

*Survey on Computer Software & Information Technology Enabled Services Exports: 2013-14**

The Reserve Bank's annual survey on Computer Software and Information Technology Enabled Services Exports (ITES) collects information on various dimensions of exports of computer services and ITES exports, including Business Process Outsourcing (BPO). Details on export of software services are collected as per the type of activity/ services (on-site/off-site) and country of destination along with the modes of supply. This article presents the aggregate results of 2013-14 round of the survey and examines any changes in the characteristics of software services exports. It also analyses the trend in major aggregates based on current and earlier round of survey results¹.

I. Introduction

The annual survey on Software and Information Technology Enabled Services Exports is conducted by the Reserve Bank for estimation of various aspects of Computer Services Exports as well as exports of ITES/BPO. The Reserve Bank started to conduct the annual survey on 'Computer Software and Information Technology Enabled Services Exports' in 2002-03 as per the recommendations of the National Statistical Commission (2001) and subsequent guidance from the Technical Group on Computer Services Exports (TGCSE) (2008). The survey collects details of exports of computer services following the *Balance of Payments and International Investment Position Manual (BPM6)* of the International Monetary Fund (IMF) and the *Manual on Statistics of International Trade in Services*

(MSITS), which is joint work of seven international agencies, as well as other select information on ITES/BPO services exports. The survey also collects exports data as per the four modes of supply (*viz.*, cross-border supply, consumption abroad, commercial presence and presence of natural persons) as defined in MSITS. The previous round of this survey was conducted for the reference year 2012-13.

For the 2013-14 survey round, which was eighth in the series, the schedule was canvassed among 6,700 companies. Responses were received from 873 companies, of which 128 cases were for Nil-return or for closed companies. The remaining 745 companies included most of the large IT companies as well as other companies. The responding companies together accounted for 74.7 per cent of the total software services exports during the year. The detailed methodology for estimation of software exports of the non-responding companies is given in the Annex.

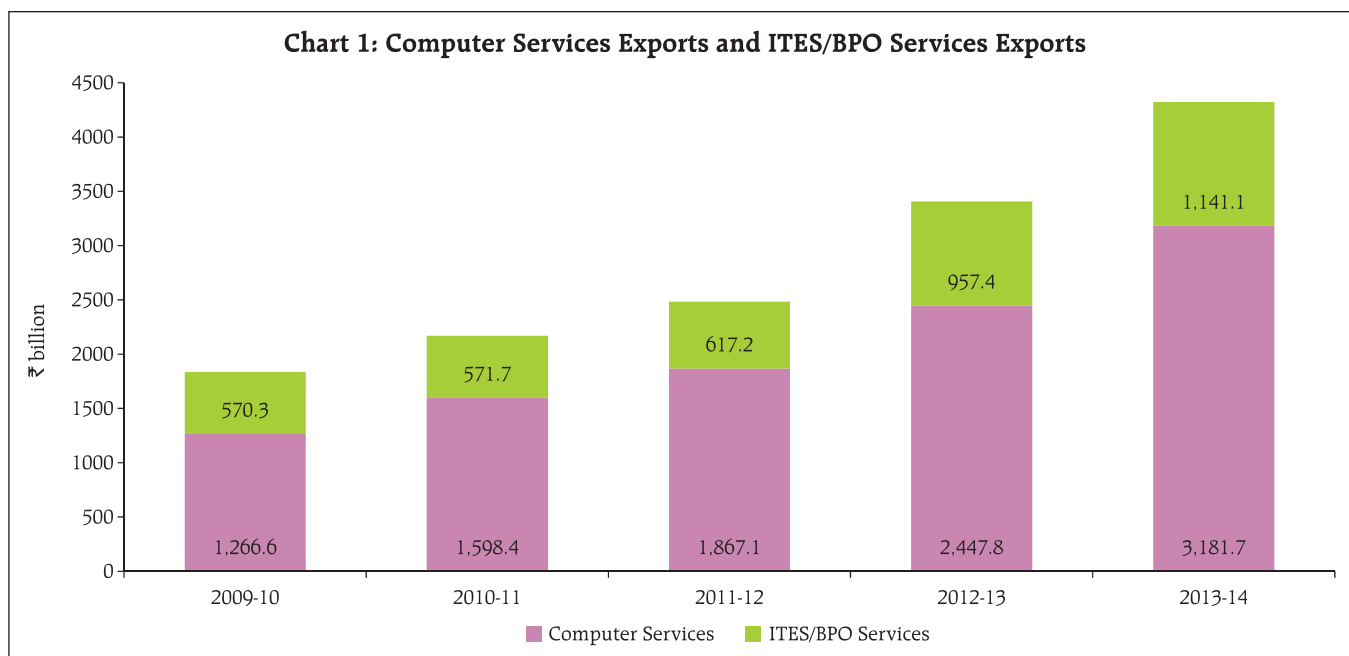
II. Software Services Exports from India – Recent Trends

Software and IT-enabled services are considered important activity in the Indian economy, including for their role as net exports from the country. As per the balance of payments (BoP) Statistics, the software services exports (other than on-site exports), stood at ₹4,206 billion in 2013-14 and constituted around 46 per cent of total services exports of India as well as 3.7 per cent of GDP. After growing at remarkable pace during the period 2001-02 to 2007-08 (30.4 per cent in US \$ term), India's software service exports reflected some moderation following global financial crisis in 2008-09 but recovered in the subsequent period.

In this survey, software services exports have been divided into two major categories: (i) Computer Services exports which include IT services as well as Software Product Development and (ii) ITES/BPO services which includes BPO services and engineering services. As per

* Prepared in the External Liabilities and Assets Statistics Division, Department of Statistics & Information Management, Reserve Bank of India, Mumbai. The previous article in the series with reference period 2012-13 was published in March 2014 issue of the Reserve Bank of India Bulletin.

¹ Detailed data related to ITES 2013-14 survey are released on the RBI website (www.rbi.org.in) on February 16, 2015.



the survey results, export of computer software services and ITES/BPO services are estimated at ₹3,181.7 billion (US\$ 52.6 billion) and ₹1,141.1 billion (US\$ 18.9 billion), respectively, during 2013-14. India's total export of computer services and ITES/BPO services (excluding commercial presence) is estimated at ₹4,322.8 billion (US\$ 71.4 billion), showing 14.1 per cent annual growth in US \$ terms.

Computer services remained the dominant component (around 73.6 per cent share) in India's total software services exports during 2013-14 (Chart 1 and Table 1). 'IT services' was the major component in the 'Computer Services' category. The share of computer services exports, in the total Computer software and ITES/BPO services exports increased, whereas, the share of ITES/BPO services exports declined.

Table 1: Software Services Exports from India with Components

(₹ billion)

Activity	Software Services Exports					Share in Total (%)		
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2012-13	2013-14
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A) Computer Services	1,266.6	1,598.4	1,867.1	2,447.8	3,181.7	69.0	71.9	73.6
<i>Of which:</i> i) IT services	1,115.8	1,492.2	1,661.8	2,256.7	2,936.7	60.8	66.3	67.9
ii) Software Product Development	150.8	106.2	205.3	191.1	245.0	8.2	5.6	5.7
B) ITES/BPO Services	570.3	571.7	617.2	957.4	1,141.1	31.0	28.1	26.4
<i>Of which:</i> i) BPO Services	431.3	468.7	523.0	789.6	934.1	23.5	23.2	21.6
ii) Engineering Services	139.0	103.0	94.2	167.8	206.9	7.5	4.9	4.8
Total Export of Software Services (A+B)								
in ₹ billion (A+B)	1,836.9	2,170.1	2,484.3	3,405.2	4,322.8	100.0	100.0	100.0
in US \$ billion *	38.7	47.6	51.8	62.6	71.4			
Annual Growth (in US \$ terms)		22.9	8.9	20.7	14.1			

* Using Average Exchange Rate for the year (applicable for all tables).

Table 2: Industry-wise Share of ITES/BPO Services Exports

(per cent)

Activity	2009-10	2010-11	2011-12	2012-13	2013-14
	(1)	(2)	(3)	(4)	(5)
BPO Services	75.6	82.0	84.7	82.5	81.9
Customer interaction services	18.0	12.2	14.4	10.9	8.4
Finance and Accounting, auditing, book keeping and tax consulting services	11.9	13.4	23.5	9.7	11.2
HR Administration	1.3	0.5	0.2	0.9	0.7
Procurements and logistics	0.3	0.5	0.0	0.4	0.3
Medical transcription	0.4	0.6	0.2	0.7	1.3
Document Management	0.3	0.6	0.4	0.5	0.9
Content development and management and publishing	1.0	0.8	0.7	1.4	0.9
Other BPO service	42.4	53.4	45.3	58.0	58.1
Engineering Services	24.4	18.0	15.3	17.5	18.1
Embedded Solutions	0.8	2.4	2.1	4.1	5.3
Product Design Engineering (mechanical, electronics excluding software)	7.5	8.6	7.0	5.9	5.5
Industrial automation and enterprise asset management	2.6	0.6	0.0	2.4	0.2
Other Engineering service	13.5	6.4	6.2	5.1	7.1
Total BPO Services	100.0	100.0	100.0	100.0	100.0

III. Industry-wise Distribution of ITES/BPO Services Exports

The classification given by the Department of Information Technology (DIT-2003), Government of India, was used for compilation of data on exports of *ITES/BPO services*. Among the *BPO services* exports, '*Finance and Accounting, auditing, book keeping and tax consulting services*' and '*Customer interaction services*' were the major components.

During 2013-14, exports in BPO services and Engineering services increased by ₹144.5 billion and ₹39.1 billion, respectively, as compared with ₹266.6 billion and ₹73.6 billion increases in the previous year. In the total ITES/BPO services exports, the *Engineering services* recorded higher growth than *BPO services*. Among *BPO services*, the share of '*Finance and Accounting, auditing, book keeping and tax consulting services*' increased whereas the share of '*Customer interaction services*' declined (Table 2). However, '*other BPO services*' (*i.e.*, Legal services, Animation, Gaming, Pharmaceuticals and biotechnology services, *etc.*) as well as combination of services constituted more than half of the ITES/BPO services, and recorded an increase of ₹107.4 billion in 2013-14.

Among *Engineering services*, the contribution of '*Embedded Solutions*' increased, whereas the share of '*Product Design Engineering*' (*mechanical, electronics excluding software*) and '*Industrial automation and enterprise asset management*' declined in 2013-14 (Table 2).

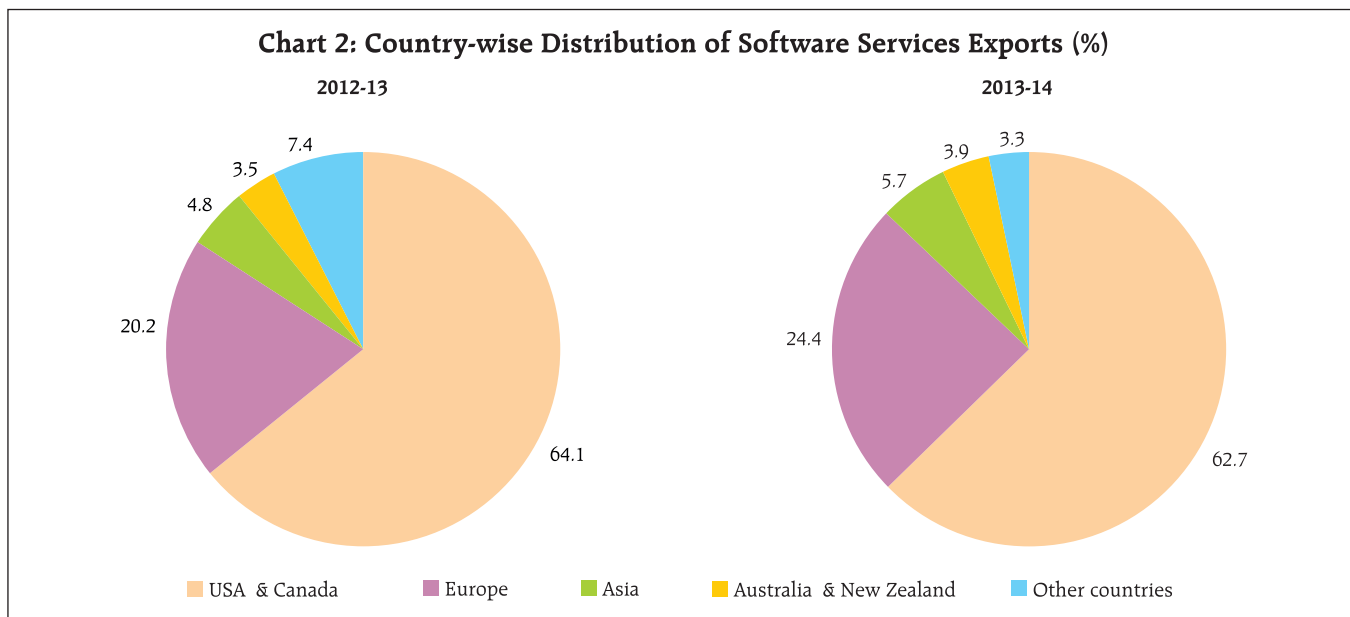
IV. Organisation-wise Distribution of Software Services Exports

Public limited companies continued to have the highest share of the total software services exports though their share declined marginally from 64.6 per cent in 2012-13 to 63.6 per cent in 2013-14 as the share of Private limited companies increased (Table 3).

Table 3: Organisation-wise Share of Software Services Exports

(per cent)

Organisation	2009-10	2010-11	2011-12	2012-13	2013-14
	(1)	(2)	(3)	(4)	(5)
Private Limited Companies	39.3	38.5	41.2	35.3	36.0
Public Limited Companies	58.1	61.3	58.7	64.6	63.6
Others	2.6	0.2	0.1	0.1	0.4
Total	100.0	100.0	100.0	100.0	100.0

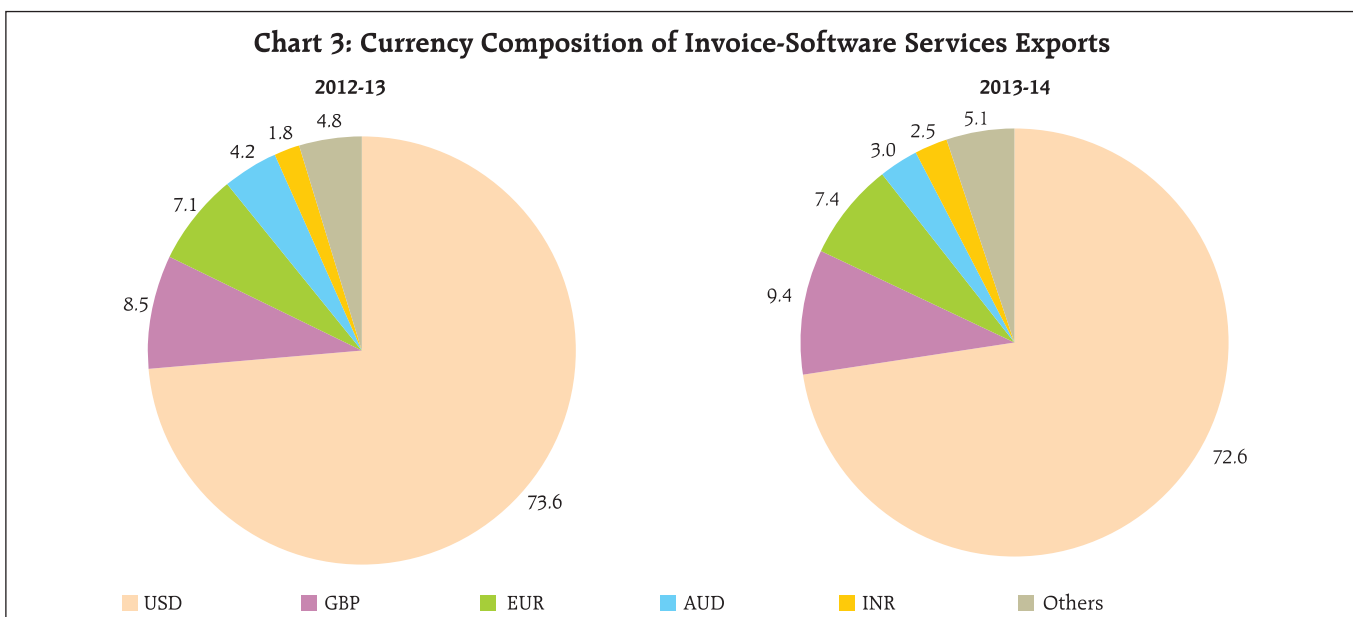


V. Country-wise Distribution of Software Services Exports

United States & Canada remained the top destination (62.7 per cent) for software services exports from India followed by Europe, which had nearly one-fourth share in 2013-14 (Chart 2). The shares of United States & Canada in total software exports decreased, whereas the share of Europe, Asia and Australia & New Zealand increased as compared to 2012-13.

VI. Currency Composition of Software Services Exports

US Dollar continued to remain the major currency of invoicing software export accounting for nearly three-fourth of total invoicing during 2013-14. The shares of GBP, Euro and Indian rupee have increased and the same of US dollar and Australian dollar have decreased since 2012-13 (Chart 3).



VII. Modes of Software Services Exports

Software services are exported through both on-site and off-site routes. The share of export of software service through on-site mode, which recorded declining trend since 2008-09, increased to 19.8 per cent in 2013-14 from 15.8 per cent in 2012-13.

As per the MSITS, international trade in services can be conducted through four different modes, *viz.*, (i) transactions between resident and non-resident covering cross-border supply (Mode-1), (ii) consumption abroad (Mode-2), (iii) presence of natural person (Mode-4) and (iv) services provided locally by the affiliates established abroad, *i.e.*, commercial presence (Mode-3). However, as per the BoP manual, foreign affiliates established abroad are treated as the domestic units in the host economy and hence the services delivered by them are not considered as the exports of the home country. To this extent, data on services exports in BoP differs from those in the Foreign Affiliates Trade in Services (FATS) statistics.

The survey collected the software services trade data on all four modes of supply. The total international trade in computer services by India by all four modes of supply stood at ₹5,011.8 billion (US\$ 82.8 billion) in 2013-14. The share of software services exports by India through Mode-1 and Mode-2 declined, whereas the share of software services through Mode-3 and Mode-4 increased in 2013-14, reversing the trend followed since 2009-10 (Table 5).

Table 4: Share of On-site and Off-site Exports

Type of Services	(per cent)				
	2009-10	2010-11	2011-12	2012-13	2013-14
	(1)	(2)	(3)	(4)	(5)
On-site (Mode 4)	21.6	20.7	17.8	15.8	19.8
Off-site (Mode 1 & Mode 2)	78.4	79.3	82.2	84.2	80.2
Total	100.0	100.0	100.0	100.0	100.0

Table 5: Software Services Exports by Different Modes

Type of Mode	(per cent)				
	2009-10	2010-11	2011-12	2012-13	2013-14
	(1)	(2)	(3)	(4)	(5)
Mode 1 (cross-border supply)	64.6	67.4	69.0	74.7	69.0
Mode 2 (consumption abroad)	0.0	0.1	0.5	1.6	0.1
Mode 3 (commercial presence)	17.6	14.8	15.4	9.4	13.7
Mode 4 (presence of natural person)	17.8	17.7	15.1	14.3	17.1

VIII. Software Business of Subsidiaries/Associates

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 the host country, *i.e.*, locally, to India and to other countries, for the purpose of Foreign Affiliates Trade in Services (FATS). The total software business of the Indian-owned foreign affiliates (excluding the services provided to India) observed slowdown following global crisis in 2008. However, in 2013-14, it increased significantly by ₹427.3 billion (US\$ 7.1 billion) as against a decline of ₹122.5 billion (US\$ 2.3 billion) in the previous year (Table 6). The business of these subsidiaries to India increased by ₹87.1 billion (US\$ 1.4 billion) in 2013-14 on top of increase of ₹173.2 billion (US\$ 3.2 billion) in 2012-13.

Indian companies providing the combination of four broad group of services (*viz.*, IT services, Software product development, BPO services and Engineering services) were classified under 'Other services' category. Under 'Other Services' category, foreign affiliates were the major source for generating the software business outside India. Software services provided by foreign affiliates in all countries increased for 'IT services', whereas it declined for 'BPO services' 'Engineering services', and 'Software product development'.

Table 6: Software Business by Foreign Affiliates of Indian Companies

(₹ billion)

Activity	2009-10			2010-11			2011-12			2012-13			2013-14		
	Locally	To India	Other Countries	Locally	To India	Other Countries	Locally	To India	Other Countries	Locally	To India	Other Countries	Locally	To India	Other Countries
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
IT services	6.4	0.0	0.4	17.9	0.2	1.6	27.5	10.7	5.4	23.9	1.8	0.4	37.4	2.0	3.0
Software Product Development	0.2	0.0	4.9	4.7	0	0.6	1.6	0.7	8.0	5.0	2.3	11.2	0.0	0.0	14.1
BPO Services	15.1	0.4	17.2	15.2	0.6	9.1	31.0	4.4	12.3	15.9	0.4	3.6	7.1	0.1	0.2
Engineering Services	0.6	0.1	0.0	1.7	0.3	0.0	1.5	0.3	20.6	1.6	0.5	0.0	0.1	0.0	0.0
Other services	370.1	7.1	22.3	338.2	4.4	26.7	391.8	0.4	20.8	307.4	184.6	28.9	644.3	274.6	118.9
Total (₹ billion)	392.3	7.7	44.9	377.7	5.4	38.1	453.4	16.4	67.0	353.8	189.6	44.1	689.0	276.7	136.2
Total (US\$ billion)	8.3	0.2	0.9	8.3	0.1	0.8	9.5	0.3	1.4	6.5	3.5	0.8	11.4	4.6	2.3

USA had the maximum share of total software business by foreign affiliates though its share declined in 2013-14. It was followed by UK which recorded a higher share. The share of Germany and Singapore in the total software business of foreign affiliates also increased during the year (Table 7).

Table 7: Software Business by Foreign Affiliates of Indian Companies – Country-wise Distribution

(per cent)

Country	2009-10	2010-11	2011-12	2012-13	2013-14
	(1)	(2)	(3)	(4)	(5)
USA	54.7	67.5	65.0	71.3	65.4
United Kingdom	6.1	6.8	5.3	6.6	7.9
Canada	4.0	2.7	3.6	4.1	4.1
Germany	3.1	2.5	2.9	3.0	3.5
Singapore	3.0	3.4	4.4	2.7	3.3
Netherlands	3.1	3.6	4.3	2.1	3.2
Other Countries	26.0	13.5	14.5	10.2	12.5
Total	100.0	100.0	100.0	100.0	100.0

IX. Conclusion

During 2013-14, India's export of computer software services continued to have robust growth even as the growth of ITES/BPO services moderated. Total international trade in software services by India, including the services delivered by foreign affiliates established abroad, stood at ₹5,011.8 billion (US\$ 82.8 billion) in 2013-14. Software exports by foreign affiliates of Indian companies increased substantially in 2013-14.

The share of on-site exports increased in 2013-14, for the first time after 2008-09 even as Mode-1 (cross-border supply) continued to be the major mode of software services exports. The share of software services exports through Mode-1 and Mode-2 declined, whereas, the share of software services through Mode-3 and Mode-4 has increased in 2013-14. USA continued to remain the major destination for software exports and US dollar remained the major invoice currency for software exports during 2013-14.

Box: Comparison of survey results with NASSCOM and BoP data

The Reserve Bank publishes the software exports data in BoP using data reporting by Authorised Dealers (ADs), STPI and also the software exports data released by the NASSCOM. This accounts for only non-physical offsite software exports. As per the BoP data released by the RBI, non-physical (off-site) software exports stood at ₹4,206.0 billion in 2013-14 which does not include on-site software exports. Adding the on-site software exports of ₹857.3 billion (US\$ 14.2 billion), as reported in the survey, the total software services exports in 2013-14 worked out to ₹5,063.3 billion (US\$ 83.7 billion).

NASSCOM publishes exports of IT-BPO industry which is based on the global software business of the Indian software companies, *i.e.*, software exports of Indian companies together with the software business of their overseas subsidiaries. Accordingly, in order to make the data generated through the RBI's survey on Software & ITES/BPO Services Exports comparable

with NASSCOM data, the software business of overseas subsidiaries of Indian companies have been added to the estimated software services exports of India, based on the survey.

Based on the survey, export of software services from India in 2013-14 was estimated at ₹4,322.8 billion (US\$ 71.4 billion) and the software business done by the Indian subsidiaries abroad in 2013-14 was estimated at ₹689.0 billion (US\$ 11.4 billion). Thus, the global software export of India based on the survey was ₹5,011.8 billion (US\$ 82.8 billion) as against ₹5,228.9 billion (US\$ 86.4 billion) published by the NASSCOM. The software business done by the overseas subsidiaries of Indian companies accounted for 13.7 per cent of the global software business, estimated through the survey.

The survey results are quite comparable with the software exports data released by NASSCOM and also with the software service exports data of BoP.

Reconciliation of Software Services Exports of India during 2013-14

(₹ billion)

Software exports as per NASSCOM (Global business)	Software Exports based on annual Survey			Software Exports based on Balance of Payment Statistics		
	Indian companies (Mode 1, Mode 2 & Mode 4)	Subsidiaries abroad (Mode 3 & export of Subsidiaries other than India)	Global Business	Software Exports based on BoP data	On-site software exports based on survey (Mode 4)	Total Software Exports of India
(1)	(2)	(3)	(4) = (2) + (3)	(5)	(6)	(7) = (5) + (6)
5,228.9	4,322.8	689.0	5,011.8	4,206.0	857.3	5,063.3

Annex:**Methodology for estimation of Software Services Exports of Non-responding companies**

Annual survey on Software and IT enabled Services Exports for the period 2013-14 was launched among nearly 6,700 Software and ITES/BPO companies. Of these, 873 companies responded to the survey which included 128 NIL and closed companies. The non-respondent companies were generally the smaller companies, as the 745 active companies that supplied data included all major companies in the sector.

Using the observed proportion, number of companies with NIL exports was estimated from 5,827 non-respondent companies and software exports have been estimated for the remaining 4,973 non-responded companies, using the following method:

- I. Based on the ITES/BPO reported activity, companies have been classified in four groups, viz.; IT Services, ITES/BPO Services, Engineering Services and Software Product Development Services (having 100 per cent business under respective group).
- II. For classifying the other companies having combination of these as their business activity, reported proportions of their exports done in IT, BPO, Engineering and Software Product Development services have been used.

- III. Based on the reported data, it was observed that 'On-site' software export was primarily reported by the major companies. Therefore, only offshore software exports component was used for estimating software export of non-responded companies.

- IV. As the observed distribution of exports was highly positively skewed in each of these groups, median was used for estimating software exports in each group.

Estimated software exports for i^{th} group of non-responding companies

$$= \text{median of } i^{\text{th}} \text{ group} * \left[\frac{\# \text{ reported companies in } i^{\text{th}} \text{ group}}{\text{total no. of reported companies}} \right] * [\# \text{ non-responding companies}]$$

The total software export of India has been compiled as the sum of reported software exports and the estimated software export for non-responded companies in each of the four groups.

Using the methodology given above, the software services exports of non-respondent companies was estimated to the tune of ₹1,093.4 billion (around 25.3 per cent of total software services exports).