Economic Participation of ICT sector in the Global Integration Case Studies of Indian Economy

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Abstract: The developing countries have been increasing their contribution of ICT in global trade year by year. The global ICT service market is shifting to developing countries rapidly. The study on ICT sector has undertaken by different scholars and researchers. However, such studies on ICT sector fall short in undertaking a complete analysis of developing countries economic participation in perspectives of globalization. This paper seeks to evaluate the present and future prospects of ICT service of a developing country in India particular. To find answers to the queries and objectives the present study used the secondary database research methodology. The present study constructs arguments and attempts to bring out the issues related to the developing world. The present study points out an overview of participation of developing countries in the market integration. In order to explicate economic participation of ICT sector in the global integration this paper divided into two sections.

Keywords: Service Sector, Information and Communication Technology (ICT), Developing Economies, Indian Economy and Market Integration.
First Section

1. Introduction

In the process of globalization, service sector trade has a great importance for both the developed and developing economies. The policy of liberalization and elimination of regulation has encouraged the trade of services in the process of globalization. The increasing share of service sector in the GNP of developed and developing economies is the mark of world economies transformation. In more than 120 countries, share of service sector in GNP has increased in only twenty-one countries it has declined during the period 1980-1997. In the middle-income countries, the service sector share in GNP has increased from 40 to 50 per cent and in all low-income countries; it has grown from 38 to 42 per cent. As far as developed countries are concerned, in the USA service sector’s share in GNP rose from 58.3 per cent in 1960 to 64 percent in 1980 and 71 per cent in 1997. Between the period 1980 and 1997 the service sector share in GNP raised from 60 per cent to 70 per cent in the Netherlands. In the same period, in the UK’s economy share of service sector raised from 64 per cent to 71 per cent. In 1985, the share of service sector in GDP of major thirteen developed economies was averaged 65 per cent as compared with 55 per cent in 1965. During the same period the share of service sector in GDP of main forty-one developing countries has increased from 42 per cent to 47 per cent (Yair & Nachum, 2002). The investment and international trade in services has been increasing rapidly because of market integrations. Developing and developed economies have been promoting trade related openness to services. The innovation in technology stimulates trade in services among continents. The trade in services and entry of new nations in services trade both these events are increasing. Many countries are now allowing investment in their nation in order to expand trade in services. Developing countries are trying to implement the less
protection trade policy to services. In the elimination of trade barriers, some developing countries have comparative cost advantages in the process of globalization in services. The contributions of developing countries have been increasing continuously since the last two decades. Developing countries’ share in world export of services during 1986-2002 is shown in figure 1.1. Developing counties share in world exports has increased from 14.2 per cent to 19.9 per cent between the period 1986 and 2002.

The service sector involves, services like hotel and restaurants, tourist assistance, railways, entertainment services, medical and health services, education, storage, banking and insurance, public administration, business and management consultancy, advertising, architectural and engineering consultancy other technical consultancy and last but not least Information and Communication Technology (ICT). However, this paper emphasizes one of the mounting ICT services of developing countries. The service sector has been contributing an important role in most of the economies. The developing countries like Argentina, Brazil, China, Mexico, South Africa, Kenya, Zimbabwe, India, Pakistan, Bangladesh, Nepal and Sri Lanka have increased the service sector share in their GDP. The present research paper is divided under two major sections. The first section deals with introduction and research methodology. It also clears the objectives of the research paper. ICT services are going to become a pivotal in the developing economy this aspect focused in the same section. The second section elaborated growing importance of ICT sector in the Indian economy. Some key findings and conclusions regarding to Indian and other developing economies also involved under this section.

2. Research Methodology and Objectives

The present research used the secondary database research methodology. In order to explicate the participation of developing countries in the market integration the present study
considered the trade profile of selected ICT services of developing economies. The data are obtained from FAO, UNCTAD, IMF, WTO, RBI, United Nations Statistics Division, World Information Technology and Services Alliance (WITSA), International Financial Statistics, NASSCOM and Ministry of Finance GOI. The research has applied simple statistical techniques like graphical presentation, tabular and flowcharts for effective understanding of the subject. The methodology used in the study was descriptive as well as perspective as based on collected information and data. The objectives are comparing of trade performance of developing countries during the world market integration.

The present study examines objectives and attempts to bring out the issues related to the developing world with respect to globalization based on available information and data. **Objectives** : I. To focus on economic contribution of ICT trade in global integration. II. To assess the potential of developing economies ICT trade in perspective of globalization. III. To evaluate the prospects of India’s ICT services during the process of market integration. IV. To make conclusions and findings for ICT sector regarding to developing countries and India.

3. **ICT Services of Developing Countries in Global Integration**

Since the last two decades, advanced technologies in computer and telecommunication have drastically increased its trade share in the global market. The advance in computer and communication technology enhanced the trade of information intensive services and its equipment’s in the developing economies. In the packaging, manufacturing, exports and services Asian countries have the ability to improve their trade and foreign reserves. In the suppliers list of ICT products and services to US, the Asian countries have an excellent position. The growth of ICT manufacturing and services from the Asian countries has been increasing rapidly.
The ICT product and services have been restructuring the global market with the newcomers like some Asian and Eastern European countries. In the expansion of global ICT trade, new nations are becoming the contributors both in form of producer and market source. The global trade of ICT products and services has been expanding strongly. The emerging economies like India, Brazil, Mexico, Vietnam, China, Russian Federation and South Africa are going to become the key players in the production and new market for the ICT services and goods. However, among these, India and China both are the emerging economies in the ICT sector. In the economies of OECD \(^1\) member, the ICT related services trade is one of the most important components from the exports side.

The computer and information services and communication services export and imports have increased drastically between the period 1996 and 2006. Not only developed but developing countries are also participants of global trade of ICT services (Table 1.1). Developing countries have been increasing their contribution of ICT in global trade year by year. The global ICT service market is shifting towards developing countries rapidly. There were only two OECD countries in the list of top 25 ICT markets, \(^ii\) on the other hand the developing countries like India, Brazil, China, Indonesia, Slovenia and Russian Federation are six economies among the top 25 ICT market worldwide. The worldwide share of IT services in trade of developing countries has been increasing in an upward direction. As far as world’s ICT spending \(^iii\) is concerned, it reached USD 3,433 billion in 2007. The spending on ICT has increased speedily between the period 2003 and 2007 in the region of North America, Latin America, and Eastern Europe. Among the members of OECD countries, US, Mexico and Canada are the maximum spenders in the ICT sector. The non-OECD economies have been considerably contributing in the spending of ICT since 2003 (OECD Information Technology Outlook, 2008). The non-
OECD economies like India, Brazil, China, and Russia have increased their ICT spending during the 2003-07. Around more than 50 per cent of ICT goods are being providing from the non-OECD countries. India and China have a potential to become the ICT hub among the non-OECD countries. Countries like China, India, Russia, Brazil, and South-Africa have considerable contributing in the ICT spending. The spending on software has increased most rapidly as compared to the hardware segment since 2003. However, the other segments of IT have also increased during the period 2003-08. China, India, Brazil, and South Africa are become booming developing economies source in various segment of ICT (Table 1.2). The economy of Brazil is not as rapid as India or China in terms of an emerging or rapidly growing economy. The IT services sector of Brazil is low as compared to the Indian IT services sector.

Malaysia is one of the important and well-known destinations of electronic equipment’s and ICT manufacturing from the South East Asian region. As far as use of computer and Internet access is concerned, the 105 computer per 1000 persons and about 1500 internet users per 10000 persons are in Malaysia. More liberalized Thailand has not concentrated on ICT industry like Malaysia. As compare to Singapore, Philippines and Malaysia the ICT sector of Thailand is less developed. As far as use of computer and Internet access is concerned, the 24 computer per 1000 persons and about 266 internet users per 10000 persons are in Thailand. Due to the Asian economic crisis of 1997, Thailand was badly affected. Thailand is yet to make a responsible entry in the ICT sector. With the strong support of MNCs like Oracle, HCL, HP, IBM and SUN the Thailand cabinet has given approval to set up the Software Park of Thailand (SPT). The inadequate technology and science level are the major obstacles in the progress of ICT industry in Thailand. In the economy of Philippines, ICT manufacturing sector has an important position. The country has a potential to provide skillful workforce for the ICT services
and manufacturing industry. US is the major export destination for Philippines’s ICT industry.\textsuperscript{iv} The ICT is the fastest growing sector of Russian economy. Due to the strong government policy and economic factor the ICT sector will continue the same growth in the coming years. The foreign as well as domestic demand for IT services is the major strength of Russian economy. The Russian government has implemented the policy of ICT awareness in the economy. As a result of this, numbers of government projects and proposals have been taken by the Russian Ministry of Information Technologies and Communications (RMITC) (Dobkin, 2008). The Russian Federation ranked second among all the developed and developing contraries in terms of revenue growth in the same period (Figure 1.3).

As far as Cambodian economy is concerned, the contribution of ICT sector in trade is negligible; the entire domestic demand has been completed through imports. In spite of the liberal trade and investment regime, Cambodian economy could not attract the investment. The weak technology and science level, unstable political situation, and weak government policy are the major bottlenecks on the way of ICT development. The ICT sector has less developed in the economy of Myanmar. There are two computer producers, with almost 70 to 80 per cent of the total ICT goods and services production. Due to the financial and technological weakness of domestic private sector, the global MNCs do not like to join the project in Myanmar. Vietnam has prepared the policy for development of science and technology since 1997. Vietnam has taken various initial steps which are important for the growth of ICT sector. The growth rates of software services and hardware are much better than Cambodia, Thailand, and Philippines. As compare to other Asian newcomers in the ICT sector, the economy of Vietnam is on the path to be a major contributor in the global trade of ICT sector (Joseph, 2006).
China is one of the major contributors in the global trade of information and communication technology. At the end of 2003, around 8,700 software companies were registered out of which 2,000 were newcomers. In 2004 China’s exports of software industry had reached RMB 21.8 billion which was 15.6 billion in 2003. As compare to 2003, the growth has been accounted by 35 per cent in 2004. China has more cell phones than other emerging market like India, Russia and Brazil. At the end of June 2006, with 33,305,000 internet connection China was first rank in the world (Vespa, 2008). The annual average growth of revenue from the China’s top IT companies is considerable between 2000 and 2006 (Figure 1.3). From the ICT sector, there has been increasing trend in the various segments of ICT sector like communication, IT hardware, software and services. China is a leading economy in the ICT spending as compared to other emerging economy like India, Russia, Brazil and South Africa between the period 2003 and 2008 (Table 1.2). This is a rapidly growing sector of China’s economy.

Second Section

4. ICT an Emerging Sector of Indian Economy

The exports share of ICT sector has been increasing rapidly in the Indian economy. During the period 2003-08 the total ICT spending of software, IT hardware, communication and IT services has increased from USD 22,795 million to USD 84,604 million. During the same year the total IT exports increased up to US $ 18 billion. With the annual growth rate of over 25 per cent, these both can generate export revenues of US60 billion by 2010. The contribution of IT sector in national gross domestic product is increasing and it is expected to be around 8.5 per cent by 2010-11, which will be quite similar to today’s US economy. The drastic increases in IT revenue and GDP ratio is stated in table 1.3. The growth and role of IT sector of Indian economy is different from the other Asian countries. There is a general notion that India is
world-class service provider in the ICT sector. There is an increasing trend in IT sectors revenue and revenue’s ratio to the GDP in the Indian economy. During the period 1994 to 2005, the IT sectors revenue ratio to GDP has increased from 0.62 per cent to 4.34 per cent. The contribution of IT sectors revenue has increased by seven fold in the period of one decade. As far as revenue from the IT sector is concerned, it increased from US $ 63 billion to US $ 1276 billion during the same period or one decade (Table 1.3). The increasing growth ITES-BPO has been faster compared to the other segments of IT sector. During the period 2000-01 to 2003-04 the share of ITES-BPO to the total IT revenue has increased from 7.40 per cent to 20.20 per cent. On the other hand, the share of IT services and software has decreased from 64.50 to 58.50 per cent. The contribution of IT hardware to total revenue has fallen from the 28.10 per cent to 21.30 per cent during the same year (Figure 1.2). India has become a major destination for the IT software and ITES-BPO. The revenue from both IT software and ITES-BPO has increased by US $ 22.2 billion in 2004-05 out of which US $ 17.3 was from the exports. The Indian IT industry occupy the IT services and software, ITES-BPO and hardware.

As far as the total IT export revenue is concerned, in 2004-5 the IT services & software accounted 68 per cent followed by the ITES-BPO with 28 per cent and hardware has contributed 4 per cent. Due to some strengths like knowledge pool, quality standards, reliable infrastructure and prominent ITES India is competent in ITES-BPO services. The economic and social environment is favorable for India as compared to Philippines, China, and Ireland (Box 1.1). Due to the rapid increases in the services like banking, health care, insurance, telecom, retail and telecom equipments the exports of Indian IT services and software increased from few million dollars in 1980 to US $ 12 billion in 2004-05. As far as ICT scenario in globalization is concerned, this sector is playing an important role for both the developing and developed
economies. In terms of revenue, employment, FDI, and economic growth IT is underpin for both types of economies. The less purchasing power of consumer, recession in OECD and bad economic conditions the OECD group could not maintain their growth of ICT. The economic indicators and trade activities are showing that the ICT growth of OECD group has slowed in 2008 as compare to the 2007. The ICT industry has been expanding drastically in the developing countries on the basis of internal and external factors, like workforce, and proximity location. Indian firm must provide service for the US market in real time so the staffs night shifts not only increases cost but it adversely affects the attractiveness of workers also. The travelling distance for mobility of labor is little between US and Brazil as compare to the countries like India, China and Russia.

India is one of the comfortable destinations in terms of quality of labor, managerial skill, market availability and cost factor as compared to other nation like China, Canada, Philippines and Australia. Indian IT industry has been increasing at domestic and international level. In the process of globalization it is an opportunity to take advantage of growing domestic as well as international market. Between the periods 2002 to 2005 the IT services and software has increased from US $ 9.9 billion to US $ 16.5 billion out of which US $ 12.2 billion of exports and US $ 4.3 billion from domestic market. The hardware has increased from US$ 3.6 billion to US$ 6.0 billion out of which only US$ 0.7 billion is from export and US$ 5.3 billion from domestic during the same year. As far as ITES-BPO is concerned, in the same year it has increased from US$ 2.6 to 5.7 billion and out of which US$ 5.1 billion from exports while only US$ 0.6 billion from domestic (Table 1.4). Although, there is little scope for the hardware exports, the domestic market is adequate for it. The ITES-BPO and IT services and software have been glorying performer in both international and domestic market. According to
UNCTAD, due to the improvements in ICT infrastructure the costs of telecommunication and IT components declined. As a result of this, there has been increase in the accessibility of internet in both developed and developing countries. Hence, the one of the segment of ICT, the ITES-BPO services has grown drastically. There has been an increasing demand from the business tycoons for cost-saving measures in Europe and America also stimulates the ITES-BPO sector. The efficient workers reduce the operational costs of such developed region. Naturally, the internationalization of IT services and ITES-BPO has grown rapidly.

India is able to attract massive costumer from all over the world on the basis of quality, price and performance. The world economic power, US with 66 per cent of total IT exports is the major destination for India. Europe, especially UK has accounted 22 per cent at the second position. The revenue growth of Indian IT firm \(^\text{vi}\) has considerable increase during the period 2000-06. India has ranked first among the developed and developing countries top 250 ICT \(^\text{vii}\) firms’ revenue growth in the same period. The revenue of single firm of Venezuela has declined. As against, India, Russian Federation, Egypt, Chinese Taipei, and Indonesia have increased their revenue by more than 20 per cent. (Figure 1.3) The emerging market’s demand for goods and services reshuffle the global trade of ICT sector. In the market integration the developing economies like India, Egypt, Brazil Indonesia, Mexico and South Africa have increased their revenue growth between the period 2000 and 2006. The IT services and software trade has been rapidly spreading in the new comer countries and region like Vietnam, Philippines and Eastern Europe. The efficient workforce for ICT sector is one of the strength of emerging developing economies. Initially, in India the employee in the ITES-BPO has been around thousand. But within few years there has been a considerable increase in employee in this sector. Between the period 2003 and 2008 the ICT sector’s CAGR has accounted 31 per cent. According the
NASSCOM, ITES-BPO is the only sector which shown high growth in employee in short period. In IT services and ITES-BPO the total direct employment in India stands at 2 million and the indirect employment at 7-8 million. The male and female both have the equal opportunity in the IT services and software sector hence it is beneficial to reduce the gender inequality. This sector provides career prospects with flexibility in work so female worker can become operator from home with family. So, it attracts the female worker to ICT sector. However, among the segments of ICT sector the ITES-BPO services offers more chances to female worker. As far as male to female ratio is concerned, during the 2004-05 the male to female ratio in IT services and software segment was 76:24. But in the ITES-BPO services male to female ratio was 31:69. The growth in ITES services has a very positive impact on the status of women. Around more than half of call center employees are women. As compared to other sector of economy, in the sector of IT services and ITES women employees are obtaining high-paying jobs. The share of women employee in IT services and ITES accounted around 30 per cent. In IT services and ITES Philippines has women employee around 65 per cent of the total employee of this sector. The service sector has accounts for 70 per cent of employment and 73 per cent of gross domestic product (GDP) in developed countries. As far as developing countries services sector is concerned, it accounted for 35 per cent of employment and 51 per cent of GDP (UNCTAD, 2008). In short, both male and female employments have increased in India, China, Brazil, Mexico, Philippines and South Africa. According to MaKinsey & Company, the IT services and its segments of ITES-BPO sector has a potential to occupy the $ 325 billion annual market. Generally in the IT services includes hardware and software help desk services, network administration and system integration, software engineering, application development and consulting. While in the ITES include the communication services like banking, insurance,
administration, and BPO. McKinsey & Company further added that the annual potential market for ITES was $150 billion in 2007. As far as a global distribution of IT Services and ITES Markets is concerned, developing countries have been successfully growing in IT services and ITES. Naturally, in these services India is the leader. China, Mexico, and the Philippines are also raising players in the same components of services. From the region of Central and Eastern Europe Russian Federation Czech Republic, Moldova, Poland, Romania, and Hungary have developed their market potential in IT services and ITES services. (Figure 1.4) The new comers like Arab Republic of Egypt, South Africa, Israel, Malta, and Mauritius are attractive location for the IT services and ITES. All these countries should try to develop IT services and ITES for the purpose of their economic and social growth. The knowledgeable workforce is one of the basic needs of any sector. As far as IT software and ITES is concerned, the skillful and knowledge workforce is a very important part of this industry. The growth prospect of such industry would be vigorous if the country has knowledge workforce. Some countries have a potential of knowledgeable workforce which is the strong point in the process of globalization (Figure 1.5). However, for staying in the process globalization every nation need government support reliable workforce, favorable political and economic environment, proper education system, cost advantage, intellectual property security, proper infrastructure, quality standards and global and legal maturity.

V. Findings and Conclusions

This study was undertaken with the purpose of trying to find out economic participation of developing countries through the ICT sector. While considering such possibility, the study tried to make a comprehensive analysis of competitiveness, participation, prospects and
potential of developing countries in the market integration. The study while discussing the economic participation of developing countries comes out with certain findings and conclusions about developing countries and in particular India.

- The increasing share of service sector in the GNP of developed as well as developing economies has become the mark of world economy. The increasing contribution of service sector has given new shape to the world. Most of the developed and developing economies have increased their exports share of services to world economy since 1980.

- In terms of foreign exchange earnings, employment, Foreign Direct Investment and economic growth ICT services has an important place in the developing economies. The emerging economies like India, China, Brazil, South Korea, Mexico, Vietnam, Russia and South Africa are going to become the emerging nation in the production and new market for the ICT services and goods.

- ICT services have an important place in the export basket of Indian economy. Its increasing contribution to every economy has resulted in India being a key player in the process of global integration.

- Workforces’ proficiency in English language, ability in software development, market availability and cheap labor costs are the advantages for India in the trade of ICT services.

- Nonetheless, the Indian ICT services have some problems like specific types of skillful workforce, lack of government involvement, improvement in infrastructure and migration of the employments.

- In order to overcome the problems of ICT services there is a need of governments’ intervention regarding basic infrastructure and R&D. There is also need to support the small ICT firm so they can stand the cutthroat competition. The establishment of training institutions would
create a base for future growth and skilled workforce so government should undertake policy in this regard. The management of present human resources is another important aspect in which government needs to take an innovative approach.

NOTES :

i The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

ii Data on ICT markets and spending are based on data published by World Information Technology and Services Alliance (WITSA), based on research by global Insight, Inc.

iii In the ICT spending includes the value of purchased computer hardware and software, computer services, communication equipment’s communication services, and communications.


vi India has four firms among the top 250 ICT firms.

vii Sources used to identify the top 250 ICT firms include the business week’s Information Technology 100, Software Magazine’s Top 50, Forbes 2000, Washington Post 200, Forbes Largest Private Firms, top 100 Outsourcing, World Top 25 Semiconductors, and a number of other Internet listings.


References List:


Figure 1.1 Developing Countries Share in World Export of Services (1986-2002)
Figure 1.2  Composition of India's IT sector (2000-04)


Figure 1.3 Top 250 ICT Firm’s Revenue Growth by Economy of Registration 2000-06. (Avg. annual growth percent)

Note: Cohort data are necessarily incomplete for firms that did not exist and/or report in 2000. As
a result these data marginally exaggerate growth for Bermuda, Chinese Taipei, Germany, India, the Netherlands and United States. Source: OECD, Information Technology database, compiled from annual reports, SEC filings and market financials.

Figure 1.4 Global Distributions of IT Services and ITES Markets (percent)

A. IT Services Market

B. ITES Services Market


Figure 1.5 Potential of Knowledgeable Workforce

Table 1.1 World Trade in ICT Services 1996-2006. (USD million in current price)

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<tbody>
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<td>France</td>
<td>582</td>
<td>417</td>
<td>509</td>
<td>482</td>
<td>3698</td>
<td>2076</td>
<td>1936</td>
<td>1966</td>
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<tr>
<td>Germany</td>
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<td>1602</td>
<td>2379</td>
<td>4318</td>
<td>6146</td>
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<td>944</td>
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<td>590</td>
<td>3159</td>
<td>4585</td>
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<td>91</td>
<td>4</td>
<td>112</td>
<td>205</td>
<td>102</td>
<td>102</td>
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<td>...</td>
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<td>764</td>
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<td>...</td>
<td>...</td>
<td>2191</td>
<td>899</td>
<td>29 186</td>
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<td>...</td>
<td>803</td>
<td>917</td>
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<td>...</td>
<td>305</td>
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Note: Communication services include telecommunications, postal and courier services. Computer and information services include IT and subscription services.


Table 1.2 Total ICT Segment Spending of Emerging Economies (2003-08)

<table>
<thead>
<tr>
<th>Country/Year</th>
<th>2003</th>
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<th>2006</th>
<th>2007</th>
<th>2008</th>
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</thead>
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<td>150110</td>
<td>172459</td>
<td>205836</td>
<td>254353</td>
<td>327194</td>
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<td>10516</td>
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<td>19560</td>
<td>20174</td>
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<td>21380</td>
<td>23128</td>
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<td>32008</td>
<td>42314</td>
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<td>65648</td>
<td>84604</td>
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<td>22911</td>
<td>25085</td>
<td>27450</td>
<td>30644</td>
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</table>

Notes: i. Data for 2008 are forecast. ii. ICT Segment includes hardware, software, IT services and Communications. Source: OECD, based on data provided by WITSA (2008).
### Table 1.3 India’s IT Sector Revenue and Revenue Ratio to GDP

<table>
<thead>
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<th>Year</th>
<th>IT sector Revenue (Rs. billion)</th>
<th>IT Sector Rev. to GDP Ratio (%)</th>
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<td>63</td>
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<tr>
<td>1995-96</td>
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<tr>
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<td>186</td>
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<td>253</td>
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<td>2003-04</td>
<td>978</td>
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<tr>
<td>2004-05</td>
<td>1276</td>
<td>4.34</td>
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</table>

*Source: [http://www.nasscom.org](http://www.nasscom.org) and [http://www.mospi.nic.in](http://www.mospi.nic.in)*

### Table 1.4 Market Potential of Indian IT sector

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>IT Services &amp; Software</td>
<td>9.9</td>
<td>12.8</td>
<td>16.5</td>
</tr>
<tr>
<td>Exports</td>
<td>7.1</td>
<td>9.2</td>
<td>12.2</td>
</tr>
<tr>
<td>Domestic</td>
<td>2.8</td>
<td>3.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Hardware</td>
<td>3.6</td>
<td>4.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Exports</td>
<td>0.3</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Domestic</td>
<td>3.3</td>
<td>4.3</td>
<td>5.3</td>
</tr>
<tr>
<td>ITES-BPO</td>
<td>2.6</td>
<td>3.9</td>
<td>5.7</td>
</tr>
<tr>
<td>Exports</td>
<td>2.4</td>
<td>3.6</td>
<td>5.1</td>
</tr>
<tr>
<td>Domestic</td>
<td>0.2</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Total IT industry</td>
<td>16.1</td>
<td>21.5</td>
<td>28.2</td>
</tr>
<tr>
<td>Exports</td>
<td>9.8</td>
<td>13.3</td>
<td>18.0</td>
</tr>
<tr>
<td>Domestic</td>
<td>6.3</td>
<td>8.2</td>
<td>10.2</td>
</tr>
</tbody>
</table>

*Source: [http://www.nasscom.org](http://www.nasscom.org)*
Box 1.1  India’s Comparison with its Major Competitors in the ITES-BPO Segment

<table>
<thead>
<tr>
<th>Country</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| India     | ➢ Vast pool of knowledge professionals  
               ➢ Specialized technical skills  
               ➢ Prestigious institutes like IITs  
               ➢ Low costs  
               ➢ Reliable infrastructure in big cities  
               ➢ Expertise developed in ITES-BPO segment  
               ➢ Favorable time zone difference  
               ➢ Quality standards  
               ➢ Large English speaking population  
               ➢ High productivity levels  
               ➢ High attrition *  
               ➢ Improvement required in infrastructure * |
| Philippines | ➢ Low attrition  
               ➢ Government support  
               ➢ Understanding of the US market  
               ➢ English speaking skills  
               ➢ Proper infrastructure  
               ➢ IT skill set  
               ➢ Higher costs than India*  
               ➢ Small technology focused talent pool  
               ➢ Quality of services not as good as that of India * |
| China      | ➢ Low manpower costs (costs less than India)  
               ➢ Low cost of real estate and power  
               ➢ Low English speaking population *  
               ➢ No BPO competency * |
| Ireland    | ➢ One of the front-runners of the BPO sector  
               ➢ Good brand image  
               ➢ Favorable government policies  
               ➢ Excellent infrastructure  
               ➢ Expertise in providing ITES-BPO services  
               ➢ Excellent quality standards  
               ➢ Lack of large labor pool *  
               ➢ Manpower costs higher than India * |