

## Recent Trends in Exports of computer software and Information Technology Enabled Services from India

Dr. M. Sindhu

Assistant Professor

Department of Economics Sree Kerala Varma college Thrissur

### Abstract

Software industry occupies an important place in Indian economy. This sector has a significant role in term of contribution to GDP, employment, export earning etc. The present paper examined the performance of software service exports from India. The software service exports comprises of computer services and information technology enabled serices (ITES). The recent trends in the software export shows that the export earning has increased. The growth rate of export of this sector is 13 per cent during 2008-2019 period. ITES service exports shows a higher growth rate than the computer service exports during 2008-19 period. Though the public limited company was the major contributor of exports, in the last two years the private sector occupies the position. Major destination of software exports are USA and Canada. Majority of the software service exports are through the cross border supply, ie through Mode-1.

### Introduction

Computer Software and IT-enabled services and its exports have an important role in the Indian Economy. In the recent years the exports from this sector has increased and occupies an important role in service exports from India. Information Technology industry in India can be divided into six components- Software products, IT services, IT enabled services/ Business Process Outsourcing, Engineering and R&D Services, Hardware and E commerce. Information technology (IT) deals with the use of computers and computer soft wares to securely store, process, transmit, convert and retrieve information. Outsourcing of services using information technology is termed as information technology enabled services (ITES). Outsourced services in the field of banking and finance, telecommunication, insurance etc are termed as information technology enabled services. India is a major provider of software and information technology (IT) enabled services in the world. The contribution of these services to India's gross domestic product (GDP), employment and exports has also risen substantially over the years. India is among the top four countries of the world in the provision of ICT enabled services. USA, UK, Germany, India and France are the major exporters of ICT enabled services in the world. India is the leading outsourcing destination in the world with a share of 55 percent of global sourcing business.

### Data sources

This paper examines the recent trends in software service exports from India. Software service exports includes computer service exports and information technology enabled services. The study mainly used the data base provided by the RBI the through survey of Computer software and information technology enabled services from India. The period of analysis is from 2008-09 to 2018-19.

### Software services exports from India

India's total exports of software service was 1672.4 billion in 2008-09 and it increased to 8242.5 billion in 2018-19. The growth rate over the period was 18.55 in billion terms. The software exports showed an increase in performance since 2010-11. During 2018-19 the annual growth rate shows a decline compared to the earlier period. During the last ten years since 2008-09 the software exports from India increased annually at the average growth rate of 13 per cent.

**Table.1 Software services exports from India**

	Rs in billion	US\$ billion	Annual Growth (in US dollar terms)
2008-09	1672.4	36.4	
2009-10	1836.9	38.7	6.3
2010-11	2170.1	47.6	23.0
2011-12	2484.3	51.8	8.8
2012-13	3405.2	62.6	20.8
2013-14	4322.8	71.4	14.1
2014-15	5014	82	14.8
2015-16	5763.1	88	7.3
2016-17	6510	97.1	10.3
2017-18	7051.2	108.4	11.6
2018-19	8242.45	117.9	8.8
CGR	18.55	13.02	

Source: RBI reports (Various issues)

Export of Software services are divided into two major categories such as computer Services exports which include IT services and Software Product Development and Information Technology Enabled Services ITES/BPO services which includes BPO services and engineering services. Computer services exports increased from 1219.6 billion in 2008-09 to 5580.5 billion in 2018-19 as given in Table.2. This sector showed a compound growth rate of 18 percent during 2008-19 period. ITES/ BPO service showed a growth rate of 20.4 percent during the same period. BPO services and engineering services exports increased at the rate of 19.6 per cent and 24 percent respectively over 2008-19 period.

**Table.2 Activity wise Software Services Exports from India (Rs.in Billion)**

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	CGR 2008-19
A) Computer Services	1219.6	1266.6	1598.4	1867.1	2447.8	3181.7	3610.8	4104.4	4506.7	4809.9	5580.49	17.8
Of which i) IT services	1070.5	1115.8	1492.2	1661.8	2256.7	2936.7	3399.7	3862.8	4300	4572.8	5328.63	18.8
ii) Software Product Development	149.1	150.8	106.2	205.3	191.1	245	211.1	241.6	206.7	237.1	251.86	6.4
B) ITES/BPO Services	452.8	570.3	571.7	617.2	957.4	1141.1	1403.2	1658.7	2003.3	2241.3	2661.96	20.4
Of which: i) BPO Services	383.4	431.3	468.7	523	789.6	934.2	1089.2	1336.8	1539	1739.1	2048.14	19.6
ii) Engineering Services	69.4	139	103	94.2	167.8	206.9	321.9	464.9	502.3	613.2	82	24

Source: RBI reports (Various issues)

The share of computer services in software services exports was 72.9 per cent in 2008-09 and it decreased to 69.2 per cent in 2016-17 and to 67.7 in 2018-19. Table 3 shows that the share of IT service was 64.6 per cent in 2018-19. The share of ITES/BPO increased from 27.1 per cent in 2008-09 to 32.3 per cent in 2018-19 in total software service exports.

**Table.3 Share in software exports activity wise**

	2008-09	2012-13	2016-17	2017-18	2018-19
<b>A) Computer Services</b>	<b>72.9</b>	<b>71.9</b>	<b>69.2</b>	<b>68.2</b>	<b>67.7</b>
Of which i) IT services	64.0	66.3	66.0	64.2	64.6
ii) Software Product Development	8.9	5.6	3.2	3.3	3.1
<b>B) ITES/BPO Services</b>	<b>27.1</b>	<b>28.1</b>	<b>30.8</b>	<b>31.8</b>	<b>32.3</b>

Of which: i) BPO Services	22.9	23.2	23.7	24.7	24.8
ii) Engineering Services	4.2	4.9	7.1	7.1	7.5

Source: RBI reports (Various issues)

### Industry wise software service exports

The organization wise software services exports from India is given in the Table .4. During 2008-09 period public sector contributed major share whereas the trend has changed and during 2018-19 period 51.5 percent was provided by the private sector.

**Table.4 Organisation wise software exports from India**

Country	2008-09	2012-13	2015-16	2017-18	2018-19
Private Limited	34.8	35.3	44.3	51.7	51.5
Public limited	62	64.6	54.3	47.5	47.6
Others	3.2	0.1	1.3	0.8	0.9

Source: RBI reports (Various issues)

The ITES BPO services are broadly divided into two BPO services and Engineering services. The classification is as per Department of Information Technology classification of services 2003. The BPO services includes customer interaction services, finance and accounting, auditing services, HR administration. Procurement and logistics, medical transcription document management, content development and management etc. Engineering services includes embedded solutions, product design engineering, industrial automation and enterprises asset management etc. The classifications are given in Table.5. BPO services exports are the major sector of IT enabled service provider in India. It contributed nearly 84.7 per cent in 2008-09. But its share shows a decline and in 2016-17 this sector provided 76.8 per cent of the software services exports. The share during 2018-19 period was 77 per cent. The share of engineering service was 15.3 per cent in 2008-09 but increased to 23.2 percent in 2018-19. Among the BPO services the prominent sector is Finance and accounting, auditing, consultancy services, which has a share of 13.6 percent in 2018-19 in total software service exports. Among the engineering services the product design sector has highest share.

**Table.5 Industry wise distribution(% share) of ITES/BPO services Exports from India**

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
<b>BPO Services</b>	84.7	75.6	82.0	84.7	82.5	81.9	77.6	80.6	76.8	77.6	77
Customer interaction services	10.7	18.0	12.2	14.4	10.9	8.4	4.6	3.5	5.0	8	6.6
Finance and Accounting, auditing, book keeping and tax consulting services	8.3	11.9	13.4	23.5	9.7	11.2	12.2	11.2	10.3	12.3	13.6
HR Administration	2.4	1.3	0.5	0.2	0.9	0.7	0.9	1.2	0.6	0.6	0.5
Procurements and logistics	1.2	0.3	0.5	0.0	0.4	0.3	0.5	0.5	0.4	0.4	0.3
Medical transcription	11.8	0.4	0.6	0.2	0.7	1.3	1.0	0.8	0.8	0.8	0.3
Document Management	-	0.3	0.6	0.4	0.5	0.9	0.7	0.4	0.3	0.8	1.4
Content development and management and	6.5	1.0	0.8	0.7	1.4	0.9	0.9	0.8	0.8		

publishing											
Other BPO services	43.8	42.4	53.4	45.3	58.0	58.2	56.8	62.2	58.6	54.7	54.7
<b>Engineering Services</b>	15.3	24.4	18.0	15.3	17.5	18.1	22.4	19.4	23.2	22.4	23
Embedded Solutions	3.0	0.8	2.4	2.1	4.1	5.3	4.1	4.3	3.7	3.5	2.7
Product Design Engineering (mechanical, electronics excluding software)	6.0	7.5	8.6	7.0	5.9	5.5	5.9	5.1	7.7	7.1	7.9
Industrial automation and enterprise asset management	-	2.6	0.6	0.0	2.4	0.2	0.2	0.1	0.1	0.5	0.5
Other Engineering services *	6.3	13.5	6.4	6.2	5.1	7.1	12.2	9.9	11.7	11.3	11.9
<b>Total ITES/BPO Services</b>	<b>100.0</b>		<b>100</b>								

Source: RBI reports (Various issues)

#### Software business by foreign affiliates of Indian companies

India's exports of software services through foreign affiliated are given in Table.6. Major share of foreign affiliates are in USA, UK, Canada, Germany, Singapore, and Netherlands. USA has the major share it is about 48.3 per cent in 2018-19. The share declined from 61 percent in 2008-09 to 48 per cent in 2018-19. The share of UK and Canada are 11.4 and 4.8 per cent respectively in 2018-19

**Table.6**

#### Software business by foreign affiliates of Indian companies (% share)

Country	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
USA	61.0	54.7	67.5	65.0	71.3	65.4	66.7	64.6	65.0	64.2	48.3
United Kingdom	8.9	6.1	6.8	5.3	6.6	7.9	8.0	9.2	6.7	7.2	11.4
Canada	5.1	4.0	2.7	3.6	4.1	4.1	3.3	2.4	3.6	3.5	4.8
Germany	3.5	3.1	2.5	2.9	3.0	3.5	2.4	2.9	3.3	4	5.3
Singapore	3.7	3.0	3.4	4.4	2.7	3.3	3.3	3.3	2.9	2.6	3.5
Netherlands	2.9	3.1	3.6	4.3	2.1	3.2	2.3	2.5	2.7	3.9	5
Other Countries	14.9	26.0	13.5	14.5	10.2	12.6	14.0	15.1	15.8	14.6	21.7
<b>Total</b>	<b>100.0</b>	<b>100</b>	<b>100</b>								

Source: RBI reports (Various issues)

#### Mode wise Software Services Exports

International trade in services can be conducted through four different modes as per Manual on Statistics on International Trade in Services (MSITS). They are Mode 1- transactions between resident and non-resident covering cross-border supply, Mode-2 consumption abroad, Mode-3 services provided locally by

the affiliates established abroad, i.e. , commercial presence and Mode-4 presence of natural person. India exports software services through both on-site and off-site routes. On site supply are through Mode-4, whereas the offsite software service exports are through Mode-1 and Mode-2. Share of onsite supply shows a decrease over the years since 2008-09. The share of on site exports decreased from 32.2 per cent in 2008-09 to 15.7 percent in 2018-19. Major software service exports are through off site Mode 1 and 2. The exports through off site was 67.8 per cent in 2008-09 and increased to 84.5 per cent in 2018-19.

**Table.7 Types of services wise software exports from India( % share)**

Type of Services	On-site (Mode-4)	Off-site (Mode-1 & Mode 2)
2008-09	32.2	67.8
2009-10	21.6	78.4
2010-11	20.7	79.3
2011-12	17.8	82.2
2012-13	15.8	84.2
2013-14	19.8	80.2
2014-15	20	80
2015-16	19.9	80.1
2016-17	17.2	82.8
2017-18	15.7	84.3
2018-19	15.7	84.5

Source: RBI reports (Various issues)

Mode wise exports share of India in ITES enabled services and computer services are given in Table.8. From the table it is clear that major share of exports is through Mode1. It contributed 56.3 percent of the software exports in 2008-09. Its share increased to 66.5 per cent in 2016-17. The exports through mode 2 is comparatively low from India. The share of Mode 3 and Mode 4 ranges between 16-20 percent. In recent years the share of commercial presence has increased than the presence of natural person.

**Table.8 Mode wise exports of software services from India (% share)**

Mode of supply	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Mode 1	56.3	64.6	67.4	69	74.7	69.1	68.4	64.8	66.5	69.5	74
Mode 2	0.1	0	0.1	0.5	1.6	0.1	0.1	0.2	0.2	0.1	0.03
Mode 3	16.8	17.6	14.8	15.4	9.4	13.7	14.4	18.9	19.4	17.4	12.4
Mode 4	26.8	17.8	17.7	15.1	14.3	17.1	17.1	16.1	13.9	13	13.6

Source: RBI reports (Various issues)

### Destination of software services exports of India

USA and Canada are the major markets for software service exports from India. About 61 percent of the computer and information technology enabled services goes to these countries. European countries are the second destination and it accounts for 25.6 percent in 2018-19. Among the European countries UK is the major market with a share of 11.7 percent in 2018-19. Exports to Asian countries shows a increase since 2008-09. The share in 2018-19 is 6.8 per cent. Australia and New Zealand are the other important markets for Indian software with a share of 3.4 per cent in 2018-19.

**Table.9 Destination wise software service exports from India**

Country	2008-09	% share	2012-13	% share	2018-19	% share
USA and Canada	22.3	61.9	40.1	64.1	72.1	61.2
Europe	9.8	26.5	12.7	20.2	30.2	25.6

UK	5	12.4	7.2	11.4	13.8	11.7
Asia	1.9	4.9	3	4.8	8	6.8
Australia and New Zealand	0.5	2.3	2.2	3.5	3.9	3.4
Others	1.9	4.4	4.6	7.4	3.6	3
	36.9	100	62.6	100	117.9	100

Source: RBI reports (Various issues)

## Conclusions

Software industry occupies an important role in Indian Economy. The contribution of this industry towards employment, GDP and exports shows an increasing trend. This paper examined the export performance of software services from India. The software service exports comprises of computer services and Information technology enabled services. India occupies an important role in the world market in software service exports. The software service exports showed a growth rate of 13 percent annually in the last ten years. The information technology enabled service exports also show an increasing trend in recent years. The compound growth rate over the period 2008-09 to 2018-19 shows that ITES has a growth rate of 20.4, whereas computer software has 17.8 percent growth rate. During 2008-09 period the public sector contributed the major share of exports, whereas in recent years the private sector is the most contributing sector. Software exports from India shows that majority are through Mode -1, ie through cross border supplies. In 2018-19, 74 percent of software service exports was through cross border supply ie through Mode-1. The major markets for the software exports from India is USA and Canada. 61 percent of foreign affiliated exports of India in computer software and ITES is from USA.

## References

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