

UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS STATISTICS DIVISION

Meeting of the Technical Subgroup on Movement of Natural Persons – Mode 4 Paris, 31 January -1 February 2005

> Services Exports under Mode 4 of GATS: Exploratory Evidence from India

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Services Exports under Mode 4 of GATS: Exploratory Evidence from India

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Abstract

From the viewpoint of GATS, challenges emerging from Mode 4 of supply are two pronged - measurement of value of services delivered through Mode 4 and statistical record of movement of persons to deliver services. The existing reporting system in India provides information on the purpose of transactions; the modes of supply of services are not considered. However, based on the nature of delivery of services, these can be broadly identified under specific modes of supply. Some measurement of mode of supply is possible in respect of software services. Onsite software exports - services performed at the site in the host country - which account for 41 per cent of the value of exports, would involve delivery either through natural movement of persons or through contractual employment of residents of the host country. An important issue emerging from the Indian experience is that proper identification and classification of remittances repatriated by the migrant workers would be crucial under the GATS to assess the services delivered through Mode 4. In case of countries where a significant share of migrant workers is constituted by unskilled/semi-skilled workers who basically work in goods producing enterprises in the host country, workers remittances may not provide an accurate estimate of services delivered through Mode 4. A crucial underlying assumption under the GATS framework to measure delivery of services through Mode 4 is that migrant workers' remittances mirror the export of services. The cointegration test for India provides evidence to support the hypothesis that India's workers remittances are reflection of services exports and could be a reliable proxy for determining services delivery through Mode 4. With regard to improving measurement of services supplied through Mode 4, attention is needed to develop an information system as a coordinated effort of national statistical authorities, migration authorities, immigration offices and the population census and BoP compilers. Host country statistics can perhaps provide an accurate universe of migrant workers as host country information may be reliable due to stricter regulation and record of immigrants.

1. Introduction

Despite the rapid proliferation of international trade in commercial services in the last decade, the measurement challenges continue to haunt the balance of payments (BoP) compilers, policy makers and multilateral trade negotiators. With international trade in commercial services coming under the ambit of General Agreement on Trade in Services (GATS), the demand for disaggregated, relevant and internationally comparable data on services trade has been on the rise. Trade negotiators require statistics, possibly by mode of supply, as a guide to negotiate specific commitments, evaluate market access *i.e.*, both sector/market specific access opportunities, compare liberalization commitments, and facilitate settlement of trade disputes on the basis of reliable trade statistics. Perhaps, the

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overriding objective is to impart a greater degree of transparency to the entire process of trade negotiations in services sector.

Outward shifting technological frontiers, particularly in the form of information technology have not only had a significant impact on the cost of providing services but also on the delivery mode with increasing technology intensity of services. There has been a growing recognition that Mode 4 or movement of natural persons is an important method of delivering services across borders. Although Mode 4 has emerged as an integral part of trade negotiations in services, the measurement of trade in services through this mode remains an issue shrouded in definitional ambiguity and identification problems. In view of these constraints, the focus of response at the international level seems to be towards gearing up the statistical systems with the objective of providing an internationally comparable standardized statistics. From the viewpoint of GATS, challenges are two pronged – measurement of value of services delivered through Mode 4 and statistical record of movement of persons to deliver these services. An accurate measurement of services delivered through Mode 4, thus, becomes an important prerequisite for any meaningful trade negotiations on services.

2. System for Compilation of Statistics on India's Trade in Services

Data on India's international trade in services are compiled and disseminated by the Reserve Bank of India as part of BOP statistics. At present, the BoP statistics relating to services are published in two formats *i.e.*, standard presentation with major heads and detailed presentation with break-up of major heads. The compilation of data for standard presentation is in accordance with the methodology set out in the IMF Balance of Payments Manual, 5th Edition (BPM5). This presentation provides details of services trade under the five broad heads: travel, transportation, insurance, Government not included elsewhere (G.n.i.e.) and miscellaneous services. Due to growing share of software services are disseminated separately as part of services trade.

The disaggregated data on services trade are compiled and released through an article titled "Invisibles in India's Balance of Payments". These are primarily based on reporting by banks/authorised dealers (ADs) under the international transaction recording system (ITRS). As the data provided by ADs are not comprehensive, these are supplemented by information collected from various other agencies and surveys. For small value transactions, a Survey of Unclassified Receipts is also conducted.

In order to meet the requirements of compilation under Extended Balance of Payments Statistics (EBOPS), a technical group on Statistics of International Trade in Services was formed by the Reserve Bank of India that submitted its report in March 2002. As per the recommendations of this Group, the purpose codes for recording data under ITRS on India's international trade in services were expanded taking into account the need for disaggregated information on services as outlined in the EBOPS and also the requirements under WTO negotiations in respect of GATS from India's point of view. The new electronic transaction reporting system has become operational since April 1, 2004. The comprehensive list of services covered under the revised electronic ITRS is presented in Annex 1. The existing reporting system provides information on the purpose of transactions but not on the modes of supply of services. However, based on the nature of delivery of services, these can be allocated to specific modes of supply as presented in Table 1.

Type of Service		Probable Modes of Supply		
	Mode			
	1 Me	ode 2 Mode 3	Mode 4	
Transportation	V	v		
Travel		V		
Communication Service	V	V	v	
Construction Service		v	v	
Insurance Service	V	V	v	
Financial Services	V	V	v	
Computer & Information Services	V	V	v	
Royalties & License Fees		v		
Other Business Services				
Merchanting services -net payments (from Sale & purchase of goods without crossing the border)		V		
Trade related services - commission on exports/imports	V	v		
Operational leasing services (other than financial leasing) without operating crew, including charter hire	v	V		
Legal services	v	v	v	
Accounting, auditing, book keeping and tax consulting services	v	v	v	
Business and management consultancy and public relations services	V	v	v	
Advertising, trade fair, market research and public opinion polling service	v	V	v	
Research & Development services	v	v	v	

Research & Development services	v	V	v
Architectural, engineering and other technical services	v	V	v
Agricultural, mining and on-site processing services - protection against insects & disease, increasing of harvest yields, forestry services, mining services like analysis of ores etc.	V	V	V
Maintenance of offices abroad		v	v
Distribution Services		v	v
Environmental Services	v	V	v
Other services not included elsewhere	v	v	v
Personal, Cultural & Recreational services			

3. India's Software Exports and Modes of Supply

India's software exports account for about 48 per cent of total service exports. These data are compiled primarily on the basis of the survey conducted by the National Association of Software and Service Companies (NASSCOM). Data on software exports are also collected through the banking channel but these relate mainly to the offsite exports. While under the extant system of reporting for India's BoPs the information on modes of delivery is not available, some measurement of mode of supply is possible in respect of software services.

In the GATS framework, software exports are classified under Modes 1, 3 and 4. Based on the nature of software operations undertaken by the entities, these can be categorised as IT services exports and IT Enabled Services (ITES) and business process outsourcing (BPO). As the latter category of services exports is predominantly performed in India, these exports can be treated as falling outside the category of 'Mode 4'. Global delivery model for software services exports presented in Figure 1 provides a more coherent picture of services delivered through Mode 4. Onsite exports *i.e.*, services performed at the site in the host country that account for 41 per cent of the value of total software exports, involve delivery either through natural movement of persons or through contractual employment of residents of the host country.



The statistics on total number of professionals employed in the software export sector in India are provided by the NASSCOM (Table 2). Broadly speaking, the total number of persons employed in software exports sector consist of (a) professionals carrying out work in the domestic territory, and (b) temporary movement of professionals delivering services in the host country either on the pay rolls of the parent software company or hired professionals. It is the number of professionals falling in category (b) that would form part of Mode 4. However, as of now, such break up is not available.

Table 2: Professionals Employed in the Indian Software Exports Sector		
Numbers in million		
Year	Professionals Employed	
1999-2000	0.11	
2000-01	0.16	
2001-02	0.17	
2002-03	0.21	
2003-04 (Estimates)	0.26	

Source: NASSCOM, 2004.

4. Measurement of India's Workers' Remittances

Appropriately capturing workers' remittances in most developing countries is a daunting task. The BPM5 defines *workers' remittances* as current transfers by migrants who are employed in new economies and considered residents of those economies. The inflows on account of remittances can also take the form of inkind transfers and funds transferred by non-residents through various saving schemes, which are subsequently transformed into local deposits or channelised into productive activities in the domestic economy.

In the Indian context, the workers' remittances, placed in a broad macroeconomic framework, are closely linked to export of a number of professional and business services which entail natural movement of persons to render such services abroad. The surge in workers' remittances to India, responding to oil boom in the Middle East during the 1980s, and the information technology revolution in the 1990s, has put India among the highest remittance receiving countries in the World (US \$ 23 billion in 2003-04). Remittances by migrant workers also include repatriation of funds for family maintenance and local withdrawals from the non-resident Indian (NRI) deposits. In India, during the decade of the 1980s a number of instruments were designed to mobilize inward remittances from migrants by offering attractive returns, options for denomination in domestic/foreign currency, repatriability and liquidity (Jadhav, 2004). The inflows by way of NRI deposits subsequently assume the form of "local withdrawal" from these deposits denominated in Indian rupees (Figure 2). The magnitude of such remittances is given in Table 3 below. While in the ' first leg' of inflow, funds remitted form part of NRI deposits, in the 'second leg', the funds withdrawn locally get included as component of private transfers. Since the funds remitted by NRI's through this modus operandi are characteristically not different from worker's remittances, the exclusion of such remittances from the statistics of worker's remittances masks the actual magnitude of such remittances and their economic impact.



An important issue emerging from the Indian experience is that proper identification, classification and measurement of remittances repatriated by the migrant workers would be crucial under the GATS to assess the magnitude of services delivered under Mode 4. Country experiences reveal that many developing countries have put in place a variety of incentive oriented deposit schemes to attract steady flow of workers' remittances. Migrants may be more likely to remit into savings account if they can have foreign currency denominated accounts, higher than normal interest rates, tax exemptions, better exchange rate etc. (Meyers, 1998). Under the extant system of recording BoP, such deposits, although byproduct of remittances by the migrant workers, get classified as capital account transactions. This practice understates the magnitude of services trade under Mode 4 while also giving rise to the problem of non-comparability of workers' remittances across countries. In order to bring about an improvement in the recording of workers' remittances, it is suggested that labour exporting countries need to be encouraged to invest resources in collecting information on the types of economic activity performed by their labour force in the host countries (Patra and Kapur, 2003). In fact, the collection of information on the types of services delivered by the migrant workers would provide very useful benchmarks for classifying Mode 4 by the type of services exports. Another issue raised is the difficulty in establishing correspondence between temporary migrants under the GATS and the remitters (Lemaitre, 2004).

			(US \$ million)
Year	Inward Remittances for	Local Withdrawal	Total
	for Family Maintenance	from NRI Deposits	
	and Other Purposes		
1990-91	626	1,027	1,653
1995-96	1,003	4,198	5,201
1999-00	7,423	4,120	11,543
2002-03	7,893	6,494	14,387

Table 3: Composition of Workers' Remittances to India

Source: Jadhav, 2004.

Are Migrant Worker's Remittances a Shadow Services Export?

A crucial underlying assumption under the GATS framework to measure delivery of services through Mode 4 is that migrant workers' remittances mirror the export of services. How far this assumption holds in the Indian case? It is held that growing volume of remittances by overseas migrant workers is a reflection of India's comparative advantage in some segments of services exports. The proposition can be statistically tested by applying test of cointegration. We first test the series on workers' remittances and services exports for unit root. The results of the unit root are presented below. It is evident from Table 4 that both the series have unit root in levels. However, the first differences series do not contain unit root and are stationary.

Private Transfers - Level			
PP Test Statistic	-1.46642	1% Critical Value*	-3.6422
		5% Critical Value	-2.9527
		10% Critical Value	-2.6148
Private Transfers - First Di	fference		
PP Test Statistic	-4.54303	1% Critical Value*	-3.6496
		5% Critical Value	-2.9558
		10% Critical Value	-2.6164
Services - Level			
PP Test Statistic	-1.19418	1% Critical Value*	-3.6422
		5% Critical Value	-2.9527
		10% Critical Value	-2.6148
Services - First Difference			
PP Test Statistic	-3.56852	1% Critical Value*	-3.6496
		5% Critical Value	-2.9558
		10% Critical Value	-2.6164
*MacKinnon critical values for	rejection of hy	pothesis of a unit root.	

The first differences series of services exports and workers' remittances are tested for cointegration. The results show at least one common trend between these two series, implying that services exports and workers remittances have strong comovement (Table 5). The statistical evidence supports the hypothesis that India's workers remittances are reflection of service exports and could be a reliable proxy for determining services delivery through Mode 4.

Services Exports and Workers Remittances				
Eigen value	Likelihood	5 Percent	1 Percent	Hypothesized
	Ratio	Critical Value	Critical Value	No. of CE(s)
0.204645	9.543877	15.41	20.04	None
0.066934	2.216943	3.76	6.65	At most 1

Table 5: Results of Johansen Cointegration Test for	
Services Exports and Workers Remittances	

*(**) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. rejects any cointegration at 5% significance level

5. Compensation of Employees

Another form of BoP labour related flows to assess services delivered via Mode 4 is *compensation of employees*, which comprise wages, salaries and other benefits (in cash or kind) earned by individuals for work performed for and paid by residents of new economies. Employees in this context include seasonal or other short-term workers (employed for less than one year) who have centers of economic interest in their own economy.

In India, receipts under the head 'compensation of employees' are recorded through the ITRS while the payments are captured through the ITRS and NASSCOM survey on software exports.

Compensation of Employees

- Wages received by Indians working on foreign contracts
- Payment of wages/salary to Non-residents working in India or Indians working on projects abroad including payments made abroad to software professionals.

6. Exploring Scope of Foreign Affiliates Trade in Services Statistics (FATS)

Cross border delivery of certain services necessitates proximity of consumers and producers, manifested in locally established affiliates to deliver services, which are enshrined as 'commercial presence' or Mode 3 under the GATS. Services supplied through employment of foreigners in resident foreign affiliates are of particular relevance for Mode 4 of trade in services, and a number of commitments taken on Mode 4 concern directly intra-corporate transferees (WTO, 2003). MSITS recommends the following measures of activities of foreign

affiliates: sales (turnover) or output, employments, value added, exports and imports of goods and services and the number of enterprises.

In the Indian context, the possible source of data on some of the above-mentioned variables on foreign affiliates activity is the article titled "Finances of Foreign Direct Investment Companies". This article is prepared on an annual basis with a lag of $1\frac{1}{2}$ to 2 years from the reference period based on audited annual accounts of selected FDI companies operating in India. The relevant information culled out from the article on indicators of foreign affiliates activity is presented in Table 6 below. The limitation of directly using this the information is that it contains both goods as well as services producing entities.

Table 0. Dask Variables for FA15. Treminiary	1999-00 2		
1 Sales (Rs. billion)	60.510	63.794	66.426
(US \$ million)	1,396	1,396	1,393
2 Value of Production (Rs. billion)	60.914	64.055	66.219
(US \$ million)	1,406	1,402	1,388
3 Imports in foreign currency (Rs. billion)	6.535	7.19	7.437
(US \$ million)	0.555	157	156
4 Other than Import Payments (Rs. billion)	1.840	2.293	2.661
(Dividend, Interest, Traveling, Royalty,			
Technical Fees, Professional and Consultancy Fees etc.)	10	50	
(US \$ million)	42	50	56
5 Exports (Rs. billion)	6.298	7.444	7.663
(US \$ million)	145	163	161
6 Forex Earnings other than Exports (Rs. billion)	1.853	2.23	2.903
(Interest, Commission etc.)			
(US \$ million)	43	49	61
7 Salaries, wages and bonus (Rs. billion)	4.623	5.181	5.581
(US \$ million)	107	113	117
8 Number of FDI Companies: Country-wise Distribution			385
US			96
UK			71
Germany			66
Mauritius			44
Japan			42
Netherlands			32
Switzerland			20
France			14
Others			80

Table 6: Basic Variables for FATS: Preliminary Information on India

7. Measurement & Data Compilation Issues

Under the extant compilation procedure in India and most other developing as well as developed countries there is no standard basis for categorization of services exports under different modes in general and Mode 4 in particular. The BoP compilation system, based on the ITRS, does not provide for information on the movement of natural persons. However, in countries that rely mainly on surveys rather than the ITRS for the BOP data, the scope for collection of information on movement of natural persons for delivering services would be easier through inclusion of mode 4 information in the survey questionnaire. The experience of developing countries, however, suggests that the survey method has its own limitations due to poor response of participants particularly in a more liberalised environment. Even under the ITRS, the introduction of formats seeking disaggregated information does not ensure receipt of quality data when respondents are not careful about furnishing such details to the monitoring authorities.

An exercise aimed at mapping the services exports under Mode 4 of GATS with the BoP statistics can only provide a crude estimate of services rendered through Mode 4 due to its inherent limitations. Lack of uniformity in properly identifying and measuring remittances of migrant workers constrains the scope of its being used as a proxy for Mode 4. For instance, in many countries workers' remittances are repatriated in the form of deposits, as these provide better returns. The treatment of this component of workers' remittances as capital account transaction understates the actual magnitude of services exports through Mode 4.

In the case of countries where a significant share of migrant workers comprises unskilled/semi-skilled workers who basically work in goods producing enterprises in the host country, workers remittances may not provide a correct estimate of services delivered through Mode 4. For instance, a large part of total remittances to India are from the oil producing Middle East countries, where a significant part of the migrant Indian workers is unskilled/semi-skilled engaged in goods producing sectors. Similarly, from other South East Asian countries a significant share of the migrant workers to Middle East countries comprises unskilled/semiskilled labour. Disentangling workers' remittances as a service-providing segment as per the GATS requirements, thus, becomes crucial.

On the issue of recording the magnitude of movement of natural persons supplying services, the existing reporting system for compilation of BoP statistics will have to be suitably revamped in India and also in other countries. The focus should be to develop an appropriate information system through coordinated efforts of national statistical authorities, migration authorities, immigration offices and the population census and BoP compilers. Host country statistics can perhaps provide a universe of migrant workers as their information base may be more reliable presumably due to stricter regulation and record of immigrants. The definitional issues need to be sorted out on a priority basis at the level of international and regional organizations to provide a clear direction to the participating counties from the point of view of their preparedness to address the data compilation issues.

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Component	FET-ERS Prior to	FET-ERS Since
	April 2004	April 2005 (Broadly
	C	consistent with EBOPS
1 Transportation		
1.1 Sea Transport		
1.1.1. Passenger	Х	Х
1.1.2. Freight	Х	Х
1.1.3. Other		
1.2 Air Transport		
1.2.1. Passenger	Х	Х
1.2.2. Freight	Х	Х
1.2.3. Other		
1.3 Other Transport		
1.3.1. Passenger		
1.3.2Freight	Х	Х
1.3.3Other		Х
Extended Classification of other transport		
1.4 Space transport		
1.5 Rail transport		
1.5.1. Passenger		
1.5.2Freight		
1.5.3. Other		
1.6 Road Transport		
1.6.1 Passenger		
1.6.2Freight		
1.6.3Other		
1.7 Inland waterway transport		
1.7.1 Passenger		
1.7.2Freight		
1.7.3Other		
1.8 Pipeline transport and electricity transmission		
1.9 Other supporting and auxiliary transport services		
2Travel		
2.1 Business travel		
2.1.1 Expenditure by seasonal and		
Border workers	Х	Х
2.1.20ther		
2.2 Personal travel		
2.2.1 Health-related expenditure		Х
2.2.2 Education- related expenditure		Х
2.2.3Other		

Annex 1: Balance of Payment Service Classification: Coverage under the Old and the New Reporting Systems

3Communications services		
3.1 Postal and courier services	Х	Х
3.2 Telecommunications services		Х
4Construction services		
4.1 Construction abroad	Х	Х
4.2 Construction in the compiling economy		Х
5Insurance Services		
5.1 Life insurance and pension funding	Х	Х
5.2Freight insurance	Х	Х
5.3 Other direct insurance		Х
5.4Reinsurance	Х	Х
5.5 Auxiliary services	Х	Х
6Financial Services	Х	Х
7Computer and Information services		
7.1 Computer Services	Х	Х
7.2 Information Services		Х
7.2.1 News agency services		Х
7.2.20ther Information provision services		Х
8Royalties and license fees		
8.1 Franchises and similar	Х	Х
8.20ther royalties and license fees		Х
90ther business services,	Х	
9.1 Merchanting and other trade related services		
9.1.1 Merchanting		Х
9.1.2 Other trade-related services		Х
9.2 Operational Leasing services		Х
9.3 Miscellaneous business, professional, and technical services		
9.3.1 Legal, accounting, management consulting		
and public relations		Х
9.3.1.1 Legal services		Х
9.3.1.2 Accounting, auditing, bookkeeping, and		
Tax consulting services		Х
9.3.1.3 Business and management consulting and		
Public relations services		Х
9.3.2 Advertising, market research, and public		
Opinion polling		Х
9.3.3 Research and Development		Х
9.3.4 Architectural, engineering and other		
Technical services		Х
9.3.5 Agricultural, mining, and on-site processing		
services.		Х
9.3.5.1 Waste treatment and depollution		
9.3.5.2 Agricultural, mining, and other on-site		
processing services		Х
9.3.6Other Business services		Х

	9.3.7 Services between related enterprises, n.i.e.	
10 Personal, c	cultural and recreational services	Х
	10.1 Audiovisual and related services	Х
	10.20ther personal, cultural, and recreational	Х
	services	
	10.2.1 Educational services	
	10.2.2 Health services	
	10.2.3 Other	
	11 Government services, n.i.e.	
	11.1 Embassies and consulates	
	11.2 Military units and agencies	
	11.3Other government services	
	dum items	
-	nsportation on merchandise,	
valued on	a transaction basis	
	1.1 Sea freight	
	1.2 Air freight	
	1.3 Other freight	
	1.4 Space freight	
	1.5 Rail freight	
	1.6Road freight	
	1.7 Inland waterway freight	
	1.8 Pipeline freight	
2Travel		
	2.1 Expenditure on Goods	
	2.2Expenditure on accommodation and	
	food and beverage serving services	
	2.3 All other travel expenditure	
3Gross insu	rance premiums	
	3.1 Gross premiums - life insurance	
	3.2 Gross premiums - freight insurance	
10 .	3.3 Gross premiums - other direct insurance	
4Gross insu	rance claims 4.1 Gross claims - life insurance	
	4.2 Gross claims - freight insurance 4.3 Gross claims - other direct insurance	
5 Financial i		
	Intermediation services indirectly	
measured	services including FISIM	
	ng gross flows	
	al transactions	
oAuui0-vist		