

Measuring Trade in Services

ESTIMATED TIME: 3 hours

OBJECTIVES OF MODULE 10

- Illustrate the statistical frameworks used to measure trade in services:
 - balance of payments trade in services statistics,
 - foreign affiliates statistics;
- present the current state of play with regard to statistics enabling to assess the supply of services by mode;
- present the statistics currently available and where they can be found at the international level.

I. INTRODUCTION

Following the entry into force of the WTO General Agreement on Trade in Services (GATS), there has been an **increasing demand for detailed, relevant and internationally comparable statistical information on the international supply of services**. Trade negotiators require statistics, possibly by mode of supply, as a guide to negotiate specific commitments and to monitor their economic impact for each type of service. Not only GATS has inflated demand for enhanced statistics, but it has also highlighted that the scope of international supply of services is far wider than what statistics conventionally measure.

This module builds upon the *Manual on Statistics of International Trade in Services* (MSITS) 2010. MSITS 2010 provides **guidelines and recommendations on how to measure the international supply of services**. **Two building blocks** are identified:

1. **Balance of payments (BOP) statistics**, which summarise transactions of an economy with the rest of the world and display data on trade in services as conventionally measured (i.e. between residents and non-residents). These statistics are discussed in Section II;
2. **Foreign Affiliates Statistics (FATS)**, which expand the statistical definition of international trade in services by recommending the measurement of services supplied by foreign affiliates (not included in BOP). The FATS framework is illustrated in Section III.

These statistics should be available broken down **according to the type of service supplied, by partner and by mode**. Such breakdowns give a firm basis for the multilateral and bilateral trade in services negotiations, and are important for a variety of analytical purposes. However, it is often difficult (e.g. in terms of cost, confidentiality, quality of statistics) to collect very detailed data which is why data compilers often have to make a compromise between user's needs and what is reasonably feasible in terms of data collection.

The statistical approach for linking the value of international trade in services to the four modes of supply is discussed in Section IV and finally international data sources are listed and briefly described in Section V. This last section also provides indication of what other statistics could be of interest for a more complete analysis of trade in services (e.g. quantitative indicators).

RECALL

As stressed in GATS, international trade in services can take place through four modes of supply:

- in Mode 1, cross-border supply, only the service crosses the border;
- Mode 2, consumption abroad, occurs when consumers consume services while outside their country;
- in Mode 3, the service supplier establishes its commercial presence in another country through e.g. branches or subsidiaries; and
- Mode 4, presence of natural persons, occurs when an individual has moved temporarily into the territory of the consumer in the context of the service supply, whether self-employed or as an employee of a foreign supplier.

II. BALANCE OF PAYMENT STATISTICS ON INTERNATIONAL TRADE IN SERVICES AND THEIR LINKS WITH GATS

This section provides an overview of the fundamental concepts that underpin the measurement of trade in services as recorded in the balance of payments (i.e. trade in services between residents and non-residents). Moreover, it introduces the detailed classification of trade in services statistics (the Extended Balance of Payments Services Classification 2010 – EBOPS 2010).

IN BRIEF

International trade in services is traditionally measured within the balance of payments (BOP), that is, between residents and non-residents of a country. However BOP only covers the value of trade in services taking place through modes 1, 2 and 4. Mode 3 is generally not covered, and is measured in Foreign Affiliates Statistics.

Trade in services measured in the Balance of Payments are broken down according to 12 major balance of payments (BPM6) services categories, or the more detailed EBOPS 2010 items. EBOPS 2010 is completely in line with the BPM6 classification. There is no one-to-one identity between EBOPS and W/120, but a correspondence table facilitates the linkage between both classifications.

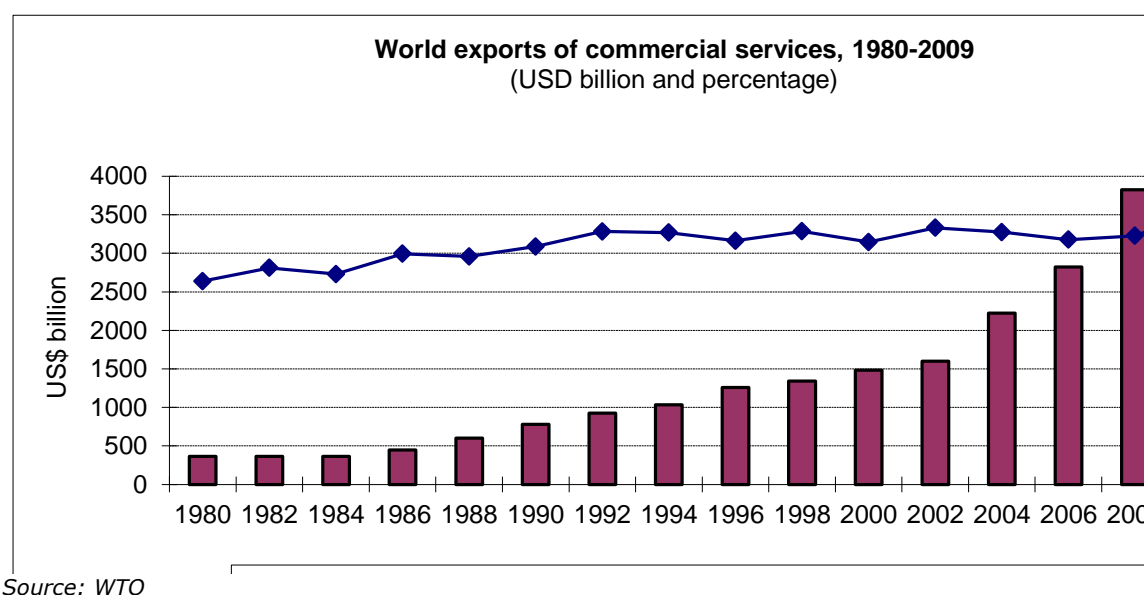
II.A. COVERAGE OF BALANCE OF PAYMENTS TRADE IN SERVICES STATISTICS

Balance of payments (BOP) statistics are the most used source of data on trade in services and is often the only information available. The Services account of the BOP records services transactions between residents and non-residents following principles set forth in the IMF's 6th edition of the Balance of Payments and International Investment Position Manual (BPM6). The chart below is derived from such statistics. It shows the major trend in commercial services exports over the last three decades.

The **residence** concept of the BOP is not based on nationality or legal criteria but on a person's centre of predominant economic interest. It is deemed that an enterprise has a centre of predominant economic interest in a country when it engages or intends to engage in economic activities on a significant scale, and over a long time period, within the country's territory. A household has a centre of predominant economic interest where it maintains one or more dwellings within the country that members of the household use as their principal dwelling. A period of one year (or more) is suggested as a flexible guideline (the "one-year rule") for determining residence.

What do available statistics tell us on the importance of trade in services and its developments?

In 2009 **World exports of commercial services** (i.e. total services excluding government services n.i.e., recorded on a balance of payments basis) **amounted to US\$ 3,350 billion**, after growing on average at around 7.9% per year in value terms since 1980. Trade in commercial services grew faster than trade in goods (6.6% on average) during this period, increasing its share in total world trade by 6 percentage points. In 2009, the share of services in world trade reached 21%, that is 2 percentage points up from the previous year, as the decline in global trade in services was considerably less pronounced than that of goods.



As a consequence of the definition of residence, **BOP services statistics mainly cover the supply of services through modes 1, 2 and 4**. Services supplied cross-border, services consumed by consumers while abroad or services supplied through the temporary presence of a natural person are in the majority of cases actually supplied to a resident consumer by a non-resident supplier or vice-versa¹. However the need for proximity for supplying many services has led producers to establish a **commercial presence abroad**, taking the form of an affiliate which is considered resident in the host country. In GATS terms, services supplied by these affiliates to the local market are mode 3 trade. In statistical terms, such transactions take place among residents of the host country: they are not captured in BOP and need to be measured in a different statistical framework (see Section III).

How much of GATS trade in services is not covered by BOP trade in services statistics?

Fragmentary available data suggest that the value of services supplied through foreign affiliates is higher than the value of services traded on a BOP basis.

¹ On the issue of the residence of natural persons moving under mode 4 and related statistical treatment, see Tip box below.

TIP

The one year guideline and supply of services through the presence of natural persons

It is often argued that as a one-year guideline is used to define residency of transactors, balance of payments trade in services statistics may not capture services supplied through the presence of a natural person when they stay in the host country for more than one year. However this is often not true as although the natural person may be staying more than one year, if she/he is an employee of a foreign service supplier with no commercial presence, the transaction remains between the resident client and the non-resident service supplier (note that if employed in a foreign affiliate, the supply of services is through mode 3). See section IV.A below.

II.B. THE EXTENDED BALANCE OF PAYMENTS SERVICES CLASSIFICATION (EBOPS 2010)

Data on trade in services is displayed in BOP statistics under BPM6 into 12 items, which are broken down into a list of standard and supplementary components. Although it would have seemed attractive, statisticians do not see as realistic options the compilation of data according to the Central Product Classification (CPC)² or the W/120 (the classification generally used by WTO Members for making commitments or negotiations under GATS). Such a level of detail would be burdensome for data providers (banks or survey respondents) and often prone to errors (not always easy to identify specific services).

In order to respond to the needs for more precise information required by trade negotiations, statisticians developed the more detailed EBOPS 2010 classification as a further breakdown of BPM6 services items. The main BPM6/EBOPS 2010 components are listed below. Items of EBOPS 2010 may generally be described in terms of the CPC Version 2. In addition, to facilitate the use of statistics based on EBOPS 2010 for GATS purposes, tables of correspondence between EBOPS 2010, CPC and W/120 are provided on-line (<http://unstats.un.org/unsd/tradeserv/default.htm>).³

² The CPC is the standard international product classification. The W/120 is described in terms of the CPC provisional version which was drafted in 1989. The current version of the CPC is Version 2 and was agreed as the new international standard in 2008.

³ At the time of writing, these are foreseen as being made available in 2011.

EBOPS 2010 main components

Manufacturing services on physical inputs owned by others includes activities such as processing, assembly, labelling, packing, etc., undertaken by enterprises that do not own the goods (e.g. oil refining, assembly of clothing, cars, electronics). *

Maintenance and repair services not included elsewhere (n.i.e.)

Transport covers all transport services and related supporting and auxiliary services. EBOPS 2010 distinguishes eight modes of transport – sea, air, space, rail, road, internal waterway, pipeline and electricity transmission – and other supporting and auxiliary transportation services. Post and courier services are also covered under transport.

Travel differs from most categories listed in that it is the consumer of these products that gives *travel* its distinctive characterisation. *Travel* does not refer to a particular product and covers expenses for goods and services (including accommodation, food, souvenirs, etc.) acquired by a person during his/her visit in a country other than his/her own. Note that students studying abroad and patients receiving health care abroad, remain residents of their economies of origin even if they stay longer than one year. Travel is subdivided into *business travel*, and *personal travel*. The latter can be further divided into – *health-related* expenditure, *education-related* expenditure, and all *other* personal travel expenditure. An alternative breakdown by type of product consumed is also proposed.

Construction

Insurance and pension services

Financial services

Charges for the use of intellectual property, n.i.e. is divided into franchises and trademarks licensing fees and licenses referring to the use of outcomes of research and development, or for the reproduction/distribution of computer software or audiovisual and related products.

Telecommunications, computer and information services

Other business services include research and development services, professional and management consulting services (legal services; accounting, auditing; business and management consulting and public relations services; advertising); and technical, trade-related and other business services (architectural, engineering, waste treatment and de-pollution, agriculture, mining; operational leasing services; and trade-related services).

Personal, cultural, and recreational services comprises audiovisual and related services and other personal, cultural, and recreational services. The second component covers services such as those associated with education services, health services (provided cross-border or through the presence of natural persons), heritage and recreational services, and other personal services.

Government goods and services, n.i.e. covers all government and international organizations' transactions not contained in other EBOPS 2010 items. Note that GATS does not cover services supplied in the exercise of governmental authority.

The highest priority for the development of BOP trade in services statistics by product is on the development of statistics at the level described in BPM6. The second priority is then to develop this breakdown into the more detailed EBOPS 2010 components, which should be carried out in stages. Compilers generally commence with the disaggregation of services of major economic importance to their own economies.

At the time of writing countries were still working and publishing data on the basis of BPM5 and EBOPS 2002, the previous versions of international recommendations described here. The main differences lie in the introduction of 2 new items under services in BPM6/EBOPS 2010 (manufacturing services and maintenance and repair services) and a number of minor internal reclassifications and naming changes.

III. MEASURING MODE 3 AND MORE... FOREIGN AFFILIATES AND FDI STATISTICS

Section II.A above highlighted that trade in services statistics as measured by the balance of payments mainly cover the supply of services through mode 1, 2 and 4. However, services suppliers often establish affiliates abroad to be closer to the consumer. These foreign affiliates are resident in their host economy and their sales to consumers of this country are therefore considered domestic transactions.⁴

The statistical framework of Foreign Affiliates Statistics (FATS) has been designed to capture information on the activities of these foreign affiliates. FATS provide for a satisfactory approximation of Mode 3 through the computation of the output of foreign-controlled enterprises active in the service sector. FATS also include a wide range of information suitable for analysing not only Mode 3 but also the phenomenon of globalisation in general. Although they are not yet widely compiled across the world (see section V), FATS produced by a number of large developed economies already provide a precious source of information on these areas.

IN BRIEF

Conventional statistics on trade in services between residents and non-residents do not cover Mode 3. This mode of supply will be better measured within the newly created Foreign Affiliates Statistics (FATS) framework.

FATS encompass a set of indicators on the operations of foreign-controlled enterprises which cover both resident affiliates of foreigners (inward FATS) and residents' affiliates located abroad (outward FATS). FATS cover both producers of goods and services, however they provide for breakdowns that enable a suitable identification of services and their sub-sectors.

Although they cannot be considered as statistics for measuring Mode 3, Foreign Direct Investment (FDI) statistics can be considered an important complement.

III.A. THE FATS FRAMEWORK

The population of enterprises for which FATS variables are measured is that of affiliates in which a single investor owns more than 50 % of voting power (i.e. controls a foreign affiliate)⁵. "Control" is the key element of FATS relationships. Consequently FATS reflect all operations of the affiliates concerned: they are not prorated according to the share owned by the foreign investor. FATS cover producers of goods and services alike: GATS Mode 3 information needs are taken into account through the breakdown of statistics by economic activity, which identify separately producers of goods and producers of services. In general data are available for a wide range of different service sectors.

⁴ In 2008, for the United States, international supply of services through foreign affiliates is more than twice as high as through cross-border trade.

⁵ This statistical criteria relates closely, although not exactly, to GATS definition of control ("power to name a majority of its directors or otherwise to legally direct its actions").

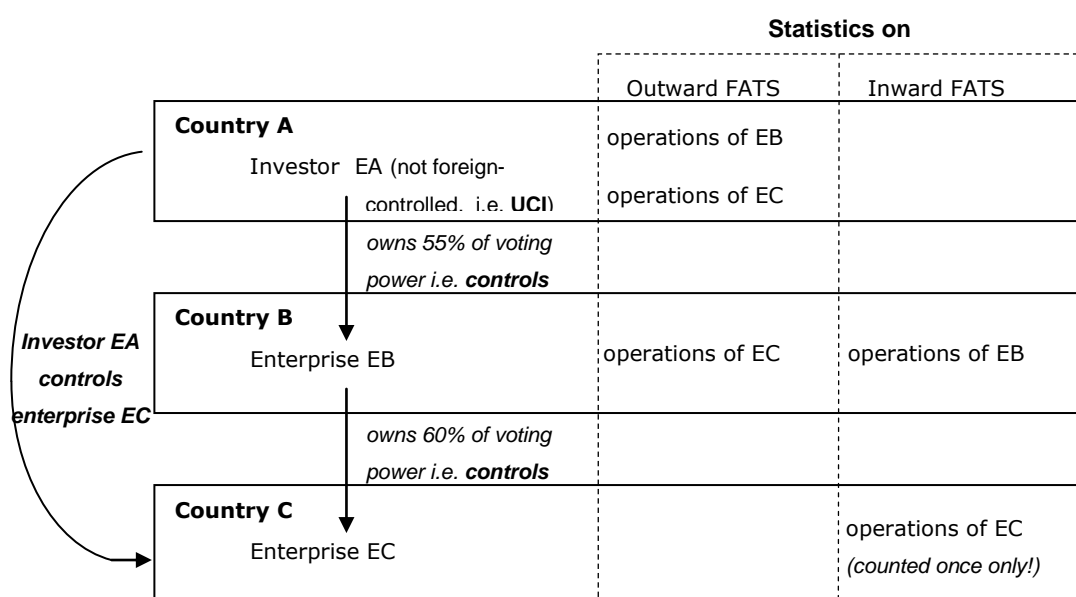
The illustration below shows the importance of clearly identifying chains of control and highlights how inward and outward FATS should be recorded by compilers of each country involved in the chain of control (the countries of residency of the affiliate, the immediate and the ultimate controllers).

Illustration: FATS and control through chains of ownership

The chart features two foreign-controlled enterprises whose operations are measured in FATS. Enterprise EB is directly controlled by an investor EA in country A, and controls directly an enterprise EC in country C. As a consequence EC is also indirectly controlled by EA, even if EA only owns 33% of EC from an arithmetic standpoint (i.e. 55% times 60%). EA is the ultimate controlling institutional unit (UCI), controlling both enterprises EB and EC. The modalities of the control relationship ("who controls whom and in which way") determine how the operations of EB and EC are measured in inward and outward FATS.

Company EB, resident in country B, is foreign controlled: its operations are therefore included in country B's inward FATS. In country A, the country where the investor is resident, the operations of EB are described in outward FATS. As enterprise EB controls EC, country B therefore includes the operations of enterprise EC in its outward FATS. Enterprise EB being itself controlled by EA, the operations of EC should also be described in country A's outward FATS. However this results in double counting (i.e. recording of operations of EC in outward FATS of both country A and country B), in particular when conducting comparisons at the international level. To facilitate analysis, MSITS 2010 therefore strongly encourages compilers to identify the share of (outward) FATS variables accounted for by resident enterprises which are UCIs.

Country C reports the operations of enterprise EC in its inwards FATS.



III.B. FATS GEOGRAPHICAL ATTRIBUTION

The geographical attribution of FATS can be particularly complex as it is often necessary to analyse chains of control. In breaking down variables by economy, the issues to be addressed depend on whether the statistics are on inward FATS or outward FATS.

Outward FATS are attributed to the economy of the affiliate whose operations are described by the variables.

Inward FATS are allocated to the economy that ultimately controls– and that derives the benefits from controlling– the affiliate (UCI).

FATS geographical attribution: an illustration

If a British company controls an affiliate in the United States through a holding company located in Bermuda, then in British outward FATS the affiliate should be attributed to the United States rather than to Bermuda.

If a Moroccan enterprise is indirectly controlled by a French enterprise through its controlled subsidiary in the Netherlands, then in inward FATS compiled by Morocco, the data should be attributed to France. However, considering that information on immediate controllers (or “first foreign parents”) may be available as a by-product of FDI data, and to facilitate comparisons with these data, economies are encouraged to also compile some data classified to the country of the first foreign controller.

III.C. ECONOMIC VARIABLES FOR FATS

The FATS variables to be collected include at least the following basic measures relating to foreign affiliates:

- **sales** (turnover) and/or **output** (services output is used as the preferred measure of the international supply of services through Mode 3);
- **employment**;
- **value added**;
- **exports and imports of goods and services**;
- **number of enterprises**.

III.D. HOW ARE SERVICE SECTORS IDENTIFIED?

FATS variables are broken down by **activity of the affiliates**. On this basis, all of the data for a given enterprise are classified to its primary activity, that is, the single activity for which its sales (or another key variable) are largest. A special activity classification for FATS variables, termed **ISIC Categories for Foreign Affiliates in services (ICFA Rev.1)**, has been developed so as to cover all economic activities with more detail for activities where the production/sales of services is important.

TIP

When analysing FATS data broken down by activity, one needs to keep in mind that these statistics might give an approximation, but not a precise measure, of the activity itself. For example, the total output recorded in FATS under *legal activities* refers to the total output of law firms rather than the total supply of legal services. Some enterprises which are not classified as law firms also offer legal services as a secondary activity, however this production is not included in *legal activities*. Further, the output of *legal activities* might include some of law firms' output resulting from secondary activities, such as, for instance, providing financial advisory services.

The extent to which data on resident/non-resident (BOP) trade classified by product can be aligned with data on FATS variables classified by activity is inherently limited. Nonetheless, a correspondence between EBOPS 2010 and ICFA Rev.1 is provided on-line at unstats.un.org/unsd/tradeserv.⁶ Finally, some countries (e.g. United States) further breakdown the sales (or output) of the affiliates broken down by activity by identifying separately the total sales of goods products from that of total sales of services. The latter provides a closer measure to the mode 3 information needs, and all countries are encouraged to develop a similar breakdown.

III.E. COMMERCIAL PRESENCE AND FDI STATISTICS

Foreign direct investment (FDI) is the category of international investment that reflects the objective of an investor to obtain a lasting interest in a foreign enterprise. For statistical purposes, FDI relationships are characterized by the investor's ownership of at least 10% of a foreign enterprise's voting power (the latter enterprise is referred to as the direct investment enterprise).

FDI statistics form part of the BOP framework. They monitor international economic relations between direct investors and their direct investment enterprises by measuring financial transactions between them, and related income and investment position (stock). Unlike FATS variables, FDI indicators do not enable an assessment of mode 3's full economic and social impact. They are nevertheless an important complementary set of information in that they enable to assess the extent to which commercial presence is created and develops across borders and the direct net benefits that accrue to investors. In addition, these statistics are much more widely available than FATS and although not enabling to measure mode 3 they currently provide the set of indicators most commonly used in commercial presence-related analysis.

⁶ At the time of writing, these are foreseen as being made available in 2011.

IV. STATISTICS ON THE INTERNATIONAL SUPPLY OF SERVICES BY MODE

Links between statistics on the value of trade in services and the different modes of supply are not always straightforward and issues are particularly complex regarding Mode 4.

GATS mode 4 covers more than the direct supply of services by foreign natural persons. For instance, intra-corporate transferees or persons that negotiate service contracts are natural persons that not necessarily produce a service, but are instrumental to its supply. Section IV.A presents the categories of natural persons concerned by Mode 4 and identifies those that are actually directly involved in the supply of a service and for which the value of trade should be measured in statistics.

Another difficulty lies in the identification of the different modes of supply in existing statistics. Such a breakdown is, at the time of writing, generally not being compiled and currently not being considered as a priority. MSITS 2010 nevertheless provides a simplified statistical approach for compilers to approximate the value of the international supply of services by mode. This approach, summarized in section IV.B, is based on the overall good correspondence between FATS and Mode 3, and BOP statistics and the three other modes.

IN BRIEF

The value of mode 4 trade is almost entirely captured in BOP statistics on trade in services between residents and non-residents.

While the value of mode 3 is mainly covered by FATS, a separate identification of the other modes of supply within BOP statistics is more complex.

Services items identified in EBOPS are however deemed to be supplied through one or two dominant modes. This serves as a basis for a simplified approach in MSITS 2010 to use FATS and BOP data to approximate the value of the international supply of services by modes.

IV.A. MODE 4 TRADE: A STATISTICAL VIEW

Mode 4 is not limited to foreign persons directly involved in the rendering of services but also concerns those whose presence abroad is instrumental to the provision of a service.

GATS qualifies Mode 4 trade in services as being “the supply of a service ... by a service supplier of one Member, through **presence** of natural persons of a Member in the territory of any other Member”. Therefore from a statistical perspective, Mode 4 covers foreign natural persons entering the host economy to:

- fulfil directly service contracts (contractual service suppliers): this covers **self-employed persons** (independent professionals) or **employees of a foreign service supplier**;
- work in a foreign affiliate that delivers services (**intra-corporate transfer** or **directly recruited by the affiliate**); negotiate contracts (**services sellers**), negotiate the constitution/acquisition of an establishment supplying services (**persons responsible for setting up commercial presence**), market a service etc.

GATS information needs relating to Mode 4 do not only cover the value of services traded, but also the number of natural persons concerned for each of these categories.⁷ As far as the **value of Mode 4** trade in services is concerned, it is only relevant for categories of persons identified in the first bullet point above, i.e. self-employed service suppliers or employees of a foreign service supplier entering the host economy of the client to produce/provide directly a service. For intra-corporate transferees and foreign persons directly employed by the foreign affiliate, it is considered that the supply of the service takes place through Mode 3. For service sellers and persons responsible for setting up commercial presence there is at least initially no production or delivery of a service (it should in principle take place at a later stage, in either of the modes).

Another key issue is the **temporary** nature of the presence: although GATS does not define temporary presence in terms of a specific duration of stay, in practice this is done in Member's schedules of commitments. This definition is not always consistent with the "one-year guideline" which distinguishes residents of an economy from non-residents. Nevertheless, the value of Mode 4 trade in services is almost entirely captured (together with other modes) within the **services** components in BOP which covers transactions relating to international service contracts between residents and non-residents, even if the natural persons stays or intends to stay more than one year in the host economy:

- in the case of contractual service suppliers as employees of a foreign service supplier, although the natural person may have become statistically resident in the host economy, the contract and its payment remain between a resident client and non-resident supplier (i.e. the employer of the natural person);
- for self-employed persons, MSITS 2010 considers that they seldom become residents of the host economy, except if they establish themselves in a host country, in which case it is done as per a mode 3 commitment.

The BOP main services items that are thought to include **significant elements** of Mode 4 are **computer and information services; other business services; personal, cultural and recreational services; and construction**.

TIP

BOP labour-related flows (i.e. compensation of employees and workers' remittances) are not measures of mode 4. They provide interesting information on the income flows originating from general (temporary or indefinite) movements of persons or migration, of which labour mobility. However, unlike BOP services indicators, (i) labour-related flows do not measure trade flows (transactions) as specified in international service contracts between service suppliers and consumers; and (ii) the universe of persons covered with respect to labour-related flows generally largely differs from the universe of persons involved in Mode 4 service trade (i.e. most of the universe for the latter is not covered by BOP labour-related flows).

⁷ Sources of data to measure the number of persons moving under Mode 4 are examined in section V.C.1 below.

IV.B. ALLOCATION OF BOP ITEMS TO MODES OF SUPPLY

Statistics on trade in services are not broken down by mode of supply, and the production of such a breakdown is not currently a priority in comparison with other statistical developments needed to fulfil GATS-related information needs. As a first step, MSITS 2010 however proposes a simplified approach for the allocation of FATS and BOP data to modes of supply based on the following considerations:

- to the extent that foreign affiliates are a good approximation of commercial presence entities, FATS provide most information for services supplied through Mode 3; and
- service transactions between residents and non-residents, as captured in the balance of payments, broadly cover Mode 1, Mode 2, and Mode 4. Although an accurate breakdown by mode is not compiled, the individual services items identified in EBOPS are generally prone to being delivered only through one or two dominant modes, which enables approximation.

MSITS 2010 thus identifies the most important mode(s) of supply involved for each EBOPS item and proposes a simplified approach for allocating FATS and BOP statistics by mode (see MSITS Chapter V, and in particular Table 5.2). The main principles of this approach are summarized in Table IV.1 below.

TABLE IV.1: CORRESPONDENCE BETWEEN MODES OF SUPPLY AND STATISTICAL DOMAINS		
Mode of supply	Relevant statistical domain simplified presentation	Inadequacies
Mode 1: Cross-border supply	BOP: commercial services (excluding <i>travel, manufacturing services on physical inputs owned by others, maintenance and repair services, construction and part of transport</i>).	BOP does, at the time of writing, not allow a separation between modes of supply.
Mode 2: Consumption abroad	BOP: <i>travel, manufacturing services on physical inputs owned by others, maintenance and repair services and part of transport</i>	<p><i>Travel</i> also contains goods consumed by travellers and although an alternative breakdown by type of product is recommended, data generally available are not subdivided into the different categories of services consumed by travellers.</p> <p>BOP does, at the time of writing, not allow a separation between modes of supply for the other listed BOP items when deemed necessary.</p>

TABLE IV.1: CORRESPONDENCE BETWEEN MODES OF SUPPLY AND STATISTICAL DOMAINS

Mode 3: Commercial presence	FATS	Incomplete coverage of activities for FATS at the time of writing. Not many countries compile FATS.
	BOP: <i>construction</i>	Not distributed between Modes 3 and 4
Mode 4: Presence of natural persons	BOP: commercial services (excluding <i>travel</i>)	BOP does, at the time of writing, not allow a separation between modes of supply

As shown on the second row of this table, a fair approximation of services supplied through consumption abroad (Mode 2) is feasible by aggregating *travel* and a few other service items. Similarly a number of other EBOPS items like financial services are clearly mainly supplied cross-border (Mode 1).

Some other important services identified in EBOPS can be delivered through two modes of supply which may be both important elements. For example, a country's exports of computer services may be well measured overall. However how much of these sales relate to cross-border supply (Mode 1, e.g. electronic transmission of a specific software developed in the country of the provider), and how much relate to the presence of natural persons (Mode 4, e.g. a programmer developing a specific application in the premises of the foreign customer)?

MSITS 2010 acknowledges that compilers will not be able to allocate each EBOPS type of service by GATS modes of supply in the near future. The **simplified approach**, operational in the current statistical context, is meant for producing **approximations**. This approach is only considered as a first step in the estimation process, and MSITS 2010 fully acknowledges that further research and empirical information will be required to validate and to refine the estimates, especially for BOP services items where two dominant modes are involved.

V. AVAILABILITY AND DISSEMINATION OF DATA ON THE INTERNATIONAL SUPPLY OF SERVICES

This section informs on the availability and international dissemination of BOP trade in services statistics, as well as on statistics regarding commercial presence (FATS and FDI data). It also identifies additional indicators and sources used for analysing the international supply of services.

V.A. BOP TRADE IN SERVICES DATA AVAILABILITY AND DISSEMINATION

BOP trade in services data collection is relatively well established and widespread. Data is available for most economies, at least at the level of the major BPM/EBOPS components.

An increasing number of countries are also breaking down their BOP/EBOPS trade in services statistics by partner country; finally, a larger number of economies are now collecting quarterly/monthly data on trade in commercial services to monitor recent trade developments.

Although the revised international standards were recently published (BPM6 and MSITS 2010), which in particular propose revised services classification (EBOPS 2010), available statistics are still based on the BPM5 and EBOPS released in 2002.

Table V.1 below summarizes the major sources of BOP data, specifying the country/partner coverage, the type of service and the format.

TABLE V.1: SUMMARY OF BOP TRADE IN SERVICES DATA DISSEMINATION BY INTERNATIONAL ORGANIZATIONS				
Publication	Format	Country coverage	By type of service	By partner country
IMF Balance of Payments Statistics Database– also available from ITC's Trade Map	book, on-line and CD-ROM	IMF members	BPM5 and EBOPS (provided to IMF on voluntary basis)	No
Eurostat Database	on-line and CD-ROM	EU members, total EU, euro area, EU candidate countries	EBOPS	Yes, over 200 partners
OECD Statistics on International Trade in Services Volume 1 Detailed Tables by Service Category and Volume 2 Detailed Tables by Partner Country	book, on-line and CD-ROM	OECD members; Hong Kong, China and Russian Federation	EBOPS (and additional detail)	Yes, over 200 partners
UNCTAD Handbook of Statistics	book, on-line and DVD-ROM	Around 200 economies	BPM5 main items	No

UN ServiceTrade database	on-line	Around 200 economies	EBOPS	Yes, over 200 partners
WTO's International Trade Statistics	book, on-line and CD-ROM	All economies, regions, world	Summary data and analysis	

The online versions of these databases are available at the following addresses:

- IMF Balance of Payments Statistics Database
<http://www.imf.org/> > Data and Statistics > Balance of Payments Statistics (BOPS)
- Eurostat Database
<http://epp.eurostat.ec.europa.eu> > Statistics > Economy and finance > Balance of Payments > Database > International trade in services, geographical breakdown
- OECD Statistics on International Trade in Services
<http://stats.oecd.org/> > International Trade and Balance of Payments > Trade in Services
- UNCTAD Handbook of Statistics
<http://unctadstat.unctad.org/> > International trade in services
- UN ServiceTrade database
<http://unstats.un.org/unsd/ServiceTrade/>
- WTO's International Trade Statistics
http://www.wto.org/English/res_e/statis_e/statis_e.htm

V.B. COMMERCIAL PRESENCE: INFORMATION AVAILABLE

Compared with trade in services in BOP, FATS are still at an early stage of development. Nevertheless, their collection and dissemination are taking an increasing importance at **Eurostat** and **OECD**, fuelled by the growth in national activity in this area. When countries do not yet collect FATS, FDI statistics can provide a useful indication of commercial presence.

V.B.1. AVAILABILITY AND DISSEMINATION OF FATS

Eurostat and OECD use FATS questionnaires inquiring their member countries both inward and outward FATS information, by activity and by country of origin/destination of investment. The coverage of inward FATS is relatively good compared to the outward situation, which is due to the difficulty for national agencies to collect statistics on operations performed outside the country territory or jurisdiction.

Table V.2 below summarizes the major sources of FATS, specifying the country/partner coverage, the activity breakdown and the format.

TABLE V.2: SUMMARY OF FATS DATA DISSEMINATION BY INTERNATIONAL ORGANIZATIONS

Publication	Format	Country coverage	By activity	By partner country
Measuring Globalisation: The Role of Multinationals in OECD Economies, Volume II: Services	book, on-line and CD-ROM	OECD members	ISIC rev. 2 and 3	Yes
Eurostat Database	on-line	EU members	NACE Rev. 1.1 Section C to K	Yes
WTO's International Trade Statistics	book, on-line and CD-ROM	Selected countries	Total	Total

The online versions of these databases are available at the following addresses:

- Activity of Multinationals

<http://stats.oecd.org/> > Globalisation > Activity of multinationals

- Eurostat Database

<http://epp.eurostat.ec.europa.eu> > Statistics > Industry, trade and services > structural business statistics > Database > Foreign controlled EU enterprises - inward FATS or Foreign affiliates of EU enterprises - outward FATS

- WTO's International Trade Statistics

http://www.wto.org/english/res_e/statis_e/statis_e.htm

V.B.2. FDI STATISTICS

The **main collectors and disseminators of FDI data are Eurostat, IMF, OECD and UNCTAD**. Eurostat and the OECD use a common questionnaire to collect FDI inward and outward stocks, flows and income data, broken down by industry and by country of origin or destination. The IMF collects FDI positions, flows and income according to the components set out in BPM5, but without any industry and partner country breakdowns.

Table V.3 below summarizes the major sources of FDI data, specifying the country/partner coverage, the activity breakdown and the format.

Table V.3: SUMMARY OF FDI DATA DISSEMINATION BY INTERNATIONAL ORGANIZATIONS

Publication	Format	Country coverage	By activity	By partner country
Eurostat Database	on-line	EU members	NACE Rev. 1.1	Yes
IMF's Balance of Payments and International Investment Position Statistic	book and CD-ROM	IMF members	No	No
OECD's International Direct Investment Statistics	on-line and CD-ROM	OECD members	ISIC rev. 3 (2 digits)	Yes
UNCTAD Foreign Direct Investment Database	on-line	around 200 economies	No	No

The online versions of these databases are available at the following addresses:

- Eurostat Database
<http://epp.eurostat.ec.europa.eu> > Statistics > Economy and finance > Balance of Payments > Database > European Union direct investments
- IMF's Balance of Payments and International Investment Position Statistic
<http://www.imf.org/> > Data and Statistics > Balance of Payments Statistics (BOPS)
- OECD's International Direct Investment Statistics
<http://stats.oecd.org/> > Globalisation > Foreign Direct Investment Statistics
- UNCTAD Foreign Direct Investment Database
<http://unctadstat.unctad.org/> > Foreign Direct Investment

V.C. ADDITIONAL INDICATORS FOR ANALYZING THE INTERNATIONAL SUPPLY OF SERVICES

Trade in services statistical needs go beyond that of the value of services trade. Negotiators and analysts need additional information to further guide negotiations, to support comparison of commitments, as background for the settling of disputes and for the assessment of the international supply of services. Additional information is also necessary for a more complete economic analysis and to evaluate market access opportunities. Further to international trade values, statistics on the overall importance of services activities as well as quantitative information that might be linked to individual service sectors by modes of supply are of particular relevance.

The number of persons moving and temporarily present abroad in the context of mode 4 is one of those additional needs, and an important complement to the value of mode 4 trade, which is why it is described in detail in MSITS 2010. The first part of this section particularly focuses on quantitative indicators on mode 4 and the rest of this section then discusses possible data sources for production and employment data, as well as quantitative indicators and other types of indicators.

V.C.1. THE NUMBER OF PERSONS FOR MODE 4

Tourism and migration/labour statistics partly respond to the needs identified for **measuring the number of persons moving under Mode 4**. However, adjustments in related statistical concepts (e.g. duration of stay, categories of migrants and non-migrants) are needed in order to respond to trade policy needs. These frameworks could be used as follows:

- within tourism and migration (non-migrants) statistics, separately identify business travellers/visitors travelling for business purposes;
- in short- and long-term migrant categories, separately identify intra-corporate transferees and foreigners directly recruited by foreign affiliates.

Useful information on existing labour and migration statistics and classifications can also be found at the ILO International Labour Migration Database, www.ilo.org.

V.C.2. MEASURING THE IMPORTANCE OF SERVICES BEYOND INTERNATIONAL TRADE: STATISTICS ON DOMESTIC ACTIVITY

National Accounts constitute the statistical framework out of which main macroeconomic aggregates are calculated (production, Gross Domestic Product, Gross National Income, consumption...). Value added broken down by industry permits the measurement of the contribution of the services sector and its sub-sectors to GDP.

Employment statistics provide the total number of people employed in various sectors of activity. They allow to identify the number of people employed in the services sector and their distribution among different sub-sectors (it should be noted that such statistics also form part of the central framework of National Accounts).

Other information such as prices, business statistics (available from regional and international organizations) as well as data provided by business federations may also be useful for assessing the activity of specific services sectors.

These data (which are available at various levels of detail) may be sourced from various international databases such as Eurostat, ILO, OECD, UNSD, World Bank.

V.C.3. QUANTITATIVE INDICATORS ON SPECIFIC SECTORS

Quantitative indicators available on specific service sectors include, for instance, the number of international students enrolled in basic education, arrivals of tourists, number of letters mailed, kilometres flown by planes,

number of phone calls, etc.. Used as a complement to the value of international trade flows, they provide an invaluable additional perspective that enables a more in-depth analysis of services sectors.

Relevant sources of information related to specific sectors are, among others:

- ICAO Digests of Statistics on civil aviation
<http://www.icao.int/icao/en/atb/sea/publications.htm>
- UIC Statistics on rail transport
<http://www.uic.org/spip.php?rubrique988>
- UIS statistical database on education, culture, audiovisual, R&D
<http://stats.uis.unesco.org/>
- International Telecommunication Union
<http://www.itu.int/ITU-D/ict/statistics/>
- UPU Postal statistics database
<http://www.upu.int/en/resources/postal-statistics/>
- World Tourism Organization
<http://www.unwto.org> > Programmes > Market Trends > Facts and Figures
- WIPO Industrial Property Statistics on patents, utility models, industrial designs etc.
<http://www.wipo.int/ipstats>

Finally, the World Bank's World Development Indicators (<http://databank.worldbank.org/>) include a wide range of analytically useful series for trade in services related analysis, such as quantitative information on communication and transportation, in addition to statistics enabling to assess the domestic importance of services mentioned in section V.C.2 above.

V.C.4. OTHER INDICATORS

Other tools are also important sources of information for trade negotiators, analysts and economists, such as the WTO Services Database, which presents information on WTO Members' schedules of commitments and exemptions, the World Bank Regulatory Barriers in Services Trade database⁸, providing a comprehensive repository of regulatory barriers to international trade in selected services sectors, or the Quantitative Air services Agreements Review database. The OECD also developed a Services Trade Restrictiveness Index for three sectors: business services, construction and telecommunications services. These tools are described in the document "Trade and market access data for policy makers"⁹ which was first prepared for the Data Day held at the WTO on 18-19 May 2009.

⁸ At the time of writing, these were still work in progress.

⁹ The January 2010 update is available at www.wto.org/english/res_e/statis_e/broch_dataday_feb10_e.pdf.

VI. SUMMARY

Following the entry into force of the WTO General Agreement on Trade in Services (GATS), there has been an increasing demand for detailed and internationally comparable statistical information on the international supply of services, possibly by mode of supply.

This module presents the measurement of the international supply of services and the existing issues with respect to the approximation of data by mode of supply. Two building blocks are identified: **Balance of Payments** (BOP) statistics and **Foreign Affiliates Statistics** (FATS).

BOP statistics, which summarise transactions of an economy with the rest of the world, display data on trade in services as conventionally measured (i.e. between residents and non-residents). Trade in services measured in the BOP are broken down according to 12 major balance of payments (BPM6) services categories, which are further broken down into the more detailed Extended Balance of Payments Services Classification (EBOPS 2010).

FATS expand the statistical definition of international trade in services by recommending the measurement of services supplied by foreign affiliates. FATS encompass a set of indicators on the operations of foreign-controlled enterprises which cover both resident affiliates of foreigners (inward FATS) and residents' affiliates located abroad (outward FATS). FATS cover both producers of goods and services, however they provide for breakdowns that enable a suitable identification of services and their sub-sectors.

Links between statistics on the value of trade in services and the different modes of supply are not always straightforward. Although acknowledging that further work is needed in this respect, the Manual on Statistics of International Trade in Services (MSITS 2010) provides guidelines for linking the value of international trade in services to the four modes of supply:

- the value of mode 4 trade is only relevant for foreign natural persons entering the economy to directly fulfil service contracts (either self-employed or employees of a foreign service supplier); it is almost entirely captured in BOP statistics on trade in services between residents and non-residents;
- the value of mode 3 is mainly covered by FATS. Foreign Direct Investment (FDI) statistics can be considered as an important complement, although they do not measure mode 3;
- services items identified in the balance of payments broadly cover modes 1, 2 and 4; they are deemed to be supplied through one or two dominant modes (simplified approach).

BOP trade in services statistics are available for most economies, at least at the level of the major BPM/EBOPS components. The major sources of data are IMF, Eurostat, OECD, UNCTAD, UNSD, and WTO.

FATS are still at an early stage of development; Eurostat and OECD are the main providers of FATS data.

Other statistics could be of interest for a more complete analysis of trade in services. Tourism and migration statistics respond to the needs for measuring the number of persons moving under mode 4 however adjustments to data collection systems would be needed. National Accounts and employment statistics assess the contribution of the service sectors to GDP and employment. Quantitative indicators on specific sectors can be useful complements to the value of international trade flows.