
International Outsourcing from India: A Study

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World trade in services is growing at a much faster rate than trade in goods. Outsourcing of intermediate goods and business services are the most rapidly growing components of international trade. This paper analyzes the business service/IT outsourcing from India. The paper proves that India is having revealed comparative advantage in exports based on ITES-BPO services. The rapid rise in world trade in services would give a good opportunity to India to raise its share of world trade. The Government of India has already taken some initiatives in this regard by giving fiscal concessions to service sector. IT infrastructure and general business environment are two areas where India clearly lags behind other competitor countries in outsourcing arena. Another important finding is that even though there is lot of media attention on outsourcing sector in India and other developing countries, the maximum surplus in services trade is actually generated by developed countries. Even though India maintains its lead status as a source country for a variety of IT related services, there are number of emerging challenges like anti-outsourcing legislation and protectionism in western countries, rise of competitor countries *etc.* In short India has already made an impact in the outsourcing area. However, to maintain its lead and capture new markets and areas, Indian service industries should remain vigilant.

JEL Classification : F13, F14.

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1. Introduction

Outsourcing of intermediate goods and business services is one of the most rapidly growing components of international trade. Companies are outsourcing an ever expanding set of activities, ranging from product design to assembly, from R&D to marketing, distribution

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and after sales service. It may be noted that, many of the modern day firms have become “virtual” manufacturers, owning designs and plans for many products but making almost nothing themselves. Vertical disintegration is clearly evident in international trade. Annual report of the World Trade Organization (WTO) (1998) details, for example, the production of a particular American car as follows:-

“Thirty percent of the car’s value goes to Korea for assembly, 17.5 per cent to Japan for components and advanced technology, 7.5 per cent to Germany for design, 4 per cent to Taiwan and Singapore for minor parts, 2.5 per cent to the United Kingdom for advertising and marketing services, and 1.5 per cent to Ireland and Barbados for data processing. This means that only 37 per cent of the production value...is generated in the United States”.

Outsourcing of services could be within a country, from one state to another (inshore outsourcing), and also between countries (offshore outsourcing). Literature on outsourcing has given maximum attention on the effect on employment in developed countries. The objective of this study is to show the different facets of India’s Information Technology Enabled Services/Business Process Outsourcing (ITES/BPO). This study tries to capture comprehensive information on this topic by utilizing information/data from diverse source. The study also attempts a comparison between India’s and China’s ITES/BPO sector, the competitiveness of Indian ITES/BPO companies, the business environment existing in this regard in other competitor countries, emerging challenges *etc.*

This paper has been organized into 6 sections. Section 1 covers introduction and discusses the concepts related to outsourcing. Section 2 reviews the literature on outsourcing and spells out the methodology adopted in this study. Section 3 provides a cross country perspective of services exports and items closely related to outsourcing. It also discusses the major characteristics of India’s outsourcing sector and its importance for economic development. Section 4 attempts a comparison of outsourcing sector in India and

its competitor countries. It also discusses Indian Government's policy towards IT sector. Section 5 presents the emerging challenges for India's outsourcing sector and Section 6 presents the conclusions emanating from the study.

There is no commonly accepted definition for outsourcing. Some of the interpretations of outsourcing as discussed in the literature are as follows.

The Oxford dictionary (1998) defines outsourcing as "obtain goods or a service by contract from an outside supplier. Outsourcing can dramatically lower total costs". According to McKinsey study (2003), effective outsourcing implies identifying and managing the "natural owner" of every activity in the value chain. Bhagwati, Panigariya and Srinivasan (2004), have explained outsourcing as a process in which the innovating firms introduce a product in the domestic market and once the product matures, the production of this product is shifted to countries where it is cheaper to produce, with the innovating country eventually becoming an importer of the product. It could also consist of arm's-length, or 'long -distance' purchase of services abroad, mainly *via* electronic mediums.

WTO under its General Agreement on Trade in Services (GATS), categorizes four different ways in which services can be traded. Mode 1, Mode 2, Mode 3 and Mode 4. In Mode 1, trade in services involves arm's-length supply of services, with the supplier and buyer remaining in their respective locations. Mode 1 purchases have come into prominence because of the advances in electronic information and communication technology. Both individuals and firms can provide Mode 1 services. In the former category, independent designers, architects and consultants who sell their services to customers abroad electronically are included whereas latter consists of large firms that manage call centers, back offices and software programmers. It is said that, trade in Mode 1 services is what most economists have meant when they discuss "outsourcing" (Bhagwati, Panigariya and Srinivasan 2004). Mode 2 involves movement of the consumer to the location of the supplier. Under Mode 3, services are

sold in the territory of a member by legal entities that have established a presence there but originate in the territory of another member. Mode 4 includes services requiring the temporary movement of natural persons.

In brief, outsourcing means employing cheap and efficient labour available in different countries to produce a product or supply a service. Literature on outsourcing of services uses different terminologies for outsourcing and there is no uniformity even though they broadly mean ITES and BPO. Data/information on outsourcing is scattered. For capturing maximum information on outsourcing, this study makes use of the information/data reported under the terms ITES, BPO, Business Process Service (BPS), Information technology exports, business service exports, other business services, computer services exports, software exports *etc.* A broad classification of outsourcing is set out in table 1.

Section II

Literature on Outsourcing related to India

Bhagwati, Panagariya and Srinivasan (2004) indicate that in the process of outsourcing the home country will lose low-wage jobs, but gain high wage jobs. On the balance outsourcing will lead to the

Table 1: Broad classification of Offshoring services

Call/contact centre services	Back-office services	IT services
Help desk	Claims processing	Software development
Technical support/advice	Accounts processing	Application testing
After-sales	Transaction processing	Content development
Employees enquires	Query management	Engineering and design
Claims enquires	Customer administration Processing	Product optimization
Customer support/advice	HR/payroll processing	
Market research	Data processing	
Answering services	IT outsourcing	
Prospecting	Logistics processing	
Information services	Quality assurance	
Customer relationship management	Supplier invoices	

Source: World Investment Report 2004, United Nations Conference on Trade and Development.

transition of the innovator country to a high-value job oriented country. The study also points out that, it is wrong to believe that most of the service jobs will be outsourced to India and China. This is because majority of the jobs in the US are in service industries, such as, retailing, restaurants, tourism, *etc.*, that require both consumer and producer to be present at the same place, and, therefore, cannot be outsourced. In conclusion, this study points out that outsourcing is a relatively small phenomenon in the US labour market.

A study by Amiti and Wei (2004) brings out three interesting findings: (1) the notion that large industrialized countries outsource more intensely is not correct; (ii) outsourcing does not lead to decline in employment in industrialized countries; and, (iii) in terms of economic size, it is the smaller economies which outsource intensively. This study shows that increases in service outsourcing in US manufacturing and services goes together with greater labour productivity. Manufacturing firms outsource business services in a large way. This is due to firms sourcing their least efficient process of production from cheaper countries. Outsourcing may lead to shedding of labour but ultimately, the increased efficiency could lead to higher production and an expansion of employment in other lines of work. However, the authors point out that there could be a change in the skill mix of jobs. The authors cite a study by McKinsey (2003), which indicates more than 69 per cent of workers who lost jobs due to imports in the USA between 1979 and 1999 were re-employed. These results suggest that service outsourcing would not induce a fall in aggregate employment.

Taganas and Kaul (2006) explore the strategies of firms in the Indian IT industry and their innovative behavior. The study concludes that India's software industry has generally been weak to spur innovation within the industry. Most of the innovations are incremental rather than radical in nature. The pattern of innovation is market driven rather than based on fundamental technological research. Competition compels firms to cut costs and put emphasis on marketing

cooperation. The study point out that there is wide scope for IT firms to collaborate with the more technologically competent MNCs. It suggests that Indian IT firms should further increase their focus on R&D to sustain their growth.

The study by NASSCOM (2007) focuses on growth of IT software and services industry in China and India. It is based on a series of interactions with Chinese officials and interviews with IT software companies. The study indicates that Chinese IT-BPO has much to learn from India. Even though the Chinese IT sector is expected to continue growing at a rapid pace, it is unlikely to displace India in the near future. Strong Government support, excellent quality of infrastructure, rapid pace of growth of domestic economy, *etc.*, are the major strength of Chinese IT-BPO sector. Further the geographical proximity and cultural similarity to advanced markets like Japan and Korea is a great help to Chinese IT-BPO sector. The average wage in China is significantly lower than other competitor countries. However, lack of transparency in procedures and weak intellectual property protection are major weakness of China. The study puts forward a strong case for increased partnership between India and China to tap the growing IT-BPO market in the world.

There are some interesting studies on labour conditions and trade unions in ITES-BPO sector. Ramesh (2004) point out the vulnerabilities for laborers in India's BPO sector. The study is based on field survey of call centers. Firms often terminate the job to get rid of long-term commitments towards employees. Laborers, who work on voice processes, are forced to live as Indian during the day and Westerner after the sundown. Many a times, customers are irritable and abusive. Further, odd working time conflicts with the natural rhythm of human body resulting in increased healthcare costs besides affecting personal and social life. Workers are not entitled for national / religious holidays, as the firms work with clients' calendar. The study also observed workers developing poor eating habits, smoking, excessive drinking of coffee, *etc.*, to cope up with the psychological and physical stress. The long-term opportunity costs of BPO work could be still

higher as most of the young workers are burning out their best time for higher education working as “cyber coolies”. Further, Women’s scope in the job is extremely constrained due to odd timings of work. Sandhu (2006) examines the difficulties of unionizing BPO sector. It point out that there have been attempts at unionizing the call centre industry since the year 2000. Information Technology Professionals’ Forum (ITPF) is the result of this, and it gained recognition as an official organization from the Karnataka State Government as a society rather than a trade union. The study indicate BPO workers opposed unions because they associate it with the pre-1991 era of slow economic growth and limited opportunities. BPO workers associate their work with upward mobility, clean work clothes, shiny buildings, *etc.* In short, the study point out that even though BPO workers are overworked and stressed, they are not interested in unionization. Taylor *et al* (2008) examines the issue of working conditions and employee rights in ITES-BPO industry. The study suggests that there is a constituency for UNITES in Indian ITES-BPO. UNITES was formed in September 2005 on the foundations laid by the Centre for Business Processing Outsourcing Professionals (CBPOP) in 2004. UNITES has secured legal status under Trade Disputes Act (1926) and has been granted ‘provisional affiliation’ to Indian National Trades Union Congress (INTUC). The study collected information through questionnaires mainly from UNITES members. Majoriy of the respondents reported that UNITES is helping to improve work conditions. About 65 per cent of respondents indicated “working times” which include shift length, night-time work, *etc.*, as crucial issues for them. In short, the study indicates that there are numerous work related concerns in Indian ITES-BPO industry.

It may be pointed out that, even though outsourcing has attracted much attention in the media, there is a dearth of comprehensive study on outsourcing from India. Most of the available studies focus on outsourcing and issues related to job loss. The study by Amiti and Wei (2004) is very relevant in the context of anti-outsourcing legislations in developed countries like the US. It points out that if we take into

account the size of the economy, developing countries like India not only export but also are a large importer of business services. This study is a coherent one and removes many misconceptions about outsourcing. Ahuja (2004) sets out the benefits from outsourcing, such as, cost reduction and suggests a tax on profits of beneficiary firm so as to fund the relocation of workers who lose their jobs due to outsourcing. The Study by Ramesh (2004) is unique as it focuses on labour issues and harsh conditions of work in BPOs located in India and point out the negative side of employment in BPOs. However, the recent reports indicate that there are positive sides of employment in BPOs. Many BPOs had started taking measures for the welfare of their workers like, leisure trips, physical and mental exercises for destressing, social interaction programmes, financial incentives, *etc.* Tata Indicom is planning to employ visually challenged individuals in its call centres which may boost the morale and employment opportunity of differently able people. In conclusion, it may be said that most of the literature points out that offshoring of IT and IT-enabled services will increase in the coming years without significantly reducing the employment levels in the countries that offshore jobs. Nor will it dramatically change the overall employment situation in the countries providing the offshored services. In this context, World Trade Report (2005), indicates that the impact of offshoring services jobs is far stronger in the popular perception than on actual production, employment and trade patterns. The number of jobs affected by offshoring IT services is small when compared to the overall employment levels in the developed countries. It is also small in the countries which have started exporting IT services when compared to their total employment. However, many of the studies mention about initial loss of employment or change in skill mix due to outsourcing in the service importing country.

2.1 Methodology

Under Balance of Payments format, services come under invisibles. Services can be further subdivided into Travel, Transportation, Insurance, Government Not Included Elsewhere and

Miscellaneous services (including IT/BPO exports). Outsourcing of ITES and Business Process has become prominent in recent years and therefore there is no uniform comparable data for outsourcing to and from different countries in the global context. But a broad comparison can be attempted using the IMF data. In its BoP statistics, the IMF reports services, which includes the categories most closely related to outsourcing- 'computing and information services' and 'other business services'. According to IMF (2006), computer and information services comprise transactions between resident and nonresident related to hardware consultancy, software implementation, information services (data processing) *etc.*; the item 'other business services' covers transactions between residents and nonresidents relating to professional and technical services, miscellaneous business services, merchanting and other trade-related services.

Since a single source of data does not give a comprehensive picture, this study mainly uses three sets of data, *viz.*, data compiled by Reserve Bank of India, under Balance of Payments Statistics, NASSCOM, and IMF.

The objectives and the scope of this study are as follows: Firstly, an analysis using the IMF data is attempted to find out countries that dominate in service exports. Secondly, it computes Revealed Comparative Advantage (RCA) index for different countries to examine countries that have a comparative advantage in business services (proxied as BPOs) and computer software related exports. It also examines whether India has comparative advantage in merchandise goods exports or services exports. Thirdly, it uses firm level data from NASSCOM to study the specific characteristics of India's ITES-BPO sector. Fourthly, it examines ITES-BPOs in India and China so as to find out their relative strengths and weaknesses. Fifthly, it explores the weakness and emerging problems in India's ITES-BPO exports. Finally, it also tries to find out whether the global economic slowdown has had any impact on Software and business service export. Though this study have used the descriptive statistics for most of the stated objectives, it has used the Balassa

Index (1965) to measure the ‘Revealed Comparative Advantage’ (RCA). This is stated in equation 1.

$$RCA=(X_{ij}/X_{it})/(X_{nj}/X_{nt})=(X_{ij}/X_{nj})/(X_{it}/X_{nt}) \dots 1$$

Where X represents exports, *i* is a country, *j* is a commodity (or industry), *t* is a set of commodities (or industries) and *n* is a set of countries. RCA measures a country’s exports of a commodity (or industry) relative to its total exports and to the corresponding exports of a set of countries. A comparative advantage is ‘revealed’, if $RCA > 1$. If RCA is less than unity, the country is said to have a comparative disadvantage in exports of the commodity/industry (Utkulu and Seymen, 2004).

Section III

Service Sector Exports: A Cross-Country Perspective

Since IT/BPO exports are included under service exports, this study present the broad trend in international trade in services. Over the last decade, international trade in services has been growing at a higher rate than trade in goods. The world economy has fast turned into a ‘service economy’ since the 1990s. Around 70 per cent of global GDP comprises of services. The growth of services sector has overtaken the growth in real GDP in a number of countries. While developed countries still account for a major share of services in world GDP and trade, developing countries are catching up in terms of increasing their share in global trade in services. In India, traditionally services relating to trade in goods, such as transportation and financing were the major constituents, the rapid developments in telecommunications and information technology has facilitated the emergence of business and computer services as the main drivers of the export growth (RBI, 2010). This is evident from the rapid rise in India’s share of service exports in world which has shown steady growth from 0.6 per cent in 1994 to 2.7 per cent in 2008 (Ranked 12th in world, China stood 8th with a share of 3.8 per cent in 2008) (Table 2).

The share of India’s service exports in its total exports of goods and services has also shown a rapid rise from around 26.4 per cent in 2000-01 to 35.0 per cent in 2008-09 (Table 3).

Table 2: Top Service Exporting Countries (Share in World)

(in per cent)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	Rank
United States	17.7	19.5	17.6	15.9	15.3	15.1	15.0	14.5	14.1	1
United Kingdom	6.5	7.9	8.3	8.4	8.7	8.1	8.2	8.2	7.4	2
Germany	6.5	5.5	6.3	6.5	6.4	6.4	6.6	6.5	6.4	3
Europe	4.9	4.8	4.8	5.1	5.3	5.6	5.7	6.0	6.7	4
France	6.8	5.3	5.3	5.2	5.0	4.8	4.5	4.3	4.3	5
Japan	5.3	4.6	4.0	4.1	4.3	4.3	4.1	3.7	3.9	6
Spain	3.3	3.5	3.7	3.9	3.8	3.7	3.7	3.7	3.7	7
China,P.R.	1.6	2.0	2.4	2.5	2.7	2.9	3.2	3.5	3.8	8
Italy	5.0	3.7	3.7	3.8	3.7	3.5	3.4	3.2	3.2	9
Netherlands	3.7	3.2	3.4	3.3	3.2	3.1	2.9	2.8	2.7	10
Ireland	0.4	1.2	1.8	2.2	2.3	2.4	2.4	2.7	2.6	11
India	0.6	1.1	1.2	1.3	1.7	2.1	2.4	2.5	2.7	12
China,;HKong	–	2.7	2.7	2.5	2.4	2.5	2.5	2.5	2.4	13
Singapore	2.1	1.9	1.8	1.9	2.1	2.1	2.2	2.3	2.2	14
Belgium	–	–	2.3	2.4	2.3	2.2	2.1	2.2	2.2	15

Source: Balance of Payments Statistics (February 2010), IMF.

Amongst the different services sectors, trade in software services has witnessed rapid expansion in recent years. This is largely due to the increased demand from developed countries like US and EU,

Table 3: India's Exports of Services

(in US \$ million)

	1995-96	2000-01	2004-05	2005-06	2006-07	2007-08	2008-09
Goods and Services	39,654	61,720	128,455	162,811	202,668	256,504	290,679
Services Export	7,344	16,268	43,249	57,659	73,780	90,342	101,678
Services export as per cent of goods and service export	18.5	26.4	33.7	35.4	36.4	35.2	35.0
Computer and Information services	....	4,727	16,344	21,875	29,088	37,491	49,379
Computer and Information services as per cent of Services export		29.1	37.8	37.9	39.4	41.5	48.6
Computer services	....	4,633	16,204	21,711	28,787	37,032	48,626
Computer services export as per cent of Services export		28.5	37.5	37.7	39.0	41.0	47.8
Other business services	2,120	4,149	8,153	12,764	17,536	20,734	20,426
Other business services export as per cent of Services export	28.9	25.5	18.9	22.1	23.8	23.0	20.1

Source: Monthly Bulletin, various issues, Reserve Bank of India (for goods and services exports) and Balance of Payments Statistics (February 2010) IMF.

which are outsourcing their non-core activities to take advantage of the low-cost high-skilled professionals from the developing countries like India. India exhibits a strong revealed comparative advantage (RCA) in services. India's comparative advantage in this area has made India a favorable destination for outsourcing and also exports oriented FDI projects in IT and related area (Table 4).

A Report (2005) by United Nations Conference on Trade and Development (UNCTAD) points out that many of the poorest countries continue to have very low Information and Communication Technology (ICT) penetration rates, in particular those with a large rural population and relatively high-priced basic ICT infrastructure. Only 3.1 per cent

Table 4: Export oriented FDI projects in call centres, shared service centres, IT services and regional headquarters, by destination, 2002-2003

(Number and per cent)

	Call centres		Shared service centres		IT services		Regional HQs	
	No of projects	Share of total (%)	No of projects	Share of total (%)	No of projects	Share of total (%)	No of projects	Share of total (%)
World	513	100	139	100	632	100	565	100
Developed countries	279	54	48	35	293	46	339	60
EU	169	33	38	27	198	31	185	33
Developing economies	203	40	72	52	315	50	209	37
Asia	167	33	66	47	283	45	195	35
China	30	6	4	3	60	9	38	7
Hong Kong, China	2	—	—	—	14	2	37	7
India	60	12	43	31	118	19	7	1
Korea, Rep.	5	1			5	1	6	1
Malaysia	16	3	6	4	8	1	17	3
Phillipines	12	2	1	1	9	1	4	1
Singapore	16	3	8	6	35	6	36	6
Taiwan	4	1	—	—	9	1	4	1
Hungary	11	2	7	5	4	1	4	1
Ireland	29	6	19	14	14	2	15	3
UK	43	8	7	5	73	12	64	11
United States	15	3	2	1	26	4	80	14
Canada	56	11	3	2	14	2	25	4
Germany	20	4	1	1	34	5	22	4

Source: World Investment Report 2004, United Nations Conference on Trade and Development.

of Africans had access to the Internet in 2004, compared with 62.6 per cent North Americans. In EU 15 country average is 50 per cent. This indicates a vast stock of potential outsourcing opportunities for countries like India once the ICT picks up in these regions.

3.1 Exports of Computer and Information Services

IMF data shows that during 2008, India ranks first before industrialised countries like Ireland, UK, US and Germany in exports of computer and information services (Table 5). India's surplus position in trade in computer and information services is rapidly rising (Chart 1). India is attractive because of its low cost of operations, high quality of products and services and availability of skilled manpower.

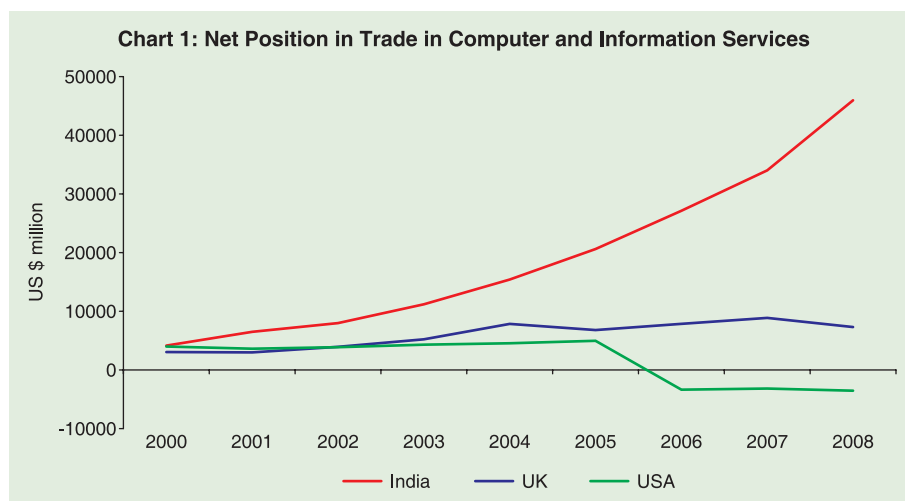
Further, India's share of export of computer and information services in the total service exports is high compared to other countries (Table 6). This indicates the importance of this emerging sector within the growing services sector. Regarding import of computer and

Table 5: Exports of Computer and Information services

(US \$ million)

	1995	2000	2002	2003	2004	2005	2006	2007	2008	Rank
India	....	4,727	8,889	11,876	16,344	21,875	29,088	37,491	49,379	1
Ireland	....	7,490	10,447	14,238	18,774	19,586	21,040	29,825	34,162	2
U.K	1,250	4,320	5,930	8,160	11,260	10,820	12,560	14,210	13,580	3
Germany	1,400	3,800	5,530	6,700	8,090	8,390	9,910	12,600	15,130	4
U.S.A	2,420	5,620	5,390	6,250	6,700	7,320	10,080	11,640	12,600	5
Sweden	....	1,191	1,472	1,993	2,537	2,688	3,585	6,526	7,647	6
Netherlands	620	1,166	1,422	2,884	3,702	3,723	4,969	6,419	6,684	7
Israel	....	4,246	4,180	3,409	4,407	4,529	5,289	5,809	6,852	8
Spain	1,033	2,043	2,490	2,913	2,964	3,606	3,960	5,358	6,119	9
Canada	1,011	2,428	2,266	2,796	3,014	3,600	4,296	4,597	4,642	10
China,P.R.	....	356	638	1,102	1,637	1,840	2,958	4,345	6,252	11
Belgium	....	....	1,774	2,132	2,441	2,581	2,869	2,982	3,616	12
France	360	800	1,190	1,260	1,490	1,710	1,970	1,900	1,530	13
Finland	743	203	503	566	755	1,511	1,475	1,846	8,250	14
Austria	82	296	420	657	899	1,234	1,503	1,833	2,155	15

Source : Balance of Payments Statistics (February 2010), IMF.



information services in the world, the top five importers during 2008 were US, Germany, UK, Netherlands and Japan. India occupied 6th position with import valued at US \$ 3.4 billion and China stood at 8th position with import of US \$ 3.2 billion.

3.2 Exports and Imports of 'other Business Services'

In dollar terms, the top exporters of business services in 2008 are the USA (US \$ 87 billion), the UK (US \$ 83 billion) and Germany

Table 6: Share of Computer and Information Services Export in their Total Services Export

	1995	2000	2002	2003	2004	2005	2006	2007	2008
India	-	28.3	45.6	49.7	42.7	41.6	41.7	43.1	48.0
Ireland	-	40.4	34.9	33.9	35.6	32.7	30.4	32.0	33.6
Israel	-	27.6	34.3	25.0	27.5	26.0	27.6	27.5	28.4
U.K	1.6	3.6	4.4	5.1	5.7	5.2	5.3	5.0	4.7
U.S.A	1.1	1.9	1.9	2.1	1.9	1.9	2.3	2.3	2.3
Germany	1.7	4.6	5.4	5.4	5.5	5.1	5.2	5.6	6.1
Netherlands	1.3	2.4	2.5	4.6	5.0	4.6	5.9	6.6	6.3
Spain	2.6	3.9	4.1	3.9	3.4	3.8	3.7	4.2	4.3
China,P.R.	-	1.2	1.6	2.4	2.6	2.5	3.2	3.6	4.2
Belgium	-	-	4.7	4.8	4.6	4.6	4.8	4.0	4.2
France	0.4	1.0	1.4	1.3	1.3	1.4	1.5	1.3	0.9

Source: Balance of Payments Statistics (February 2010), IMF.

(US \$ 80 billion). India, a country that has received the maximum attention as a recipient of outsourcing, is ranked 15th (US \$ 20 billion) and China ranked 5th, receive contract worth US \$ 46 billion (Table 7). It is interesting to note that eventhough India is highlighted in the media as one of the biggest exporters of business services in the world, there are many industrialized countries ahead of it.

Amiti and Wei (2004) shows that, the media reports indicating US and other developed countries alone outsource (or contract out services) to developing countries like India and China to take advantage of lower cost in these countries is not entirely correct. This is clear from an analysis of IMF data on import of other business services. Comparable data shows that top three importers of business services in 2008 are Germany, US and France. India and China- two countries that are major topic of discussion as major recipients of

Table 7: Exports of Other Business Services

(US \$ million)

	1995	2000	2001	2003	2004	2005	2006	2007	2008	Rank
U.S.A	29,080	48,220	52,310	60,160	66,020	71,730	65,140	77,640	87,040	1
U.K	17,200	33,880	35,770	47,300	57,010	60,450	68,880	81,160	83,370	2
Germany	20,010	24,200	25,880	33,240	43,180	50,680	62,380	72,250	80,400	3
China,P.R.	3,740	7,663	8,448	17,427	19,952	23,283	28,973	40,408	46,349	4
Japan	24,440	17,710	16,240	18,040	21,910	27,280	30,680	32,920	41,130	5
Italy	13,154	13,789	17,024	21,000	24,345	28,216	30,769	35,204	38,853	6
France	23,710	19,300	20,010	24,130	24,930	29,410	29,570	31,630	38,560	7
Netherlands	12,161	15,527	16,599	23,599	26,705	29,924	29,642	33,246	36,107	8
Spain	4,289	8,018	9,385	13,407	16,081	17,886	21,884	27,456	32,862	9
Ireland	1,389	1,908	4,386	7,862	10,498	16,232	18,724	28,279	31,355	10
Singapore	6,689	8,318	8,343	14,378	18,371	21,219	24,732	30,676	30,242	11
Belgium	....	....	....	14,714	16,501	17,577	17,462	23,342	29,457	12
Switzerland	4,376	5,224	5,266	7,744	12,382	15,681	17,659	21,271	29,190	13
Sweden	2,566	6,482	6,912	11,148	14,020	15,583	18,120	22,942	27,070	14
India	2,120	4,149	2,349	2,229	8,153	12,764	17,536	20,734	20,426	15
Canada	5,853	10,402	9,451	12,011	13,354	15,183	15,774	17,164	17,945	16
Austria	11,836	5,384	6,341	8,254	9,618	11,423	12,635	14,362	16,652	17
Brazil	1,249	4,568	4,613	4,133	4,938	6,722	8,568	11,064	14,331	18
Norway	1,682	4,014	3,458	4,470	5,708	6,670	9,123	12,517	13,551	19
Korea, Republic of	6,761	7,200	6,388	6,687	8,125	9,422	10,532	14,421	13,157	20

Source: Balance of Payments Statistics (February 2010), IMF.

outsourcing are themselves significant outsourcers of business services (with a value of US \$ 21 billion for India and US \$ 38 billion for China, and ranked 13th and 7th in the world respectively. This clearly points out that the biggest importers in business services are leading developed countries like US and UK followed by emerging countries like India and China. Amiti and Wei 2004, pointed out that there is nothing unusual in larger economies like USA, UK *etc.*, trading more than smaller ones. To get an idea of relative importance of outsourcing for an economy, it is important to know the share of imports in the economy, *i.e.* imports as per cent of GDP. If one scales imports of business services by domestic GDP, smaller African economies like Angola, Congo *etc.* are much more outsourcing-intensive than developed countries like US and UK. In conclusion, we can say that even though industrialized countries outsource (contract work to other countries) more than developing countries in absolute terms, in terms of size of economy (GDP), it is poor countries which import more than developed countries. The belief that global service trade is dominated by lopsided one-way outsourcing from developed countries to developing countries is not supported by the available data. It is particularly important to note that developed countries like US and UK who are big exporters and importers of services are also gaining from trade in services. Short term job losses in these countries if any, due to outsourcing are well compensated by cost reduction and productivity gain made by these countries. The net result of outsourcing is that, both developing countries and developed countries are ultimately gaining. For example, while industrial countries gain in terms of productivity, cost reduction *etc.*, developing countries gain in terms of employment, foreign exchange earning *etc.*

3.3 Revealed Comparative and Competitive Advantage in India's Service Exports: An International Comparison

Tables 8 and 9 presented below gives the RCA indices calculated using IMF BoP statistics. A broad comparison clearly points out that India have advantage in exporting services which includes outsourcing

Table 8: RCA-Export of Goods of Select Countries

	1995	2000	2002	2003	2004	2005	2006	2007	2008
Mexico	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
China,P.R.: Mainland	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Germany	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Netherlands	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Japan	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0
Philippines	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0
Singapore	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
France	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
United States	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
India	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
United Kingdom	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Ireland	1.1	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7

Source: Author's calculation based on IMF February (2010) data.

of services when compared with export of goods. Further, the indices point out that in case of India, the revealed comparative advantage in goods export is gradually coming down while that of services export is going up.

Data for calculating RCA at a more disaggregated level is available only for few countries. Computation of RCA indices for select countries shows that India and Ireland have clear revealed

Table 9: RCA-Export of Services of Select Countries

	1995	2000	2002	2003	2004	2005	2006	2007	2008
Ireland	0.5	1.0	1.3	1.6	1.7	1.9	2.1	2.2	2.4
United Kingdom	1.3	1.5	1.6	1.7	1.8	1.8	1.8	2.0	2.0
India	0.9	1.4	1.4	1.4	1.6	1.7	1.9	1.8	1.8
United States	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5
France	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Singapore	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.1	1.0
All Countries	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Philippines	1.8	0.4	0.4	0.4	0.5	0.5	0.6	0.8	0.9
Japan	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9
Netherlands	1.0	1.0	1.0	1.0	0.9	1.0	0.9	0.9	0.8
Germany	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
China,P.R.	0.7	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.5
Mexico	0.6	0.4	0.4	0.4	0.3	0.4	0.3	0.3	0.3

Source: Author's calculation based on IMF February (2010) data.

Table 10: RCA-Export of Computer and Information Services of Select Countries

	2000	2005	2006	2007	2008
India	9.4	9.9	9.2	9.0	9.2
Ireland	13.4	7.8	6.7	6.7	6.4
Netherlands	0.8	1.1	1.3	1.4	1.2
Germany	1.5	1.2	1.1	1.2	1.2
United Kingdom	1.2	1.2	1.2	1.0	0.9
China,P.R	0.4	0.6	0.7	0.7	0.8
Philippines	0.7	0.5	0.3	0.7	0.8
United States	0.6	0.5	0.5	0.5	0.4
Singapore	0.3	0.2	0.4	0.4	0.4
France	0.3	0.3	0.3	0.3	0.2
Japan	0.8	0.2	0.2	0.2	0.1

Source: Author's calculation based on IMF February (2010) data.

advantage in export of computer and information services over developed country like USA (Table 10).

3.3.1 Sources of Comparative Advantage of Indian Outsourcing sector

Low salary, vast talent pool, suitable geographical time zone and proficiency in English language are the major source of comparative advantage of Indian outsourcing sector. ITES/BPO firms rely upon a business model that arbitrages between high employee salaries abroad with low cost personnel in India. Even though salary is rising, the Indian outsourcing sector continues to enjoy comparative advantages because many of the ITES/BPO firms are expanding their operations to second-tier cities where cheap labour and space are still available. The Indian diaspora also played a major role in making India a preferred destination for outsourcing. In US, the Indian population (approx 1.9 million) is the third largest Asian group after China (2.7 million) and Filipinos (2.4 million). Over 25 per cent of all scientists and engineers in Silicon valley high-technology companies are from India. Many of them have contributed to the growth and success of service industry in India (Varma and Rogers, 2004). It is expected that they will continue to help India retain its edge and move up value chain in outsourcing. Further, favorable time zone difference with North America and

Europe is an advantage to India as the foreign companies can outsource their work from India in night and thus can function without any interruption to their operations and customer service (almost like working for 24 hours a day).

3.4 ITES/BPO firms and Inclusive Growth

Inclusive growth remains a major goal for the Indian Government and industry. High GDP growth has to be accompanied by more balanced development, with the benefits of progress being shared by citizens at the grass root levels. The Indian IT-BPO sector can be instrumental in bringing about financial, cultural, gender and digital inclusion (Table 11). By setting up BPO centres in a Tier-III location (outside city limits), a company would not only be providing

Table 11: IT-BPO sector and India's Inclusive Growth

Key Area	Role for IT-BPO sector
Healthcare	50 per cent of Indians do not have access to primary healthcare-Information technology can provide it at half the cost
	Effectively increase outreach to rural populations
	Enable remote access to doctors through electronic diagnostic devices and real time video conferencing
	Building and operating next-generation processes
Financial services	A large chunk of Indian households are unbanked. Technology can enable access for 200 million families
	Overcome challenges to provide financial services in rural areas
	mobile banking and remittance; Internet kiosks for distribution of select financial products; Low cost ATM
Education and skill development	India faces a three-fold shortage in teachers-technology can address this through remote solutions
	ICT solutions can overcome challenges of teaching(e.g., virtual classrooms, recorded lectures by senior faculties, modular multimedia content)
Public services	India suffers from a leakage of 40-50 per cent in public food distribution-Information technology can ensure transparency
	e-Governance enhancing basic citizen services
	UIDAI to create identity for each citizen in the country
Connectivity and Access	Community service centres, with broadband connectivity, to provide all government to citizen services-also create opportunities for livelihood

Source: NASSCOM, Strategic Review, 2010.

employment for the persons involved in the process work, but also for individuals employed in administration, back office duties and other clerical work.

In conclusion, the excitement regarding India's software exports is not just about foreign exchange earnings or employment-generation. Rather, it can be an instrument for multifold impact on the economy.

3.5 Major characteristics of Indian ITES and Outsourcing Sector

This section analyse the Indian ITES and BPO sector using two sets of complementary data. The data from balance of payments statistics compiled by Reserve Bank of India and the industry level data provided by NASSCOM. BPO and IT enabled services form part of the item invisibles under current account of India's BoP. The RBI data shows that share of software services and non-software miscellaneous services exports (which includes outsourcing) in total services exports is increasing (Table 12 & 13).

Table 12: Break up of India's Services Exports (Share in per cent)

	Travel	Transportation	Insurance	G.N.I.E	Software services	Non-software miscellaneous services	Total services in US \$ million
1990-91	32.0	21.6	2.4	0.3	–	43.6	4,551
1995-96	36.9	27.4	2.4	0.2	–	33.1	7,342
2000-01	21.5	12.6	1.7	4.0	39.0	21.3	16,268
2001-02	18.3	12.6	1.7	3.0	44.1	20.3	17,140
2002-03	16.0	12.2	1.8	1.4	46.2	22.4	20,763
2003-04	18.7	11.9	1.6	0.9	47.6	19.2	26,868
2004-05	15.4	10.8	2.0	0.9	40.9	29.9	43,249
2005-06	13.6	11.0	1.8	0.5	40.9	32.1	57,659
2006-07	12.4	10.8	1.6	0.3	42.4	32.4	73,780
2007-08	12.6	11.1	1.8	0.4	44.6	29.6	90,342
2008-09	10.7	11.1	1.4	0.4	45.5	30.9	1,01,678

Source: Monthly Bulletin, various issues, Reserve Bank of India.

Table 13: Export and Import under Miscellaneous Services

(US \$ million)

	Exports		Imports	
	2007-08	2008-09	2007-08	2008-09
Miscellaneous services	67,010	77,691	29,298	27,879
<i>Of which:</i>				
Communication	2,408	2,172	860	1087
Construction	764	867	707	896
Financial	3,217	3,948	3,133	2,958
Software	40,300	46,300	3,358	2,814
New agency	503	800	506	385
Royalties, copyrights etc	157	133	1,037	1,722
Business services	16,772	16,445	16,553	15,435

Source: Monthly Bulletin (2010), Reserve Bank of India.

3.5.1 Market Scenario and Delivery Model

Nasscom, 2010 projects that IT services is expected to grow by 2.4 per cent in 2010 and 4.2 per cent in 2011 as companies coming out of recession use information technology to create competitive advantage. Further, government IT spending continues to rise across the world, focusing on infrastructure and security. Apart from these services, some other important upcoming segments in the outsourcing industry include payments services, administration and content development. Several services in developed countries, which are previously not globally sourced, are expected to do so in the immediate future. For example, due to the increased spending requirement on health care and pensions (driven by ageing population), the public sector and health care providers will increasingly depend on technology and service providers for solutions to reduce the cost to serve. Further, energy companies and utilities will look for solutions to monitor and optimize their carbon footprint in line with emission requirements (Nasscom, 2010). Country wise, US and UK are primary geographic segments for the Indian IT-BPO sector. Relatively better economic growth in Asian countries compared with Europe means Asia turning into an important market for services. One important fact to note is that, historically US has

displayed increased IT spending post recession, and this time it is not different. This is because US companies are following the strategy of cutting costs and increasing competitiveness through outsourcing to face recession (Nasscom, 2010). Indian vendors are now actively developing the Asia Pacific region as a potential market. Japan and Middle East also offer significant untapped potential. Indian companies have increased their efforts to train their employees in various foreign languages and business culture, especially German and French. ITES/BPO companies are also following the strategy of recruiting local executives abroad for selling and marketing and other client-facing functions. Joint ventures and tie ups with local firms are also attempted. Besides the export market, strong growth of Indian economy may expand the domestic IT-BPO services market. Nasscom, 2010 indicate that domestic BPO segment is expected to grow at a compound annual growth rate of 21 per cent in 2011.

Regarding delivery model, there is a trend towards growing share of offshore development, compared with on-site services. Onsite services are performed at client location/country by sending professionals abroad while offshore services are performed at software development centers located in India. Billing rates for offshore software development are lower than onsite billing rates. The Services performed onsite generate higher revenues per-capita, but a lower gross margins in percentage as compared to the services performed at own development centres (Infosys 2009-10).

Section IV

Competitor Countries: A Comparative Study with China in Focus

Any study involving a comparison between India and China is very relevant as China is generally considered as a major competitor of India. The BPS and ITS sectors in China are predominantly serving the domestic market. China's domestic markets for BPS and ITS are rapidly growing due to increasing demand from Chinese and foreign-owned multinationals that operate in China.

Structure and scale: According to a Nasscom whitepaper (2007), China's IT/BPO growth is being driven by its domestic market while

India is having predominantly an export led growth. The domestic market accounts for over 85 per cent in China.

Export destination: Indian IT –BPO exports are predominantly serving the US and the UK markets, which together account for more than 80 per cent of the total exports. On the other hand, China's key export markets are Japan and Korea, where it has certain inherent linguistic / cultural advantages.

Service Portfolio: The portfolio of IT-BPO services exports from China is dominated by application development, coding/testing and localization services. The portfolio of services sourced from India is more broad based including, application management, infrastructure services, offshore product development and engineering services.

In short, the IT-BPO sectors in India and China are at different stages of evolution and are following different trajectories of growth. Many Indian BPS and ITS companies had approached China as an opportunity rather than a competitive threat. Leading Indian companies had established branch offices in China to take advantage of cultural similarities to serve clients in neighboring Japan and Korea. The rapidly growing domestic market in China also provides good opportunity. Further, China's reforms in the banking sector will put pressure on domestic banks to increase productivity and computerization and this is expected to increase the market for BPS and ITS.

In this context it may be indicated that a report by 'Deloitte' (2003) found that among offshoring supply countries, India is still the distant leader (Table 14). The key factors considered while selecting an offshoring location are cost (38 per cent), proficiency in language (22 per cent), industry expertise (18 per cent), technology infrastructure (9 per cent), time zone (5 per cent), political risk (4 per cent) and climate (1 per cent).

However, studies have shown that inadequate quality of infrastructure is one of the major disadvantages of Indian IT export

Table 14: Leading Countries in Offshoring Related Exports

Ist Tier	2 nd Tier (Challengers with moderate offshoring capabilities)	3 rd Tier (Up-comers-with only limited experience)
India	Canada China Czech Republic Hungary Ireland Israel Mexico Philippines Poland Russia Spain South Africa	Belarus Brazil Caribbean Egypt Latvia Mauritius Singapore New Zealand Ukraine Venezuela

Source: Deloitte (2003)

sector when compared to ITES exporting countries, such as, China, Canada, Ireland, Israel, South Africa and Philippines (Table 15).

Table 15: Overall Comparison of Indian IT sector with IT sector of Select Countries (2003)

	India	Canada	Ireland	Israel	Philippines	S. Africa
IT export industry size (US \$ million)	9500	3780	1920	900	640	96
Active export focused IT professionals	195000	45000	21000	15000	20000	2000
IT employee cost (US \$ per employee)	5000-12000	36000	25000-35000	25000	7000	18000
Number of CMM level 5 certified companies	60	NA	0	0	NA	NA
IT labour force	Low cost, high quality	High cost, High quality	High cost, High quality	High cost, High quality	Low cost, moderate	Moderate
Infrastructure	Average	Good	Good	Good	Good	Good
Main Advantages	English language skills, qualified workforce, good management	Near shore, highly compatible cultures with UK and US	Large development centers of companies like Microsoft	Advanced Technology	Good English and cultural compatibility	Language skills

Source: Nasscom (2004), Strategic Review.

4.1 Facing the Competition: Government Policy towards IT Sector

Supportive government policy has helped Indian outsourcing sector. The state funded IITs and other institutes of higher learning created a pool of skilled labour. The policy for construction of software technology parks allowed firms to increase revenues from offshore projects. The Export Oriented Units (EOUs) and units under Electronic Hardware Technology Parks (EHTPs), Software Technology Parks (STPs), Special Economic Zones (SEZs) and Bio-Technology Parks (BTPs) schemes are entitled to avail several facilities/benefits including exemption from payment of income tax under Section 10A and 10B of the Income Tax Act. Nasscom has called for the continuation of Software Technology Parks of India (STPI) scheme for a 10 year period as the number of start-up companies could decline in the absence of the scheme. The STPI scheme, allowed tax breaks to make IT business affordable for SMEs and start-ups.

Further, Government of India passed the IT Act 2000, which attempts to change outdated laws and provides ways to deal with cyber crimes. The Act offers the much-needed legal framework so that information is not denied legal effect, validity or enforceability, solely on the ground that it is in the form of electronic records (CYBERLAWSINDIA.net). In view of the growth in transactions and communications carried out through electronic records, the Act seeks to empower government departments to accept filing, creating and retention of official documents in the digital format. The Act has also proposed a legal framework for the authentication and origin of electronic records / communications through digital signature. These measures are expected to help further growth of ITES-BPO services from India.

Section V

Emerging Challenges for India's Outsourcing Sector

5.1 IT Exports and Exchange rate

The invoice in US dollar accounted for the maximum share of software services exports of India followed by Pound sterling and

Table 16: Invoicing Pattern of India's Software Service Exports

Currency	Exports (US \$ million)	Share (in per cent)
US \$	26,259	75.4
Euro	2,215	6.4
Pound Sterling	4,466	12.8
AUD	626	1.8
Indian Rupee	441	1.3
Other	834	2.3

Source: Monthly Bulletin (2009), Reserve Bank of India.

Euro (Table 16). Therefore, wide fluctuations in the value of US \$ in a short period may have an impact on India's software exports and IT companies. However, it is also said that the margins in the software and BPO exports are large enough to absorb reasonable currency appreciation. To understand the full impact of exchange rate movements on exports, several indicators need to be examined such as the real effective exchange rates, the movement of relative exchange rates of competitor countries, price elasticity of products *etc.* Value addition, product and destination diversification, hedging, increased productivity, changing delivery mix to countries where the currency appreciation has not been steep provides cushion to IT/BPO firms. Table 17 indicates that in the past few years minor fluctuations in rupee have not affected the exports much.

Table 17: IT-BPO Exports and Exchange Rate

	REER	Fluctuations (in per cent)	Software Exports (US \$ Million)	Growth Rate (in per cent)	Business service Exports (US \$ Million)	Growth Rate (in per cent)
2000-01	98.67	-	6,341	-	334	-
2001-02	98.59	-0.1	7,556	19.2	519	-
2002-03	95.99	-2.6	9,600	27.1	807	-
2003-04	99.07	3.2	12,800	33.3	1296	-
2004-05	98.30	-0.8	17,700	38.3	5,167	-
2005-06	100.54	2.3	23,600	33.3	9,307	80.1
2006-07	97.42	-3.1	31,300	32.6	14,544	107.0
2007-08	104.52	7.3	40,300	28.8	16,772	15.3
2008-09	94.12	-10.0	46,300	14.9	16,445	-1.9

Source: Monthly Bulletin, various issues, Reserve Bank of India.

However, there is another view that the appreciating exchange rate along with rising costs may dampen the attractiveness of exports. In this regard, the IT industry is apprehensive that the rupee appreciation would have a multifold ramification for IT-ITES industry, especially once the tax holiday is over for Software Technology Park Scheme (STP). It may be indicated that if an industry is importing raw materials for exports, the severity of appreciation of currency is partially offsetted (Table 18). This is not the case with IT/BPO firms as they are not import dependent. The NASSCOM, has expressed concern over the adverse impact of rupee appreciation on IT and BPO sectors, warning that it could affect their long-term prospects. The small and medium companies are hit hard. According to Nasscom one per cent rise in the rupee value would affect the bottom-line of the industry by 30 to 40 basis points.

Table 18: Impact of Currency Appreciation

Characteristics of Export	Output/Exports	Employment
High intensity in use of imported input in production	Rupee appreciation will reduce the import cost of inputs. These sectors must be able to partially / fully neutralize the affect of appreciation in export market	In these sectors employment in export units may not get hurt but down stream input sectors may have the pinch. If the sector uses inputs which are based on labour intensive technology, high import of inputs will negatively affect the employment as well as production of import-competing input sectors. If the sectors uses capital intensive production, there will be less severe effect on employment.
Low intensity in use of imported inputs in production	Rupee appreciation will make these sectors uncompetitive unless deflationary pressure reduces the cost of production sufficiently.	These sectors will receive maximum jolt. As export demand goes down, induced demand of inputs will also come down. Employment will be hard hit if the sector uses labor intensive technology.

Source: Annual Report (2007-08), Ministry of Commerce.

5.2 *Salary Rise*

The growth of IT sector and quality upgrading has been so fast that there are fears of an emerging shortage in talent (Srinivasan 2006). Wages in India have been rising at a rapid rate, from 13.7 per cent in 2004 to 14.5 per cent in 2007. Studies point out that even though wages are still lower in India (Table 19), the pay hike given in India is much higher than Japan, China and Philippines (2.7 per cent, 8.2 per cent and 8.4 per cent respectively). The human resource costs in the BPO sector which is pegged at 53 per cent of budgetary allocations is expected to rise in future (Rajawat, 2008). Faced with the rise in salary, Indian suppliers have started sub-contracting their routine works to China to capitalize the prevailing lower wage rates there.

5.3 *Information Security Environment in India*

In this area, Indian companies have robust practices and procedures. Indian companies primarily comply with BS 7799 (a global standard that covers all domains of security) (Nasscom factsheet). Companies sign service level agreement (SLA), which

Table 19: Wage indicator for Select Countries, 2005

	China	Czech Republic	India	Philippines
Average annual ITO salaries (US \$)				
Entry level	5,700	12,000	5,700	7,300
Team Lead	9,600	19,500	9,400	11,900
Project Manager	15,000	36,100	14,600	18,400
Average annual non-voice BPO salaries (US \$)				
Entry level	4,300	9,600	4,500	5,700
Team Lead	7,500	15,600	7,600	9,600
Project Manager	11,700	28,800	11,800	14,900
Average annual voice BPO salaries (US \$)				
Entry level	4,100	9,100	4,300	5,500
Team Lead	7,100	14,600	7,200	9,200
Project Manager	11,100	27,100	11,200	14,200

Source: Organization for Economic Co-operation and Development (2007).

have very strict confidentiality and security clauses built into them at the network and data level. Most of the BPO companies providing services to UK clients ensure compliance with UK data protection act 1998 through contractual agreements. Many companies in India are undergoing / have undergone SAS-70 Audit. SAS-70 assignments helps service companies operating from India to implement and improve internal controls, ensure minimal disruptions to business and is potent marketing tool in the face of increasing competition (Nasscom factsheet). NASSCOM has taken a holistic view of information security through its 'Trusted sourcing initiatives' to strengthen the regulatory framework and further improve India's attractiveness as an outsourcing destination. This multi-pronged initiative is targeted at employees, organizations, enforcement agencies and policy amendment, through a '4E' framework- Engagement, Education, Enactment and Enforcement. Further, NASSCOM has undertaken to create, operate and maintain a national database of employees working in the IT/BPO sector in India, known as the National Skills Registry (NSR): a centralized database of all employees of the IT services and BPO companies in India. Launched in January 2006, NSR is a pan-India online database containing third party verified personal, qualification and career-related information of IT-BPO professionals (Nasscom factsheet).

5.4 Business Environment

The global IT competitiveness index (by Economist Intelligence Unit) ranks India 48th in the world in 2008. The study conducted in 66 countries ranks US as the most competitive country followed by Taiwan and UK. Improving the business environment is a major challenge for Indian outsourcing sector. To maintain competitiveness, domestic business environment have to be considerably improved in India. Almost all ITES exporting countries are having a better business environment than India (Table 20 & Chart 2).

Table 20: Ease of Doing business Rank

Economy	Singa.	USA	Ireland	Israel	Netherla.	S. Africa	China	Brazil	India	Philipp.
Ease of Doing Business Rank	1	4	7	29	30	34	89	129	133	144
Starting a Business	4	8	9	34	70	67	151	126	169	162
Dealing with Construction Permits	2	25	30	120	104	52	180	113	175	111
Employing Workers	1	1	27	90	123	102	140	138	104	115
Registering Property	16	12	79	147	29	90	32	120	93	102
Getting Credit	4	4	15	4	43	2	61	87	30	127
Protecting Investors	2	5	5	5	109	10	93	73	41	132
Paying Taxes	5	61	6	83	33	23	125	150	169	135
Trading Across Borders	1	18	21	11	13	148	44	100	94	68
Enforcing Contracts	13	8	37	99	30	85	18	100	182	118
Closing a Business	2	15	6	41	10	76	65	131	138	153

Note : Economies are ranked on their ease of doing business, with first place being the best. A high ranking on the ease of doing business index means the regulatory environment is conducive to the operation of business. The rankings are from the Doing business 2010 report covering period June 2008 through May 2009.

Source : World Bank (2010), Doing Business Report

5.5 Quality of Infrastructure

The quality of infrastructure in a country, including power and communications, is an important element in investment decisions for both domestic and foreign investors. India's internet scenario is plagued by low PC penetration and low telephone penetration. India lags behind other countries such as China, Japan, and Philippines in terms of internet penetration. Internet bandwidth infrastructure is critical to the growth of the ITES-BPO sectors in the country. India's position in IT

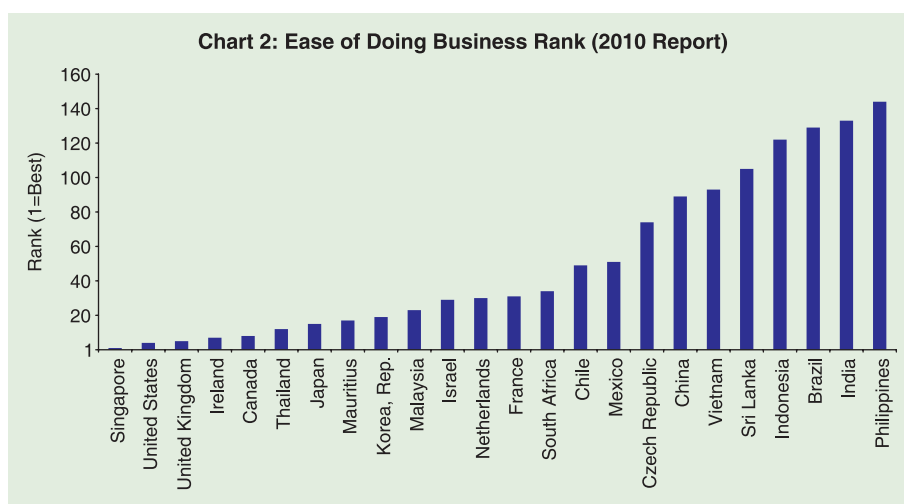


Table 21: Personal computers (per 100 people)

	2000	2001	2002	2003	2004	2005	2006
Netherlands	40	43	47	51	68	85	91
United States	57	62	-	-	76	78	81
United Kingdom	34	37	40	44	60	76	80
Singapore	48	51	56	62	66	69	72
Germany	34	38	43	48	55	61	66
France	30	33	35	42	50	57	65
Ireland	36	39	42	46	49	53	58
Czech Republic	12	15	18	21	24	27	-
Malaysia	9	13	15	17	19	22	23
Mexico	6	7	8	10	11	14	14
Philippines	2	2	3	3	4	5	7
China	2	2	3	4	4	5	6
India	0	1	1	1	1	2	3

Source: World Bank Online database

infrastructure, even though is improving, is not anywhere near the developed countries. Further, it heavily lags behind India's competitor countries like, China, Ireland, Czech, Netherlands, Philippines, *etc* in the case of availability of personal computer (Table 21). However, eventhough, India's quality of infrastructure is poor; it can be seen from the table that price for internet use in India is internationally competitive in US dollar terms (Table 22).

Table 22: Fixed broadband Internet access tariff (US\$ per month)

	2008
Netherlands	38
Ireland	38
Germany	38
France	38
Mexico	37
United Kingdom	29
Czech Republic	29
Philippines	23
Singapore	22
Malaysia	20
China	19
United States	15
India	6

Source: World Bank Online database.

5.6 *Free Trade Agreements*

Multilateral or bilateral trade agreement in services sector would be helpful for strengthening existing markets and exploring new markets and new areas of trade. India may enter into bilateral free trade agreement in services to intensively explore the foreign markets. In this context, the comprehensive economic cooperation agreement (CECA) between India and Singapore are worth noting. India and Singapore signed a CECA under which both the countries guarantee access into each other's market. Further, both the countries may not restrict access into their service market by imposing quantitative restrictions.

5.7 *Anti-Outsourcing Legislations and protectionism*

There is a rise in anti-outsourcing legislations world-wide. The Committee of European Banking Supervisors (CEBS) has put out a consultative paper proposing a total ban on outsourcing of strategic or core activities (Business Standard, 2004). However, it is also said that some of the anti-outsourcing bill in US may violate its international trade obligations and therefore will not be passed. But the fact that there is a general mood to prevent contracting of services to other countries under various pretext remains (Table 23).

Further, there are moves to impose restrictions on movement of professionals especially after the September 11, 2001 terror attack. Also, opposition to H1B quota of 65,000 exists due to growing unemployment in US (Varma and Rogers, 2004). Moreover, the Grossley-Durbin Bill in the US aims to set tougher wage standards (which may increase salaries of H-1 B workers) and also impose limits on the number of visa workers to 50 per cent of the workforce. This may force companies to hire more locals instead of professionals from India (Business Standard, 2009). In this context, it may also be noted that, a phenomenon known as 'reverse outsourcing' has begun to assert itself. For example, the Indian outsourcing firm Wipro has added many US based consultants to its staff.

Table 23: Proposed Anti-Outsourcing legislations in United States

State	Proposed legislation
Alabama	State contract restrictions on overseas work; call centre restrictions
Arizona	Ban on state contracts with foreign call centres, call centre and data transfer restrictions.
California	State contract ban, call centre, personal data and health-care information restrictions, outsourcing notification requirement
Colorado	State contract ban, ineligibility for state contracts and develop. assistance if outsourcing causes job losses
Florida	In-state resident requirement for state contractors
Georgia	State contract ban and call centre restriction, including state contract ban on foreign call centres
Hawaii	Ban on state contracts with foreign call centres, call centre and data restrictions
Idaho	Employment preference for state residents
Illinois	State contract ban, in-state preferences
Indiana	State contract ban, in-state preferences
Iowa	State contract ban
Kansas	Ban on state contracts, call centres and data transfer restrictions
Kentucky	State contract ban
Louisiana	State contract ban, in-state preferences
Washington	Ban on state contracts, call centres and data restrictions
West Virginia	Call centre restrictions, seven-year ban on state contracts and assistance to companies that outsource overseas and have 100-person job loss.

Source: World Investment Report 2004, United Nations Conference on Trade and Development

5.8 *Diminishing Returns*

It is indicated that IT/BPO sector is also subjected to diminishing returns and this may eventually reduce its potential. Unchecked IT spending, unnecessary complexity, redundant systems *etc* may lead to diminishing returns from this sector. It is well known that huge investments in information technology has lead to the productivity gains in the US and other advanced countries during early stages (in the 1990s). Since then, companies have continued to spend heavily on IT systems. However, the contribution made to productivity growth has been steadily declining. Instead of supporting innovation, the bulk of spending ends up maintaining existing systems. It is reported that, in 2007, only 13 per cent of the average IT budget supported innovation in business processes or products. The remaining 87 per cent is meant for maintenance and upkeep (Pricewaterhousecoopers, 2008).

5.9 Global Economic Slowdown and IT/BPO Exports

A global survey by 'Goldman Sachs' has found that IT budgets of various companies were declining in 2009 when compared to 2008. The decline was across the sectors including Government IT budgets. Further, due to global economic slowdown, IT companies are going slow on H-1 B visa applications. It may be noted that for the financial year 2009 (till July 2009) approximately 44, 900 applications for H-1 B visas were filed against the quota of 65,000. On the other hand in 2007 and 2008, the 65,000 cap was met within just two days (Business Standard, 2009). Further, when compared with 2007-08, the average growth of India's ITES-BPO exports have come down significantly during 2008-09 and 2009-10 (Table 24).

5.10 Other challenges

Many Indian BPO's had lost orders due to various factors ranging from ignorance of 'cultural' issues of home countries, lack of language

Table 24: Recent Trends in IT/BPO Exports

(Growth in per cent)

	Software Services	Business Services	Total Services	Merchandise
2007-08				
April-June	25.5	11.0	18.0	23.4
July-Sept	27.1	13.3	28.0	17.5
Oct-Dec	26.4	24.3	30.7	39.7
Jan-March	34.3	12.4	14.9	34.7
Average	28.3	15.3	22.9	28.8
2008-09				
April-June	37.6	-5.5	21.8	57.0
July-Sept	35.0	24.3	32.9	39.6
Oct-Dec	19.1	-12.6	11.8	-8.4
Jan-March	-12.7	-15.1	-9.7	-20.0
Average	19.8	-2.2	14.2	17.0
2009-10				
April-June	-8.9	-27.4	-10.4	-34.0
July-Sept	-10.2	-48.3	-25.2	-21.8
Oct-Dec	15.3	-34.6	-12.3	13.2
Average	-1.3	-36.8	-16.0	-14.2

Source: Author's calculation based on Monthly Bulletin, various issues, Reserve Bank of India.

abilities other than English, lack of technical proficiency, credit card frauds and misuse of personal information. Further, some segments of outsourcing such as engineering services outsourcing has close links with manufacturing and it may be difficult for India to succeed in outsourcing sector without significantly enhancing manufacturing capabilities. India's weak engineering and physical infrastructures are likely to hamper the growth of services outsourcing in future.

Section VI

Conclusion

In conclusion, the study proves that India is having revealed comparative advantage in exports based on ITES-BPO services. World trade in services is growing at a much faster rate than trade in goods. This will give a good opportunity to India to raise its share of world trade if adequate attention is given to service sector especially to ITES-BPO sector. Government of India has already taken some initiatives in this regard by giving fiscal concessions to service sector. Regarding competition from China, as of today it is not a serious threat to outsourcing business of India. Indian companies had reasonably succeeded in maintaining an edge over Chinese companies in the quality and marketing of service exports. IT infrastructure and general business environment are two areas where India clearly lags behind almost all other competitors in outsourcing arena. Another important finding is that even though there is lot of media attention on outsourcing sector in India and other developing countries, especially regarding loss of employment in developed countries like US and UK due to contracting of services to abroad, the maximum gain from services trade is actually going towards these countries. McKinsey study revealed that more than three-fourth of the value being created in the global economy through offshoring goes to US and receiving countries like India get only 22 per cent (Dey 2004). Eventhough India maintain its lead status as a source country for a variety of IT related services, there are number of emerging challenges which require immediate attention. Anti-outsourcing legislation and growing protectionism in western countries need to be closely monitored.

There is an urgent need to diversify services export to other countries rather than concentrating only on US and Europe. In this regard, major Indian IT companies have adopted the strategy of acquisitions and alliances to increase the portfolio of services, and cater to new markets such as the Middle-east Asia, Singapore, *etc.* Indian service providers should move up the value chain to make up for the loss of rise in wage cost *etc* and to increase their profitability. Setting up of overseas offices through joint ventures and collaboration with foreign companies and recruiting local talents from abroad is a strategy to bridge the gap in culture and language while exporting to non-English speaking countries. Free trade agreements in services with other countries may be attempted to further consolidate the gains India already made. In short, India has already made an impact in the outsourcing area. However, to maintain its lead and capture new markets and areas, Indian service industries should remain vigilant.

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