

*Survey on Computer Software & Information Technology Enabled Services Exports: 2012-13**

The Reserve Bank's annual survey on Computer Software and Information Technology Enabled Services Exports collects information on various aspects of computer services exports as well as exports of Information Technology Enabled Services (ITES) and 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 four modes of supply, as per General Agreement on Trade in Services (GATS). This article presents the aggregate results of 2012-13 round of the survey and examines changes in the characteristics of software services exports. It also analyses the trend in major aggregates based on current and earlier round of survey results.

I. Introduction

The annual survey on Software and Information Technology Enabled Services Exports is conducted by the Reserve Bank of India (RBI) for compiling data on various aspects of Computer Services Exports as well as exports of Information Technology Enabled Services (ITES)/Business Process Outsourcing (BPO). The Reserve Bank started to conduct the annual survey on '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, as defined in the Balance of Payments and International Investment Position Manual (BPM6) of the International Monetary Fund (IMF) and the GATS Manual on Statistics of International Trade in Services (MSITS) 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 annual round of the survey was conducted with reference period 2011-12.

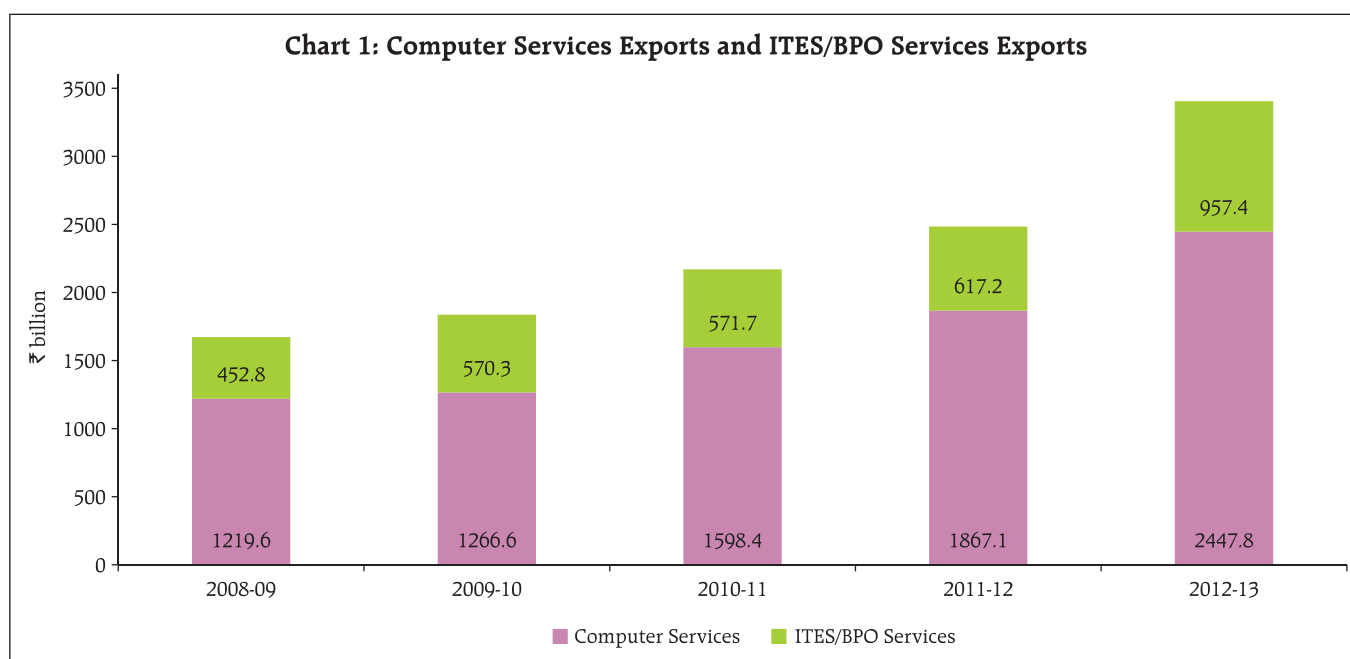
For the 2012-13 survey round, which was 7th in the series, the schedule was canvassed among 6,660 companies. Responses were received from 737 companies, including most of the large companies. The responding companies together accounted for 75.4 per cent of the total software exports during the year. 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 plays an important role in the Indian economy. As per the balance of payments (BoP) statistics, the software services exports (other than on-site exports), stood at ₹3,583 billion in 2012-13 and constituted around 45 per cent of total services exports of India as well as 3.5 per cent of GDP. India's Software services exports grew at remarkable pace during the period 2001-02 to 2007-08, at an average rate of 30.4 per cent in US \$ terms. Subsequently too, this sector has shown resilience in the face of marked moderation in global demand following the global financial crisis of 2008-09, though the pace of growth has moderated considerably.

In the survey, software services exports are 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 the survey, India's total export of computer services and ITES/BPO services (excluding commercial presence) during 2012-13 is estimated at ₹3,405.2 billion (US\$ 62.6 billion), exhibiting 20.7 per cent growth in US\$ terms over the previous year.

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Export of computer software services and ITES/BPO services are estimated at ₹2,447.8 billion (US\$ 45.0 billion) and ₹957.4 billion (US\$ 17.6 billion) respectively. Within 'computer services', there was a substantial rise in exports of IT services but software product development export was lower. While the share of ITES/BPO services exports increased at the cost of computer services exports share during 2012-13, the latter continued to be the dominant component (around 72

per cent share) in India's total software services exports (Chart 1 and Table 1). Among BPO services, the shares of exports of 'Customer interaction services' and 'Finance, Accounting and related services' declined.

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

The classification given by the Department of Information Technology (DIT-2003), Government of

Table 1: Software Services Exports from India with Components

(₹ billion)

Activity	Software Services Exports					Share in Total (%)		
	2008-09	2009-10	2010-11	2011-12	2012-13	2008-09	2011-12	2012-13
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A) Computer Services	1219.6	1266.6	1598.4	1867.1	2447.8	72.9	75.2	71.9
<i>Of which:</i> i) IT services	1070.5	1115.8	1492.2	1661.8	2256.7	64.0	66.9	66.3
ii) Software Product Development	149.1	150.8	106.2	205.3	191.1	8.9	8.3	5.6
B) ITES/BPO Services	452.8	570.3	571.7	617.2	957.4	27.1	24.8	28.1
<i>Of which:</i> i) BPO Services	383.4	431.3	468.7	523.0	789.6	22.9	21.0	23.2
ii) Engineering Services	69.4	139.0	103.0	94.2	167.8	4.2	3.8	4.9
Total Export of Software Services (A+B)								
in ₹ billion	1672.4	1836.9	2170.1	2484.3	3405.2	100.0	100.0	100.0
in US \$ billion *	34.9	38.7	47.6	51.8	62.6			
Annual Growth (in US \$ terms)		11.0	22.9	8.9	20.7			

* Using Average Exchange Rate.

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

(per cent)

Activity	2008-09	2009-10	2010-11	2011-12	2012-13
	(1)	(2)	(3)	(4)	(5)
BPO Services	84.7	75.6	82.0	84.7	82.5
Customer interaction services	10.7	18.0	12.2	14.4	10.9
Finance and Accounting, auditing, book keeping and tax consulting services	8.3	11.9	13.4	23.5	9.7
HR Administration	2.4	1.3	0.5	0.2	0.9
Procurements and logistics	1.2	0.3	0.5	0.0	0.4
Medical transcription	11.8	0.4	0.6	0.2	0.7
Document Management	-	0.3	0.6	0.4	0.5
Content development and management and publishing	6.5	1.0	0.8	0.7	1.4
Other BPO service	43.8	42.4	53.4	45.3	58.0
Engineering Services	15.3	24.4	18.0	15.3	17.5
Embedded Solutions	3.0	0.8	2.4	2.1	4.1
Product Design Engineering (mechanical, electronics excluding software)	6.0	7.5	8.6	7.0	5.9
Industrial automation and enterprise asset management	-	2.6	0.6	0.0	2.4
Other Engineering service	6.3	13.5	6.4	6.2	5.1
Total ITES/BPO Services	100.0	100.0	100.0	100.0	100.0

India, was used for compilation of data on exports of *ITES/BPO services*. Among the BPO services exports, 'Medical transcription', 'Content development and management and publishing' sectors witnessed moderation in exports during 2009-10 in the wake of the global slowdown and continue to witness subdued activities in the subsequent years.

During 2012-13, exports in BPO services and engineering services recorded increase of ₹266.6 billion and ₹73.6 billion, respectively. In total ITES/BPO services exports, the share of engineering services increased at the cost of BPO services, whereas the shares of 'Customer interaction services' and 'Finance and Accounting, auditing, book keeping and tax consulting services' went down. Other BPO services (*i.e.*, Legal services, Animation, Gaming, Pharmaceuticals and biotechnology services, *etc.*) which constituted more than half of the ITES/BPO services, recorded an increase of ₹275.9 billion in 2012-13 (Table 2).

Among the major components of Engineering services, the contribution of 'Embedded Solutions' and 'Industrial automation and enterprise asset management' increased, whereas the same of 'Product Design Engineering' (mechanical, electronics excluding software) declined in 2012-13 (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. Its share increased from 58.7 per cent in 2011-12 to 64.6 per cent in 2012-13. On the other hand, the share of Private Limited Companies in total software services exports declined to 35.3 per cent in 2012-13 (Table 3).

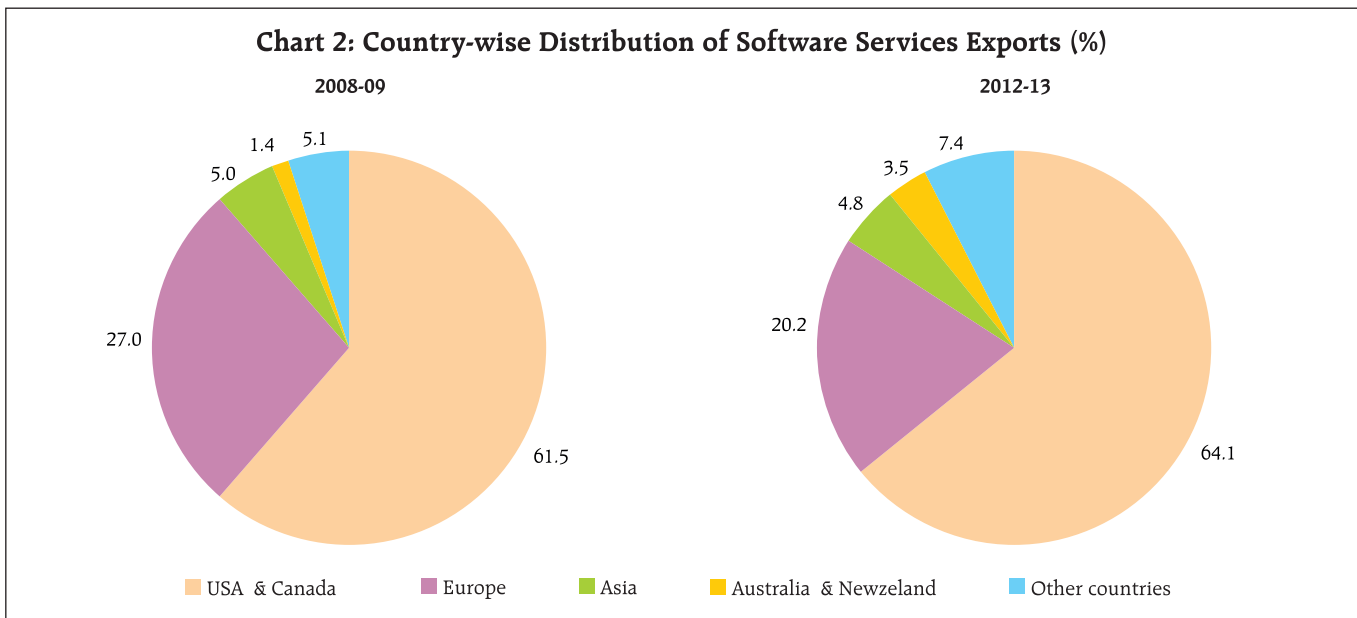
V. Country-wise Distribution of Software Services Exports

United States & Canada continued to remain the top destination (over 60 per cent) for software services exports from India followed by Europe, which accounted for nearly one-fifth. The shares of UK, East Asia and West Asia declined in 2012-13 as compared to 2011-12. The share of 'Other countries' increased from 5.1 per cent in 2008-09 to 7.4 per cent in 2012-13

Table 3: Organisation-wise Share of Software Services Exports

(per cent)

Type of Organisation	2008-09	2009-10	2010-11	2011-12	2012-13
	(1)	(2)	(3)	(4)	(5)
Private Limited Company	34.8	39.3	38.5	41.2	35.3
Public Limited Company	62.0	58.1	61.3	58.7	64.6
Others	3.2	2.6	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0



indicating more software exports to new markets (Chart 2).

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 2012-13. The shares of Indian Rupee and Australian Dollar have increased since 2008-09 (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 services through on-site mode declined significantly from 32.2 per cent in 2008-09 to 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

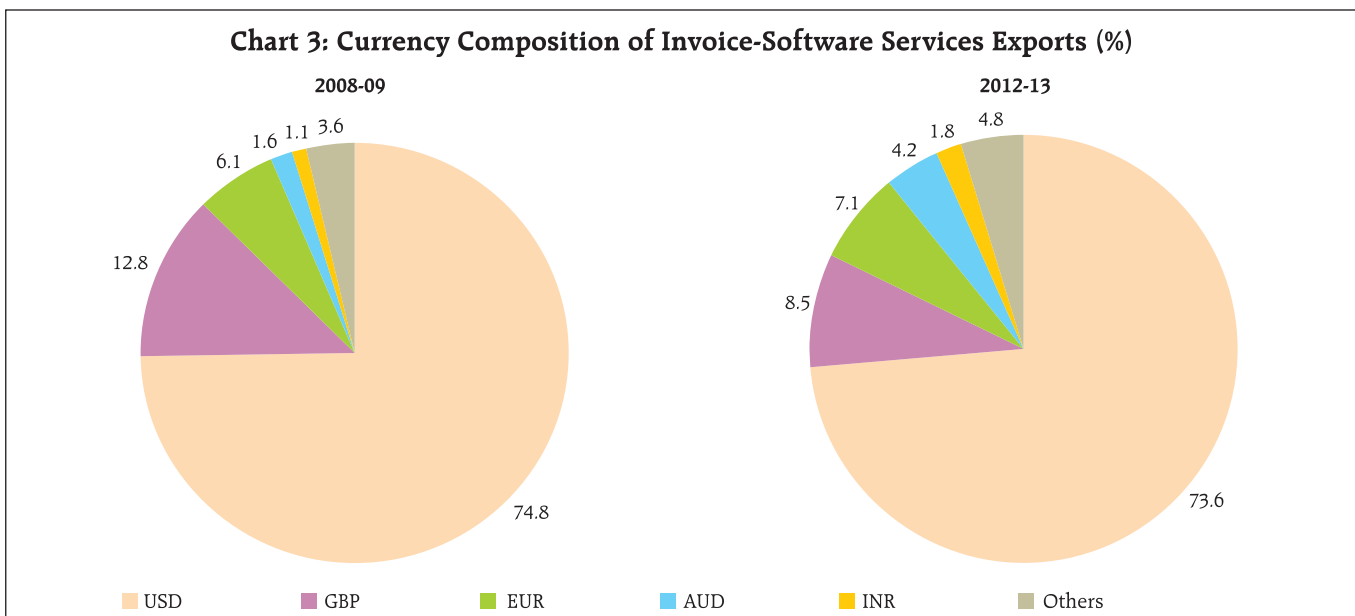


Table 4: Share of On-site and Off-site Exports

Type of Services	(per cent)				
	2008-09	2009-10	2010-11	2011-12	2012-13
	(1)	(2)	(3)	(4)	(5)
On-site (Mode 4)	32.2	21.6	20.7	17.8	15.8
Off-site (Mode 1 & Mode 2)	67.8	78.4	79.3	82.2	84.2
Total	100.0	100.0	100.0	100.0	100.0

(Mode-1), consumption abroad (Mode-2) and presence of natural person (Mode-4) and

- (ii) 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 Statistics (FATS).

The present 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 ₹3,759 billion (US\$ 69.1 billion) in 2012-13. The share of software services exports through Mode-1 and Mode-2 is increasing since

Table 5: Software Exports by Different Modes

Type of Mode	(per cent)				
	2008-09	2009-10	2010-11	2011-12	2012-13
	(1)	(2)	(3)	(4)	(5)
Mode 1 (cross-border supply)	56.3	64.6	67.4	69.0	74.7
Mode 2 (consumption abroad)	0.1	0.0	0.1	0.5	1.6
Mode 3 (commercial presence)	16.8	17.6	14.8	15.4	9.4
Mode 4 (presence of natural person)	26.8	17.8	17.7	15.1	14.3

2009-10 following global financial crisis, whereas the share of software services by India through Mode-3 and Mode-4 are decreasing (Table 5).

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 FATS. The total software business of the Indian-owned foreign affiliates (excluding the services made available to India) observed immediate slow down following global crisis. During 2012-13, software exports of foreign subsidiaries/associates decreased by ₹122.5 billion to ₹397.9 billion (US\$ 7.3 billion) (Table 6). On the other hand, their business in India

Table 6: Software Business by Foreign Affiliates of Indian Companies

Activity	(₹ billion)														
	2008-09			2009-10			2010-11			2011-12			2012-13		
	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	12.2	0.8	0.1	6.4	0.0	0.4	17.9	0.2	1.6	27.5	10.7	5.4	23.9	1.8	0.4
Software Product Development	1.7	0.3	0.1	0.2	0.0	4.9	4.7	0.0	0.6	1.6	0.7	8.0	5.0	2.3	11.2
BPO Services	3.8	0.4	28.5	15.1	0.4	17.2	15.2	0.6	9.1	31.0	4.4	12.3	15.9	0.4	3.6
Engineering Services	0.0	0.2	0.3	0.6	0.1	0.0	1.7	0.3	0.0	1.5	0.3	20.6	1.6	0.5	0.0
Other services	319.3	9.8	37.3	370.1	7.1	22.3	338.2	4.4	26.7	391.8	0.4	20.8	307.4	184.6	28.9
Total (₹ billion)	337.0	11.5	66.4	392.3	7.7	44.9	377.7	5.4	38.1	453.4	16.4	67.0	353.8	189.6	44.1
Total (US\$ billion)	7.3	0.3	1.4	8.3	0.2	0.9	8.3	0.1	0.8	9.5	0.3	1.4	6.5	3.5	0.8

increased by ₹173.2 billion from ₹16.4 billion (US\$ 0.3 billion) in 2011-12 to ₹189.6 billion (US\$ 3.5 billion) in 2012-13.

Indian companies were classified into four major activity categories, *viz.*, IT services, Software product development, BPO services and Engineering services and those providing the combination of these services were classified under 'Other services' category. Foreign affiliates located abroad, under 'Other Services' category was the major source for generating the software business outside India. Software services provided by foreign affiliates in all countries decreased in 'IT services', 'BPO services' and 'Engineering services', whereas it increased in 'Software product development' and 'Other services'.

It is observed that USA had maximum share of total software business by foreign affiliates followed by UK. Share of USA, Canada and UK in total software business of foreign affiliates increased, while the share of Singapore and Netherlands decreased in 2012-13 (Table 7).

IX. Conclusion

India's software services exports has continued to rise, *albeit* at a slower rate, following the global financial crisis in 2008. During 2012-13, India's export of software services and IT enabled services experienced

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

(per cent)

Country	2008-09	2009-10	2010-11	2011-12	2012-13
	(1)	(2)	(3)	(4)	(5)
USA	61.0	54.7	67.5	65.0	71.3
United Kingdom	8.9	6.1	6.8	5.3	6.6
Canada	5.1	4.0	2.7	3.6	4.1
Germany	3.5	3.1	2.5	2.9	3.0
Singapore	3.7	3.0	3.4	4.4	2.7
Netherlands	2.9	3.1	3.6	4.3	2.1
Other Countries	14.9	26.0	13.5	14.5	10.2
Total	100.0	100.0	100.0	100.0	100.0

good growth. Total international trade in software services by India, including the services delivered by foreign affiliates established abroad, stood at ₹3,759 billion (US\$ 69.1 billion) in 2012-13. Software exports by foreign affiliates of Indian companies declined in 2012-13.

The share of software services exports through on-site mode has been consistently declining as most of the software services are exported through off-site mode. Mode -1 (cross-border supply) continued to be the major Mode of software services exports. USA continued to remain the major destination for software exports and US dollar remained the major invoice currency for software exports during 2012-13.

Box: Comparison of survey results with NASSCOM and BoP data

The Reserve Bank of India publishes the software exports data in BoP using data reported by Authorised Dealers, 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 ₹3,583 billion in 2012-13 which does not include on-site software exports. Adding the on-site software exports of ₹539.1 billion (US\$ 9.9 billion), as reported in the survey, the total software services exports in 2012-13 worked out to ₹4,122.1 billion (US\$ 75.8 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 Computer Software & ITES 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 2012-13 was estimated at ₹3,405.2 billion (US\$ 62.6 billion) and the software business done by the Indian subsidiaries abroad in 2012-13 was estimated at ₹353.8 billion (US\$ 6.5 billion). Thus, the global software export of India based on the survey was ₹3,759.0 billion (US\$ 69.1 billion) as against ₹4,124.2 billion (US\$ 75.8 billion) published by the NASSCOM. The software business done by the overseas subsidiaries of Indian companies accounted for 9.4 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 services exports data of BoP.

Reconciliation of Software Exports of India during 2012-13

(₹ 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)
4,124.2	3,405.2	353.8	3,759.0	3,583.0	539.1	4,122.1

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

In total, 737 companies responded to the annual comprehensive survey covering all major companies. So, the non-responded companies were the smaller companies. Further, it was observed from data received from the responded companies that onsite export was mainly reported by the major companies. So while estimating the exports done by the non-responded companies, only offsite export was considered. As no information was available about the business activity of the non-responded companies, these were classified into four groups, *viz.*, IT services, BPO services, Engineering services and Software Product Development based on the observed proportion. Also, the distribution of export in all the four groups, *i.e.*, IT services, BPO, Engineering and Software Product Development was highly positively skewed. So median exports done by each of these groups was used for estimating the exports done by respective group of business. Using the methodology given below, the software services exports of non-respondent companies was estimated to the tune of ₹837.7 billion (around 24.6 per cent of total software services exports). To estimate other distributional patterns of exports, observed proportions were used.

Annual survey on Computer Software and IT Enabled Services Exports for the period 2012-13 was launched canvassing around 6,660 Software and ITES/BPO companies. Of these, 847 companies responded to the survey which includes 110 Nil and closed companies. All the major software and ITES/BPO companies responded to the survey. Using the observed proportion, number of Nil and closed companies have been estimated from 5,813 non-responded companies

and software exports have been estimated for the remaining 5,058 non-responded companies, using the following method:

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

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

Then, the total software exports 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.