PRODUCTION OF STATISTICS ON EXTERNAL TRADE IN COMPUTER SERVICES IN INDIA: SOME FEATURES AND DATA ISSUES

SATYABRATA CHAKRABARTI
DEPUTY DIRECTOR GENERAL
CENTRAL STATISTICS OFFICE, INDIA

1.   Introduction

1.1   There has been an increasing demand for detailed and comparable statistics on trade in services after the GATS came into force since 1st January 1995. In the absence of well-defined statistics on services trade by type of services provided, partner country & the mode of supply of services to the partner country, trade negotiators worldwide felt it extremely difficult to negotiate specific commitments & monitor their economic impact for each type of service.

1.2   In accordance with the Foreign Exchange Management Act (FEMA) 1999, all forex transactions must be channeled through the banking system and the banks that undertake forex transactions must submit various periodical returns and supporting documents prescribed under the FEMA to Reserve Bank of India (RBI), the central bank in India. All forex transactions are routed through the Authorized Dealers of various categories and Full-Fledged Money Changers (FFMC) licensed under the FEMA.

1.3   The software used for the electronic reporting system is called FET-ERS (Foreign Exchange Transactions – Electronic Reporting System). Reserve Bank of India introduced an electronic reporting system for foreign exchange transactions in October 1997. At present FET-ERS V 6.2 is in use. In view of the growing importance of trade in services new reporting arrangements were put in place by the RBI in 2004-05 wherein a number of new purpose codes were introduced with a view to collecting data separately for a number of emerging business services such as
- a) merchanting services,
- b) trade related services,
- c) operational leasing services,
- d) legal services,
- e) accounting services,
- f) advertising services,
- g) R & D services,
- h) architectural and engineering services,
- i) agricultural services,
- j) office maintenance services,
- k) environmental services and
- l) personal and cultural services.

1.4   The new purpose codes of 5 characters are endorsed by the International Transaction Reporting System (ITRS) of the IMF. Apart from the FET-ERS, there is also the FLM 8 which is filed by the FFMC on exchange of currencies for travel purposes only. The international best practices with regard to recording BoP data indicate that **most countries use a combination of the foreign exchange transactions reported through banking channel and surveys/census to gather the necessary details.** RBI also supplements data collected through reporting of forex transactions through the banking system by information available from various embassies/consulates including Indian embassies/consulates abroad, various ministries Government agencies/departmental undertakings, NASSCOM, Air India, financial institutions and commercial banks (independent of reporting under ITRS), corporate sector and RBI's own records.

1.5   To estimate the distribution pattern of inward foreign exchange remittance transactions below Rs. 5 lakhs the RBI conducts a survey of unclassified receipts every year. Information is collected for two randomly selected dates in a fortnight. Country and Currency wise distributions are estimated based on the Quick Estimate figures (aggregate value) for transactions below Rs. 5 lakhs.

   i.

2.   Balance of Payment Statistics

2.1   India's only official source of data on trade in services is the Balance of Payments (BoP) data published by the RBI. Standard BoP presentation with broad heads is compiled in India in accordance with the methodology set out in the IMF Balance of Payments Manual, 6th Edition (BPM6, 2009). BPM 6 classifies services into 12 major components namely,

   i.   Manufacturing services on physical inputs owned by others,
   ii.   Maintenance and repair services n.i.e.,
   iii.   Transport,
   iv.   Travel,
   v.   Construction,
   vi.   Insurance and pension services,
   vii.   Financial services,
   viii.   Charges for the use of intellectual property n.i.e.,
   ix.   Telecommunications, computer, and information services,
   x.   Other business services
   xi.   Personal, cultural, and recreational services and
   xii.   Government goods and services n.i.e.

2.2   These components, though not exactly co-terminus with GATS categories, match the GATS product coverage relatively well barring some exceptions such as the component: 'Government services not included elsewhere (n.i.e)' does not find mention in the GATS.

2.3   Publishing detailed BoP data was based on the recommendation in the Manual on Statistics of International Trade in Services 2002, published jointly by six organizations, namely EC, UN, UNCTAD, IMF, WTO and OECD which recommended extending the BPM5 classification of transactions by type of service to provide more detailed classification through the Extended Balance of Payments Services (EBOPS) Classification. It may be noted that RBI has adopted the EBOPS components with suitable modifications to capture the important items in India's international transaction in services.

2.4   Dissemination of data on international trade in services is done in three stages. The Reserve Bank releases provisional aggregate (total value of exports and imports) monthly data on India's international trade in services with a lag of 45 days. This is revised when the Balance of Payments (BoP) data are released on a quarterly basis.

2.5   In stage 2, data on trade in services are compiled and released on quarterly basis covering major components like transport, travel, insurance, G.n.i.e and miscellaneous (covering software services, business services, financial services and communication services, transfers, investment income and compensation of employees) with a lag of 3 months as per IMF's Special Data Dissemination Standards (SDDS) requirements.

2.6   In stage 3 the detailed BoP presentation with break-up of broad heads is published by the RBI in an annual article titled "Invisibles in India's BOP" in RBI's monthly Bulletin. The detailed/disaggregated data on services are finalized and published every year once the firm data on components become available.

2.7   An analysis of the percentage contribution of different categories of services to India's total export & import of services during the last five years, i.e., 2007-08 to 2011-12 along with the growth in trade for these **categories have revealed that seven sectors, namely, (i) Software, (ii) Travel, (iii) Transportation, (iv) Business Services, (v) Financial Services, (vi) Communication Services & (vii) Insurance together contribute around 90% of India's total services trade.**

Table 1: Percentage Contribution of different Categories of Services to India's Total Export of Services

category	% contribution to total export				
	2007-08	2008-09	2009-10	2010-11	2011-12
Travel	12.5	10.3	12.4	11.5	13.0
Transportation	11.1	10.7	11.7	10.7	12.8
Insurance	1.8	1.3	1.7	1.5	1.9
Software Services	44.6	43.5	51.9	41.7	43.7
Business Services	18.6	17.5	11.9	18.1	18.2
Financial Services	3.6	4.2	3.9	4.9	4.2
Communication Services	2.7	2.2	1.3	1.2	1.1
Total of 7 above	**94.8**	**89.6**	**94.7**	**89.6**	**94.9**
Total export of services (in Rupees Billion)	**3630**	**4880**	**4533**	**6047**	**6844**
Year-on-year growth of export of services	**8.98**	**34.44**	**-7.11**	**33.40**	**13.18**

Table 2: Percentage Contribution of different Categories of Services to India's Total Import of Services

category	% contribution to total import				
	2007-08	2008-09	2009-10	2010-11	2011-12
Travel	18.0	18.1	15.6	13.2	17.5
Transportation	22.4	24.4	19.9	16.5	20.9
Insurance	2.0	2.2	2.2	1.7	1.9
Software Services	6.5	4.8	2.5	2.6	1.6
Business Services	32.2	29.6	30.1	33.0	34.3
Financial Services	6.1	5.7	7.7	8.9	10.2
Communication Services	1.7	2.1	2.3	1.4	2.0
Total of 7 above	**88.9**	**86.9**	**80.2**	**77.4**	**88.4**
Total import of services (in Rupees Billion)	**2068**	**2396**	**2834**	**3825**	**3765**
Year-on-year growth of import of services	**3.39**	**15.86**	**18.28**	**34.97**	**-1.57**

3.   Telecommunications, Computer and Information Services

3.1   In India's BOP, this category is presented separately under the heads 'Communication', 'Software', and 'News Agency'. Data on credits and debits under each category is captured through FETERS. With regard to 'Computer Services' data are presented as 'Software Services' and credit data are sourced from the National Association of Software and Services Companies (NASSCOM) due to deficiencies in FETERS data. Data on debit side of Software Services are from FETERS. Tables above

show that computer (software) services have around 40-50% share of total services export of India against around 2-7% share of services import. Thus it contributes significantly to the overall favorable balance of trade in services.

3.2   In view of the growing importance of exports of Information Technology and Information Technology Enabled Services (IT & ITES), the Reserve Bank of India (RBI) first conducted a comprehensive survey of the firms engaged in information technology and computer services export activities considering April 2002 – March 2003 as the reference period. Thereafter, it started conducting annual survey on software and IT exports services on regular basis from September 2008 and the latest survey in this sector was conducted for the reference period April 2010 – March 2011. The survey is designed to collect detailed disaggregated level information on export of software services according to activity, type of services (on-site/off-site) and country of destination along with the four modes of supply as stipulated in General Agreement on Trade in Services (GATS).

3.3   For the purpose of this survey, the companies engaged in IT & ITES services exports are first classified into two major categories, namely, Computer Services and ITES/BPO services and each of these are again sub-divided into two classes as below:

Computer Services	Information Technology Services
	Software Product Development
ITES/BPO services	BPO Services
	Engineering Services

The BPO services consists of twelve different types of activities, namely,

(i)   Customer interaction services,
(ii) Finance and Accounting, auditing, book, keeping and tax consulting services,
(iii) HR Administration,
(iv) Procurements and logistics,
(v)   Legal services,(including IP management services),
(vi) Business and corporate research,
(vii) Animation,
(viii)   Gaming,
(ix) Medical transcription,
(x)   Document Management,
(xi) Content development and management and publishing,
(xii) Pharmaceuticals and biotechnology.

Engineering services is composed of four major categories, namely, Embedded Solutions, Product Design Engineering (mechanical, electronics excluding software), Industrial automation & enterprise asset management and Architectural & other technical services while software products include own software products license revenues, Resale of software and Offshore Product Development etc. Information on all these activities are collected and compiled in Indian Rupee as well as US $. Information on export earnings from different destinations are also collected in this survey for compilation and publication. With a view to compile statistics by the four GATS modes of supply of services, provision has also been made in the questionnaire to report export earnings by modes of services.

3.4   The survey also collects information on the software business of foreign subsidiaries/associates of Indian companies (foreign affiliates), under the heads of software business done in host country, locally, to India and to other countries, for the purpose of Foreign Affiliates Trade in Services (FATS). Indian companies are classified into four major activity categories, viz., IT services, Software product development, BPO services and Engineering services. Companies providing a combination of these

services were classified under 'Others'. These multiservice providing companies remained the major source for generating software business outside India.

3.5   The statistics of foreign trade compiled from the annual survey on computer software and information technology services exports is also cross-checked and validated with the information collected independently by two other sources, namely, the National Association of Software and Services Companies (NASSCOM) and the non-physical (off-site) software exports figures collected through a different format called Softex. Information pertaining to the non-respondent units is estimated using appropriate statistical tool.

3.6   Highlights of the latest survey

- **Coverage:** For the 2011-12 survey round, the schedule was canvassed among 6,550 companies of which 731 companies, including most of the large companies responded, accounting for around 81.0 per cent of the total software exports during the year.
- **Software and ITES/BPO services exports:** India's export of software services and ITES/BPO services during 2011-12 is estimated at Rs. 2,484.3 billion (US$ 51.8 billion), showing an annual growth of 14.5 per cent. Exports of Computer Services and ITES/BPO services accounted for 75.2 per cent and 24.8 per cent, respectively of the total software services exports.
- **Growth of Software Services Exports:** Growth of computer services exports during 2011-12 slowed down to 16.8 per cent from 26.2 per cent in the previous year; growth of BPO services exports rose to 8.0 per cent in 2011-12 from 0.2 per cent in 2010-11.
- **Industry-wise Distribution of BPO Services Exports:** Among the major activities in BPO services exports, Finance and Accounting related services witnessed a significant increase in its share.
- **Organisation-wise Share:** Public limited companies accounted for 58.7 per cent share of the total software services exports during 2011-12 and registered an annual growth of 9.6 per cent. On the other hand, private limited companies with 41.2 percent share registered much higher growth of 22.4 per cent.
- **Country-wise share:** 'USA and Canada' continued to remain major destination for software exports. USA contributed 62.9 per cent of the total export of software services in 2011-12. European countries had share of 23.3 per cent, of which UK accounted for 14.3 per cent
- **Software Exports by Different Modes:** The share of software services exports through cross-border supply (Mode-1), consumption abroad (Mode-2) and commercial presence (Mode-3) increased whereas the share of software services by India through presence of natural person (Mode-4) in 2011-12 decreased.
- **Software exports by Foreign Affiliates of Indian Companies:** The software exports by foreign affiliates stood at `453.4 billion in 2011-12 and total international trade in software services by India, including the services delivered by foreign affiliates established abroad, stood at ` 2937.7 billion in 2011-12.

4.   Limitations of FET-ERS Statistics on Trade in Computer services

a) RBI's BoP statistics does not provide data covering all the four modes of supply as laid down in the WTO General Agreement on Trade in Services (GATS). Non-availability of services trade data by the mode of supply is a major stumbling block in persuasion of services negotiations with different countries and trading blocks. The RBI data for services exports and imports are less than the exports and imports data as provided by the ITS, WTO. The major reason for such differences is that mode 3 data (particularly significant for imports) is included in the ITS imports data for India.

b) Even for the individual categories for which data are published, information is available only at aggregate level. No disaggregate value data at 3/4-digit level of Central Product Classification (CPC) is published.

c) Data on export & import of services by (i) type of service rendered and partner country, (ii) type of service, partner country & mode of supply are also not available, particularly for exports. In the absence of data by trading partner, it is almost impossible to study the impact of liberalization commitments on bilateral trade. The lack of bilateral trade data is one of the major limitations in India's statistics on trade services.

5.   Way Forward

5.1   Office of the Director General of Commercial Intelligence and Statistics (DGCI&S) receives data in a pre-defined format (softex) on export of software services along with figures on merchandise exports/imports of the SEZs on daily basis from NSDL through a well-defined data transmission mechanism. However, this mechanism is able to provide information for those SEZs registered with NSDL (SEZ ONLINE) and a number of unregistered SEZs send data directly to DGCIS. In addition to the SEZ units, there are a large number of IT-ITES units which operate from the Software Technology Parks (STPs). However, as on date there is no mechanism for collection of information on services trade from these units.

5.2   In order to compile India's off-site software services export figures utilizing administrative records, it is necessary to augment the data received from the units located in the SEZs with those of the STPI units. Once data from all the SEZ as well as STPI units start flowing on a regular basis to DGCIS, the same can be processed for generation of IT-ITES services trade statistics (off-site/Mode 1) by (i) services category and (ii) services category & trading partner.

5.3   There is also a third source, namely, the Annual Survey on Computer Software & Information Technology Services Exports conducted by the RBI. However, all the three sources have different types of classification of IT and IT enabled services that prevent further compilation by clubbing information from these three sources. Therefore, there is a need to adopt a uniform classification of software services for collection of software services export data by different sources. The issue of devising a common code structure both for Softex and STPI units have been taken up with the RBI. The Department of Commerce may also take up the issue with RBI so that data flowing to DGCIS through NSDL can be processed and compiled to generate estimates of offsite exports from the SEZs. In addition, DoC may also like to take up with the Department of Information Technology submission of monthly/quarterly/annual returns electronically to DGCIs so that SOFTEX and STPI data can be combined for estimation of software exports.

******