Technical Notes

This Note details the definitions, methods and sources of the statistics used in *International Trade Statistics 2001.*

I. Composition of country groups

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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, Bosnia and Herzegovina, Croatia, former Yugoslav Republic of Macedonia, Slovenia, Yugoslavia (the last five countries mentioned comprise the former Yugoslavia), 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, The Kyrgyz Republic, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. The grouping *former USSR* refers to the Baltic States and the CIS.

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, Cyprus, 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; Macau, 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.

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; Taipei, Chinese; Thailand; United States of America and Viet Nam.

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

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

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

MERCOSUR: Argentina, Brazil, Paraguay and Uruguay.

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

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

3. Other country groups

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, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

Six East Asian traders: Hong Kong, China; Malaysia; Republic of Korea; Singapore; Taipei, Chinese and Thailand.

The designations used in this report do not imply an expression of opinion by the Secretariat concerning either the status of any country, territory or area, or the delimitation of its frontiers.

4. Political boundaries

Changes in political boundaries since 1991 involving the former Czech and Slovak Federal Republic, the former Yugoslavia and the former USSR are reflected in this report, as far as available statistics permit. This means that, beginning with 1992, data for these former entities are no longer given. This information is replaced with data for their successor states. In the case of the successor states to the former Czech and Slovak Federal Republic and the former Yugoslavia, the statistics include their mutual trade. In the case of the successor states of the former USSR, the absence of detailed merchandise trade statistics for most of them has ruled out the inclusion of their mutual trade at the disaggregated product level, as well as, for comparability reason, at the aggregate level. However, recent improvements in data collection have meant that mutual trade between the successor states of the former USSR has been included systematically in the tables, starting with data for 1996. The effects on the continuity of the data series are explained in Section III.2 below.

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.

Unless otherwise noted, 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. 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. Coverage

Trade flowing through processing zones is not systematically recorded in national trade statistics and can result in significant under-recording of trade in certain goods. For example, the exclusion of these flows from the statistics for Central American

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and Caribbean countries has resulted in under-recording of their trade in clothing. When included, practices for classifying the goods involved also differ between countries. In recent years, however, improvements in data collection have resulted in the inclusion of processing trade for a number of countries including Costa Rica, Czech Republic, Hungary, Lithuania, Mexico, Morocco and the Ukraine. In all but one of these countries, this has resulted in breaks in the continuity of the data series. In the case of Mexico, trade flows through the special manufacturing zone known as the "maquiladoras" were previously excluded from official trade statistics, but reported separately by the Banco de México. The Secretariat included these flows in Mexico's exports and imports given their magnitude (ranging from 29 to 40% of combined trade during the 1990-2000 period). These shipments have been included in Mexico's official trade statistics since 1992.

4. World trade network

The world merchandise trade network by region and product from which Appendix tables A2/A3 and A9/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 country figures published by the International Monetary Fund in *International Financial Statistics*, other international organizations, and national statistical authorities. They are supplemented by Secretariat estimates (see Appendix table A5).

Next, the total merchandise exports of each region are distributed by destination and then by product. The regional and commodity breakdown is based on OECD, *Monthly Statistics of Foreign Trade*; UNSD, *Comtrade database*, *International Trade Statistics Yearbook,* and *Monthly Bulletin of Statistics*; 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) Re-exports of Hong Kong, China are excluded. This is because the magnitude of Hong Kong, China's re-exports (9.8% of Asian total merchandise exports in 2000) would introduce a significant element of double counting into the trade of the Asian region since a large proportion of Hong Kong, China's re-exports are goods of Chinese origin or have China as final destination.

(iii) China's exports are adjusted to approximate their final destination.

(iv) Exports of military goods and non-monetary gold, where known, are included. When they cannot be broken down by destination, they are allocated to "unspecified destinations".

5. Merchandise trade of selected major traders by product, region and major trading partner (Appendix tables A11 to A20)

These tables are derived from the UNSD *Comtrade database*. The figures in the tables for total merchandise trade are not necessarily the same as those in Appendix tables A5 and A6 (see Section III.1 below). 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 adjustments have been made to the figures:

(i) 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).

(ii) Merchandise trade of the European Union (Appendix tables A14 to A18)
- part of Belgian imports included in "other products" are re-allocated to "automotive products";
- French trade in military goods is included. It is allocated to "other products" and "unspecified origins and destinations";
- official supplementary estimates of intra-EU exports and intra-EU imports beginning with 1993 that have not been transmitted to UNSD by the statistical authorities of EU member countries are included. For the United Kingdom, supplementary estimates have been distributed by product using national statistics. For other countries, whenever relevant, the figures have been allocated to "other products";
- for the combined trade of EU member States (Appendix table A14), intra-imports have been replaced by intra-exports beginning with 1993 to partly compensate for the observed under-reporting of intra-imports resulting from INTRASTAT procedures (see Section III below).

Selection of each reporter's major trading partners is based on a ranking of total trade (exports plus imports) of each reporter with their trading partners in 2000 (member States of the EU are counted as one trading partner).

6. 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 (ITS) 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 have 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 ITS in most instances conforms with the BPM5. Differences remain for the following cases: (i) *transactions that represent services transactions* (e.g. blueprints, videos, and tapes) should be valued in ITS at the value of the material in which they are incorporated, while 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 ITS for practical reasons, whereas they are usually included in BOP statistics; (iii) goods under the *improvement and repair trade* regime should be excluded from ITS, but they are to be included at the value of the repair under the BPM5.

Concerning the system of trade, the ITS 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. It is not strictly speaking correct to aggregate the figures for commercial services and merchandise shown elsewhere in this report.

It should be noted that some countries 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 will result in an improvement of country comparability over time. However, given that these improvements are being 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.

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 1990 and 2000, for example, data for calendar year 1990 were taken as the beginning point, and data for calendar year 2000 as the end point.

2. Commodity 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.

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. For example, the indices reported by France exclude electricity, military and railway equipment, electronics, analysing and controlling instruments, shipbuilding and aeronautics, and machine tools. Switzerland excludes jewellery, antiques, and precious metals from its indices.

Aggregation of the indices to obtain a world total is a two-tier process. *First*, export and import unit values are adjusted to the extent possible for differences in coverage and, in cases of missing data, completed with Secretariat estimates. 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 (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 1990 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 1990 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 1990-2000 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 2000 to $179 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/A3 and A9/A10 are smaller than those in Appendix table A5. 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. Breaks in data continuity

1. Merchandise trade statistics of the European Union

The introduction of a new system for collecting statistics on trade between the member States of the EU in January 1993 – INTRASTAT – which was briefly described in the GATT annual report 1994, *International Trade Trends and Statistics*, has affected EU merchandise trade statistics in a number of ways. The system has resulted in the loss of continuity with pre-1993 trade figures. Difficulties in implementing the new system have resulted in reporting delays and numerous revisions in the figures. More generally, the EU intra-trade statistics collected through INTRASTAT are markedly less accurate than statistics collected under the previous system.

The coverage of the current 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. Estimates for non-response and exemptions from reporting obligations are made by the statistical authorities of some member States but these estimates cannot always be broken down by product, and they most probably under-record the actual trade flows, so that continuity with pre-1993 figures has been lost. In some cases, as well, estimates of under-reporting have not been included in submissions to the United Nations Statistical Division for inclusion in the *Comtrade database*, which has also contributed to a marked disruption in the continuity of the Secretariat's traditional data source.

Prior to the adoption of the current system, reported intra-EU imports (c.i.f.) closely matched reported intra-EU exports (f.o.b.). From 1993, however, the reported value of intra-EU imports has been on average around 6.5% below the value of intra-EU exports, indicating a substantial under-reporting of intra-EU imports. Given the significance of this inconsistency, the Secretariat has used intra-EU export data to adjust for the under-reporting of intra-EU imports. However, this adjustment could not be allocated *between* EU member countries. As a result, the sum of reported imports of individual EU members does not add to the figure for EU imports as a whole (see, for example, Appendix Table A6). This adjustment is also reflected in the volume estimates for the EU as a whole.

Due to reporting delays to UNSD, the latest merchandise trade statistics for all EU member States were not available at the time the world trade network by region and product was prepared. As a result, the Secretariat has had to partly estimate the 2000 product breakdown of the EU.

The EU accounts for some 35% of world merchandise trade. It is also the major market for the exports of Africa, the Middle East and the CIS – all regions for which detailed trade statistics are scarce. EU trade statistics, both for EU member countries and for trade with these partner countries, therefore play a key rôle in global trade statistics and are of particular importance in the construction of the world trade network by region and product. Reporting delays and the decline in the reliability of EU intra-trade statistics have resulted in an increase in the margin of error in the Secretariat's trade estimates.

Due to a change in the definition of the statistical territory, the merchandise trade statistics of France include trade of French Guiana, Guadeloupe, Martinique and Reunion beginning with 1996.

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

Beginning in 1990, trade data for Bulgaria and the former USSR were converted into dollars at official, market-oriented exchange rates, replacing the earlier practice of using implicit conversion factors. This created breaks in continuity in the corresponding time series between 1989 and 1990. 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.*

Figures for the Czech Republic and the Slovak Republic include trade between these two countries. As regards the Baltic States and the CIS, trade figures cover their mutual exchanges starting with 1996. Total merchandise exchanges among these countries amounted to some $36 billion in 1998, $29 billion in 1999, and $38 billion in 2000. The inclusion of the mutual trade has therefore resulted in substantial breaks in the continuity of the trade series at the country and regional levels between 1995 and 1996.

The political and economic upheavals in the region caused disruptions in statistical reporting systems. Although some countries improved or adapted their systems, detailed trade statistics are still not available for many country/periods (except for the Russian Federation). As a result, the Secretariat has estimated their trade largely on the basis of the statistics of their trading partners.

The implementation of internationally agreed concepts and definitions for collecting merchandise trade statistics will result in an improvement of country comparability over time. However, given that these improvements are being made gradually, they also result in a number of breaks in series. Breaks in the continuity in the trade figures were identified for the following countries: for the Czech Republic between 1992 and 1993 due to the inclusion of shipments through processing zones, and between 1998 and 1999 due to the exclusion of aircrafts and ships movements through inward processing zones, as well as the exclusion of temporary exports and imports; for Hungary between 1995 and 1996 due to the inclusion of shipments through processing zones; for Estonia between 1998 and 1999 due the change from the general to the special system of trade; for Lithuania between 1994 and 1995 due to the change from the special to the general system of trade; for Ukraine between 1994 and 1995 due to a change in data collection procedures and the inclusion of shipments through processing zones; for the Slovak Republic between 1996 and 1997, and for Poland between 1997 and 1998 due to the introduction of new arrangements in customs procedures to harmonize with the standards of the European Union.

Considerable uncertainty remains about the accuracy of the foreign trade statistics of the Russian Federation, especially as regards imports. A large proportion of the reported data on imports consists of official estimates of inflows of goods which enter the country without being registered by the customs authorities. Such adjustments to import data accounted for 27, 26 and 25% of the officially reported totals in 1998, 1999, and 2000 respectively; on the export side, such adjustments accounted for about 5, 4 and 2% respectively.

IV. Statistical sources

Most frequently used sources for statistics are:
EUROSTAT, *External and Intra-European Union Trade*
FAO, *Production Yearbook*
FAO, *Trade Yearbook*
IMF, *Balance of Payments Statistics*
IMF, *International Financial Statistics*
IMF, *World Economic Outlook*
OECD, *Main Economic Indicators*
OECD, *National Accounts*
OECD, *Monthly Statistics of Foreign Trade*
OECD/IEA, *Energy Prices & Taxes*
UNECE, *Economic Survey of Europe*
UNIDO, *National Accounts Statistics Database*
UNSD, *Comtrade database*
UNSD, *International Trade Statistics Yearbook*
UNSD, *Monthly Bulletin of Statistics*
World Bank, *World Development Indicators*
World Bank, *World Tables*

These sources are supplemented by national publications and Secretariat estimates.

The merchandise trade statistics in this report are largely derived from two sources. Figures for total merchandise trade are derived from IMF, *International Financial Statistics.* Data on merchandise trade by origin, destination and product come mainly from 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., Hong Kong, China; Macau, 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 destinations (Tables III.6 and III.7) are also derived from national statistics.

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