Measurement, Classification, and Reporting of Services Activities: An International Perspective

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Summary: This paper examines needs for statistics on trade in services, indicates in general terms what data are now available, describes the existing international body of methodological guidance for statistical compilation, discusses strategies for data-improvement programs, and identifies some of the data needs that remain unmet and some of the difficulties and special situations involved in data collection. Particular attention is given to relationships between guidelines for compilation and definitions contained in or implied by the General Agreement on Trade in Services.

Over roughly the last 15 years, growth in trade in services and the advent of trade negotiations and agreements covering services have made it increasingly important that measurement of services trade be as comprehensive, detailed, accurate, and internationally comparable as possible. International organizations and national statistical offices have responded by issuing new methodological guidelines and classifications, improving the coverage of transactions, and reporting services trade in greater detail. In addition, a number of countries have begun to develop data on services delivered to international markets through locally established foreign affiliates. Overall, a remarkable amount of progress has been achieved. Yet the area still is not one most people would consider highly developed. Available data tend to be highly aggregated, particularly in comparison with those on trade in goods, often do not separately identify prices and quantities for specific services, do not indicate the mode through which the service was supplied, and may classify cross-border trade and (if data on them are available at all) sales by foreign affiliates on fundamentally different bases--all limitations that help to define the wish lists of data users.

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This paper will examine needs for statistics on trade in services, indicate in general terms what data are now available, describe the existing international body of methodological guidance for statistical compilation, attempt to provide some insight into what is involved in improving trade-in-services statistics (using as an illustration the efforts of the United States, with which the author has been involved), and identify some of the needs that remain unmet and some of the difficulties and special situations involved in data collection.

Because it is likely that many of its readers are most interested in services statistics as a tool for supporting negotiations, the paper devotes special attention to identifying areas in which negotiators may have adopted definitions that differ from those found in guidelines for statistical compilation. For these readers, it may help motivate the discussion that follows to point out a reason why statistics on the trade subject to negotiation may be even more critical for services than for goods--namely, the greater need for indirect tools for gauging impediments. Barriers to services trade are almost exclusively non-tariff barriers and thus difficult to quantify, and impossible to quantify precisely.[1] However, sufficiently detailed and accurate trade statistics might allow levels of protection to be gauged indirectly, through comparisons between actual trade flows and flows predicted by economic models.

DATA NEEDS

Data on trade in services are used for a variety of purposes, and it is with these purposes in mind that needs must be considered. The most longstanding purpose is for general economic measurement and accounting. Trade in services is recorded in balance of payments accounts, which provide a statistical record of economic transactions between the residents of a nation and those of other countries; these accounts, in turn, feed into the national income and product accounts used for gauging overall economic activity. Another purpose--and one that has provided much of the impetus for data improvement--is for use in connection with trade policy, including the support of negotiations and the resulting agreements. Finally, the data may be used by businesses in assessing market opportunities and by researchers in conducting economic analysis.

Needs for data on trade in services may be approached from different perspectives. The one that comes most readily to mind is that of the *types* of information needed, and this is the principal concern addressed below. However, no less important are issues related to the *quality* and the *comparability* of the data. For users to feel they can depend upon them, the data must be accurate and timely. For the data to be as useful as possible analytically, it

[1]Despite the difficulties, some efforts to quantify these barriers have been made. For a discussion of the work in this area, see Warren and Findlay, 1999.

must be possible to compare them from country to country and relate them to statistics on the domestic economy.

The types of information required to meet the needs of economic accountants, negotiators and policy officials, business analysts, and researchers can be stated rather straightforwardly. Putting aside for the time being questions of what is feasible or cost effective, four basic types of needs can be identified; these are discussed below under the headings of *values*, *prices*, *modes of supply*, and *foreign-affiliate activities*.

Values.--The most basic need is simply for data on the values of services exports and imports, both in the aggregate and for specific services. These should be available in some degree of detail, preferably classified according to an internationally agreed system that allows comparisons among countries and, for a given country, with data on domestic production and consumption of those same services.

Prices.--Information on the prices governing the transactions is needed to allow estimates of trade flows in real terms to be developed, to address terms-of-trade issues, and to assist in efforts to estimate and analyze supply and demand for traded services.

Modes of supply.--A relatively new need is for a breakdown of statistics on the basis of the "modes of supply" through which services are delivered. While analysts had for some time recognized that services transactions may be differentiated based on the location of the producer and consumer of the service at the time of the transaction, the discussion was mostly couched in theoretical terms.[2] It was only with the General Agreement on Trade in Services (GATS), under which offers and commitments may be restricted to services supplied via particular modes, that mode of supply became identified as a significant statistical need.[3]

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[2]See, for example, Stern and Hoekman, 1987.

[3]As many readers are no doubt already aware, the GATS identifies four modes of supply. Three of them subdivide the bulk of the services transactions between residents and nonresidents that are recorded in balance of payments accounts: Cross-border supply (service is transmitted from a producer in one country to a consumer in another country), consumption abroad (purchaser consumes the service in the country of the producer), and presence of natural persons (producer performs the service in the country of the consumer). A fourth mode--commercial presence--covers services supplied through foreign affiliates or through short-term commercial operations that do not qualify as direct investment (e.g., some construction projects).

Foreign-affiliate activities.--Related to the need for mode-of-supply information is the need for data on the sales and other activities of foreign affiliates. Though important for both goods and services, supply through foreign affiliates may be particularly important for services, due to the need for close and continuing contact between producers and consumers and, in many cases, the impracticality--or even impossibility--of supplying the market through any other mode. Although given impetus by trade agreements, data on foreign affiliates' activities also are needed in connection with the study of globalization phenomena and, in particular, of the ways multinational firms organize their international operations and of the effects of these operations on home- and host-country economies.

DATA AVAILABILITY

A good overall impression of the availability of data on trade in services may be obtained by examining publications of international organizations that recompile data supplied by their member countries. Data for the largest number of countries are those found in the International Monetary Fund's *Balance of Payments Statistics Yearbook* (IMF, 1998). In it, data on services trade (and other international transactions) are broken down according to the standard components recommended by the Fund's *Balance of Payments Manual* (5th edition, often referred to as "BPM5"), which provides guidelines for balance of payments compilers (IMF, 1993). (These guidelines will be discussed in the next section.) The 1998 edition of the *Yearbook* contains data for 159 countries and covers the years 1990-97. Of the 159 countries, data on total services trade are provided for both 1990 and either 1996 or 1997 for 110 countries.[4] Table 1 shows how many of these countries reported data for each of the various services components for 1990 and for the latest year reported (1997, in all but a few cases).

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[4]Most of the remaining countries did not exist in the same form throughout the period (e.g., Soviet republics that became separate countries) or began reporting during the period.

Table 1.--Number of IMF Member Countries Providing Services Data

	Exports		Imports	
	1990	1996 or 1997	1990	1996 or 1997
Total services	110	110	110	110
Transportation	105	106	108	109
Travel	105	106	104	107
Other services	109	109	109	109
Communications	30	66	32	67
Construction	16	34	16	40
Insurance	83	86	97	98
Financial services	16	41	17	43
Computer and information services	8	34	8	33
Royalties and license fees	34	46	52	66
Other business services	102	102	105	108
Personal, cultural, and recreational services	11	31	20	36
Government, n.i.e.	95	102	99	104

Note.--This table covers the 110 countries for which data on total services are shown for both 1990 and either 1996 or 1997 in the 1998 edition of the *Balance of Payments Yearbook*.

As can be seen, almost all of the countries reported data for the three major categories--transportation, travel, and "other." Within "other," however, a category encompassing a very wide variety of services, the picture is not so bright. Most countries reported on insurance, "other business services," and government services, but for several other services, only a minority of countries reported. For construction, financial services, computer and information services, and personal, cultural and recreational services, a minority--generally around 30-40 percent in the latest year--reported for both exports and imports. For royalties and license fees--basically, transactions related to intellectual property--a minority reported exports (receipts), perhaps reflecting to some extent a genuine absence of such exports by a number of mainly less-developed countries, but around 60 percent of the countries reported imports (payments). Considering that this is a highly aggregated list to begin with--only 11 categories altogether, excluding subtotals--these results probably are not very encouraging to trade negotiators. (The Services Sectoral

Classification List (often referred to as the "W120 list") used in connection with the GATS, for example, lists about 150 separate services.[5])

Despite the rather low numbers of countries reporting on several of the services, it is encouraging that these numbers are growing. For construction, financial services, computer and information services, and personal, cultural and recreational services, the numbers of countries reporting more than doubled from 1990 to 1996-97 for both exports and imports. This would seem to indicate that countries are beginning to devote increased attention and resources to providing more detailed and comprehensive data on services trade, even if the available detail remains rather limited. Of course, during this developmental period, the changing number of countries reporting various services itself greatly complicates the analysis of global trends in services trade, and this factor must be kept in mind in interpreting the available data. A related complication stems from the fact that newly reported services may in some cases have been included previously in higher-level groupings, making it difficult to know the extent to which discontinuities for individual services carry over to groups of services or services as a whole.

While the IMF data are the most comprehensive in terms of country coverage, the aggregated nature of the standard components does not allow analysis of data availability for very many specific types of services. However, it is likely that most of the countries that have more detail are developed countries (one would expect this *a priori*, and their reporting of the IMF standard components tends to be the most complete), and many of these countries report detailed data on services trade to the Organisation for Economic Co-Operation and Development. Table 2 indicates the number of countries, from among the 27 covered by the most recent OECD statistical publication on trade in services, reporting data for different types of services, including several that are not broken out separately in the IMF *Yearbook*.

[5]The IMF *Yearbook* contains additional detail that is not shown in table 1, but all of it is within travel and transportation, many countries did not supply some or all of it, and its addition would in any event still leave the list far more aggregated than the W120 list. The W120 list was originally published in GATT, 1991. A more generally accessible source for this list is United Nations Conference on Trade and Development and the World Bank, 1994, pp. 169-72. For a discussion of linkages between the W120 list and the statistical classifications used by balance of payments compilers, see Henderson, 1997.

Table 2.--Number of OECD Countries Providing Statistics on Trade in Different Types of Services, 1996

	Exports	Imports
Total services	27	27
Transportation	27	27
Travel	27	27
Communications	25	24
Construction	23	23
Insurance	27	27
Financial services	25	26
Computer and information services	22	22
Royalties and license fees	25	25
Other business services	27	27
Merchanting and other trade-related	23	22
Operational leasing	23	24
Misc. business, professional and technical services	26	26
Legal, accounting, management, and public relations services	20	20
Advertising, market research, and public opinion polling	20	20
Research and development services	20	19
Architectural, engineering, and other technical consultancy	17	17
Agricultural, mining, and on-site processing	16	16
Other business, professional and technical services	20	20
Services between affiliated enterprises, n.i.e.	14	14
Personal, cultural, and recreational services	26	26
Audio-visual and related services	18	18
Other personal, cultural, and recreational services	18	17
Government services, n.i.e.	27	27
Other services	25	25

Source: OECD, 1999; derived from tables B.1 - B.28.

The general impression obtained from the table is one of good coverage of the major broad categories, with lesser but still significant coverage of most individual services. Several countries do not provide separate information on most or all of the services within the "business, professional, and technical" group, but a significant number do. Reporting for exports and imports is very similar, with there being just a few instances of trade reported in only one direction.

All the data described above show values only and do not distinguish between movements attributable to price change and movements attributable to changes in quantities. Nor do they distinguish among the different modes of supply. To the best of the author's knowledge, comparable cross-country estimates breaking down values for specific services into price and quantity components or allocating those values on the basis of mode of supply simply do not exist.[6]

Concerning sales of services by foreign affiliates and other related information on the operations of direct investment enterprises that might relate to the commercial presence mode of supply, the data availability situation is difficult to assess. For most countries, this is a relatively new area of data collection; only a few have actually begun it. International guidelines are still evolving, and systematic recompilation by international organizations has not yet begun. Among the countries that have collected data on sales by foreign affiliates for some time are the United States, Japan, and Sweden. These data are classified by the primary industry of the affiliate rather than by type of service, and only the United States data break down sales by affiliates in each industry as between sales of goods and sales of services.

In 1997, the Statistical Office of the European Communities (Eurostat) issued a *FATS Task Force Report*, reporting on the work of a task force established to investigate statistical issues related to activities by foreign affiliates--which the report termed "foreign affiliates' trade."[7] Included in the report was a prototype survey, later implemented jointly with the OECD, requesting information disaggregated by industry of affiliate on five key operating statistics--turnover (sales), employment, value added, exports, and imports. About a dozen responses were received, most of them providing information on only some of the items

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[6]Notwithstanding the statement in the text, Karsenty has found it possible to make order-of-magnitude assessments of the relative importance of the different modes of supply, by making assumptions about the various categories of transactions recorded in balance of payments accounts and by examining the available data on activities of foreign affiliates (Karsenty, 1999).

[7]Statistical Office of the European Communities, 1997. In this publication, "FATS" stands for "foreign affiliates trade statistics." In the draft *Manual of Statistics of International Trade in Services*--described in the next section--the same acronym is used to represent "foreign affiliates trade in services." These terms have largely replaced the term "establishment trade," which for many years was used in trade policy circles as a shorthand way of referring to activities falling under the commercial presence mode of supply.

requested and only for foreign-owned firms in the domestic economy (inward direct investment). Additional countries can be expected to make progress in this area in the coming years, at least with respect to inward investment, though there is no indication that the availability of data is likely to become truly widespread any time soon.[8]

THE INTERNATIONAL METHODOLOGICAL INFRASTRUCTURE FOR TRADE-IN-SERVICES STATISTICS

International organizations have influenced the available statistics on trade in services not only by republishing member-country data, but also by providing definitions and methodological guidelines for compilation, generally through internationally coordinated consultative processes involving member-country statistical offices. The organizations most directly involved in these activities have been the IMF, the OECD, and the UN, all of which have major statistical functions as integral parts of their work programs. These organizations, together with the World Trade Organization and Eurostat, currently are jointly endeavoring to integrate and expand the body of international guidance on trade-in-services statistics through a Task Force on Statistics of International Trade in Services, whose activities are described below along with those of the primary statistical organizations.

IMF

Of the numerous steps international organizations have taken to promote better data on services trade, perhaps the most fundamental ones are those reflected in the 5th edition of the IMF's *Balance of Payments Manual*. Published in 1993, BPM5 was the first edition of the *Manual* to provide a statistical definition of trade in services, together with a single heading within the current account under which all services exports and imports would be separately grouped. It gave definitions of what to include under this heading and what to exclude, and it specifically addressed a number of borderline cases. In recommending that the total be

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[8]The greater availability of data for inward investment than for outward investment is likely to be a continuing feature of data on foreign-affiliate operations. For inward investment, it may be possible to develop estimates by linking data on direct investment, which can help to identify the firms in the domestic economy that are foreign-owned, with domestic enterprise statistics. In this way, estimates can often be developed without any actual new data collection being required. For outward investment, in contrast, no such linking opportunities are available, and so new surveys or expansion of existing surveys generally would be required to develop the data. Some of the implications of this situation are considered in the last section of the paper.

distributed among a number of "standard components," it provided a broad international classification for trade in services.

Because of its centrality in determining how trade in services is statistically recorded and because agreements such as the GATS may use definitions that differ from the statistical definitions, it will be useful to review some of BPM5's main features relating to trade in services, to describe how it handles certain borderline cases, and to call attention to its treatment of a few services that present unique definitional issues.

Residency.--BPM5 defines international transactions in terms of residency. Specifically, a transaction is considered "international" if it is between residents and nonresidents of the compiling economy. In most cases, an individual must remain in a country for a period of a year or more to be considered a resident of that country. Exceptions are provided for students, medical patients, and government employees, such as diplomats and military personnel, all of whom are considered residents of their country of origin even if they remain in another country for a year or more. For a business enterprise, a foreign operation is considered to constitute a foreign affiliate, resident in its country of location, if it maintains a production establishment in that country and plans to do so "indefinitely or over a long period of time" (para. 73). In addition, it must qualify as a bona fide business enterprise in the host country, such as by maintaining its own accounts, receiving funds for its own account for work that it does, having a physical presence in the country of location (e.g., plant and equipment and employees), and paying local income taxes.

To give a concrete example of how these definitions would work in the context of services, if an individual stayed abroad as a service provider for a period of six months, then the fees charged by the individual to residents of the foreign country for performing the service would be recorded as an international transaction--specifically, as an export by the individual's permanent country of residence and as an import by the country in which the services were performed. However, if the individual remained in the latter country for, say, 18 months, then for statistical purposes the individual would be deemed a resident of that country and the fees would be regarded, not as international transactions, but as transactions occurring wholly within the country where the services were performed.

Trade negotiations and agreements might not differentiate between these two cases, or they might do so in a way different from that adopted for statistical purposes. In the GATS, for example, a natural person (i.e., an individual) is regarded as a "natural person of another Member" if the person is, under the law of that Member, a "national" (or the equivalent, in certain special cases).[9] This is more of a legal definition than one geared to economic measurement and accounting, and it could result in situations where service providers

[9]See GATS, Article XVIII, Section k.

working in a country different from their country of nationality are considered for statistical purposes as resident in the country where they work, but for purposes of the GATS remain persons of their country of nationality. Their fees for providing services would be relevant to the agreement, yet they would not be recorded statistically as international transactions. While the practical importance of the variance from the statistical definition may not be great in most cases, the potential for differences exists, and users of the data for policy purposes need to be aware of how definitions differ, to have reflected upon how the differences may affect the usefulness of the data for their particular purposes, and possibly to determine whether any supplemental information may be required.

Similar definitional issues may arise with respect to enterprises. For example, a construction project abroad may be accounted for statistically either as a services export by the home country of the construction firm that carries it out or as an operation of that firm's foreign affiliate in the country of the project, depending on its duration and other characteristics, following the guidelines outlined above. In the former case, the transaction would be recorded in the balance of payments as an international transaction, whereas in the latter, the transaction would be one wholly within the country of the project and thus would (apart from the related capital and income flows) be excluded. (However, it *would* be recorded in statistics covering the activities of foreign affiliates, provided the countries involved maintained them.)

It is worth noting that these statistical definitions differentiate only between transactions that are between residents of the same country and transactions that are between residents of different countries. No distinctions are drawn based on the location of the provider and the consumer of the service at the time the service is performed--the key criteria for determining the mode of supply. However, the treatment of foreign affiliates as residents of their countries of location (rather than of their owners' countries) does--by resulting in the exclusion of sales by these entities from the balance of payments accounts--help to isolate transactions effected through commercial presence from transactions effected through the other modes of supply.

Definition of services.--BPM5 does not provide a conceptual definition of services, but it is, with only a few noted exceptions, harmonized with the *System of National Accounts 1993* (SNA), which states that "services are heterogeneous outputs produced to order and typically consist of changes in the conditions of the consuming units realized by the activities of producers at the demand of the consumers."[10] In any event, there are relatively few economic outputs that might be treated as services by some definitions but not by others,

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[10]Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and World Bank, 1993, paragraph 6.3. This definition derives from Hill, 1977, p. 318.

and BPM5 takes note of some of these and provides conventions for treating them statistically. However, because some of the conventions are at variance with the way outputs have been categorized by trade negotiators, it is useful to highlight these cases.

Among the borderline cases specifically addressed by BPM5 are transactions involving repair, processing, goods procured in ports by transportation carriers, merchanting, and intellectual property. These will be discussed in turn below, both to illustrate the issues involved and to indicate their resolution. It is not, strictly speaking, possible to say how closely these definitions are aligned with the GATS, because the GATS does not itself define "services" for purposes of the agreement (other than to exclude services supplied in exercise of governmental authority). However, in some cases sectoral classification lists or other information can be used as the basis for inferences.

BPM5 calls for transactions in *repair* to be recorded under trade in goods. Although often thought of as a service in a domestic context, repair in an international context often involves such activities as major overhauls of vessels or aircraft--activities that may take place in factory-type settings and may have more in common with manufacturing activities than with services operations. In meetings of balance of payments compilers held in connection with BPM5, consideration was given to drawing a distinction between repairs to investment goods and repairs to other goods, and including the latter in services (a treatment followed in the SNA), but a decision not to attempt this was made on practical grounds, taking into consideration the apparent predominance of repair to investment goods in international transactions. Although recorded statistically as trade in goods, for purposes trade agreements, repair may be among the activities considered as services. For example, the W120 list includes an entry for "maintenance and repair of equipment."

Processing presents another borderline case. Processing occurs when goods are imported, have value added to them, and then are re-exported without a change in ownership having occurred. In the fourth edition of the *Manual*, processing was recorded on a net basis as a service; that is, the goods themselves were excluded from exports and imports of goods and the processor's fee recorded as a service. In BPM5, in contrast, the goods before and after processing are to be recorded on a gross basis, as separately identifiable components of exports and imports of goods. This treatment presumably is more closely aligned with the needs of negotiators than the treatment of the fourth *Manual*, inasmuch as the activities involved, such as petroleum refining or factory-type assembly work done under contract, are seldom discussed in connection with services.[11]

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[11]It has been argued, however, that a services aspect may be present in some such cases. Feketekuty has recently put forth the view that "[t]he globalization of production, which results in the unbundling and distribution of different steps in the production process to different countries gives manufacturing many of the same characteristics as the production of

In another change from the fourth *Manual*, *goods procured in ports by transportation carriers* is included by BPM5 in trade in goods, rather than as a part of transportation services. While this helps to sharpen the distinction between services and goods, this item may be considered to provide additional information pertinent to agreements on air and maritime transport, and special note of this treatment is therefore taken here.

Merchanting refers to cases where goods are bought and subsequently resold by a resident of a country, without the goods physically entering or leaving that country. If both the purchase and sale occur within the same period, the difference between the acquisition cost and sale proceeds is to be recorded as a service in the balance of payments of the country of the merchant.[12] However, from the standpoint of trade agreements, the transaction presumably would be governed by provisions applicable to trade in goods between the country where the goods were acquired and (if different) the country where they were resold.

As a final illustration of borderline cases, *royalties and license fees*--payments for use of such items of intellectual property as patents, trademarks, copyrights, and proprietary industrial processes--are included by BPM5 in trade in services, even though, as returns on existing assets, consideration had been given to regarding them as payments of income, to be grouped with investment income and compensation of employees. Here, the issue for negotiators relates to the way negotiations have been structured and, in particular, to the fact that multilateral negotiations and agreements related to intellectual property rights have been handled separately, outside the GATS.

Special definitions.--By and large, trade in tangible goods is measured the same way for all goods. Trade in most services is likewise measured uniformly, in terms of the total values of the receipts and payments that flow between buyer and seller. There are a few instances, however, in which special definitions have been adopted to provide an economically more meaningful measure of the trade, or in which special definitions might have been appropriate conceptually but have not been implemented for practical reasons. These concern transportation, insurance, financial services, travel, and government services. The issues involved and the treatment recommended by BPM5 are outlined below.

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services. . . [I]t can be argued that partial processing of manufactured goods is more effectively treated as the production of a value-added service rather than as the manufacturing of a good" (Feketekuty, 1999).

[12]If the purchase and resale occur in different periods, the purchase is recorded as an import of goods, and the subsequent resale is recorded as a deduction from such imports (i.e., as a negative goods import).

For *transportation* services, the value of the actual payments between residents and nonresidents for transportation of freight is not the measure recorded as international transactions. Were it to be, an inconsistency in the valuation of merchandise would exist, inasmuch as merchandise values would sometimes include and sometimes exclude transportation charges, depending on whether the buyer or the seller was responsible for paying the freight. To provide for uniform valuation of merchandise, as well as to simplify data collection and reporting, a convention has been adopted under which all freight charges are deemed to be paid by the importer. Thus, for a given country, freight exports are defined as domestic carriers' receipts for carriage of the country's exports (as well as any receipts for carrying freight between foreign countries), and freight imports are defined as domestic residents' payments to foreign carriers for carriage of the country's imports. Figures computed on this basis provide the information needed for compiling the balance of payments. However, because confusion may arise if information from industry sources gives a different picture (perhaps because of the inclusion of data covering transportation that is "international" in the sense of involving movement of freight from one country to another but that does not fall within the scope of the above definitions), it is important that data users be familiar with the definitions underlying the published statistics.

For *insurance* services, the value of trade is measured in BPM5, not by total premiums, but by "service charges included in total premiums" (para. 257). Different methods of estimating the insurance service charge are given for different types of insurance, but the basic concept underlying all of them is that of intermediation, in which a portion--ordinarily a large one--of premiums simply represents transfers between all policyholders and those policyholders to whom claims are paid, with a smaller amount representing the value of the services provided by insurance companies.[13] For other purposes, however, knowledge of the gross financial flows involving insurance is needed, and in this regard it can be noted that the OECD and Eurostat have developed an expanded list of components, consistent with the BPM5 components but with added detail, in which gross premiums and claims are requested as memorandum items. (This list is described below.)

Financial services are sometimes provided without an explicit charge, with the cost of services being implicitly covered by the difference between the rates of interest financial institutions charge to borrowers and the rates they pay to depositors, or by bid-asked

[13]In the SNA, an additional element, represented by income on technical reserves, is included in the insurance service charge for domestic transactions. However, both the SNA and BPM5 indicate that, for practical reasons, this element is to be ignored in the measurement of international trade in insurance. This omission may result in some understatement (similar to the case of FISIM, discussed below with respect to financial services), though the types of insurance for which income on technical reserves is most important probably are not the ones most important in international trade.

spreads on traded financial assets. For this reason, an imputed amount--"financial intermediation services indirectly measured" (FISIM)--is provided in the SNA as a measure of such services. For practical reasons, BPM5 does not require the estimation of FISIM in the measurement of international transactions in financial services. However, negotiators and other users of the data should be aware of this omission, and of the fact that it tends to result in an understatement of the relative importance of financial services in international trade. They may wish to examine data on international income flows in conjunction with data on explicit charges for financial services, to obtain an idea of the international borrowing and lending activity that might have been subject to FISIM, and thus to gauge the order of magnitude of the understatement.

Travel is regarded by BPM5 as a service, and in fact is one of the largest services in international trade. Strictly speaking, however, travel is not a *type* of service, but rather a category for recording all of the expenditures of nonresident individuals, including expenditures for goods as well as for services. *Government services, n.i.e.* likewise is a transactor-based category and may include expenditures for goods as well as services.

OECD

Some of the earliest international discussions on services statistics were those held in the OECD. In the early 1980's, statistical issues began to arise from time to time in discussions held within the Trade Committee, a group normally concerned with trade policy. In 1983, the Working Party of the Committee met for the first time in a "statistical mode" to discuss services statistics, with representatives of statistical offices joining the trade policy officials that usually attended these meetings. Subsequently, regular meetings began to be held dealing solely with statistics, and a work program was developed, housed within the regular statistical part of the organization. The major elements of the program have been the development of a classification of trade in services and the compilation of member country data on services trade.

Recognizing that the need for data was immediate, whereas it would take considerable time to agree to a classification and even longer for widespread implementation to occur, work on both elements was pursued in tandem, rather than postponing the compilation efforts until a classification had been agreed upon and reflected in data collection. The initial compilations followed the then-current (i.e., the fourth) edition of the IMF *Manual* as far as the major categories were concerned, but with whatever additional detail countries could provide within those categories. Because there was then no agreed international classification for trade in services, there was considerable heterogeneity among countries in both the amount of detail and how it was grouped and presented. While the compilation was a unique resource, analysis of the data was hampered by the country-to-country inconsistencies in classification.

The OECD-Eurostat Trade in Services Classification was designed with a view to promoting international consistency in classification, at least among OECD members. Preliminary versions of this classification were available during the period when BPM5 was being developed, and as the result of close cooperation between the organizations involved and efforts to avoid inconsistencies, the OECD-Eurostat Classification can be characterized as an "extended subsystem" of the BPM5 standard components for services. That is, it contains all of the standard components, but with further breakdowns provided for a number of services. While the OECD-Eurostat classification provides for more detail by type of service than BPM5, its extensions are relatively modest. Its aim was for a level of detail that most OECD member countries could reasonably be expected to provide, not for separate enumeration of every possible traded service.

The OECD-Eurostat Classification is given in the annex at the end of this paper. In it, BPM5 standard components and "services sub-items" (items suggested to be provided as supplementary information) are labeled with an asterisk (*), so that the table can be used to display the BPM5 classification as well. This classification, or one very much like it, is likely to be the primary basis for compilation of data on services trade (except via commercial presence) worldwide for some time to come. It is, with minor modifications (mainly involving additional memorandum items needed in connection with the GATS), to be the basis recommended in an international manual on trade-in-services statistics that is currently being prepared. In 1998, for the first time, the OECD and Eurostat requested that submissions of trade-in-services data be reported on the basis of this classification, and the data were presented in this format in the data publication released in 1999.

In a separate exercise conducted within a working group of the Industry Committee, the OECD also has also done work that should help in the development of international guidelines for compilation of data on the activities of foreign affiliates. It is through this group that a manual of globalization indicators is being prepared, and this manual and the abovementioned manual on trade-in-services statistics are to be harmonized, insofar as possible. This work is still in progress, and the details of the statistical recommendations are still in flux. However, it appears likely that the recommendations will be for these statistics to be applied to foreign affiliates that are majority-owned by direct investors, for the principal basis of attribution to be an industry classification rather than a product (e.g., type of good or service) classification, and for a variety of indicators of affiliate activity--such as sales, value added, employment, exports, and imports--to be covered.

Finally, although its recommendations have now been incorporated in the SNA and in BPM5, the OECD is the originator of the currently accepted international guidelines for recording statistics on foreign direct investment (OECD, 1996). While the relationship of this to trade in services may seem tangential, its significance becomes more apparent in light of the fact that relatively few countries (and hardly any developing countries) now maintain the kinds of statistics on foreign-affiliate activities that are needed for monitoring the commercial presence mode of supply. While not exactly what is needed, statistics on foreign direct investment do provide an alternative indicator of commercial presence. In addition, they may contribute to the development of the statistics that *are* needed, by providing a readily available means of identifying firms that are foreign-owned.

United Nations

The United Nations has influenced statistics on trade in services in a number of ways. The UN is of course among the international organizations responsible for the SNA, whose external account for goods and services is almost completely harmonized with BPM5 and which therefore provides a somewhat parallel source of guidance with respect to trade in services, but without mention of some of the details covered by BPM5 and presented in the larger context of the overall national income and product accounts. However, it is perhaps with respect to classification that the UN has had the largest effect on trade-in-services statistics, for it is both the originator and the custodian of the major international systems for classifying economic outputs by product and by industrial activity.[14]

The Central Product Classification (CPC) is the only international product classification covering both goods and services. It began to be developed during the mid-to-late 1970's and was published as a provisional classification in 1991. In 1997, the U.N. Statistical Commission approved a revised version to be released as version 1.0, which was published the following year (United Nations, 1998). Inasmuch as an international product classification already existed for goods (the Harmonized System, with which the goods portion of the CPC corresponds very closely), the principal contribution of the CPC can be said to lie in its classification of services. While the CPC was not designed specifically as a trade classification, it has played a prominent role in such classifications. For example, the CPC was used in drawing up the abovementioned W120 list used in connection with the GATS. In addition, BPM5 contains an appendix (Appendix III) that relates its classification of services to the CPC, and the OECD/Eurostat classification also has been concorded to the

[14]The assistance provided to the UN by the group of country experts known as the Voorburg Group in connection with these classification systems should be acknowledged. This group met for the first time in 1986 (in Voorburg–the site of the Statistics Netherlands headquarters offices), primarily to provide a means through which representatives of national statistical offices could assist the UN Statistical Office with the parts of the classifications dealing with services. Over time, it has evolved into an annual forum for the exchange of views and information on a wide variety of statistical issues pertaining to services.

CPC.[15] The forthcoming international statistical manual on trade-in-services statistics likewise will relate its classification of services trade to the CPC. Because concordance with the CPC is a common element in each of these trade-related classifications, the CPC thus provides a tool through which the classifications can be related to one another.[16]

While the CPC has thus played a significant role in international classifications of trade in services, it has served more as a dictionary, used to describe the content of the various services categories, than as a guide to aggregation structure or even as a guide to the boundary between goods and services. As would be expected, the trade classifications are designed to show the greatest detail for the services that figure most prominently in international trade. In addition, the trade classifications include two categories--travel and government services--that are transactor-based rather than product-based.[17] Finally, while the CPC has not been represented as a guide to distinguishing goods from services, its groupings and nomenclature suggest different dividing lines in some cases from those reflected in the classifications for international trade. Among the more significant differences are the classifications for repair and processing, both of which are among the borderline cases discussed above. Repair, treated by BPM5 as a part of trade in goods, is included in the CPC division for "maintenance and repair services." Processing, called for by BPM5 to be recorded on a gross basis in exports and imports of goods, is covered by the CPC division for "production services, on a fee or contract basis."

With respect to industry classification, the UN is responsible for the International Standard Industrial Classification of All Economic Activities (ISIC), which promises to figure prominently in statistics on the activities of foreign affiliates (United Nations, 1990). Now in its third revision, the ISIC is recommended as a basis for industry classification in the SNA and in the *OECD Benchmark Definition of Foreign Direct Investment*. Pilot surveys on foreign-affiliate activities conducted by the OECD have requested reporting on the basis of a selected subset of ISIC categories, and a similar ISIC-based classification is being considered for the forthcoming statistical manual on trade-in-services statistics. Many national and regional industry classification systems follow the ISIC, in whole or in part.

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[15]The existing concordances are with the provisional CPC. Work is underway to create concordances with CPC ver. 1.0.

[16]The CPC is used in this way in the previously cited work of Henderson, relating the W120 list to balance of payments classifications (Henderson, 1997).

[17]It is true, as some have pointed out, that what is recorded under these categories consists of specific goods and services, all of which have a place in the CPC. However, for practical reasons the trade classifications do not call for these to be separately enumerated, either by CPC category or by any other product classification.

For example, the NACE system used within the European Union is very closely related to the ISIC, and the recently introduced North American Industry Classification System used by the Canada, Mexico, and the United States is designed to be consistent with the ISIC at the 2-digit level.

Task Force on Statistics of International Trade in Services

In 1994, the UN Statistical Commission established the Interagency Task Force on Services Statistics. In recognition of the fact that all of its work involved *trade* statistics, it was subsequently redesignated as the Task Force on Statistics of International Trade in Services. Apart from facilitating communication among the international organizations represented and thus helping to rationalize work on trade-in-services statistics and avoid duplication of effort, the main project of the Task Force has been the preparation of a manual on trade in services statistics. The manual--which has as a working title the *Manual on Statistics of International Trade in Services*--will take account of a broad spectrum of statistical needs, specifically including those of the GATS. It will do this by building upon, rather than by attempting to replace, existing standards for compilation.

The manual will be consistent with existing international guidelines for statistical compilation--specifically including BPM5--but it will provide for the added dimensions called for by needs such as those of the GATS. Thus, for example, in addition to the core BPM5 rules for recording trade between residents and nonresidents will be recommendations for disaggregating this trade on the basis of mode of supply or as between intrafirm trade and trade between unrelated parties. Also provided will be guidelines for compiling data on the activities of foreign affiliates--to be termed "foreign affiliates trade in services," or FATS (a usage which has been adopted for the remaining sections of this paper). Recognizing that the totality of the recommendations to be provided generally lies beyond the capability of most, if not all, countries to implement in the short term, the manual will also indicate priorities for implementation. The priorities should be particularly useful for developing countries, which will tend to have the most work ahead of them and the least resources available for doing it.

THE STEP-BY-STEP APPROACH TO DATA IMPROVEMENT

From the standpoint of developing statistics, one of the key distinctions between trade in services and trade in goods is the fact that services lack a central registration point that can be exploited as a data collection vehicle. While there may be numerous and varied impediments to services trade, customs declarations, specifying the type of service and its value, are not required for services. Add to this lack of administrative records the above-discussed special definitions and conventions and the requirement for data on commercial presence, and it becomes obvious that improving trade-in-services statistics is a multidimensional exercise, more likely to involve many small steps than a few large ones. Whether this makes statistics *harder* to improve for trade in services than for trade in goods is difficult to say. On the one hand, the sheer number of steps that must be taken can be daunting. On the other hand, there are likely to be many opportunities, varied in terms of difficulty of implementation, to make improvements, and at any given time there usually will be at least *some* opportunity that is within reach. Furthermore, the improvements do not have to be made all at once, but may be implemented incrementally over time.

While the steps taken to improve data on trade in services in any given country will depend on the particulars of the needs, the available resources, and the institutional framework for data collection, in many cases the improvements will involve one or more of three broad elements--methodological realignment, new or expanded surveys, and indirect estimation. Each of these may, in turn, involve multiple steps. What each of these may involve will be discussed momentarily, illustrated by the experience of the United States, with whose statistics the author has been involved.[18] Before any significant improvements can be made, however, a country must know the dimensions of the task and also must have a sense of priorities--what is most important. In addition, the responsible statistical office must have the legal authority to collect the necessary data. This preparatory work, though not a data improvement in itself, is nonetheless essential and can be considered as a fourth typical element in a data improvement program. It is termed here "setting the stage" and is discussed first.

Setting the stage.--Because of the lack of a central registration point and the diverse sources of information and methodologies that typically must be used in developing estimates, data on trade in services cannot be collected through a single all-inclusive instrument, such as a survey. For example, travel transactions, which involve individuals, require a different instrument from transactions between businesses, such as those in advertising, accounting, or legal services. Furthermore, the specific categories for which data are desired generally must be enumerated in surveys, inasmuch as residual, "all other" categories can be confusing to respondents in a system based on multiple instruments. (It is difficult to enforce exclusion from a given residual of those items for which data are collected using other instruments.) To sort out these issues, actual collection of additional data may need to be preceded by a period of study, in which the national statistical office attempts to make a precise determination of the largest or most important data gaps, and to develop a strategy for filling them.

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[18]For a more detailed account of the U.S. data improvements than will be provided here, see Ascher and Whichard, 1991. Improvements subsequent to this paper are described in various issues of the *Survey of Current Business*, where both the U.S. balance of payments accounts and the U.S. data on foreign affiliate activities are published.

In the United States, a number of studies were conducted to review and evaluate data on trade in services and to recommend improvements. As early as 1984, the Bureau of Economic Analysis, which compiles the balance of payments accounts and also provides statistics describing the operations of multinational companies, issued a staff paper that described the then-available data on U.S. trade and investment in services, identified gaps in the data, and made a number of suggestions for improvement (Whichard, 1984). Two years later, a report by the Congressional Office of Technology Assessment addressed some of these same issues (U.S. Congress, 1986). In 1992, after a number of data improvements had already been made, a study panel organized by the National Research Council issued a report in which the improvement efforts were evaluated and a number of suggestions for further improvements were made (National Research Council, 1992). Finally, although it did not issue any comprehensive reports, an important part of the process of sorting out data needs and of reaching a consensus within the U.S. Government on the approach to data improvement was through the work of an Interagency Task Force on Services Trade Data. Established in 1982, it was chaired by the Office of the U.S. Trade Representative and was charged with reviewing existing statistics, examining the specific needs of data users, recommending data improvements, and generally coordinating the interagency aspects of work in this area.

An outcome of the study phase of an improvement program should be not only the identification of gaps and other data inadequacies, but also the setting of priorities for improvements. In the not-unlikely event that more needs are identified than can be met in the near term, plans for sequencing improvements must be developed. Although not formally structured as such, this exercise is akin in spirit to a cost-benefit analysis, in which answers are sought to the questions "What improvements are most important?" and "How do the improvements rank from the standpoint of cost and feasibility of implementation?" This process of sorting out priorities could be particularly important for developing countries, which are likely to have numerous needs, but only limited resources that can be devoted to meeting them.

Because the initial U.S. studies predated the publication of BPM5, methodological issues did not play a major role in their recommendations. Rather, the recommendations dealt for the most part with identification of gaps in coverage. One major need for improvement that was identified was in the areas of business, professional, and technical services--services that may not have been important in international trade in the past but that appeared to be increasing in significance as cheaper and better means of international travel and communication made them more tradable and as increasingly globalized markets for goods and capital stimulated their demand.[19] Needs also were identified for information on services delivered through foreign affiliates. As described later, major improvements were made in both of these areas.

Judging from the information on data availability presented earlier, these same types of needs seem likely to be the ones most often identified in other countries as well. A typical pattern for many countries is to provide data on travel and transportation, but to have at least some gaps--often major ones--in the area of business services. Data on services supplied through foreign affiliates tend to be even more fragmentary. Thus, as a working hypothesis, it is not unrealistic to suppose that the needs most often identified will be in these two areas--conventional resident/nonresident trade in business services and services sold through foreign affiliates. In any event, this pattern is probably sufficiently prevalent that it is a useful stereotype for illustrating approaches to developing priorities.

For a country that has major gaps in both areas--as is likely to be true of many developing countries--top priority probably should be given to improving the data on trade in business services, for these are needed not only to support trade policy, but also for entry in the basic economic accounts needed in the conduct of monetary and fiscal policy. Furthermore, in the absence of direct measures of services supplied through foreign affiliates, data on stocks and flows of direct investment may provide acceptable, if somewhat indirect, alternative interim indicators of commercial presence.

For a country with some data on business services--perhaps limited in detail--but no data on foreign-affiliate activities--a pattern still prevalent among many middle-to-high-income countries--the choice is less clear cut. A strategy observed in a number of OECD countries has been to attempt to make some progress on both fronts, while limiting resource commitments by relying on least-cost approaches to developing information on affiliate activities. Typically this has meant developing the information on affiliate activities only with respect to inward investment, using links between statistics on inward direct investment and domestic enterprise statistics, which may allow statistics to be derived for the foreign-owned subset of enterprises with little or no new data collection.

To promote international co-ordination in the sequencing of improvements, the forthcoming *Manual on Statistics of International Trade in Services* will--as mentioned earlier--suggest priorities for implementing its recommendations. While these are still being negotiated internationally, it appears likely that a very high priority will be assigned to providing the

[19]As is well known, a significant share of the demand for traded services is a derived demand, stemming from international trade in goods and flows of capital. For example, a firm in one country may engage an accounting or consulting firm in another country for help in connection with an acquisition of a firm in that other country, or a firm may provide after-sale service and support abroad for its products that are sold in foreign countries.

basic statistics on resident/nonresident trade recommended by BPM5, with intermediate priority given to providing additional details on the specific types of services traded and to providing basic measures of services supplied through foreign affiliates, and lower priority given to nuances such as disaggregating trade flows by mode of supply or on the basis of whether the trade is within multinational firms or between unrelated parties.[20]

Not only study, but also legal authority and financial resources are essential precursors of a data improvement program for trade in services. To the extent that surveys are involved in the improvements, mandatory authority is generally necessary to ensure complete reporting. Businesses on the whole benefit from statistical improvements, particularly in a case such as trade in services, where the data may be used in support of efforts to create a more open and liberalized trading environment. However, responding to surveys is not without cost, and it may be difficult to connect the benefits to one's own individual response. Thus, it is better if reporting is mandatory, both from the standpoint of the resulting statistics and from that of the individual respondent, who can devote efforts to recordkeeping and responding in the knowledge that competitors are having to do the same. In the United States, new survey work for trade in services did not begin until just after legal authority was secured for collecting the data on a mandatory basis.[21] At about the same time, additional funding was obtained to finance increased survey work and other data improvements.

Methodological realignment.--What is meant here by "methodological realignment" is simply the reconfiguration of definitions and classifications to conform to current international standards. Countries cannot, of course, be compelled to follow these standards, but they generally see the benefits from conformity, the chief one being that it facilitates comparisons with statistics compiled by other countries. Because the standards themselves have recently changed or, in the case of statistics on the activities of foreign affiliates, are still evolving, realignment is likely to be a part of the data improvement program of almost every country.

For the United States, a fairly large number of steps toward realignment have been taken. Given the magnitude of the task, as well as the fact that some steps had to await the development of new source data or were not identified as needs until some time after the initial studies were conducted, the steps have tended to be spread out over time rather than being implemented all at once. While an all-at-once approach might have been better from

[20]For more information on the draft *MSITS*, see Arkell (1999).

[21]As a part of the Trade and Tariff Act of 1984, the International Investment Survey Act of 1976 was amended to provide the same authority with respect to data on trade in services that already existed for data on international investment. In the process, the act was redesignated as the International Investment and Trade in Services Survey Act.

the standpoint of minimizing the number of disruptions imposed on data users, the incremental approach was, realistically, the only option feasible. The steps taken have ranged from very broad changes in the structure of the accounts--perhaps the broadest being the creation of a separate subtotal for services within the current account--to very specific issues involving classification of individual types of transactions.

Expanded surveying activity.--While there may be some countries that have no need for additional data collection on trade in services, they are likely to be few and far between. Trade in services has only recently become a central concern of balance of payments compilers, and relatively few countries maintain statistics on the services activities of foreign affiliates in their countries of location. Furthermore, trade in services not only is growing, but it also is coming to encompass new and different types of services. Finally, information on mode of supply has been identified as a new need, but little or no data are now being collected on that basis.

In the United States, two new "families" of surveys have proved necessary to achieve satisfactory coverage of trade in services, along with a number of improvements to pre-existing surveys. One family--consisting of a benchmark survey conducted every 5 years and a more limited annual survey conducted in nonbenchmark years--currently collects data on about 30 different types of mainly business, professional, and technical services.[22] The second family--also consisting of benchmark and annual surveys--collects data on financial services. In addition to these new surveys, existing surveys have been expanded, both to improve coverage and to increase the possibilities for subdividing the data by type of service. One of the more important changes to existing surveys involved the surveys on the operations of multinational companies. On those surveys, questions on the sales of foreign affiliates of U.S. companies and of U.S. affiliates of foreign companies were expanded to require reporting of sales of services separately from sales of goods. In this way, an economical means was found for measuring services delivered to foreign markets by U.S. firms, and in the U.S. market by foreign firms, through affiliates, thus providing information relevant to the GATS commercial presence mode of supply.

Indirect estimates.--While surveys may provide the most obvious source of information on services trade, they can be costly for governments to conduct, and they impose burdens on the respondents who must complete them. Fortunately, it is sometimes possible to develop information without surveying the universe of transactors. One example of this is when benchmark and annual surveys are conducted. An effort is made to capture essentially the entire universe of transactions only in the benchmark survey. Higher reporting thresholds are used in the annual surveys, with the unreported part of the universe being extrapolated

[22]When this survey was instituted in 1986, it collected data for 18 types of services; new services have been added in connection with each subsequent benchmark survey.

forward from the benchmark year, based on movements in the transactions reported by firms that report in both types of surveys. This is done in the United States, for example, for the services covered by the two new surveys discussed above.

Estimation may also be used where a price or unit value is available from a sample of transactions and a universe measure or indicator of the volume of transactions is available from another source. For example, average expenditures of travelers to foreign countries may be estimated based on surveys given to a sample of travelers; this average may then be multiplied by the total number of travelers, obtained from the immigration authorities, to obtain an estimate of total expenditures by all travelers. As another example, transportation charges per unit of freight hauled may be estimated using a sample; this average can then be multiplied by the total volume of freight, obtained from customs documents, to produce an estimate of the total value of transportation charges. Similarly, expenditures of students studying abroad may be estimated by multiplying average charges for tuition and other expenses, which may be obtained from educational institutions or associations, by the numbers of students, which may be obtained either from these same sources or from visa information.

In the United States, a number of data improvements have taken the form of such indirect estimates, which not only help to minimize reporting burdens on the businesses or individuals involved in the transactions, but also do a great deal to economize on scarce statistical agency resources. These have involved the services mentioned above, as well as a few others.

ISSUES IN DATA COLLECTION

While considerable progress in improving data on trade in services has been made already, and while further improvements are underway, there are a number of difficult issues in data collection and estimation that should be acknowledged, with the aim of informing the data user, stimulating thinking about possible solutions, and--to face a hard fact--recognizing the existence of a few difficulties that simply tend to defy resolution. What follows is a discussion of what the author views as some of the more difficult or important problem areas. Four areas are discussed--services sold to individuals, price data, mode-of-supply information, and data on affiliate activities related to outward direct investment (sometimes termed "outward FATS statistics").

Services sold to individuals.--Except for questionnaires distributed to travelers, surveys of international trade in services are almost exclusively surveys of businesses, not of individuals. While international travelers are not hard to identify--they can be found at airports and customs checkpoints--the same cannot be said of individuals in general. The percentage of individuals involved in international trade in services other than as travelers is very small, yet collectively their transactions could be significant--becoming more so as developments in electronic commerce and the international use of credit cards make it increasingly easy and convenient for individuals to purchase services directly from abroad.[23] In almost all cases, the individuals in question are dealing, not with other individuals, but with businesses. Thus, problems in capturing services sold to individuals tend mainly to be those of compilers in the importing country. How can these transactions be identified? The answers, it must be said, are far from obvious.

As a concrete example, consider telecommunications callback services. These services may lower the cost of international calls by shifting their origin to a country which has lower rates than the country of the customer. Traditionally, telecommunications services are tracked statistically through the use of data on settlements payments between telecommunications common carriers. With callback services, however, funds also flow between individual customers and the callback service providers, typically through charges to credit cards. While data can be collected from the providers, the country of the customer would have only the individual customers from whom to collect data. However, it would have little way of identifying them, and--inasmuch as it may be illegal, or at least a gray area of the law, to circumvent the national telephone monopoly--the customers, even if aware of the need for reporting, might be reluctant to reveal themselves. Faced with such a situation, how is the importing country to obtain these data? In some cases, data exchanges with exporting countries might offer a solution, though the exporting countries typically would have no reason to track callback receipts as a separate item. In others, information obtained from credit card companies might be explored, though privacy concerns might preclude this alternative in many countries. A final possibility is for compilers simply to make their own rough estimates, based on industry sources or other information. Such estimates can be useful in eliminating downward biases in broad aggregates, but they cannot be regarded as providing precise information on trade in particular types of services.

Prices.--Almost all discussions of statistics on trade in services are about statistics on the values of the trade. Perhaps this is simply out of a sense of realism as to what is, or could be expected to become, available. It could not be for a lack of need for separate information on prices and quantities, for these are among the most basic variables in all of economics; indeed, supply and demand are defined in terms of them. Nor could it be because the information is altogether lacking. After all, exports and imports enter into the computation of GDP, an aggregate for which almost all countries provide estimates in real terms as well as in terms of current-period prices. Rather, what tends to be missing is service-by-service deflators, developed on the basis of a sampling of prices applicable to traded services alone.

[23]Consonant with the topic of this paper, services alone are mentioned in the text; however, these developments obviously also create new potentials for gaps in statistics on trade in goods.

One might think the law of one price would allow domestic prices to proxy for international prices. However, the validity of this method for purposes of analyzing trade in specific services tends to be limited by the aggregated nature of the categories for which value data are collected, together with the likelihood that the composition of international transactions within these categories differs significantly from that of domestic transactions and the fact that there may be added costs (which would be reflected in prices) of conducting business across national boundaries. Furthermore, in some cases the output itself--consulting or legal services provided in connection with a large international merger, for example--is almost uniquely defined, with the result that it is difficult even to state the units of output to which the prices apply. While hedonic techniques--through which what might be called "virtual products" are constructed in terms of their underlying characteristics--have been used to good effect to estimate prices of goods that have varied and rapidly changing characteristics, it stretches the imagination to suppose that data on traded services will be collected in sufficient detail to permit an analogous approach to be used for services anytime soon.

Probably the best that can be expected is for price indexes specific to international transactions to be developed for selected services for which prices can be related to outputs readily and in a manner that can be followed consistently over time. In the United States, for example, the International Price Program of the Bureau of Labor Statistics provides price indexes for international transportation, including passenger transportation. Before expansion of the program was limited due to resource constraints, communication was being considered as an area for future work.

Modes of supply.--Many statisticians must have wondered why it was necessary for the GATS to add such a requirement as mode of supply to a data improvement agenda that was already rather formidable. However, it would have been hard for the GATS to ignore this dimension of services trade, for it is not simply a basis for making commitments under the agreement, but a factor that was reflected in existing barriers. To take medical services as an example, access to a country's local market through movement of natural persons or commercial presence might be effectively restricted through board-certification requirements or the existence of a national health care system, yet the country's own nationals might be free to seek care abroad (consumption abroad mode of supply), and local practitioners might be free to utilize remote diagnostic services (cross-border supply). With policies differentiated in this manner, it was almost a necessity that a mode-of-supply perspective be reflected in the agreement, calling in turn for the establishment of a new statistical domain.

While the need is thus clear, the means of supplying it is not. Although data on transactions between residents and nonresidents will naturally be separated from data on services supplied through foreign affiliates, and while mode of supply will occasionally be identifiable as a result of differences in the types of transactors involved (see the next paragraph), the author knows of no data on resident/nonresident trade that are actually collected with a particular view to allocating the transactions by mode of supply. The prospects for this dimension to be reflected in collection efforts are clouded by both practical and conceptual difficulties. Not only would statistical agencies require added resources to collect data by mode of supply, but the companies that must supply the data would face an increase in reporting burden; considering that mode-of-supply is not a dimension ordinarily tracked by corporate accounting systems, the increase could be significant. A further difficulty stems from the fact that transactions involng multiple modes of supply probably are not uncommon.[24]

Considerations such as these suggest that the straightforward addition of a mode-of-supply dimension to statistical questionnaires on trade in services probably is not going to happen in the near or medium term, and perhaps not even in the long term. A more likely, and promising, course is that through study and analysis, the range of uncertainty concerning mode of supply can be significantly narrowed. First steps in this direction are reflected in the previously cited work of Karsenty (Karsenty, 1999). Case studies of particular services industries might provide further insights. Finally, a few services may be naturally differentiated along mode-of-supply lines, because of differences in the identity of the participants to the transactions. For example, with respect to educational or medical services, there should be no problem in determining the portion of the total that represents consumption-abroad transactions, inasmuch as these reflect the activities of readily identifiable classes of individuals.

Outward FATS statistics.--As mentioned earlier, a number of countries are beginning to develop statistics on the activities of foreign-owned enterprises in the domestic economy (inward FATS), but only a very small number have collected data on the activities of the activities of their own residents' foreign affiliates (outward FATS). Why is this? I believe it is for two basic reasons, both of which may be rooted as much in perceptions as in reality. The first is related to the difficulty in collecting the data; the second, to relative differences in the need for the data. While these factors, individually or in combination, may reasonably lead a country to compile FATS statistics only with respect to inward investment, a case can be made for greater efforts to cover outward investment as well.

First, the issue of difficulty. Unlike statistics on inward FATS, which can often be tabulated simply by identifying the foreign-owned portion of the universe of firms covered by domestic enterprise statistics, developing statistics on outward FATS will invariably entail additional data collection, with attendant increases in the resource requirements of statistical agencies and in the reporting burdens imposed on companies. An added obstacle to data collection

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[24]As an illustration of a multi-mode transaction, a consultant might go abroad to study a situation on behalf of the client (presence of natural persons mode of supply), then return home to prepare a report, which is then transmitted to the client via a postal or telecommunications link (cross-border supply).

that is often cited is the fact that the firms covered by the statistics are located, not in the compiling economy, but abroad. While this should be recognized as an obstacle, regarding it as an overwhelming one probably is not justified. As generally implemented, only majority-owned affiliates are covered by FATS statistics, and basic information on the operations of such affiliates would be needed by the parent company, both to prepare consolidated financial statements for the worldwide enterprise and to manage that enterprise effectively. In addition, a few countries have actually collected outward FATS statistics, thus providing an empirical demonstration of feasibility.

Even if it can be accepted that the development of outward FATS statistics is within the realm of possibility, a country must ask itself if the effort is justified. Here, a reasonable case can be made that inward FATS should be given the higher priority. Under the GATS, countries make commitments with respect to the supply of services in their own economies, not services they supply abroad. Thus, with respect to commercial presence, the most directly related data may be those on the activities of foreign-owned firms in the domestic economy. Nonetheless, the reason countries make commitments presumably is to improve their ability to supply services abroad.[25] For commercial presence, this supply is tracked by data on outward FATS, which therefore also must be considered to be relevant.

Whatever the arguments related to needs or practicalities, the reality is that in the near to medium term, far more countries are likely to develop FATS statistics for inward investment than for outward investment. However, because one country's inward FATS statistics are another country's outward FATS statistics, there is the potential for data exchanges to provide countries with information on the overseas activities of their multinational corporations, even if it is through data compiled by partner countries rather than by themselves.[26] The importance of standardized definitions and methodologies in assembling such data is obvious, and in this regard the international organizations can play an important role. One important way they can do this is by helping to achieve an international consensus as to standards. In addition, by republishing member-country data, they can, in effect, serve as clearinghouses for the information. The value of such clearinghouses can be considerable,

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[25]There may be efficiency gains from having more services supplied from abroad, but these could be achieved through unilateral liberalization.

[26]While this approach offers promise as a means of overcoming resource constraints or concerns about reporting burden, one drawback is that it may tend to leave countries, such as many developing countries, that cannot compile statistics for inward investment out in the cold, inasmuch as it deprives them of what might otherwise be a promising source of information on the operations of foreign-owned firms in their own economies (namely, partner countries' statistics for outward investment).

inasmuch as they can help to achieve a kind of consistency in presentation and can reduce the number of contacts required to assemble the data.

CONCLUSION

As this paper has attempted to demonstrate, considerable progress has been made in improving data on trade in services, yet unmet needs remain. While further progress can be expected, the new requirements for data flowing from the GATS are considerable, and some of them are likely to be met only over an extended period of time or will have to be satisfied through such expediencies as indirect indicators, proxy measures, or data exchanges among partner countries. There is work to do both for national statistical offices, which must collect and compile additional data, and for international organizations, which must assist in developing internationally agreed standards for compilation and which can play an important role in facilitating data exchanges and in disseminating member country data in consistent formats.

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ANNEX--JOINT OECD-EUROSTAT TRADE IN SERVICES CLASSIFICATION

*1. Transportation

*1.1 Sea transport
*1.1.1 Passenger
*1.1.2 Freight
*1.1.3 Other

*1.2 Air transport
*1.2.1 Passenger
*1.2.2 Freight
*1.2.3 Other

1.3 Other transport
1.3.1 Passenger
1.3.2 Freight
1.3.3 Other

Extended classification of other transport (1.3)
1.4 Space transport
1.5 Rail transport
1.5.1 Passenger
1.5.2 Freight
1.5.3 Other

1.6 Road transport
1.6.1 Passenger
1.6.2 Freight
1.6.3 Other

1.7 Internal waterway transport
1.7.1 Passenger
1.7.2 Freight
1.7.3 Other

1.8 Pipeline transport

1.9 Other supporting and auxiliary transport services

Memorandum items
Freight transportation on the basis of an ex works valuation of merchandise:
Sea freight
Air freight
Road freight
Other freight

*2. Travel
*2.1 Business
2.1.1 Expenditure by seasonal and border workers
2.1.2 Other

*2.2 Personal
*2.2.1 Health-related
*2.2.2 Education-related
*2.2.3 Other

Memorandum items:
Tourists
Goods purchased in the frontier area by travelers
Hotel and restaurant services

*3. Communications services
3.1 Postal and courier services
3.2 Telecommunication services

Memorandum items
Postal services
Courier services

*4. Construction services
4.1 Construction abroad
4.2 Construction in the compiling economy

*5. Insurance services
5.1 Life insurance and pension funding
5.2 Freight insurance
5.3 Other direct insurance
5.4 Reinsurance
5.5 Auxiliary services

Memorandum item

Gross insurance premiums
Gross insurance claims

*6. Financial services

*7. Computer and information services
7.1 Computer services
7.2 Information services

*8. Royalties and license fees

*9. Other business services

*9.1 Merchanting and other trade-related services
9.1.1 Merchanting
9.1.2 Other

*9.2 Operational leasing services

*9.3 Miscellaneous business, professional, and technical services
*9.3.1 Legal, accounting, management consulting, and public relations
9.3.1.1 Legal services
9.3.1.2 Accounting, auditing, book-keeping and tax consulting services
9.3.1.3 Business and management consultancy and public relations services
*9.3.2 Advertising, market research, and public opinion polling
*9.3.3 Research and development
*9.3.4 Architectural, engineering and other technical services
*9.3.5 Agricultural, mining and on-site processing services
9.3.5.1 Waste treatment and depollution
9.3.5.2 Other
9.3.6 Other
9.3.7 Services between affiliated enterprises, n.i.e.

<u>Memorandum items</u>
Merchanting gross flows
Agricultural services
Mining services

*10. Personal, cultural, and recreational services
*10.1 Audiovisual and related services

*10.2 Other personal, cultural and recreational services

*11. Government services, n.i.e.
11.1 Embassies and consulates
11.2 Military units and agencies
11.3 Other

Note.--Items marked with an asterisk (*) are listed in BPM5 as standard components or "services sub-items" (items suggested to be provided as supplementary information).

Source: OECD, 1999.