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Measuring GATS Mode 4 Trade Flows

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WTO

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ABSTRACT

The paper discusses the research work which has taken place over recent years with respect to the measurement of GATS mode 4 – presence of natural persons, in the context of the revision of the Manual on Statistics of International Trade in Services.

Realistic estimates of mode 4 trade are virtually non-existent. Based on the GATS legal definition, the paper introduces the statistical conceptualization of mode 4. While showing that balance of payments labour related flows indicators, such as worker's remittances and compensation of employees, cannot be used as substitutes, the paper discusses relevant balance of payments transactions in individual services sectors for estimating the value of this trade. Given the complexity of many services contracts (one service contract may involve the use of more than one mode to supply services to consumers), it provides simplifying assumptions that help build these measures of mode 4 trade in services. The paper recognizes that the proposed simplified statistical approach to modes of supply does not strictly adhere to GATS provisions and explains that it has been designed as a first guidance to provide relevant information for GATS while ensuring feasibility and consistency with statistical frameworks. Examples are given, showing the interest of some economies to estimate the size of m.1(odeis trads

INTRODUCTION

Various papers and articles in the economic literature aim at showing the benefits of mode 4 by analysing labour migration.¹ Computable General Equilibrium (CGE) simulation studies, such as those of Winters and Walmsley state that restrictions on temporary labour migration are inducing costs to developed and developing countries alike in the range of about 150 billion US dollars, about 1 per cent of world trade in 2006.² Other literature use income measures such as compensation of employees or worker remittances to prove positive effects of temporary movements of natural persons on merchandise trade and services trade under modes 1 and 3.³ They argue that temporary movements, like permanent movements, would for example reduce transaction costs for merchandise trade and thus create additional trade.⁴

The beneficial effects mentioned above are mirrored in the developing countries' requests for liberalising the movement of persons in the current Doha Development Agenda (DDA) negotiations where they seek improved commitments on market access for their nationals.⁵ While economic literature is attempting to explain the economic impact of liberalising mode 4 using tools applied in migration, statisticians in contrast struggle with the "adequate translation" of GATS mode 4 legal texts into statistical concepts to appropriately measure the size of related trade flows, that is, to determine the relative importance of mode 4 vis-à-vis other modes of supply. Measuring these trade

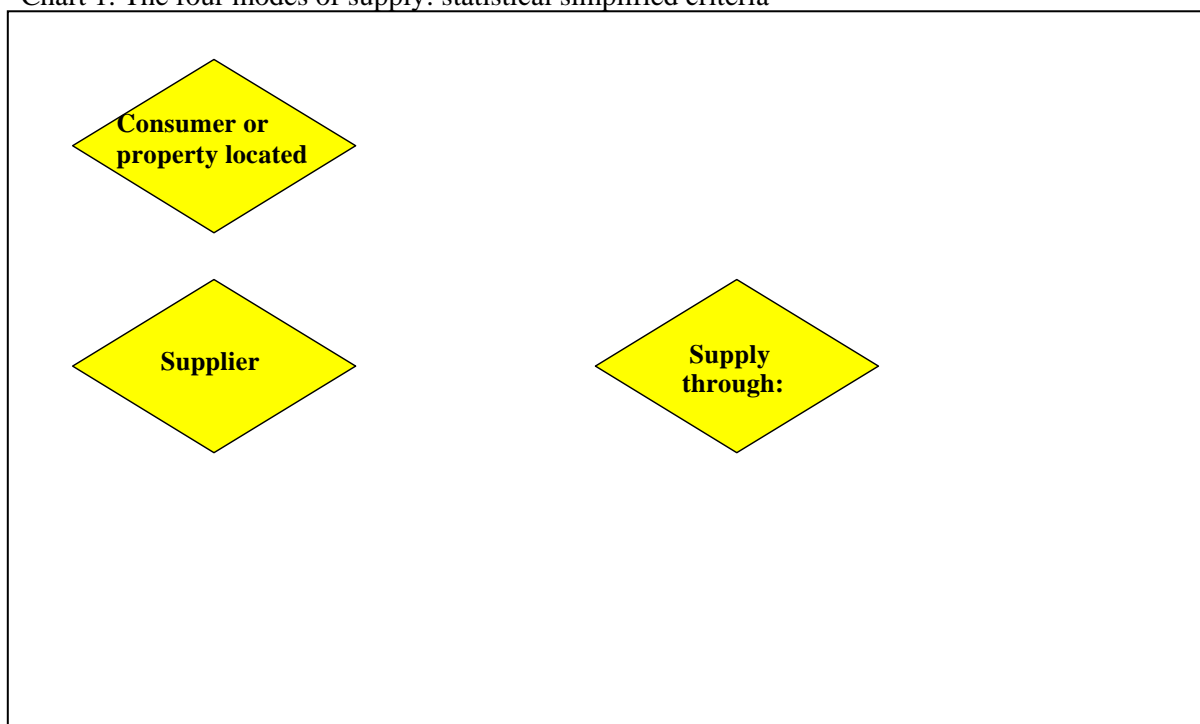
It should be stressed that the MSITS guidelines on the compilation of statistics on the international supply of services are laid out for statistical purposes and that they do not exactly correspond to trade in services as defined in GATS. For instance GATS defines the supply of services as including "the production, distribution, marketing, sale and delivery of services" whereas international statistical guidelines mainly focus on the production and delivery aspects for valuing services trade.⁹

Although MSITS adopts simplified criteria for measuring international supply of services by mode (see Chart 1), it stops short of developing a conceptual framework for measuring mode 4 trade flows. However it opens the way to the development of statistics for assessing mode 4 in an Annex on the Movement of Natural Persons supplying services under GATS. It identifies elements of relevance in the BOP, FATS, migration and tourism statistical frameworks which could serve as a basis for measuring mode 4.

While both the balance of payments (BOP), through the introduction of the Extended Balance of Payments Classification (EBOPS, see annex I), and FATS have allowed to improve the coverage and refine measures for trade in services, in particular for approximating modes 1, 2 and 3, today no reliable estimate exists on the value of mode 4 trade which renders any quantitative assessment difficult.

Following the revision processes of the Balance of Payments Manual (BPM6) and the System of National Accounts (2008 SNA) due to be finalized early 2009, MSITS is also being revised.¹⁰ The revised MSITS draft accounts for revisions introduced in the above two international statistical frameworks and in FATS and also includes a chapter that discusses the measurement of trade flows by mode of supply, in particular mode 4, and provides new recommendations. This paper which focuses on mode 4 is based on these new proposed recommendations.

Chart 1. The four modes of supply: statistical simplified criteria



Source: WTO Secretariat based on draft revised Manual on Statistics of International Trade in Services (2008).

⁹ BPM5 and MSITS define services transactions as "an economic flow that reflects the creation, transformation, exchange, transfer or extinction of economic value involving the provision of services"

¹⁰ At the time of writing the draft revised MSITS was being reviewed by compilers and users of trade in services statistics through a worldwide consultation. For more information see <http://unstats.un.org/unsd/tradeserv/msitsintro.htm>.

Remittances and GATS mode 4 trade -- Can one measure the other?

The balance of payments items compensation of employees and workers remittances (and in some instances migrant transfers) are often used in economic literature as statistical indicators to estimate the size of GATS mode 4 trade. However, compensation of employees and workers remittances are both labour income measures.¹¹ Compensation of employees covers the wages, salaries etc. received by an employee, in an economy other than the one in which he/she is resident, paid for the work performed for his employer resident of that economy.¹² Workers remittances cover the part of the

the "client" (see box 1). If an employer-employee relationship exists then the individual would not be included in this statistical framework.

- *Contractual service suppliers as employees* of a juridical person: employees of the service supplier in member B are sent to member A in order to supply a service in the context of a contract between their employer and a service consumer in A. For example, computer services are supplied to consumers of A by an employee of a foreign IT services firm of B who is sent to A to deliver this service;
- *Intra-corporate transferees and foreign employees directly recruited by foreign entities* (IT8 1 T1.tite

Box 1. Self-employed or employee?

“Self-employed” and “independent” service suppliers are terms that are often used interchangeably. Statistical recommendations describe these individuals (hereafter named self-employed) as deemed to operate their own unincorporated enterprises, and sell output they produce. Self-employed persons, who may also employ others, are generally responsible for decisions on markets, scale of operations and finance, and are also likely to own, or rent, machinery or equipment on which they work.

An employer-employee relationship exists when there is an agreement, which may be formal or informal, between an enterprise and an individual, entered into voluntarily by both parties, whereby the individual works for the enterprise in return for remuneration in cash or in kind. The remuneration is normally based on either the time spent at work or some other objective indicator of the amount of work undertaken. If an individual is contracted to produce a given result, it suggests a service contract relationship between the enterprise and a self-employed.

It may not always be clear whether an employer-employee relationship exists between the individual and the enterprise or whether the individual is a self-employed and is supplying a service to the client enterprise. Provision of several types of services may pose such problems because enterprises may choose either to purchase a service from a self-employed worker or to hire an employee to perform the job. The status of the worker has important implications. If an employer-employee relationship exists between the worker and the enterprise for which the work is being done, the corresponding payment constitutes compensation of employees. If the individual is self-employed (i.e. an employer-employee relationship does not exist), then the payment constitutes a purchase of services.

Several factors may have to be considered in determining whether an employer-employee relationship exists. An important test is that of control. The right to control or to direct, both as to what shall be done and how it shall be done, is a strong indication of an employer-employee relationship. The method of measuring or arranging for the payment is not important as long as the employer has the effective control both on the method and the result of the work undertaken by the individual. However, a certain control on the work being undertaken may also exist for the purchase of a service. Therefore, other criteria should also be used to define more clearly the employer-employee relationship. For example, an individual being solely responsible for social contributions would suggest that it is a self-employed service provider. In contrast, payment of social contributions by the employer is an indication of an employer-employee relationship. If the individual is entitled to the same kind of benefits (e.g. allowances, holidays, sick leaves, etc.) that the enterprise generally provides to its employees, this may indicate an employer-employee relationship. Payment of taxes on the provision of services by the individual is an indication for a self-employed service provider.

Source: Draft of the 6th edition of the IMF's Balance of Payments Manual and draft revised Manual on Statistics of International Trade in Services.

In their commitments, WTO members have in general indicated the length of stay of natural persons by the respective categories. For example, in the case of contractual services suppliers, whether self-employed or employees, the duration ranges between 3 months to one year, rarely exceeding 2 years; for intra-corporate transferees it is generally limited to 2-5 years; for services sellers/persons responsible for setting up commercial presences it is normally limited to 3 months.

All these issues make the task of estimating values of trade in services by modes of supply challenging. Accounting legislations, conventions and conveniences will also affect the way enterprises, banks and compilers report related payments by services items and modes and may have implications on the recording (or not) of associated payments and receipts in the balance of payments or in FATS.

The **value of services** as measured in the balance of payments refers to international transactions between residents and non-residents with an underlying contract as the basis for this transaction. Whereas certain transactions are clearly associated with specific modes, for example, a physician providing medical diagnosis to a patient via e-mail transactions as mode 1, others involve a combination of modes of supply. For example, under a single transaction between a computer services supplier and its client to develop a customized software, the supplier may need to send a computer specialist to the "host" economy (client) to develop part of the software while the other part is developed in the "home" economy of the supplier and subsequently forwarded to the specialist via e-mail, who will then take care of the finalization of the project with other specialists who stayed in the home economy.. It is for these cases of contractual service suppliers where there is a need to

identify the relevant part in services transactions considered mode 4. This is difficult because it mainly requires identifying in existing balance of payments cross-border services transactions the share of trade delivered through mode 4.

In addition to the value of trade in services, information on the **number of persons** (flows and stocks) would be of interest for all categories of natural persons. Although once again this type of information is not separately available and conceptual work is underway, existing statistical frameworks such as tourism or migration statistics combined with various data sources (enterprise surveys, statistics on international trade, etc.) could be used to estimate the number of persons. The number of persons is a key indicator of the economic impact of trade in services and is also a key indicator of the economic impact of trade in services.

appear in various types of services, however computer services, other business services (professional services such as lawyers, architects, services incidental to agriculture, mining, etc.) or personal, cultural or recreational services will most likely involve much mode 4 related trade.¹⁹

Where to find mode 4 in balance of payments trade in services transactions?

Clarifying the coverage of mode 4 in statistical terms for a conceptualization of mode 4 indicators shows that the value of services trade is relevant only in the case of contractual service suppliers, whether these services are supplied by an employee of the service supplier or if the service supplier is a self-employed and supplies the service himself. The information is not needed for intra-corporate transferees and foreign employees directly recruited by the foreign affiliate, nor for services sellers/ persons responsible for setting up commercial presence. For the former the service transaction between the service supplier (i.e. the juridical person) and the consumer is taking place through mode 3 (the mode 4 commitment enables the presence of the person in order for the service supplier to supply the service via mode 3) and for the latter there is no service transaction (the transaction takes place at a later stage).

Ideally, each international service transaction as recorded in the balance of payments, should be allocated among the different modes. However, as in many cases a single service transaction may involve more than one mode of supply, it is difficult for data compilers to identify a transaction's full complexity. To simplify, each type of service can be allocated either to one dominant mode or, where there is no single dominant mode, to the most significant mode of supply. Examples are communications services (mode 1) or travel which is used to approximate mode 2. Other examples are services incidental to agriculture and mining which are deemed to be provided predominantly through mode 4.

For other types of services the picture may be more complex as individual transactions might involve significant elements of different modes. To take a simple example, a consultant resident in the compiling economy providing services to a non-resident client may supply the service *either* on-site (mode 4) *or* from the office of the consultant transmitting reports cross border (mode 1) *or* a combination of those two. For construction, companies may want to establish either a commercial presence-mode 3 (which would not qualify as a branch being created and which may involve a mode 4 presence) for a short period of time (a few months) and/or post own workers in the host economy under mode 4.

For the more specific case of mode 4, as stated above, information is only needed for contractual service suppliers (either employees of a foreign-based service supplier or self-employed service suppliers) who are present in the host economy in order to supply a service. Depending on the category of person and the length of stay of this person abroad, the value of the services trade is in principle recorded in the balance of payments as follows:

- (a) Contractual service suppliers as employees of the foreign-based service supplier: a service supplier obtains a service contract with a consumer in another economy. He sends his employee to that other economy in order to supply the service. The transaction corresponding to the service contract will be recorded as an export or import in the respective type of services regardless of the length of stay abroad of this person. In the majority of cases considered the presence of contractual service suppliers as employees will not imply substantial operations that can be identified separately from the overall operations of the service supplier. A group of persons *per se* cannot be considered to constitute a branch or representative office (if this was the case the trade would fall under mode 3, commercial presence).

¹⁹ Table 1, MSITS, page 24.

(iii) *Mode 3 and mode 4*

For a number of services items it may also be difficult to distinguish mode 3 from mode 4. Commercial presence (mode 3) concerns mostly domestic sales of services of foreign affiliates covered in FATS, which will not be described in this paper. There are cases, however, where a

conventions. From a general point of view, the possibility of estimating mode 4 flows within the balance of payments services account would also help improve the estimations of in the international supply of services by modes. To collect further information with respect to mode 4, current surveys need to be modified or complemented with a clear list of questions to help survey respondents and compilers to identify whether the payment for a service contract or a single payment could be classified as mode 1, 2, 3 or 4 supply of services. The rules applied to compile these estimates by mode of supply and the list of items where estimates of mode 4 are necessary should be established depending on each economy's interest, and this list should not strictly be limited to the services items identified in this document.

Given the complexity of services contracts (i.e. several modes for supplying the service), the allocation should be made on a broad basis. Compilers should concentrate on services categories relevant in the context of their economy and not necessarily attempt to differentiate mode 4 from other modes for services where this mode of supply is not believed to be an important component.

There are various options which could help determine whether a transaction should be allocated to mode 4 or not:

- (a) Indicate if the provision of the service involved the physical presence of non-resident individual(s), whether as self-employed or as employee(s) sent to the compiling economy by their non-resident company (This question alone seems appropriate for collecting this information for the first time). If it involved the

estimated that it is the smallest mode of supply, it still represents a significant share of the balance of payments transactions for this sector: mode 4 represents 25% of mode 1+4 computer services transactions. Of course this information should be interpreted with caution and should be improved through future surveys.

Table 1. Indian international supply of computer services by mode, 2002-03

Size of Transactions (million USD)	Amount (million USD)					Per cent Share in Total			
	Mode 1	Mode 2	Mode 3	Mode 4	Total	Mode 1	Mode 2	Mode 3	Mode 4
< 0.2	82	1	15	7	105	77.96	1.18	14.17	6.69
0.2-2	205	5	56	31	297	69.12	1.60	18.92	10.36
2-20	358	1	288	52	699	51.18	0.12	41.27	7.43
> 20	1850	0	2706	775	5332	34.71	0.00	50.75	14.54
Total	2495	7	3065	865	6432	38.79	0.11	47.65	13.45
Top ten companies	1553	0	1750	573	3876	40.08	0.00	45.14	14.78

Source: Reserve Bank of India (2005), *Computer services exports from India*. (converted to US dollars by the WTO Secretariat).

economy allocation does not necessitate the separate identification of modes or if it has difficulties in implementing the allocation according to this chart (too burdensome or costly for compilers or reporters), the rules can be simplified by concentrating on the 10 most relevant BPM6 service transaction aggregates, FATS and if possible the estimated value for distribution services associated with cross-border merchandise trade.

Chart 4. Simplified allocation of FATS and balance of payments data to modes of supply²³

Mode 1	Mode 2
Mode 4	Mode 3

GATS, tourism and migration statistical systems

For a more global analysis of services industries or market opportunities there exist a number of additional useful statistics that can be drawn from various statistical frameworks. With respect to mode 4, information on the number of persons moving and present abroad will be found in tourism or migration statistics. Information on flows and stocks of natural persons could be derived from the definitions used in these frameworks, that is the International Recommendations on Tourism Statistics – IRTS 2008; Tourism Satellite Accounts: Recommended Methodological Framework – TSA-RMF 2008; and the Recommendations on Statistics on International Migration, Revision 1 – RSIM, Rev. 1.

²³ The allocation may vary from economy to economy (general needs of economy , as well as taking into consideration more specific sectoral needs, data collection systems in place, resources, etc.). Items in italics are not separately available in BPM6/EBOPS.

While rough aggregated mode 4 information may be drawn from these statistical systems, a more complete picture will require additional breakdowns in relevant categories. Although such statistics will not perfectly mirror the definitions of GATS, they would provide a reasonable indication of the number of mode 4 persons crossing borders and present abroad in the context of trade in services.²⁴

International Recommendations for Tourism Statistics 2008 and Tourism Satellite Accounts: Recommended Methodological Framework 2008

The IRTS 2008 is a comprehensive methodological framework for the collection and compilation of tourism statistics. An extension of the IRTS2008 is the tourism satellite account by which tourism statistics are linked with the mainstream of macroeconomic analysis (see TSA-RMF 2008). Statistics compiled according to these frameworks would mainly be a useful complement for an in-depth analysis of the tourism sector from a trade perspective, covering all modes of supply, however these frameworks also provide for the possibility to compile information on the flows of persons entering an economy other than their own for short periods of time in order to supply services.

Tourism statistics identify international visitors as being characterized by the fact that they are on a tourism trip, traveling in an economy other than in the one in which they usually reside and that they must not be employed by an enterprise of the economy visited. The number of international visitors can be broken down according to the main purpose of the trip: personal (holidays, leisure and recreation, education and training, health and medical care, etc.) and **business and professional purposes**. Although very aggregated, collecting data on the latter is useful to conduct an analysis of flows of mode 4 persons. It includes the activities of self-employed and employees as long as they do not correspond to an employer-employee relationship with a resident producer in the economy visited, as well as those of investors, businessmen, and any other type of professional purposes (participating in conferences, etc.).

The table below shows the number of "mode 4 arrivals" (i.e. inflows) for a selection of economies. This information could serve as a rough estimation as this indicator may on the one hand

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The table below presents the total number of intra-company transfers for 2003-05. Please note that these concern persons employed in both services and goods producing companies, the latter not been covered by the definition of mode 4. Despite its overestimation it provides an idea of the levels involved with respect to mode 4 intra-corporate transferees.

Table 4. Intra-corporate transfers in selected OECD countries, 2003-2005 (thousands)

	2003	2004	2005
Austria	0.2	0.2	...
Canada	3.8	4.2	4.5
Germany	2.1	2.3	...
Japan	3.4	3.6	4.2
Korea	7.8	8.5	8.4
Switzerland	14.4	7.5	1.8
United States	57.2	62.7	65.5

Source: OECD (2007), *International migration outlook: SOPEMI 2007 Edition*.

Conclusion

The statistical conceptualization of mode 4 shows that international transactions related to the supply of services through the presence of persons are already largely included in a country's balance of payments services items. The main issue is to separate the mode 4-related trade flows from the other modes of supply. Examples such as India's measuring of international supply of computer services or

