

Statistics on Services
Some Comments on Conceptual and Statistical Limitations

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STATISTICS ON SERVICES: SOME COMMENTS ON CONCEPTUAL AND STATISTICAL LIMITATION

Introduction

1. At the UNCTAD VI Conference held in Belgrade, Conference resolution 159 (VI) directed the UNCTAD secretariat to continue its studies of services issues and to consider the role of services in the development process. Pursuant to this mandate the secretariat prepared a study on "Services and the Development Process" (TD/B/1008/Rev.1) as an initial effort to establish a basis for considering services from an interdisciplinary and development oriented perspective. Later, in its Decision 309 (XXX) of 29 March 1985, the Trade and Development Board defined a work programme for UNCTAD in the area of services which included that of conducting further in-depth studies of the role of services to enable countries to analyse the role of the services sector in their economies and its contribution to all aspects of the development process. The same decision instructed UNCTAD to assist upon request and within available resources, Member States in their analysis of the role of services in their economies. The other element of Decision 309 (XXX) was that of considering the definitional aspects of services, and of strengthening and refining the data base on services at the national, regional and international level, together with methodological improvement in this field.
2. In this intervention, I would like to take the opportunity of explaining how UNCTAD has carried out this mandate with special reference to the consideration of the definitional aspects and statistical limitations in the analysis of the role of services in the development process.
3. Our first task in addressing the relationship between services and the development process was to call into question several traditional theories. In this exercise, the application of the so-called "three-stage theory of development" according to which countries, as they develop move from agriculture and raw material production, to manufacturing and only at higher levels of development and personal income, to a service economy was called into question in our initial study on Services and the Development Process. In this study it was considered that, on the contrary, services, at least certain key services, could be seen as a prerequisite for, rather than a result of, the development process. In this context, emphasis was put on the importance of certain services as an input into the production process (i.e. production of goods, both industrial and agricultural and "other" services), including both infrastructural services such as telecommunications, as well as the impact of new, technologically advanced goods. Furthermore, in questioning traditional theories, this study noted that most writers on the productivity of services tended to ignore the interlinkages among services with the rest of the economy. We consider that, due to these interlinkages, many services play a far more important role in the development process than is indicated by their direct contribution to the gross domestic product, although these interlinkages are very difficult to quantify due to the conceptual and statistical limitations in the different existing systems of statistics on services. Also, it was observed that international comparative analysis of the services sector in different countries is handicapped by the inadequacy of internationally comparable statistics.
4. Also, in the same study, the issues related to the deficiencies in the conceptual framework and the statistical limitations of services transactions in the international context were addressed. In this regard, I would like to highlight the fact that a policy oriented analysis of the phenomenon of transnationalization of services has been handicapped by the general inadequacy of both the conceptual and the statistical framework.

5. Previous studies, including UNCTAD documentation,¹ have emphasized the impact of advances in communications and information technology on the "tradeability", "transportability" of transnationalization of services. In this regard, IMF figures indicate that "trade" in services has done little more than keep up with trade in goods, although the share of services in the national economies has progressed more rapidly than goods. This may be explained partially by the fact that many international flows of services do not enter into external accounts, these include data services traded in the form of transborder data flows, or "services" embodied in trade in high technology goods which are extracted in the importing countries. Most importantly, these technological advances have greatly facilitated the penetration of world markets for services through the mechanism of investment. Since the publication of the UNCTAD document on the Role of Services in the Development Process, writers have addressed the problem of differentiating between trade and factor movements, while attempting to overcome the inadequacies of the theoretical, analytical and statistical framework which has been created essentially for trade in goods and for transactions in services aimed at facilitating their trade.²

6. After this introduction, I will refer to the main ideas developed in different UNCTAD studies related to the conceptual and statistical limitations on production, employment and trade in services. I will then present the most relevant aspects of these limitations in the preparation of national studies.³

CONCEPTUAL PROBLEMS AND STATISTICAL LIMITATIONS OF THE SYSTEMS ON PRODUCTION, EMPLOYMENT AND TRADE IN SERVICES

1. Statistics on Production in Services

A. Conceptual Problems with the Systems on Production in Services

7. There are five primary conceptual problems involved in using the national accounting classification of services. The first refers to the narrow definition of services in the national accounts as a residual category encompassing all economic activities excluding agriculture, mining, manufactures, construction and utilities. However, there are a wide diversity of opinions regarding which

¹ E.g. TD/B.1008 Rev.1, TD/B.1100 and UNCTC document ST/CTC/159.

² "Trade" in inverted commas refers to IMF definitions which, for a number of reasons are inadequate. Firstly in that, unlike trade in goods, most trade in services appears to be associated with the transborder movement factor of production. In addition, technological advances (e.g. data services) are shown as invisibles in the balance of payments accounts.

³ G.P. Sampson, R.H. Snape, "Identifying the Issues in Trade in Services", *The World Economy*, Vol. 8, No. 2, June 1985, Oxford, U.K. This recent study identifies four types of transactions in which "trade" in services is conducted, i.e. (a) the producer moves across an international frontier to the consumer ("receiver"), (b) the consumer moves to the producer, (c) the producer and consumer move to each other (i.e. in a third country or in "international space"), (d) neither the producer nor the consumer move to each other. The advantage of this approach is that it addresses not the payments for services identified in balance of payments accounts, but what actually crosses international frontiers. The examples of category (d) provided in the study, indicate that what is in fact moving is information in various forms. See also Deepak Nayyar, *International Trade in Services, Implications for Developing Countries*, lecture published by Export-Import Bank of India, Bombay, 1985. As he points out, it is necessary to differentiate between the economic and negotiating issues. This current debate, however, seems to run the risk of confusing them that regardless of their intent, the studies inevitably provide intellectual support to the various negotiating positions with respect to a possible multilateral legal framework for services.

⁴ Countries which have requested advice or assistance from UNCTAD in the conduct of national assessments under TDB Decision 309 (XXX) include: Andean Group (Bolivia, Colombia, Ecuador, Peru, Venezuela), Argentina, Bahrain, Barbados, Caricom, Chile, Cote d'Ivoire, El Salvador, Guatemala, Honduras, Jamaica, Maldives, Senegal, Sri Lanka, Trinidad and Tobago, Viet Nam, Zambia, Costa Rica and Mexico.

activities should in fact be considered as components of the "service sector". Some argue that both "construction" and "utilities" provide a service to the community and should therefore be included. However, the output of these two activities is undeniably a tangible, consumable good. It is also argued that government services should be excluded from the definition of services since most studies focus on the private service sector. The exclusion of government services would distort international comparisons of services since the same activity provided by the private sector in one country is very often provided by the public sector in another. A reasonable solution to these problems would be to exclude construction and utilities from the definition of services and include government services. This will best allow for international comparability across aggregate service data.

8. Second, the incorporation of certain service activities within manufacturing operations results in the under-statement of the size of the domestic service sector and in the over-statement of the size of the manufacture sector. Many services are provided in-house to manufacturing operations and are recorded in the total output (value added) of the industrial sector in which the activity is taking place. For example, corporations often have in-house legal departments, research and development staffs and marketing and advertising operations. Under current national accounting practices, legal services provided by an in-house legal department of a textile company would be recorded under "manufactures" while legal services provided by a private law firm to another textile company would be recorded as "business services". These accounting practices therefore result in the understatement of the production of services activities within all countries, as well as inhibit direct comparison of these activities across countries.

9. Third, the SNA does not account for the unrecorded activities of the so-called "informal sector" or "underground economy". Many consumer services such as laundry, food preparation and clothing repair are generated within the household economy and hence are technically not "traded" in the domestic market. Other service activities such as machine and equipment repair, minor transport and removal services, car washing, minor retail trade and other domestic services are carried out in small workshops or other unrecorded premises and evade any formal recording or registration. These productive activities are not recorded in the SNA and hence result in the understatement of the true size of the service sector. While an informal economy exists in developed market economy countries and socialist countries, it appears to be far more common and important in the developing countries. Moreover, it is generally believed that the share of service activities in the informal sector is somewhat greater than that in the formal sector of many developing countries - especially in countries with large urban populations.

10. Fourth, the importance of services to the domestic economy and to economic development is even greater than that implied by its share of gross domestic product. The SNA only measures the direct value-added associated with economic activities. It does not take into account the important contribution that services make through their interlinkages and externalities with the rest of the economy. While this is also true in the case of goods, it is even more significant in the case of services. Services are interlinked with an economy in several ways. Transportation, telecommunications and public administration are essential parts of the general infrastructure of all countries. Services such as accounting, advertising and other professional services play a vital role in the vertical integration of corporate activities. Similarly, services such as telecommunications and telematics facilitate the horizontal integration and expansion of corporate conglomerate activities. Only by combining the national accounts measurements of value added with some ad-hoc measurement of the economic benefits to be had from interlinkages would a truly meaningful and accurate valuation be made of the contribution that services make to an economy.

11. Fifth, the recent entry of housewives into the labour force has resulted in an increase in the recorded size of the domestic service sector even though there has been no real change in the total output of these activities. This is because many services previously performed in the household (and not recorded in the national accounts) are now provided professionally and enter into the statistics on national income under the SNA (i.e. household services, day care centres, laundry services, hairdressing). International comparisons of service data are therefore somewhat undermined by the discrepancy in reporting which results from differing degrees of female participation in national labour forces.

B. Statistical Limitations of Data on Production in Services.

12. In the preparation of national studies under UNCTAD assistance in many developing countries, eight limitations have been identified. There are various statistical limitations to the use of national accounts data. The first refers to the lack of adequate time-series data in national accounts (i.e. greater than ten years). This inhibits any analysis of long term trends in the production of services. Comprehensive cross-country analysis of such trends must therefore be limited to a recent time frame. Second, international comparability of production data on individual service activities is hindered by variations in countries' definition of these activities. Individual countries often adjust the coverage and classification of particular activities to meet particular national conditions.

13. Third, international comparability of production data on services is also limited by the lack of adequate disaggregation at the sectoral level. For example, services are disaggregated into only five categories: "wholesale and retail trade and restaurants and hotels", "transport, storage and communication", "financing, insurance, real estate and business services", "public administration and defense" and "community, social and personal services". However, given the description of ISIC classifications, each of these categories include a broad array of individual service activities that are lost in the aggregation. In particular, "other services" include diverse activities such as education, medical and health activities, religious organization, welfare institutions, legal services, business services and motion pictures, just to name a few. This limited degree of disaggregation inhibits any meaningful or detailed analysis of individual service activities. While greater disaggregation may be available from the national accounts work sheets at the national level, it is not possible at the international level.

14. A final limitation to the use of production data on services arises from the difficulty in obtaining comparable figures for the value added in many service activities. In the case of a manufactured good, total output (value added) can be measured in physical terms. This is not the case, however, with services. Countries therefore use different and sometimes arbitrary methods of recording their output of services. In most cases, the value added of a service industry is estimated by summing up all the factor payments involved in the production process. The obvious limitation of this approach is that inefficiency in the use of factors for a given service activity would result in a greater contribution to (i.e. share of) gross domestic product.

2. Statistics on Employment in Services

A. Conceptual Limitations

15. Because the ILO Yearbook data suffers from essentially the same conceptual problems as that of the SNA, it requires little elaboration. First, the aggregate definition of services could include employment in construction and utilities, though these activities involve a tangible consumable good. Moreover, the fact that some services are provided by the government in certain countries and by the private sector in other countries leads to a distortion in international comparisons unless government related services are included. Hence, the most meaningful and comparable definition of services would include employment in trade, transport, storage and communication, finance, insurance, real estate and business services, public administration and defense, but exclude construction and utilities.

16. Second, underreporting of employment in the service sector occurs because of the problem of in-house services provided within manufacturing operations. Third, underreporting of service employment will also result because of the aforementioned existence of the "informal sector" or "underground economy". This distortion becomes even more of a problem as housewives enter the recorded side of the economy while performing the same service activities. International comparability of the ILO Yearbook and employment data is therefore hindered by these discrepancies.

B. Statistical Limitations

17. Far more important than the conceptual problems, however, are the statistical limitations to the ILO Yearbook data. First, the comparability of this employment data across countries (and even within a country) is severely hampered by the differences in the methods of collection, classification and tabulation by reporting countries. The data is collected in some countries by a census, in other countries through a survey and in still others through official national estimates. Often, different definitions are used and different groups of workers are covered. For example, the extent to which family workers (particularly women) who assist in a family enterprise are included as part of the economically active population varies considerably from one country to another. In addition, while some countries report statistics of the economically active population only for persons above a certain age, other countries will not have such an age provision. Together, these variations in coverage inhibit international comparability of such data.

18. Second, the reference period used by each country in reporting their employment data varies considerably. For example, some countries refer to the actual position of each individual on (or around) the day of the census or survey, while other countries record employment without reference to any given period of time. Third, national practices vary between countries regarding the treatment of members of the armed forces, inmates of institutions, persons living on reservations, persons seeking their first job, seasonal workers and persons engaged in part-time economic activities.

19. Unlike in the case of the production data under the SNA, no attempt is made whatsoever by the ILO to standardize this particular set of data so that it is comparable across countries. In fact, this data simply is not comparable and should not be aggregated across countries. Nor should an attempt be made to directly compare data from the ILO Yearbook with the corresponding categories in the SNA production data.

3. Statistics on Trade in Services

Structure of the IMF Balance of Payments

20. The balance of payments has traditionally been divided into a current account (composed of merchandise trade and "invisibles") and a capital account. The capital account contains all transactions of a purely financial nature. The merchandise account covers both exports and imports of goods, where "goods" in principle correspond to the output of the non-service sector (i.e. agriculture, manufactures, mining, utilities, and construction). The "invisibles" account involves transactions which relate neither to capital nor to goods.

A. Conceptual Limitations to Statistics on Trade in Services

21. There are five major conceptual problems involved in the international balance of payments definition of services. These involve (a) the definition of trade in services; (b) the treatment of investment income; (c) the treatment of foreign affiliate operations; (d) the treatment of reinvested earnings, and (d) workers' remittances.

1. The Definition of Trade in Services

22. The most important conceptual problem involved in the use of the balance of payments statistics in analyzing trade in services is related to the different interpretations of the concept of trade in services itself. Accordingly, defining exactly what constitutes a traded service is an essential first step to any analysis of services. There are four broad categories: (a) services that are not traded in international markets, (b) services that are provided within national boundaries to non-residents, (c) services that are produced domestically but are exported to foreign markets, and (d) services that are provided directly to the host country through the affiliate of a foreign-owned enterprise. By definition, "(a)" is not traded in international markets. In the case of both "(a)" and "(d)" the service is produced and consumed domestically and hence no trade is involved. The only difference is that in the latter case, foreign nationals own the domestic entity involved. Only in the case of "(b)" and "(c)" does foreign trade in services occur.

23. There has been much confusion in the general literature regarding "trade" in services. Authors commonly use expressions such as "invisibles", "factor services" and "non-factor services" very loosely and add further to this confusion. Moreover, the standard lay out of the balance of payments classification scheme does not easily allow the identification of traded service components.

24. It is commonly referred that "invisibles" encompass all current account transactions excluding merchandise trade. "Invisibles" are often further subdivided into so-called "factor services" (i.e. direct investment income and other investment income), "non-factor services" (i.e. shipment, other transportation, travel and other goods and services) and "unrequited transfers". Some analysts consider "invisibles" to be trade in services. Others consider both factor and non-factor services to constitute trade in services. Only non-factor services constitute trade in services.

25. As defined by the IMF, a traded activity involves a transaction between a resident and a non-resident of an economy. Following this logic, only three types of services could therefore be considered as traded services. The first would be those services which physically cross international borders. This would include "shipment", "passenger services" and the sub-item "other goods and services" under "private transactions/other goods, services and income". The second relevant group of services would be those consumed by foreign residents in the "home" country as well as by domestic residents while in a foreign country. For example, in the case of tourism, the customer travels to his/her destination and fulfils his/her housing, food and entertainment needs accordingly. In the case of port and airport services, international ships and aircraft temporarily harboured in a foreign country must meet their fuel and servicing needs in that foreign market place. Though no "across-border export" actually takes place, the transaction is still between a resident and a non-resident and hence constitutes trade. The final group of traded services would be "official transactions". This involves transactions between one country's official sector and the official or private sector of another country. In particular, it includes *inter alia*, activities of embassies, consulates, military units and other official entities located abroad.

2. Treatment of Investment Income

26. Direct investment income consists of receipts (dividends, interest, earnings of unincorporated affiliates and reinvested earnings) derived from domestic ownership of foreign affiliates and from foreign ownership of domestic affiliates. No distinction is made, however, between foreign direct investment in "goods-producing ventures" and foreign direct investment in "service-oriented ventures". This is because in both cases capital is being invested abroad and the income earned on this investment represents the return associated with the "service" of providing the capital. The service, therefore, is the "provision of capital" and not the nature of the project in which the investment is made.

27. It can be argued, however, that the "nature" of the final activity is the relevant point and not simply the "act of investing". The returns from direct foreign investment in a "service-related" venture (for example, a bank of one country opening a subsidiary in another country) should therefore be reported separately from the returns from direct foreign investment in a "manufacturing-related" venture (for example, a motor manufacture of one country opening an assembly plant in another country).

28. If such a distinction is indeed valid, then the present method of recording "factor services" overstates the real "service" magnitude involved. The extent of this overstatement is, however, difficult to quantify. Statistics published by the United States Department of Commerce suggest that no more than one third of United States direct investment income receipts (and roughly the same proportion for direct investment income payments) is attributable to service industries. The remaining two thirds are divided approximately equally between manufacturing and petroleum.⁵ While comparable data are not readily available for other countries, it would be reasonable to assume that a substantial amount of investment income is attributable to "non-service-related activities". The disaggregation of foreign subsidiaries' earnings would increase the credits and debits of the merchandise accounts by the amount of the decrease in the credits and debits of the service account. The decline in the size of the service sector would therefore be countered by the rise in the size of the merchandise account, and hence there would be no change in the current account balance.

2. Treatment of Foreign Affiliates

29. The currently accepted method of balance of payments accounting operates under the principle of "location". Overseas affiliates are considered to be "residents" of the host country. Their sales are therefore recorded in the "host" country's national income accounts and only the earnings show up in the "home" country's balance of payments.⁶ The rationale for this treatment is that most of the subsidiary's sales revenue is used to pay wages and other expenses in the host country (or sometimes in other foreign countries) and that only the net profit directly contributes to the home country's economy.

30. It is argued by some, however, that the "location" concept significantly understates the magnitude of foreign affiliate operations and therefore the size of the service account itself. Proponents of this view advocate the use of the "ownership" concept in place of the "location" concept. Under the "ownership" concept, all transactions of fully-owned foreign subsidiaries would be attributed to the parent firm. In the case of multiple ownership, the sales could be distributed *pro rata* among the different shareholders and, consequently, among their countries. The rationale for this approach is that identical transactions - whether by the parent company in the form of exports or by a fully-owned subsidiary in the form of sales - should not be treated differently. If the entire value of the sale appears as a balance of payments credit in one case (the parent's transaction), it may be argued that there is no reason why only the profit should appear as a credit in the other case (the subsidiary's transactions).⁷

31. If it were concluded that the "ownership" principle more accurately reflected a foreign subsidiary's contribution to the service account, then the size of the service account would be increased significantly. Because the subsidiary's "sales revenue", in contrast to its "earnings", would be recorded in the balance of payments, the size of the direct investment account would increase by a factor of 17, while the size of the invisibles account would increase by a factor of 2.3.⁸ This reshuffling, however, would have no effect on the balance of the current account, because the "underreporting" on the credit side of the services account is offset by the "underreporting" on the debit side. If overseas affiliates were treated as domestic entities, all their transactions in the countries in which they reside would be considered international transactions. Hence, their payments to foreign residents for both goods and services (which under the present conventions are

⁵ See, for example, "Service transactions in U.S. international accounts, 1970-1980", *Survey of Current Business*, vol. 61, No. 11 (November 1981), tables 10 and 11.

⁶ Under the accepted method of balance of payments reporting, all earnings of a foreign subsidiary are assumed to be repatriated to the home country - whether or not this actually occurs. In turn, any portion of the earnings which in fact remains with the subsidiary is assumed to be a flow from the home country and therefore shows up as a debit in the capital account.

⁷ E.P. Lederer, W. Lederer and R.L. Sammons, "International services transactions of the United States: proposals for improvement in data collection", paper prepared for the United States Department of State and Commerce and the Office of the United States Trade Representative (Washington, D.C. January 1982).

⁸ On average, United States foreign service subsidiaries' profits represent 6 per cent of its total sales. Using this assumption, the factor services account would therefore increase by a factor of 16.67 (the inverse of 6 per cent), see Lederer, Lederer and Sammons, *op.cit.*, table 1.

considered as transactions between foreign parties and hence do not appear in the balance of payments for the home country) would appear as debit items on the current account. The net contribution of the overseas affiliate to the current account would essentially be the same as before - i.e. equal to its overseas profits.⁹

3. Treatment of Reinvested Earnings

32. Where earnings are reinvested rather than distributed, in the case of direct foreign investment they are recorded in the balance of payments. However, in the case of foreign portfolio investment, undistributed earnings in direct investment enterprises are not recorded.¹⁰ The distinction between the definition of "direct investment" and that of "portfolio investment" is essentially a matter of ownership or control. If a domestic party owns a specific minimum percentage of a foreign enterprise, the investment is considered to be a "direct investment". If the degree of ownership is less than the specific percentage, it is considered to be a "portfolio investment".¹¹ The rationale for this discrepancy is that in the case of direct investment, reinvested earnings "are conceived of as providing additional capital to the enterprises, thus increasing the value of an economy's stock of foreign assets and liabilities".¹²

33. It is argued, however, that the degree of "ownership" is not pertinent to the reporting of reinvested earnings. What is of importance is that in both cases the net contribution to the "host country's" economy is increased by the amount of reinvested earnings. The inconsistency in the "degree of ownership" concept is underlined by the fact that the boundary line between the two types of investment varies significantly from country to country; this obviously inhibits comparability. IMF itself concluded that the "treatment of reinvested earnings was quantitatively the major definitional inconsistency".¹³ In practice, however, it would be very difficult to identify the countries to which such contributions should be attributed, let alone the magnitudes that are involved. This may explain why such an inconsistency is allowed to continue. Since undistributed earnings from portfolio investment in direct investment enterprises are presently not recorded in the balance of payments, their inclusion would result in a credit to the service account and a debit to the capital account.¹⁴ This would not only increase the size of the service account but would also increase the surplus (or decrease the deficit) of the current account.¹⁵

4. Treatment of Workers' Remittances

34. "Factor income" is almost exclusively restricted to "investment" income in the balance of payments.¹⁶ Workers' remittances, however, are reported separately from the service account and

⁹ While the net effect on the current account would be zero, proponents of the ownership approach would argue that this still remains a more valid method. In the case of domestic exports of services, the revenue is often offset by payments to foreign residents (for goods and services), yet the credit side of the balance of payments still reflects the total value of foreign sales and not simply the value net of payments abroad. In addition, the merchandise account records the entire value of exports as a credit, even though the "import content" of the exports is often considerable. Hence, the reported export figures likewise provide overestimates of the contribution of the export sector.

¹⁰ According to the IMF guidelines for balance of payments statistics, the entire amount of reinvested earnings from direct investment is treated as a credit on the service account and as a debit (representing the implied capital outflow) on the capital account. On the other hand, "The share of portfolio investors in the earnings of an incorporated direct investment enterprise that are not formally distributed should not be entered in the balance of payments". IMF, *Balance of Payments Manual*, para 304.

¹¹ The specific percentage varies from 5 per cent to 50 per cent, depending on the country involved.

¹² IMF, *Balance of Payments Manual*, para 304.

¹³ *Ibid.*, para. 567.

¹⁴ As in the case of the reinvestment of direct foreign investment earnings.

¹⁵ By analogy with the case of direct investment income, it could also be argued that only returns on portfolio investment in service industries (and on bank lending to service industries) should be considered as part of factor services. Because a breakdown of "other investment income" (for example, portfolio investment and bank lending) does not exist, it would be difficult to approximate the proportion accounted for by service industries alone.

¹⁶ Interest on loans is also included.

are included in "private unrequited transfers". There is, however, a certain inconsistency in this distinction between income from capital and income from labour. Investment income is classified as a "factor service" because it represents the presumed return to the "service" provided by capital as a factor of production. Using this same logic, the return to "labour" employed abroad could also be interpreted as representing "factor income" since labour, too, is a factor of production. The inclusion of workers' remittances would increase the credits and debits of the service account and decrease the credits and debits of the private transfer account. This would have the effect of increasing the size of the service account, without affecting the overall current account.

B. Statistical Limitations to Trade Data on Services

35. There are six primary statistical limitations to the use of balance of payments data in analyzing international trade in services. First, variations in the reporting of data on certain international services activities impedes comparability across countries. Balance of payments data rely primarily on reporting by governments' customs offices. In the case of tourism, for example, many services are provided informally to visitors by residents and therefore evade any official reporting. Similarly, receipts and expenditures of open registry fleets are not recorded in the balance of payments since these fleets are not claimed by any one country. Since open registries account for roughly 29 per cent of the total world fleet, this significantly understates the overall importance of any one country's share. The reporting of "freight" transactions also varies from country to country with some nations choosing not to distinguish between "freight" and "other transportation" while others choose not to separate "air freight" from "sea freight" transactions. The same is often true in the case of air and sea passenger fares. Together, these discrepancies hinder direct comparisons between the international service activities of one country with those of another.

36. Second, as in the case of the national income accounts data, there is a lack of disaggregation of one of the largest traded service items, "other goods and services". This broad category accounts for over one-third of total world traded service credits. Yet, it is a catch-all category for a wide diversity of activities including non-merchandise insurance, communications, advertising, brokerage, management, operational leasing other than charters, periodicals bought through subscriptions, processing of and repair, merchandising and professional and technical services. This lack of disaggregation significantly hinders any meaningful and detailed analysis of trade in individual service activities.

37. Third, traded services activities are understated in the balance of payments because many services are aggregated into merchandise export data. Manufacturers often provide services to their foreign clients in connection with their traded goods activity. This is the case with engineering as well as with various training related activities. These same activities, however, are generally reported as part of the goods transactions involved. Hence, this tends to overstate the size of true merchandise trade and understate the size of traded services.

38. Fourth, there is no direction of trade statistics for services. Though balance of payments does not directly report direction of trade statistics for merchandise trade, a sister IMF publication, the Direction of Trade Statistics, does so. However, this publication only provides data on goods not services. Similar information on services would undoubtedly assist research efforts on the flows and dynamic aspects of international service trade.

39. Fifth, the balance of payments does not have substantial historic data for most developing countries. This impedes the analysis of long-term trends in international trade in services. Analyses must therefore be confined in most cases to a recent period of time.

40. Finally, the lack of balance of payments reporting by most socialist countries limits world-wide analysis of international trade in services. Only Hungary and Romania are presently members of the IMF and hence report their balance of payments statistics to the Fund. Moreover, the national balance of payments statistics derived by the socialist countries generally do not include factor payments nor non-material services. The existence of price distortions caused by counter-trade or barter arrangements for inter-CMEA trade further limits the use of these statistics.

4. Conceptual and Statistical Limitations in the Context of the Preparation of National Studies on Services

41. Many developing countries under advisory assistance from UNCTAD and in collaboration with the regional commissions, are engaged in the assessment of the role of services in their development process. In the process of the preparation of these studies, the national planners in most of these countries have faced the problem of the inadequacy of statistics and the deficiencies in the conceptual framework as being the main barriers to be overcome in order to take policy decisions. Following are some of these problems:

(1) Detailed information on services industries is very scarce or in-existent due to insufficiencies in the existing classification of services activities.

(2) There are great difficulties in measuring the contribution of producer services in the economy because of the inexistence of a) detailed listing of outputs produced or used by service industries, b) the inputs of services used in the goods producing sectors, and c) on final expenditure on services. This makes it almost impossible to assess the interlinkages between services and the other sectors of the economy. For instance, information does not exist on the output produced by trading companies, architects, accounting firms, consultants etc.

(3) There is no knowledge on the contribution of non-marketed services in the economy. In this regard, it is very important to highlight the fact that it is not possible to assess the participation of services industries on the occupational structure of employment, making it almost impossible to estimate the productivity in services industries.

(4) Lack of methodology for the treatment of the informal service sector.

(5) Price data does not exist for almost the totality of services industries. In addition, there are no surveys to collect information to estimate the value-added elements of services industries. These constraints impede the estimation of the volume of outputs produced by services industries. The main factor influencing this situation is perhaps the lack of an adequate definition of services outputs and that it does not allow the collection of data for making price services indexes. As a result, in most developing countries it is impossible to measure the real domestic product for services industries.

(6) The available statistical base in different countries does not allow the analyses of the process of externalization or the degree of internationalization of services industries due, on the one hand, to the high degree of aggregation existing in the different groupings of services and, on the other hand, to the inexistence of data of in-house services produced in the goods producing firms which normally are reported as an activity of the sector where the industry is classified.

42. Regarding international transactions on services, the situation is equally dramatic as in the domestic production of services. The main deficiencies or handicaps faced in the preparation of national studies are:

(1) The treatment of foreign investment in services related activities. In this regard it is highly relevant to mention that it is practically impossible to isolate the service component from the manufactures component of direct investment.

(2) The lack of disaggregation of "other services" in the balance of payments.

(3) The impossibility to estimate the service component in the export of goods.