-electrical machinery; office machines and telecommunications equipment; electrical machinery and apparatus; automotive products; other transport equipment (SITC section 7).

- *Power generating machinery:* power generating machinery and equipment minus internal combustion piston engines, and parts thereof, n.e.s. (SITC division 71 minus group 713).

- *Other non-electrical machinery:* machinery specialized for particular industries; metalworking machinery; general industrial machinery and equipment, n.e.s., and machine parts, n.e.s. (SITC divisions 72, 73, 74).

- *Office machines and telecommunications equipment:* office machines and automatic data processing machines; telecommunications and sound recording and reproducing apparatus and equipment; thermionic, cold cathode or photo-cathode valves and tubes (SITC divisions 75, 76 and group 776).

- *Electrical machinery and apparatus:* electrical machinery, apparatus and appliances, n.e.s., and electrical parts thereof; minus thermionic, cold cathode

or photo-cathode valves and tubes; minus electrical equipment, n.e.s., for internal combustion engines and vehicles, and parts thereof (SITC division 77 minus group 776 and subgroup 7783).

- *Automotive products*: motor cars and other motor vehicles principally designed for the transport of persons (other than public transport type vehicles) including station wagons and racing cars; motor vehicles for the transport of goods and special purpose motor vehicles; road motor vehicles, n.e.s.; parts and accessories of motor vehicles and tractors; internal combustion piston engines for vehicles listed above; electrical equipment, n.e.s., for internal combustion engines and vehicles, and parts thereof (SITC groups 781, 782, 783, 784, and subgroups 7132, 7783).

- *Other transport equipment*: other transport equipment (railway vehicles, aircraft, spacecraft, ships and boats, and associated parts and equipment); motorcycles and cycles, motorized and non-motorized; trailers and semi-trailers, other vehicles (not mechanically propelled), and specially designed and equipped transport containers; internal combustion piston engines for aircraft, and parts thereof, n.e.s.; internal combustion piston engines, marine propulsion; internal combustion piston engines, n.e.s.; parts, n.e.s., for internal combustion piston engines listed above (SITC division 79, groups 785, 786, and subgroups 7131, 7133, 7138, 7139).

(v) *Textiles*: (SITC division 65).

(vi) *Clothing*: (SITC division 84).

(vii) *Other consumer goods*: household articles, travel goods, footwear, instruments and apparatus, photography, optical goods, watches and clocks, and other manufactured articles, n.e.s. (SITC divisions 81, 82, 83, 85, 87, 88, 89 excluding group 891, arms and ammunition). Of which furniture (SITC division 82), travel goods (SITC division 83), footwear (SITC division 85), and toys and games (SITC group 894).

C. Other products: commodities and transactions not classified elsewhere (including gold); arms and ammunition (SITC section 9 and group 891).

3. World trade network

The world merchandise trade network by region and product from which Appendix tables A2 and A10 are derived is based on export data. The network is constructed in the following way:

First, total merchandise exports from each of the seven regions are aggregated from the individual country or territory figures published in Appendix table A6.

Next, the total merchandise exports of each region are distributed by destination and then by product. The regional and commodity breakdown is based on UNSD *Comtrade* database, EUROSTAT, national statistics and Secretariat estimates.

During this process, the principal adjustments to the figures are as follows:

- (i) Exports of ships to the open registry countries Panama and Liberia are re-allocated from each region's exports to Latin America and Africa to "unspecified destinations" (a category not shown separately).
- (ii) China's exports are adjusted to approximate their final destination.
- (iii) Exports of non-monetary gold, where known, are included. When they cannot be broken down by destination, they are allocated to "unspecified destinations".

4. Merchandise trade of selected major traders by product, region and major trading partner (Appendix tables A11 to A24)

These tables are derived from UNSD *Comtrade* and EUROSTAT. For trade by product, world totals include shipments which have not been distinguished by origin or destination. For trade by region and partner, world totals include goods which have not been specified by product. The following adjustment has been made to the figures:

Exports of ships to the open registry countries Panama and Liberia are re-allocated from each economy's exports to Latin America and Africa to "unspecified destinations" (a category not shown separately).

The selection of each economy's major trading partners is based on a ranking of total trade (exports plus imports) of each economy with their trading partners in 2003 (member States of the EU are counted as one trading partner).

5. Merchandise trade in balance of payments statistics

Merchandise trade statistics together with other basic statistical systems (such as industrial and transport statistics) provide the foundation for the System of National Accounts (SNA) and the balance of payments (BOP). Merchandise trade statistics are basic to the compilation of the goods account in the balance of payments as structured and defined in the fifth edition of the International Monetary Fund's Balance of Payments Manual (BPM5).

Goods (merchandise) are defined in the SNA as "physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on markets". Thus, for the SNA and BOP statistics the recording of transactions should be based on the change of ownership principle.

However, the compilation of international merchandise trade statistics (IMTS) is usually based on customs records which essentially reflect the physical movement of goods across borders, and follow international guidelines on concepts and definitions which do not fully conform to the principles of the SNA and the BPM5.

A number of adjustments has to be made to international merchandise trade statistics before they match the specific requirements of national accounts and balance of payments statistics. For aggregate exports and imports these adjustments are mainly related to coverage, the system of trade, and valuation.

With respect to coverage, the IMTS in most instances conforms with the BPM5. Differences remain for the following cases: (i) *transactions that represent services transactions* (e.g. customized, blueprints). Under BPM5 these transactions should be excluded from goods and included, at market value, in services; (ii) *transactions in which one or both national boundaries are not crossed* (e.g. trade in vessels and aircraft, exports of bunkers, etc.) are not always included in IMTS for practical reasons, whereas they are usually included in BOP statistics; (iii) goods under the *improvement and repair trade* regime should be excluded from IMTS, but they are to be included at the value of the repair under the BPM5.

Concerning the system of trade, the IMTS guidelines outline the measurement of trade flows on the basis of (1) the special trade system and (2) the general trade system. Under the special trade system, the customs frontier is regarded as the statistical boundary whereas, under the general system of trade, the national frontier is regarded as the statistical boundary. The BPM5 stresses that measurement for BOP compilation should be based on change of ownership rather than on the general trade

system or the special trade system. The general trade system appears to be a better proxy for measuring change of ownership because it provides broader coverage and the date of change of ownership may be closer to the date goods cross the national frontier than to the date goods clear through customs.

As far as valuation is concerned, the issue that affects most data comparability concerns the point of valuation, namely, whether goods are valued at the importer's border - that is at the c.i.f. value - or at the f.o.b. value at the exporter's border. ITS guidelines recommend the adoption of the c.i.f. valuation for imports whereas BPM5 requires the f.o.b. valuation. Additional adjustments may be made by BOP compilers to conform to the BPM5 requirement for a market price for valuing trade, processing trade, and with respect to currency conversion.

Once adjusted, merchandise trade is recorded in the goods category of the current account, along with services, income, and current transfers. Therefore, within the balance of payments framework transactions in both goods and services are harmonized and provide for comparable statistical series, as in Table I.8. Strictly speaking, it is not correct to aggregate the figures for commercial services and merchandise shown elsewhere in this report.

It should be noted that some economies still apply the concepts of the fourth edition of the Balance of Payments Manual, and thus do not include goods for processing and goods procured in port carriers in the goods account.

II.2 Trade in commercial services

1. Exports and imports

Exports (credits) and imports (debits) of commercial services are derived from statistics on international service transactions included in the balance of payments statistics, in conformity with the concepts, definitions and classification of the fourth (1977) or fifth (1993) edition of the IMF Balance of Payments Manual.

2. Definition of commercial services

In the fifth edition of the Balance of Payments Manual, the current account is subdivided into *goods*, *services* (including *government services, n.i.e.*), *income* (investment income and compensation of employees), and *current transfers*. The *commercial services* category in this report is defined as being equal to *services* minus *government services, n.i.e.* *Commercial services* is further sub-divided into *transport*, *travel*, and *other commercial services*.

Transport covers all transportation services (sea, air and other - including land, internal waterway, space and pipeline) that are performed by residents of one economy for those of another, and that involve the carriage of passengers, the movement of goods (freight), rentals (charters) of carriers with crew, and related supporting and auxiliary services.

Travel includes goods and services acquired by personal travellers, for health, education or other purposes, and by business travellers. Unlike other services, travel is not a specific type of service, but an assortment of goods and services consumed by travellers. The most common goods and services covered are lodging, food and beverages, entertainment and transportation (within the economy visited), gifts and souvenirs.

Other commercial services corresponds to the following components defined in BPM5:

- (i) *communication services* (telecommunications, postal and courier services);
- (ii) *construction services*;
- (iii) *insurance services*;
- (iv) *financial services*;

- (v) *computer and information services* (including news agency services);
- (vi) *royalties and licence fees*, covering payments and receipts for the use of intangible non-financial assets and proprietary rights, such as patents, copyrights, trademarks, industrial processes, and franchises;
- (vii) *other business services*, comprising trade related services, operational leasing (rentals), and miscellaneous business, professional and technical services such as legal, accounting, management consulting, public relations services, advertising, market research and public opinion polling, research and development services, architectural, engineering, and other technical services, agricultural, mining and on-site processing; and
- (viii) *personal, cultural, and recreational services* including audiovisual services.

3. Coverage and comparability

Although in recent years the coverage and comparability of services trade data have improved, recorded trade figures still lack comparability across countries and are subject to significant distortions.

First, some countries do not collect statistics for certain service categories. *Second*, some service transactions are simply not registered. If central bank records are used, situations where no financial intermediaries are employed are not counted. In the case of surveys, the coverage of trading establishments is often incomplete. A particularly serious problem is that services transmitted electronically are frequently unregistered, especially when the transactions take place within multinational corporations. *Third*, statistics may be reported on a net rather than on a gross basis, often as a result of compensation arrangements such as in rail transport or in communication services. *Fourth*, the alternate sources used for countries which are not members of the IMF do not necessarily comply with the IMF concepts and definitions. *Fifth*, misclassification of transactions may lead to an underestimation of commercial services when service transactions are registered as income, transfers or trade in merchandise rather than trade in services or, conversely, to an overestimation of commercial services when transactions pertaining to income, transfers or official transactions are registered in the private service categories.

These distortions may be particularly significant at the detailed level, i.e., for a detailed service category, or for trade flows by origin and destination.

The implementation of BPM5 is resulting in an improvement of international data comparability over time. However, given that these improvements are made gradually, they also result in a number of breaks in series. The borderline between goods and services, as well as the borderlines between the components of commercial services differ in BPM4 and BPM5. Examples of such differences are:

- (i) most processing transactions are included under *goods* on a gross basis in BPM5, while in BPM4 only the value of the fees paid for processing are included in *services*;
- (ii) goods procured in ports, such as fuels and provisions, are included in *goods* in BPM5, and in *services (transport)* in BPM4;
- (iii) in BPM4, insurance services are normally measured by the net premiums defined as premiums less claims, while in BPM5, *insurance services* reflects the "normal" service charge, i.e. administrative services and part of the earnings; the rest of the net premiums or the actual risk premiums is recorded under current transfers or in the financial account in case of life insurance; in addition,

- freight insurance is part of transport in BPM4, and part of insurance services in BPM5; and
- (iv) the expenditure of seasonal and border workers is included in labour income in BPM4, and in *travel* in BPM5.

4. Intra-trade of the European Union

The principal source for trade in commercial services are the IMF's Balance-of-Payments statistics. Intra-EU trade figures have been estimated from statistics included in the New Cronos database, August 2004.

II.3 Other definitions and methods

1. Annual changes

Throughout this report, average annual percentage changes are analogous to compound interest rates. In calculating the average annual rate of change between 1995 and 2000, for example, data for calendar year 1995 were taken as the starting point, and data for calendar year 2000 as the end point.

2. Prices

Commodity price movements are primarily described by indices largely based on spot market prices, and therefore exclude transactions governed by longer-term contracts. Price indices for such commodities as food, beverages, agricultural raw materials, minerals, non-ferrous metals, fertilizers and crude petroleum are obtained from IMF *International Financial Statistics*. Aggregates for all primary commodities and for non-fuel primary commodities are calculated using IMF weights (Appendix table A25).

Export and import prices of the United States by commodity group are sourced from the US Department of Labor. Those of Germany and Japan are sourced from national statistics. Aggregates are calculated by weighting the countries' price indices with the respective export and import values of the previous year (Appendix tables A26 and A27).

3. Merchandise trade volume and unit value indices

The volume and unit value indices are taken from a range of different international and national sources. The reported volume and unit value indices may not always be available for the most recent years or may differ in product coverage from the corresponding value indices.

Aggregation of the indices to obtain a world total is a two-tier process. *First*, export and import unit values from national and international sources are completed with Secretariat estimates for missing data. They are then aggregated to obtain regional totals. The volume index for each region is obtained by dividing the respective trade value index for each region by the corresponding regional unit value index.

Second, to obtain the total world merchandise volume index, regional unit value indices are aggregated and the world trade value is deflated by the world unit value index. Throughout the aggregation process trade values of the previous year are used as weights.

4. World production

Production of agriculture, mining and manufacturing is defined according to major Divisions 1, 2 and 3 of the International Standard Industrial Classification of all Economic Activities Revision 3 (ISIC). World production in these sectors is estimated by combining production indices published by the FAO, IMF, OECD, UNIDO and UNSD. The world index is derived through aggregation of the three sectors by using value added shares in 1995 as weights.

5. World gross domestic product

World GDP growth is estimated as a weighted average of economies' real GDP growth. The weights used are shares of economies in 1995 world nominal GDP converted to dollars at market exchange rates.

The use of official exchange rates which are not market-based for some major economies, together with the fluctuations of the United States dollar vis-à-vis major currencies can have a significant impact on the weighting pattern. The increasing use of weights based on purchasing power parities (PPP) by other international organizations is meant to attenuate "anomalies" linked to these factors. In a period of widely diverging growth rates among countries and regions, the choice of the weighting pattern can have a marked influence on the global growth estimate. For the 1995-2000 period, global growth estimates based on PPP-weights indicate a significantly faster growth than estimates using weights based on GDP data measured at market exchange rates. This is because of differences in the two weighting patterns. Relative to weights based on GDP at market exchange rates, PPP weights are low for the transition economies - especially the successor States of the former USSR with a poor growth record, and high for major developing countries (in particular China) with above average growth.

6. Re-exports

Under the system of general trade adopted in this report, re-exports are included in total merchandise trade (see Section II.1). However, in the case of Hong Kong, China, the magnitude of its re-exports (amounting in 2003 to \$ 209 billion), if included in regional or world aggregates, would adversely affect the analytical value of the statistics by introducing a significant element of double counting. Therefore, Hong Kong, China's re-exports are excluded from the world and from Asia aggregates (unless otherwise indicated); only Hong Kong, China's domestic exports and retained imports are included in the totals. For this reason, the figures for world exports and for exports of Asia shown in Appendix tables A2 and A10 are smaller than those in Appendix table A6. Since retained imports cannot be identified from imports directly, an approximation is derived by subtracting the value of re-exports from the value of imports. The resulting figure will, however, under-estimate the value of retained imports by the amount of the re-export margin.

III. Specific notes for selected economies

1. Merchandise trade statistics of the European Union

Beginning with the 2002 report, EU data compiled according to national statistical practices have been replaced, starting 1993, with data compiled by Eurostat in accordance with EU legislation. The concepts and definitions adopted by the EU are in line with the United Nations' *International Trade Statistics, Concepts and Definitions*, Series M, N° 52, Revision 2. As a result, the conceptual differences between EU member states' data have been substantially reduced. Moreover, for the EU as a whole, Eurostat data are more timely than the previous source, thus reducing substantially the amount of estimation included in the EU aggregate.

Since January 1993, statistics on the trade between the member States of the EU have been collected through the "Intrastat" system (see GATT 1994, *International Trade Trends and Statistics*). The coverage of this system, which relies on reports submitted by firms for transactions above a minimum value, is not as wide as the previous one, which was based

on customs declarations. This is particularly noticeable on the import side. For example, prior to the adoption of the Intrastat system, reported intra-EU imports (c.i.f.) closely matched reported intra-EU exports (f.o.b.). However, from 1993 onwards, the reported value of intra-EU imports has been on average around 3 per cent lower than the value of intra-EU exports, indicating a substantial under-reporting of intra-EU imports. As a result of this inconsistency, the Secretariat has substituted intra-EU exports data for intra-EU imports at the aggregate EU level when estimating regional and world totals. However, this adjustment is not allocated *between* EU member countries. Hence, the sum of reported imports of individual EU members does not add to the figure for EU imports as a whole. This adjustment is also reflected in the volume estimates for the EU as a whole.

2. Merchandise trade of Central and Eastern Europe, the Baltic States and the CIS

Throughout the 1990's economic and political upheavals in the region led to valuation problems when converting national currencies to dollars, disruptions in the statistical reporting systems, and changes in the statistical territories of various economies in the region. This has resulted in many breaks in data continuity. The main ones are as follows:

Between 1989 and 1990, for Bulgaria and the former USSR, due to the conversion into dollars at official, market-oriented exchange rates, replacing the earlier practice of using implicit conversion factors. Valuation problems are discussed in more detail in Box 1 in Volume I of *International Trade 1990-91* and in Box 2 in Volume I of *International Trade 1989-90*.

Between 1993 and 1994 for the Baltic States and the CIS, due to the inclusion of their mutual exchanges. Between 1995 and 1996 for the Czech Republic, due to the exclusion of aircrafts and the movements of ships through inward processing zones, as well as the exclusion of temporary exports and imports.

Between 1997 and 1998 for the Russian Federation due to the use of Balance of Payments methodology by GOSKOMSTAT starting 1998.

Between 1994 and 1995 for the Ukraine, due to a change in data collection procedures.

Between 1996 and 1997 for the Slovak Republic, and between 1997 and 1998 for Poland, due to the introduction of new arrangements in customs procedures to harmonize with the standards of the European Union.

With respect to the Russian Federation, considerable uncertainty remains about the accuracy of foreign trade statistics, especially as regards imports. A large proportion of the reported data on imports consists of official estimates of inflows of goods which enter the economy without being registered by the customs authorities. Such adjustments to import data accounted for 24 per cent of the officially reported totals in 2003; and, on the export side, for about 2 per cent of total reported exports.

3. Trade in insurance services of the United States

In 2003, the United States has revised its methodology for estimating trade in insurance services.

Insurance services were previously measured as premiums less actual claims paid. According to that approach, only premiums not disbursed for claims measured the output of the insurance service sector. Paid claims simply indicated money flowing through insurance companies to policy holders that suffered losses. The main inconvenience of this measure was its sharp fluctuation for years in which extreme claims occurred, for example, after the 11 September 2001 attacks or the 1992 Hurricane Andrew.

The new methodology measures insurance services as premiums less normal claims. Normal claims comprise two

components: "regularly occurring claims" that are calculated as an average of all claims paid during the previous 6 years, and a share of "catastrophic claims" that is added-on to "regularly occurring claims" in equal increments over the two decades following their event.

As comprehensive data collection on insurance services started in 1986, the first 6-year average of "regularly occurring claims" could only be calculated for 1992. As a result, time series on U.S. trade in insurance services, and consequently on other commercial services, have been revised back to 1992. In comparison with previously published statistics, the values of imports and exports of other commercial services are somewhat lower for the years 1992 through 1998 and significantly higher for the years after.

To complete the 2003 revision, in 2004 the United States added to insurance services an estimate of premium supplements (or income earned on technical reserves of insurance companies). Insurance companies provide financial protection to policy holders through the pooling of risk and provide financial intermediation services through the investment of reserves. The income is treated as accruing to the policy holders who pay it back to the insurers as supplements to premiums to cover the full cost of insurance. The investment income of insurance companies is not output in and of itself; it is used to impute the value of the implicit component of insurance services attributable to financial intermediation.

4. Travel exports of Japan

In order to enhance the coverage of estimates of travel exports and imports, the Bank of Japan and the Japanese Ministry of Finance reviewed their compilation methodology, notably by including results from a new expenditure survey of foreign travellers as of 2003. This revision had a major impact on the estimates for travel exports.

In order to maintain consistent growth rates, data shown in this report for Japanese 2003 travel exports and exports of commercial services include provisional Secretariat estimates referring to the previous compilation methodology (i.e. prior to January 2003) applied by the Japanese authorities and therefore they differ from 2003 figures available elsewhere.

IV. Statistical sources

Most frequently used sources for statistics are:

EUROSTAT, Comext and New Cronos databases
 FAO, *Production Yearbook*
 FAO, *FAOSTAT Agriculture database*
 IMF, *Balance of Payments Statistics*
 IMF, *International Financial Statistics*
 IMF, *World Economic Outlook database*
 OECD, *Main Economic Indicators*
 OECD, *Monthly Statistics of International Trade*
 OECD, *National Accounts*
 OECD/IEA, *Energy Prices & Taxes*
 UNECE, *Economic Survey of Europe*
 UNECLAC, *Overview of the Economies of Latin America and the Caribbean*
 UNIDO, *National Accounts Statistics Database*
 UNSD, *Comtrade database* (sourced through the OECD for its member States)
 UNSD, *International Trade Statistics Yearbook*
 UNSD, *Monthly Bulletin of Statistics*
 World Bank, *World Development Indicators*

These sources are supplemented by national publications and Secretariat estimates.

Figures for total merchandise trade are largely derived from IMF, *International Financial Statistics*. Data on merchandise trade by origin, destination and product are obtained mainly from Eurostat and the UNSD *Comtrade database*. Some inconsistencies in the aggregate export and import data for the same country or territory between the two sources are inevitable. These can be attributed to the use of different systems of recording trade, to the way in which IMF and UNSD have converted data expressed in national currencies into dollars, and revisions which can be more readily incorporated in the IMF data.

Statistics on trade in commercial services are mainly drawn from the IMF *Balance of Payments Statistics*. For countries that do not report to the IMF (e.g., Macao, China; and Taipei, Chinese) data are drawn from national sources. Estimations for missing data are mainly based on national statistics. Statistics

on trade in commercial services by origin and destination (Tables III.6 and III.7) are also derived from national statistics.

GDP series in current dollars are mainly derived from the World Bank *World Development Indicators*, supplemented in some cases with statistics from the IMF *World Economic Outlook database*.

Acknowledgements are due to the Food and Agriculture Organization, the International Monetary Fund, the Organisation for Economic Cooperation and Development, the Statistical Office of the European Communities, the United Nations Economic Commission for Europe, the United Nations Economic Commission for Latin America and the Caribbean, the United Nations Statistics Division, the United Nations Industrial Development Organization and the World Bank whose assistance in supplying advance copies of their publications as well as other information has greatly facilitated the work of the Secretariat. Acknowledgements are also due to national institutions for providing advance statistics.

