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EXTERNAL TRADE STATISTICS

EXTERNAL TRADE STATISTICS ANALYSED BY MODE OF TRANSPORT

Report of the Secretary-General

1. At the Second Joint Meeting of Statistical and Customs Experts, held in Brussels from 24 to 28 June 1968, the utilization of the information on customs documents for purposes of analysing exports and imports by mode of transportation was discussed. There was a consensus that the need for such analysis was a pressing one, especially for air transport. While railways, trucks and ships are the principal and traditional freight carriers, the movement of goods by air is an increasingly important development in the transportation industry. An important factor in the substantial increase in air freight is due to the requirements of a variety of products by sophisticated industries. These products are frequently fragile, perishable and of high value, and the speed of air service can mean savings in total costs which more than offset the higher transportation charges. By reducing time in transit, air transportation has been able to compete effectively with the other modes of transport. Thus, the development of competition in the transportation field over the past quarter-century has paralleled the pattern of competition found generally in industry today. Competition between substitute services, that is, alternative carriers, has become as significant as competition between like carriers, just as competition between sellers of substitute products is now in many instances as important as competition between sellers of the same products. This new

pattern has both strengthened and made more extensive the competitive structure of the transportation industry.

2. While important progress has been made during recent years in the field of international trade statistics - especially in terms of detailed data published nationally and internationally - the detailed analyses thus far available, with very few exceptions, do not cast any light on the role played by the transport industries that make the international transfers of merchandise possible. In order to have information on this economically significant area, a number of Governments are making efforts to include information on methods of transportation in their national trade statistics systems.

3. The Joint Meeting of Statistical and Customs Experts was informed by various delegations that some countries had already compiled such data in varying degrees of detail, while other countries were planning to compile such statistics. The United States of America, for instance, publishes monthly data by mode of transport in terms of gross weight as well as of value in the same detail as the regular trade statistics; the Netherlands publishes data in gross weight, without value information by mode of transport for 200 basic commodities; other countries, such as France, Portugal, Ghana and the Philippines, either have data of the sort available or will have them in the near future.

4. It has been thought therefore that, at the present stage of development in international trade statistics, the Statistical Commission might wish to consider international recommendations for the compilation of trade statistics by mode of transport. In aiming to compile international trade statistics by mode of transport, it may be prudent, initially, to limit the modes to air, sea and inland. Inland transport should encompass road, rail, inland waterway, domestic coastal trade and pipeline. Concerning the commodity detail and periodicity of the data to be compiled, it appears that, if Governments would stress annual data at the Standard International Trade Classification (SITC) group level (3-digit code) plus a few selected SITC subgroups (4-digit codes) listed as an annex to this paper, the resulting information would probably be adequate for present requirements.

5. External trade statistics are compiled from information on customs documents - filed by exporters, importers or their brokers or agents - which generally contain the following information:

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- (a) Mode of transport,
- (b) Port of loading or unloading,
- (c) Nationality of carrier,
- (d) Description of merchandise,
- (e) Net quantity of merchandise,
- (f) Value of merchandise.

While data on mode of transport for goods moved internationally are almost invariably available on customs documents, only a few countries utilize such information to compile separate trade data by mode of transport. This is so because the recording of the extra information relating to the movement of goods requires additional resources. In terms of modern technology in recording data on punched cards, it would probably mean re-designing the basic card format by which the information on the customs declaration can be recorded to reflect mode of transport. In addition, each summary card, which contains data on a flow of goods by all methods of transportation, represented by a single SITC heading, between a pair of countries, will have to be represented by three cards, each of which contains the flow by one mode of transport. In the absence of a pressing need in the past for trade data by mode of transport, countries have not applied the resources necessary for recording information of this sort. Furthermore, even now when the need for the information is clearly indicated, it is recognized that there are additional complications involved, which are discussed below.

6. For transport industries, data in gross weight of the merchandise are more important than those in net weight. While many countries have such information on the customs documents in addition to the data on a net basis, the availability of such information is not universal.

7. In countries using the special trade system, there are two aspects which make the compilation of data by mode of transport based on customs declarations less attractive. The first relates to entrepôt trade. In the special trade system, only those goods moved across the customs boundary are registered as imports or exports. This means that those goods crossing the national boundary into and out of customs warehouses and free areas, without eventually crossing the customs boundary, are excluded. For countries with important entrepôt

this omission is serious. The second aspect is timing. Certain goods entering a country (crossing the national boundary) may be kept in customs warehouses for long periods before they are withdrawn for clearance through customs, with duties paid, for domestic consumption. The result is that commodity import data obtained from the customs declarations for a given period will not necessarily reflect the transport facilities used in that same period. Because of the complications described above for countries with the special trade system, such countries might doubt the wisdom of compiling the data by mode of transport based on customs declarations.

8. In spite of the deficiencies in using customs declaration forms described above, it is believed that, if the general compilation of data on the international movement of goods by mode of transport with adequate comparability is to be attempted, the customs declaration is the only source with reasonable reliability and adequate detail. It is therefore proposed that:

(a) When a country has on its customs declaration information on quantity of goods in gross weight, it be urged to compile trade data by mode of transport in the same format as that used for the regular external trade statistics;

(b) When a country has the information on quantity of goods in net weight only, it be urged: (i) where possible, to modify the customs declaration in order to obtain the required information in gross weight terms from merchants, or, (ii) to request its customs services to establish a set of conversion factors for those general cargoes whose gross quantity measurement differs substantially from the net quantity measurement;

(c) When a country traditionally omits quantity data - both net and gross - in its trade returns for certain commodities, its customs services be urged to study the possibilities of estimating the gross weight of those commodities. In transport industries, quantity measurement in gross terms is important because of its direct relationship to the available space of the transport equipment that carries the goods. However, the degree of accuracy for such a measurement need not be, for all practical purposes, of as high a standard as that associated with quantities in net terms which are generally used for comparison with the corresponding valued data for price indications. It is therefore suggested that, in estimating gross quantities, use of sampling methods of a simplified nature might be adequate in order to keep down the cost of estimation;

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(d) When a country uses the special trade system in recording its external trade statistics, it be urged to estimate its entrepôt trade annually if important, so that those goods which have crossed the national boundary without eventually crossing the customs boundary may be separately recorded. As to the time element involved in the delayed withdrawal from customs bonded warehouses and free areas, no adjustment is suggested.

9. Data compiled by mode of transport along the lines suggested above can be processed by the International Trade Statistics Centre of the United Nations Statistical Office for publication for the information of users in all countries. Where a country finds difficulty in estimating quantity data in gross terms or in ascertaining the magnitude of entrepôt trade, it should still send the data analysed by mode of transport to the Centre without any adjustments.

10. In order to keep the cost down, countries, although possessing basic information in customs documents for a complete tally of quantities in gross terms, may still wish to use sampling methods to approximate the data required for transport purposes.

11. It may be expected that there are cases where a single shipment between a pair of countries will be carried by more than one form of transport. It would be appropriate, for the sake of simplicity of practical statistical treatment, if such shipments were to be credited to that mode of transport which accounts for the largest share of the total freight incurred by the shipment.

12. When trade data are analysed by mode of transport, an important problem naturally arises concerning the validity of using a country as a unit in dealing with shipments of merchandise especially for countries which have large land areas or have peculiar geographical configuration of coast lines. For instance, it does not seem to be adequate to analyse trade data of the United States of America without sub-dividing the US coasts into several segments. Such geographical division is obviously required as well for the USSR, Canada, France and certain other countries. For this reason, it is suggested that the coasts of the following eight countries be divided as follows:

<u>Country</u>	<u>Seaboard division</u>
(a) USA	1) Atlantic; 2) Gulf; 3) Pacific
(b) Canada	1) Atlantic; 2) Pacific

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<u>Country</u>	<u>Seaboard division</u>
(c) Mexico	1) Gulf; 2) Pacific
(d) France	1) Atlantic; 2) Mediterranean
(e) Spain	1) Atlantic, Northern; 2) other
(f) USSR	1) Baltic; 2) Black Sea; 3) Pacific
(g) India	1) East Coast; 2) West Coast
(h) Pakistan	1) East Pakistan; 2) West Pakistan

13. It will be noted that, to put analysis by seaboard division into practice requires the co-operation not only of the eight countries listed above but also that of all other reporting countries which have trade relations with them. While the basic information to produce the data with such divisions is available on the customs declarations (see paragraph 5), few countries, it is believed, are willing to undertake such analysis. The reason for this general reluctance is understandable in light of the large volume of card punching and coding of individual ports involved for each individual customs declaration. However, it is important that the eight countries listed above make an effort to analyse their own trade by the proposed seaboard divisions without necessarily making analysis for partner country seaboard. On this point, it may be of interest to the Commission to note that the United States of America has its external trade data analysed by mode of transport basically on a port-to-port basis. This will mean that any aggregate representing a trade flow between a sector of the US sea coast and a sector of the sea coast in a partner country can readily be obtained by computer processing. The exports and imports of France analysed by mode of transport are also on an individual port basis for ports in France, but not with reference to ports in partner countries. A number of other countries also have their trade data analysed by individual ports of arrival for their imports and by individual ports of dispatch for their exports.

14. It should be mentioned that the use of seaboard division of a country is, of course, primarily aimed at achieving more accurate data in terms of cargo ton-miles carried.

15. In order to analyse more accurately by mode of transport the trade of landlocked countries or of countries which depend heavily on the port facilities of their neighbouring countries, it is necessary that countries with important

transit trade make an effort to register such trade by mode of transport in quantity and values of commodities in SITC groups analysed by country of origin and country of destination. If such data can be made available by these countries to the International Trade Statistics Centre, the reconstruction of trade patterns by mode of transport for certain important countries, especially land-locked ones such as Switzerland and Austria, can be conveniently effected.

16. The need for international trade statistics analysed by mode of transport has been demonstrated in recent years. The Statistical Office has received numerous requests for information on goods moved by air. Analyses of goods moved by sea, especially for those most likely to be containerized in the near future, have been repeatedly urged by international organizations and by various concerns in the transport industry. In response to the needs of various private and international organizations and in particular to the needs of the United Nations Conference on Trade and Development (UNCTAD) for a long-range productivity study of ocean transport and a project of ocean freight rate index construction for developing countries, the International Trade Statistics Centre is currently conducting a global survey of the services performed by ocean transport. This survey, it is hoped will give a measure in tonnage carried and ton-miles performed by ocean fleets in the years 1966, 1967 and 1968 on all the sea lanes of the world analysed by (a) bulk commodities, differentiating those carried by tankers from those carried by tramp shipping and (b) general cargo, normally carried by liner services. The project involves analysing individual countries' loadings and unloadings of their seaborne trade by direction with the aid of existing information on their imports by origin and their exports by destination. Many countries have co-operated enthusiastically. The United States has supplied seventeen tapes for the period of study containing the data on a port-to-port basis. Norway and Finland have sent their tapes in response to the request of the Centre. The Netherlands and the Federal Republic of Germany are also providing data on tape that will not only approximate at least in part general trade, but also analyse transit trade to permit the description of the trade pattern for neighbouring land-locked countries. The United Kingdom, Canada, France and Sweden are also helping in important ways in this project.

17. The purpose of this account of recent developments is to emphasize that interest in trade statistics analysed by mode of transport is widespread and growing. However, it should be pointed out that, without individual countries' efforts to compile their own trade statistics by mode of transport on a uniform basis such as is suggested in the foregoing paragraphs, any estimates made can serve only as approximations at a high level of aggregation.

18. In view of these considerations, the Commission may wish to invite the Secretary-General to request Governments to consider compiling external trade statistics by mode of transport and to consult with the statistical authorities of Member States in order to ascertain what problems they would encounter in expanding their external trade statistics to distinguish the mode of transport of commodities traded.

ANNEX

SELECTED SITC SUB-GROUPS SUGGESTED FOR INCLUSION IN ANALYSIS
BY MODE OF TRANSPORT

051	Fruit, fresh, and nuts
051.1	Oranges
051.3	Bananas
061	Sugar and honey
061.1	Raw sugar
061.2	Refined sugar
061.5	Molasses
221	Oil seeds
221.1	Peanuts
221.4	Soy beans
242	Wood in rough
242.1	Pulpwood
242.2	Sawlogs-conifer
242.3	Sawlogs-non-conifer
274	Sulphur and unroasted iron pyrites
274.1	Sulphur
274.2	Iron pyrites
276	Other crude materials
276.3	Salt
276.4	Asbestos
283	Ores of non-ferrous base metal
283.3	Bauxites
283.7	Manganese
321	Coal and Coke
321.4	Coal
321.8	Coke
332	Petroleum products
332.5	Lubricating oils
332.6	Mineral jelly
332.9	Pitch, resin, petroleum asphalt etc.
732	Road motor vehicles
732.1	Passenger motor cars
732.6	Chassis with engines mounted
732.9	Motorcycles and their parts