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DATA SOURCES AND METHODS OF ESTIMATING
MERCHANDISE TRADE
IN
EXTERNAL TRANSACTIONS STATISTICS

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DATA SOURCES AND METHODS OF ESTIMATING
"MERCHANDISE TRADE"
FOR EXTERNAL TRANSACTIONS STATISTICS

I. INTRODUCTION

1. The "external sector" referred to in the United Nations System of National Accounts (SNA) ^{1/} as the "rest of the world," plays an important part in the economy of nations, and indeed, as countries become more developed, its role tends to increase. This role is attributed largely to the international exchange of goods and services but mainly to merchandise trade. The purpose of this document is to define merchandise trade and to describe the various sources and methods of estimate in respect of the relevant items shown at Table 26 of the SNA, namely, exports and imports of merchandise.

II. RESIDENTS AND NON-RESIDENTS

2. The exports and imports of merchandise comprise all transactions in these items between residents of a given country and non-residents (i.e. the rest of the world) during a given period. The residents of a given country do not necessarily coincide with the population to be found within the geographical boundaries of that country. They comprise private individuals living in the country; the departments, establishments and bodies of the various levels of its government; and all business enterprises and non-profit bodies located in its domestic territory, including branches or subsidiaries of foreign companies, but excluding branches or subsidiaries of resident companies located abroad. Agencies of the given country's government operating abroad such as embassies or military units are regarded as residents of that country, and conversely, the agencies of foreign governments in the given country are regarded as non-resident.

3. The definition of residents as given in the SNA corresponds with that found in the supplement to the third edition of the Balance of Payments Manual published by the International Monetary Fund.

4. The resident individuals of a given country is considered to comprise all individuals living within the domestic territory of that country except the following:

- (a) Tourists, foreign visitors for a period of less than one year for purposes such as medical care, study tours, business or pleasure.
- (b) Crew members of foreign vessels or aircraft docked or on lay-over.
- (c) Seasonal workers, persons explicitly for purposes of seasonal employment only.
- (d) Official diplomatic and consular representatives and members of the armed forces of a foreign country; and
- (e) Employees of international bodies who are not citizens of the country and are on a mission lasting less than one year.

^{1/} United Nations Department of Economic and Social Affairs: Statistical Office of the United Nations. A System of National Accounts: studies in methods, Series F. No. 2. Rev. 3, New York, 1968.

5. In addition to the territory lying within the political frontiers of a given country, the domestic territory of that country includes the following:

- (a) Ships and aircrafts operated by residents of the country entirely, or primarily, between two or more countries.
- (b) Fishing vessels, oil and natural gas rigs, and floating platforms operated by residents of the country wholly, or mainly, in international waters or engaged in extraction in areas in which the country has exclusive right of exploration by virtue of international agreements or pronouncements, and
- (b) The embassies of the country as well as her consulates and military establishments which are located abroad.

The domestic territory of a country does not include her overseas territories and possessions.

III. INTERNATIONAL TRADE STATISTICS

(a) Timing

6. The principal source of data for the compilation of exports and imports of merchandise are reports on foreign trade statistics. In fact, the definition of merchandise trade for national accounting purposes comes close to that of general imports and exports as set out in the United Nations publication, International Trade Statistics.^{2/} In principle, the transactions should be recorded in the national accounts at the moment when the legal title to the relevant commodities passes between the residents and non-residents, but in the general trade system the statistics record the physical movement of goods across the national boundaries of a country. Thus there is a difference in timing particularly as regards imports, which tend to be recorded in arrears change of ownership, and adjustment must be made for this.

7. The adjustment involves the following and has been provided for at items 6 and 14, adjustment of merchandise exports and imports to change-of-ownership basis, shown in the Table at annex I of this document.

- (i) adding to the basic data when changes of ownership to goods occur during the reporting period but corresponding shipments take place either in an earlier period or a later one.
- (ii) Subtracting from the basic data when shipments of goods are effected during the reporting period but relevant ownership changes occur either in an earlier or later period.

It will usually be necessary, therefore, to gather data in respect of the transactions in goods between resident businesses and the rest of the world which have been recorded in their accounts on stocks but not in the international trade statistics.

^{2/} Statistical papers Series M No. 52 United Nations, New York, 1970.

(b) Coverage

8. Foreign trade statistics are generally compiled from copies of export and import documents which are submitted to customs' authorities by exporters, importers or their brokers or agents at the time the goods leave or enter a country. These documents are required for purposes of collection of customs duties and the enforcement of the control of external trade, and so there are special forms in respect of each of the following:

- (i) Imports entering directly for home consumption or use^{3/}.
- (ii) Imports into customs bounded manufacturing plants^{4/}.
- (iii) Imports into customs bounded warehouses and free areas^{5/6/}.
- (iv) Goods withdrawn from customs bounded warehouses for the same purposes as described at (i) above.
- (v) Exports of national goods (comprising domestic produce and goods of foreign origin previously imported and transformed in domestic plants other than customs manufacturing plants.
- (vi) Exports from customs' bounded manufacturing plants.
- (vii) Exports from customs' bounded warehouses and free areas.
- (viii) Nationalized exports, i.e. goods previously imported, acquired by agents in the export business and re-exported in essentially the same physical condition as when they were previously imported.
- (ix) Goods in direct transit across the national boundary.

General imports consist of items (i) + (ii) + (iii); and general exports comprise (v) + (vi) + (vii) + (viii) described above.

9. However certain countries compile their foreign trade statistics on the basis of the special trade system in which the following definitions apply:

Special imports = (i) + (ii) + (iv) and
 Special exports = (v) + (vi) + (viii)

Thus while in the general trade system the statistical record is made when goods move across the national boundary, in the special trade system it is made when goods are cleared through customs, that is, when they move across the customs frontier. For national accounts purposes therefore some adjustment should be made in order to cover entries into, rather than withdrawals from storage under custom control, in the case of imports, and, in the case of exports, all re-export transactions.

^{3/} For private consumption, for use as supplies to industries in their domestic production, for transformation in processing plants and for re-export without transformation.

^{4/} These refer to processing or manufacturing enterprises whose movements of merchandise of foreign origin used as input and of finished goods as output are strictly under customs control.

^{5/} Not including goods in direct transit.

^{6/} The difference between a "customs bounded warehouse" and a "free area" lies merely in the degree of customs control within the respective premises. Customs have complete control of the former but very little control over merchandise within free areas.

10. Both in the national accounts and in international trade statistics the term "merchandise" includes all transactions between the residents of a country and the rest of the world in (i) new and used ships and aircraft through they may not cross the customs frontier of the country and (ii) electricity, gas and water. The term is defined to exclude the following:-

- (i) Goods in direct transit through the country.
- (ii) Tourists' and travellers' effects.
- (iii) Animals for racing and breeding.
- (iv) Goods for exhibition or study.
- (v) Returnable samples and returnable containers.
- (vi) Goods not owned by residents for purposes of storage and trans-shipment only.

11. Both in the national accounts and in international trade statistics a change of ownership is imputed where goods are sent abroad or received from abroad, on consignment for sale or for processing. This is appropriate. However there is no change of ownership when goods are shipped to or from abroad for repair although in foreign trade statistics such goods are included at their full transaction value each time they cross the frontiers of the country of the owner and the country of the repairer. For national accounts purposes, only the value of the repair services should be recorded in the imports of the country of the owner of the goods and in the exports of the country of the repairer, and this should be included under the item 9 and 28, miscellaneous commodities and not under items 1 and 19, Exports and imports of merchandise shown at Table 26 of the SNA 1/.

12. International transactions in certain commodities are sometimes carried out on a lease basis for a certain time period (e.g. renting computer facilities installed on the premises of the renter, renting developed motion picture films, musical recordings for exhibition or performance etc.). Foreign trade statistics usually record such transactions with the full value of the merchandise. However for national accounts purposes this should be excluded from the foreign trade statistics, and the rents received or paid for these items should be recorded in the external transactions account as exports or imports of services under the item "miscellaneous commodities" shown at Annex I.

13. Also included with miscellaneous commodities are the following:

- (a) Direct subscription to newspapers and magazines.
- (b) Gifts in kind sent, and received from abroad by resident households.
- (c) Migrants' household and personal goods and effects and
- (d) Transactions in other goods and services.

1/ These items are numbered 5 and 13 and 1 and 9 respectively in the Table at Annex I to this paper.

14. In order to compile data on all transactions in goods between a country's residents and the rest of the world for purposes of national accounts the foreign trade statistics of that country will have to be supplemented by the addition of certain items which are in fact merchandise but, either because they do not cross one or both of the statistical boundaries involved, or because they are not considered as ordinary merchandise by most trading countries, are usually excluded therefrom. The main items involved are the following:

- (i) Bunkers, stores, ballast and dunnage supplied to foreign vehicles (including ships and aircraft);
- (ii) Bunkers, stores, ballast and dunnage sold from foreign vehicles in the national territory;
- (iii) Bunkers, stores, ballast and dunnage acquired abroad for national vehicles;
- (iv) Bunkers, stores, ballast and dunnage sold off national vehicles in foreign ports and territories or to foreign vehicles;
- (v) Fish (including all marine products) and salvage sold abroad or to foreign vessels off national vessels ^{8/};
- (vi) Fish (including all kinds of marine products) and salvage landed from foreign vessels ^{8/} in national ports;
- (vii) Sales and purchases of gold ore and unrefined gold and of refined gold for industrial use, and
- (viii) Sales of newly refined gold ingots and bars for other uses.

15. There are certain other transactions in merchandise between residents and non-residents which are not included in the trade statistics but which should nevertheless be recorded in statistics of external transactions. These comprise purchases in the domestic territory of a given country made by non-residents there, and purchases made directly abroad by her residents, including purchases abroad for direct use there by the government of that country, and they are included in items 4, 7, 12, 15 and 16 of the table in Exports and Imports of goods and services shown at Annex I.

(c) Valuation

16. International trade statistics are usually recorded on the basis of transaction values on the market, that is f.o.b. the customs frontier of the exporting territory in respect of exports, and c.i.f. the customs frontier of the importing territory in respect of imports.

17. F.o.b. value which is the value "free on board" includes export duties, internal taxes and similar charges levied in the exporting territory as well as the following expense items:-

- (i) All transport charges from inland locations to the frontier of the country of export;
- (ii) Insurance expenses involved in transporting the goods from inland locations to the frontier of the country on board the exporting vehicle;

^{8/} Including mother-ships and other vessels.

- (iii) Commission and brokerage;
- (iv) All expenses involved in drawing up documents used in the transaction and in bringing the goods on board the exporting vehicle, including consular fees;
- (v) Cost of containers, excluding those that are treated as separate articles; cost of packing, including labour and materials;
- (vi) Loading charges not borne by the carrier.

18. The c.i.f. value of imports of merchandise includes all the costs described in paragraph 17 above as well as the following:

- (i) Freight paid for transporting the goods free on board of vehicle from the frontier of the country of export to the frontier of the country of importation;
- (ii) Unloading charges incurred in bringing the goods on board of vehicle to the point at the frontier where the facilities for customs clearance or supervision are available and/or where the goods are physically made available for the importer to take delivery, and
- (iii) Insurance charges incurred for insuring the risk involved in connection with the transport and unloading described at (i) and (ii) above.

Thus the c.i.f. value includes the charges for transportation and insurance from the country of export to the country of import regardless of the residence of the producers of these services.

19. Charges in respect of transport and insurance services which are rendered by residents of the country of import should be included in that country's exports of such services. Also information is needed in respect of the size and importance of the actual imports and exports of these services as well as the f.o.b. value of imports of merchandise. It is therefore recommended in the revised SNA that the c.i.f. value of imports should be divided into the following and shown separately as at Annex I.

- (i) f.o.b. value;
- (ii) Charges for transport services by non-residents;
- (iii) Charges for transport services by resident producers;
- (iv) Charges for insurance services by non-residents, and
- (v) Charges for insurance services by resident producers.

(d) Classification

20. Recommendations for the detailed classification of exports and imports by type of commodity are contained in the United Nations document, Standard International Trade Classification, Revised 9/, a draft revision of which was considered by the United Nations Statistical Commission at its eighteenth session^{10/}.

^{9/} Statistical Papers, Series M. No 34, United Nations, New York, 1961.

^{10/} Draft Standard International Trade Classification (SITC) Rev.2., United Nations Economic and Social Council, E/CN.3/456, 28 May 1974.

Recommendations for the economic classification of these commodities are contained in the United Nations document, Classification by Broad Economic Categories 11/, and recommendations for their reclassification by industries are contained in another UN document, Classification of Commodities by Industrial Origin 12/ which shows the relationship of the Standard International Trade Classification to the International Standard Industrial Classification. (ISIC)^{13/}

21. A classification of external trade by commodity groups is needed for the standard input-output table of the SNA relating to the supply and disposition of commodities. Also, it is necessary to distinguish imports which complement domestic production from imports which compete with domestic production, and so detailed classifications of imports and domestic output by type of commodity should be used so that the differences between imported and domestically produced items may not be obscured.

22. The classification adopted for use in the SNA is based on the International Standard Industrial Classification and is reproduced at annex II. However since in most countries the Standard International Trade Classification is used for the reporting of their foreign trade statistics, the items of imports and exports will have to be regrouped in accordance with the classification by Industrial Origin already referred to.

23. In respect of commodities which are not covered in foreign trade statistics it should be possible to gather adequate data on exports and imports of transport and insurance services, bunkering of ships, aircraft and other vehicles, and the landing of fish off fishing vessels in order to classify these transactions by kind of commodity. As regards exports and imports of certain commodities covered in the item "miscellaneous commodities" shown at annex I, however, or in the case of direct purchases of extra-territorial bodies in the domestic territory of a country, this may not be so. It may therefore be necessary to include these transactions in a miscellaneous category of the commodity classification.

IV. FOREIGN EXCHANGE RECORDS

24. In countries where transactions in foreign exchange are subject to control, foreign exchange records prepared on the basis of permits and of import and export licenses issued by the competent authority are sometimes used for the rapid compilation of statistics of imports and exports of merchandise for balance of payments purposes. However as in the case of foreign trade statistics there are problems of timing, coverage and valuation.

(a) Timing

25. For balance of payments purposes as well as for purposes of national accounts the transactions between residents and non-residents should be recorded at the time that the ownership of (the legal title to) the relevant commodities changes. However in the exchange control records a transaction is recorded only at the time that the relevant payment is made. Thus if goods are imported on

^{11/} Statistical Papers, Series M. No 53, United Nations, New York, 1971.

^{12/} Statistical Papers, Series M. No 43, United Nations, New York, 1966.

^{13/} International Standard Industrial Classification of all Economic activities, Statistical Papers, Series M. No 4, Rev.2, United Nations, New York, 1968.

credit no entry is made in the foreign exchange record since no payment was made. Also it often happens that goods are paid for at a time other than when ownership is transferred.

26. Since the foreign exchange record would show only goods in respect of which payment had been made, and since a large proportion of imports in many countries are obtained on credit, unadjusted data from the foreign exchange record could grossly misrepresent the merchandise trade situation, even perhaps showing a surplus when in fact there was a serious deficit. It is very difficult to make proper adjustment for timing and so most countries prefer to avoid the use of the exchange record as a source of statistics of merchandise trade and to rely exclusively on customs documents, although the use of both these documents and the exchange record could provide much valuable information regarding trade credits.

(b) Coverage

27. Statistics of exports and imports of merchandise cover all transactions in these items between residents of a given country and the rest of the world. The foreign exchange record on the other hand relates only to goods for which payment has been made through the exchange control authorities. It therefore does not include the following which should be taken into account, along with the statements contained at paragraphs 8 to 15 inclusive:-

- (i) Barter
- (ii) Gifts in kind
- (iii) Goods transferred between parent enterprises and their subsidiaries against credits or debits to inter-company accounts, including goods transferred for processing
- (iv) Goods imported or exported against foreign loans or on credit,
- (v) Exports for which exchange is not surrendered (the export proceeds are retained in whole or in part in foreign currency)
- (vi) Imports paid for with foreign assets, including retained foreign currency accounts.

28. Most private gifts in kind would be sent by parcel post or express. The source of information in respect of these items would therefore be the post office or the express companies. However as regards official gifts in kind, data must be had either from the government itself directly or published government documents.

29. In respect of goods transferred between parent companies and their subsidiaries, relevant data may be obtained either from the customs office or the company itself or both. However unless the company's transactions are few and of high value it is unlikely that the customs would be very helpful.

30. For information on imports and exports against foreign loans or credit, it would be best to approach the creditors, usually banks, in the case of exports. If a government agency is involved, that agency would most probably have a reliable record of shipments under the terms of the loan. In the case of imports, one would have to resort either to used import licenses, the importers themselves, or, through local banking agencies, the foreign creditors. Presumably, in the case

of barter, of exports for which exchange is not surrendered, and of imports paid for with foreign assets, licenses are required. Relevant data may be obtained from used such licenses.

(c) Valuation

31 Merchandise transactions are not always effected on a uniform basis. Sometimes imports are purchased on an f.o.b. basis and exports on a c.i.f. basis or vice versa. Sometimes the exporter may be allowed to retain part of his proceeds abroad. Sometimes there is a tendency for export values to be understated and the import values to be overstated. This is so when an exporter would wish to keep secretly abroad a certain part of his foreign exchange receipts or the importer would wish to obtain more foreign exchange than he actually required. Therefore the value of the transaction shown in the exchange control record may not necessarily be the correct value as far as the national accounts are concerned, at so some adjustments for valuation may be necessary.

32. It should not be very difficult for the authorities to verify the f.o.b. value of exports, since there are very few commodities in Africa for which prices are not quoted on the world market. However as regards adjustments necessary in respect of imports, close cooperation between the customs authorities and the exchange control authorities would be needed for that purpose.

Annex I
EXPORTS AND IMPORTS OF GOODS AND SERVICES ^{1/}

Item No.	Type of Transaction
1	<u>Exports of merchandise, f.o.b.</u>
2	Transport and communication (i) In respect of merchandise imports (ii) Other.
3	Insurance service charges. (i) In respect of merchandise imports (ii) Other
4	Direct purchases in the domestic market, extra-territorial bodies. bodies.
5	Miscellaneous commodities
6	Adjustment of merchandise exports to change-of-ownership basis
7	Direct purchases in the domestic market, non-resident households.
8	<u>Exports of goods and services.</u>
9	<u>Imports of merchandise, c.i.f.</u> (i) Imports, f.o.b. (ii) Transport services on merchandise imports by non-residents. (iii) Transport services on merchandise imports by resident industries. (iv) Insurance service charges on merchandise imports, services by non-residents. (v) Insurance service charges on merchandise imports, services by resident industries.
10	Other transport and communication services by non-residents.
11	Other insurance service charges, services by non-residents.
12	Direct purchases abroad on capital account, government services.
13	Miscellaneous commodities.
14	Adjustment of merchandise imports to change-of-ownership basis.
15	Direct purchases abroad, resident households.
16	Direct purchases abroad on current account, government services.
17	<u>Imports of goods and services.</u>

^{1/} Extracted from Table 26, External Transactions, shown on page 204 of a System of National Accounts.

Annex II

CLASSIFICATION OF IMPORTS AND EXPORTS OF COMMODITIES

BY

CHARACTERISTIC PRODUCTS OF SPECIFIED KIND OF ACTIVITY OF INDUSTRIES

ISIC CODE	COMMODITIES CHARACTERISTIC PRODUCTS OF SPECIFIED KIND OF ACTIVITY OF INDUSTRIES 2/	EXPORTS	IMPORTS (c.i.f.)		IMPORT DUTIES
			Complementary	Competitive	
11	Agriculture and hunting				
12	Forestry and logging				
13	Fishing				
210	Coal mining				
220	Crude petroleum and natural gas production				
230	Metal ore mining				
290	Other mining				
311/2	Food manufacturing				
313	Beverage industries				
314	Tobacco manufactures				
321	Manufacture of textiles				
322	Manufacture of wearing apparel, except footwear				
323	Manufacture of leather and products of leather, leather substitutes and fur, except footwear and wearing apparel				
324	Manufacture of footwear, except vulcanized or moulded rubber or plastic footwear				
331	Manufacture of wood and wood and cork products, except furniture				
332	Manufacture of furniture and fixtures, except primarily of metal				
341	Manufacture of paper and paper products				
342	Printing, publishing and allied industries				
	Manufacture of chemicals and chemical, petroleum, coal, rubber and plastic products.				
351	Manufacture of industrial chemicals				
352	Manufacture of other chemical products				
353	Petroleum refineries				
354	Manufacture of miscellaneous products of petroleum and coal.				

COMMODITIES		IMPORTS <i>c.i.f.</i>			
ISIC CODE	CHARACTERISTIC PRODUCTS OF SPECIFIED KIND OF ACTIVITY OF INDUSTRIES 2/	EXPORTS	Complementary	Competitive	IMPORT DUTIES
355	Manufacture of rubber products				
356	Manufacture of plastic products not elsewhere classified				
361	Manufacture of pottery, china and earthenware				
362	Manufacture of glass and glass products				
369	Manufacture of other non-metallic mineral products				
371	Iron and steel basic industries				
372	Non-ferrous metal basic industries				
381	Manufacture of fabricated metal products, except machinery and equipment				
382	Manufacture of machinery except electrical				
383	Manufacture of electrical machinery, apparatus, appliances and supplies				
384	Manufacture of transport equipment				
385	Manufacture of professional and scientific and measuring and controlling equipment not elsewhere classified, and of photographic and optical goods				
390	Other manufacturing industries				
410	Electricity, gas and steam				
420	Water works and supply				
500	Construction				
61	Wholesale trade				
62	Retail trade				
63	Restaurants and hotels				
71	Transport and storage				
72	Communication				
81	Financial institutions				
82	Insurance				
83	Real estate and business services				
91	Public administration and defence				
92	Sanitary and similar services				

ISIC CODE	COMMODITIES	EXPORTS	IMPORTS (c.i.f)		IMPORT DUTIES
	CHARACTERISTIC PRODUCTS OF SPECIFIED KIND OF ACTIVITY OF INDUSTRIES <u>2/</u>		Complement- ary	Compèti- tive	
93	Social and related community services				
94	Recreational and cultural services				
95	Personal and household services				
96	International and other extra- territorial bodies.				

1/ Comprises the part of Table 2 supply and disposition of commodities relevant to merchandise transactions shown on page 168 of A System of National Accounts

2/ See pages 84 and 85 of A System of National Accounts.