

Business process outsourcing: the Indian experience as an offshore location

*Shashank Bhide**, *B.P. Vani***, and *Meenakshi Rajeev***

Abstract

Business process outsourcing (BPO) generally refers to the operation of letting out the task of performing particular functions of an enterprise to another, often a third party and, in some cases, its own subsidiary. Under the pressure of nonavailability of manpower in the country of origin, many multinational companies (MNCs) decided to outsource their business processes to remote locations during the initial phase of globalization. In the Indian context, this process could throw down sturdy roots due to the encouraging supply-and-demand factors in the country.

This paper takes a close look at the BPO industry in India, the service lines in which the country has specialized, and India's comparative advantages vis-à-vis competitor countries, e.g., China and the Philippines. The paper highlights the strengths and weaknesses of the Indian industry operating in this segment.

JEL classification: L86

Keywords: BPO, knowledge process outsourcing, IT-enabled services, call center

1. Introduction

With the development of information technology (IT), services enabled by computers and telecom networks have come to play a significant role in Indian economy. Using IT-enabled services (ITES), a business entity can delegate one or more IT-intensive services to an external service provider. This promises to revolutionize service operations by radically reducing costs and improving service standards. The most talked-about business process outsourcing (BPO) industry is based on such IT-enabled services, which promises to make India a global hub for outsourcing. Also, a firm can work efficiently only if it has an optimal size [Williamson 1967].

*Senior Economist, National Council of Applied Economic Research (NCAER), New Delhi

**Faculty, Institute for Social and Economic Change, Bangalore, India.

This paper was presented at the 30th Annual Conference of the Federation of ASEAN Economic Association, Philippine Economic Society, Manila, Philippines, November 2005.

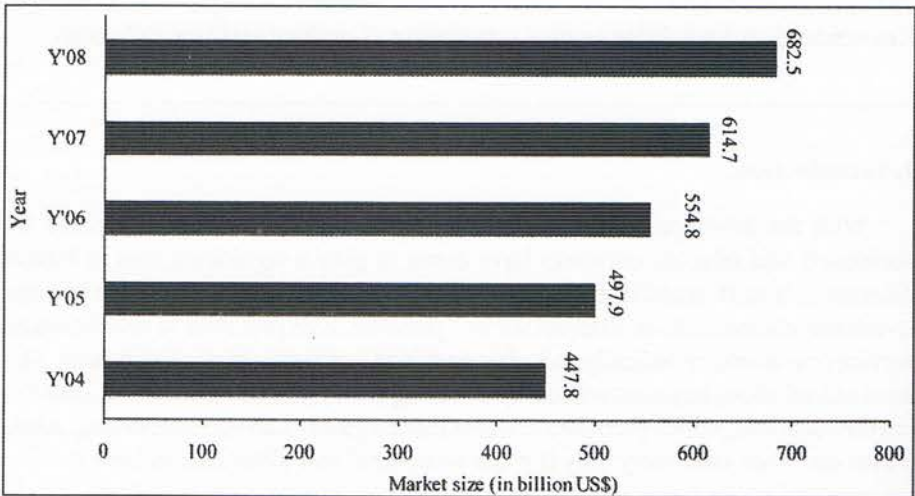
Although onshore or near-shore outsourcing is a well-established phenomenon in business, outsourcing to an offshore location is a comparatively recent trend. The discovery of some developing nations as cost-effective destinations has made offshoring to these countries a profitable proposition for the business giants of the West. India, in particular, tops the list with low-cost, high-quality abundant manpower, which led a few industry majors to experiment with offshoring business processes and consumer-related tasks to centers in India. The experiment began with the establishment of wholly owned subsidiaries by the likes of GE Capitals and British Airways (captive players). There has since been no turning back. Third-party players then started investing in the market backed by venture capitalists and have met with considerable success.

- Software and services export reached US\$ 12.2 billion in 2003-2004, an increase of 30.5 percent from US\$ 9.6 billion in 2002-2003.
- ITES/BPO segment grew at a rate of 52.3 percent in 2003-2004, reaching US\$ 3.6 billion in 2003-2004.
- ITES and IT services sector is expected to generate revenues of US \$62 billion by 2008-2009.

Source: National Association of Software and Services Companies (NASSCOM).

Global ITES have shown considerable growth over the years (Figure 1).

Figure 1. Global BPO market growth



Source: Compiled from NASSCOM reports, various issues.

2. Indian advantage

India, one of the world's most populous countries, has a large pool of human resources. The government's continued investment in higher education since independence, through the establishment of educational institutes as well as subsidized education, has produced a pool of knowledge workers capable of performing skilled and specialized tasks.

2.1. Positives

Of late, India has emerged as a service economy and, in particular, as the "IT services hub of the world". Domestic companies like Infosys, Wipro, and TCS showed excellence in software development and made IT knowledge popular among aspiring young professionals. Taking advantage of the skilled manpower and emerging global IT market, several IT companies, including small and medium-sized ones, were established over time, and India eventually became a strong knowledge base for information technology. Such advances subsequently helped develop India's IT-enabled services sector. In addition, due to the rupee-dollar exchange rate, Indian labor turned out to be considerably less expensive for US business enterprises. Traditionally, English language skill is also high among the Indian population, compared to other Asian countries. Given India's value proposition, multinational organizations came up to establish captive units in India or outsource processes to third-party service providers.

- Subsidized higher education produced a large pool of knowledge workers.
- 2.4 million graduates from all disciplines produced by about 253 universities and 13,150 colleges each year.
- Strong IT base.
- With liberalization in infrastructure services, considerable improvement in telecom infrastructure.
- Survey by the National Association of Software and Services Companies (NASSCOM) shows the ITES/BPO sector employed 245,500 professionals in 2003-2004.

In addition to cost savings, organizations have realized that there are quality and productivity benefits too [NASSCOM 2002a].

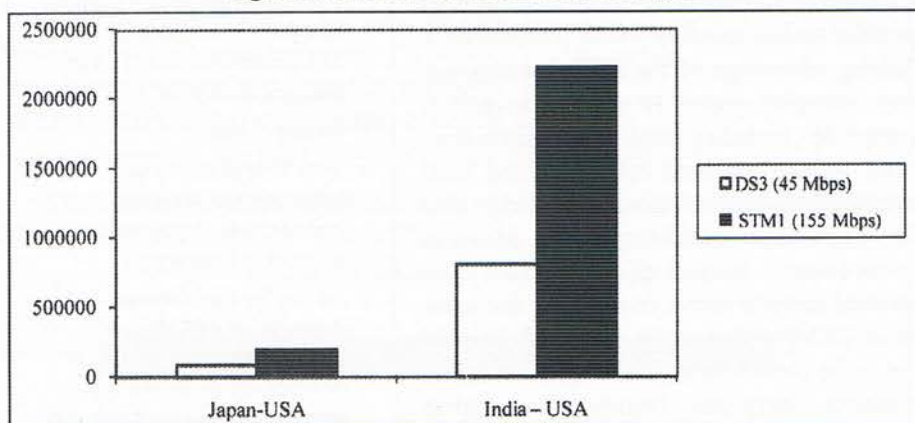
According to a case study prepared by Outsource Partners International, it costs a typical regional US Certified Public Accounting (CPA) firm US\$ 255 to prepare an average individual tax return. On the other hand, outsourcing intermediaries such as Xpitax charge between US\$ 75 and US\$ 110 to prepare a tax return in India. These numbers translate to savings of 57-71 percent per return processed.¹ Such factors have further enhanced the attractiveness of India as an offshoring location.

¹<http://www.nysscpa.org/cpajournal/2005/105/perspectives/p9.htm>.

But despite enjoying advantages over its competitors in terms of labor cost, English language skill, and IT knowledge, India faces shortcomings that must be tackled to ensure long-run competitiveness. While dealing with data—in particular, relating to a consumer's medical, legal, or financial information—privacy of information needs to be ensured. India does not have a compatible data protection or privacy act, which impedes trade in this sector. Protest against outsourcing in Western countries is often based on this ground.

As far as the infrastructure component is concerned, after opening the markets there have been commendable changes in the telecom infrastructure, which made the BPO boom feasible. However, telecom tariffs remain high in India compared to many other countries (Figure 2).

Figure 2. Telecom tariff of India vs. Japan



Source: TRAI [2004].

Although language skill is an asset to India, it is limited to the English language. Thus limitations exist in capturing markets located in European countries or far-eastern countries like Japan.

3. The competing countries

The bulk of outsourcing today is done onshore. Developed economies in nearshore locations like Australia, Canada, and Ireland have also been favorite outsourcing destinations. Although India had advantages in terms of human resources and English language skills, infrastructure bottlenecks and lack of information have acted as barriers to its emergence as a global player. After the liberalization of its economy—allowing foreign equity participation and FDI in various sectors, especially in infrastructure and telecommunications—India has been able to make its presence felt in the global outsourcing market.

Today only India and Ireland have large broad-based presence in the ITES market worldwide, while the Philippines and Singapore have emerged as niche players [NASSCOM 2002a:249].

Although China is comparable to India with respect to the size of its human resources and even if it already serves as an outsourcing center as far as the manufacturing sector is concerned, it lags behind India in the ITES segment owing to language barrier. Some East European and former Soviet Union countries are now emerging as strong players in the market.

Compared to two prominent offshoring locations, India's profile in March 2002 is as follows (Table 1).

Table 1. BPO industries in India, Ireland, and the Philippines, 2002

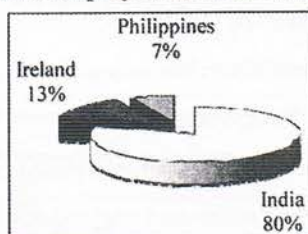
Countries	ITES employees	ITES companies (number)	ITES revenues (million US\$)
India	106,000	250-300	1,470
Ireland	18,000*	130-150	NA
Philippines	8000-10,000	60-70	240

*For year 2000.

Source: NASSCOM [2002a:250].

Representations of the above comparative scenario in terms of percentage share show that India has a much larger share (Figures 3 and 4).

Figure 3. Share of ITES employees in March 2002 (across countries)



Source: Based on Table 1.

Figure 4. Share of ITES companies (across countries)



Source: Based on Table 1.

3.1. Two important competitors: revisited

3.1.1. China

Although China is currently not a direct competitor to India, several Indian BPO managers feel that it has the potential to pose a major threat down the road. Opinions vary as to how distant this future will be. China has over a billion people, including many in densely populated cities, and Chinese labor is considered cheaper than its Indian counterpart. The Chinese government's investment in technical education is also increasing. Although China's IT software industry is currently not as strong as India's, China's infrastructure is far superior. Further, physical proximity and cultural similarities with South Korea and Japan make China a logical choice for offshoring by these countries. China's legal system also needs to be on a par with that of western nations; of late it has become more mindful of passing laws protecting private ownership and intellectual property [Todd 2003].

To summarize, the Indian BPO managers' views on China are as follows:

- (a) China can be an outsourcing location for South Korea and Japan, where India cannot compete due to language barriers.
- (b) It has a large pool of talented youth.
- (c) Its labor costs are lower than in India.
- (d) It has a much stronger infrastructure.
- (e) It is a lucrative location for manufacture-related outsourcing.
- (f) It has commendable work ethics and professionalism.
- (g) Its legal system is weak.
- (h) There exists a language barrier with western nations, but China is dealing with this weakness. (Source: Field survey carried out by the authors with the management of the BPO firms.)

3.1.2. The Philippines

The Philippines is a mature player in the BPO market. A former US colony, it has strong cultural affinity with the United States, and its people have excellent English language skills. Therefore, for call center business outsourcing, the Philippines has been an ideal location for the United States. A skilled labor pool is available in the country. Its universities award 350,000 technology-related degrees each year.² Its infrastructure, compared to that of other less-developed outsourcing locations, is considered far better. The Special Economic Zone Act of 1991 established a number of IT parks to support the IT-export industry. Also, by virtue of hosting a US military base, the Philippines has a strong telecom infrastructure facility. Government incentives are provided in terms of tax breaks, exemptions from all government fees, license dues, export taxes, etc. To summarize the Philippines' comparative advantage:

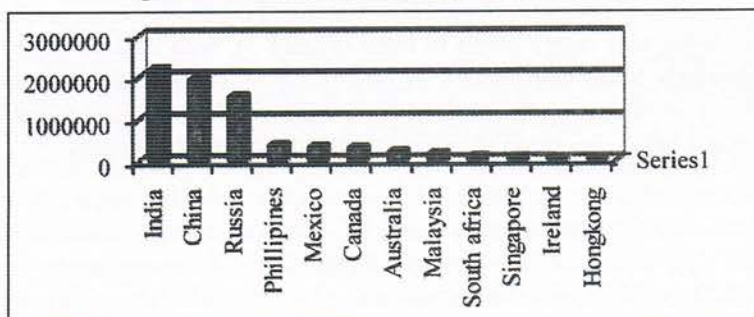
- (a) It has cultural affinity with the United States, and being an English-speaking nation makes the Philippines a lucrative choice.
- (b) It has comparative advantage in catering to US-based call center BPOs.
- (c) Its infrastructure is good.
- (d) Its bandwidth tariffs are not particularly low.

3.2. Comparison of competing countries with respect to some indicators

3.2.1. Manpower

As far as manpower strength is concerned, India and China top the list in terms of total population and number of educated youth. Total number of graduates (Figure 5) gives an indication of the available manpower for the BPO sector, in terms of which India and China are ahead of other countries. Russia also has a large pool of potential labor available for this sector (Figure 5).

Figure 5. Total number of graduates, 2002-2003

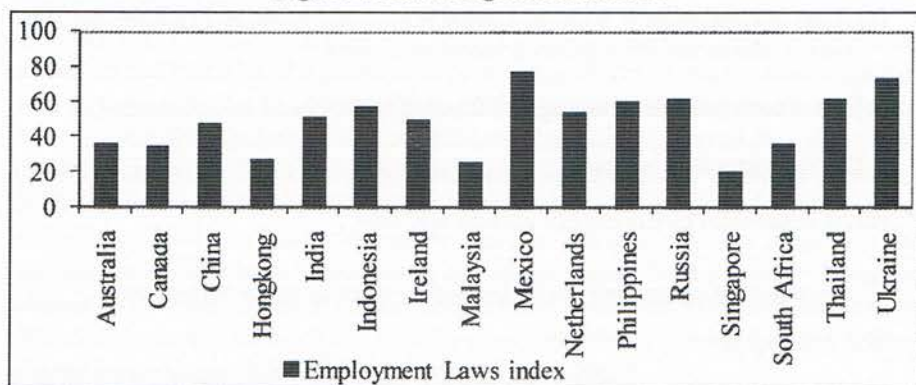


Source: UNESCO [2002].

²CIO Magazine, November 15, 2002.

An index based on labor regulations indirectly reveals how investor-friendly these are. In India, for example, some provinces have laws that prohibit female employees from working late hours. Although some states have relaxed this regulation, many BPO firms feel that such restrictions may hamper the industry. Figure 6 shows the relative positions of different competing countries in terms of "Employment Laws Index", which reflect three aspects of labor regulations: (1) flexibility in hiring, (2) flexibility in firing, and (3) conditions of employment. The index ranges from "0" to "100", in which a higher value shows more rigidity in terms of labor laws. Here, Australia, Canada, and Singapore have more flexible labor laws, but most of the other competing countries have moderately rigid labor regulations, with the index ranging from 40 to 60 points. Mexico tops the list with almost 80 points.

Figure 6. Labor regulation indices

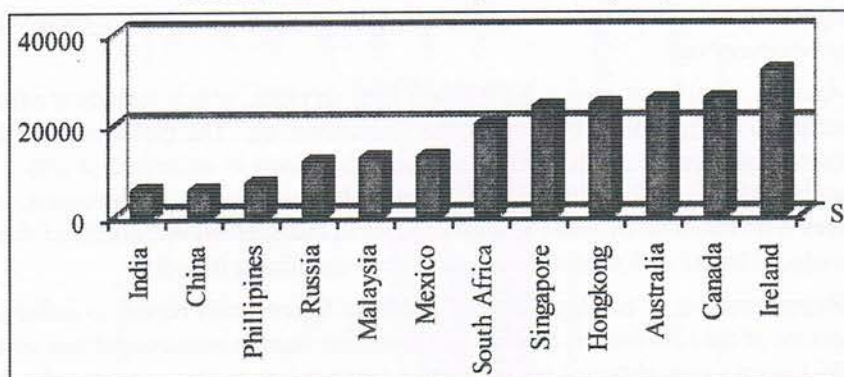


Source: World Bank [2004].

3.2.2. Cost of Manpower

Developed countries like Australia, Singapore, and Ireland are in a comparatively disadvantaged position because of very high salary levels. Figure 7 reveals India's advantage in terms of manpower cost. However, the Philippines, China, and Mexico also have comparable salary levels to India (Figure 7), with China's salary level actually currently lower than India's. In fact, in the Indian BPO sector, manpower cost has been increasing on the back of competition among firms, and this is one area that needs urgent attention if India is to maintain competitiveness.

**Figure 7. Graduate salaries (per annum)
across different countries, 2000-2001 (US\$)**



Source: NASSCOM [2002b].

3.3. Privacy and data protection laws

Developed countries have strict privacy and data protection laws to protect customers from leakage of any personal information. When such information is sent to an offshore location, especially to a Third World country, customers worry about compliance with privacy norms.

India and few other players in the BPO segment currently do not have adequate data protection laws. To attract investment in this sector, each nation is fast taking adequate measures to come up with strong information protection laws. Pakistan has already initiated such an act. For nations to emerge as a viable offshore location, having an adequate privacy and data protection law is a must.

4. The verticals and the horizontals

The philosophy behind BPO is specific: "Do what you do best and leave everything else to business process outsourcers." BPO saves precious management time and resources and allows a business to focus on its core competencies. To attain a competitive edge, companies are moving their noncore business processes to outsource providers. However, as mentioned earlier, with the BPO companies' increasing experience, the core itself is shrinking over time. Initially India emerged as a player in the call-center segment, as the demand for this service in the BPO sector is the highest. Under customer care, horizontal services that are outsourced to India are utility-related services (call center for telecommunication companies), financial operations (credit card), hospitality business (hotel booking), and others. However, call centers suffer from the disadvantage of being highly capital intensive. An ordinary BPO center that takes care of pure back-office operations (e.g., payroll,

data entry) is not as expensive as a call center. Fortunately today, in addition to call center services, functions outsourced to India include purchasing and disbursement, billing, coding and collection, human resources administration, cash and investment management, tax compliance, internal audit, payroll, animation, CADD_CAM—the list grows every day.

Another significant area is health-care BPO services, which include medical transcription (MT), coding, billing, medical insurance, etc. The global market for outsourced services from the health-care industry alone is estimated at US\$ 3.6 billion in 2004 to US\$ 24 billion in 2008 (www.pharmabiz.com). At the outset, MT services were taken up by many BPO companies in India. However, not all of them succeeded. The MT BPO segment has lately been stabilizing in India.

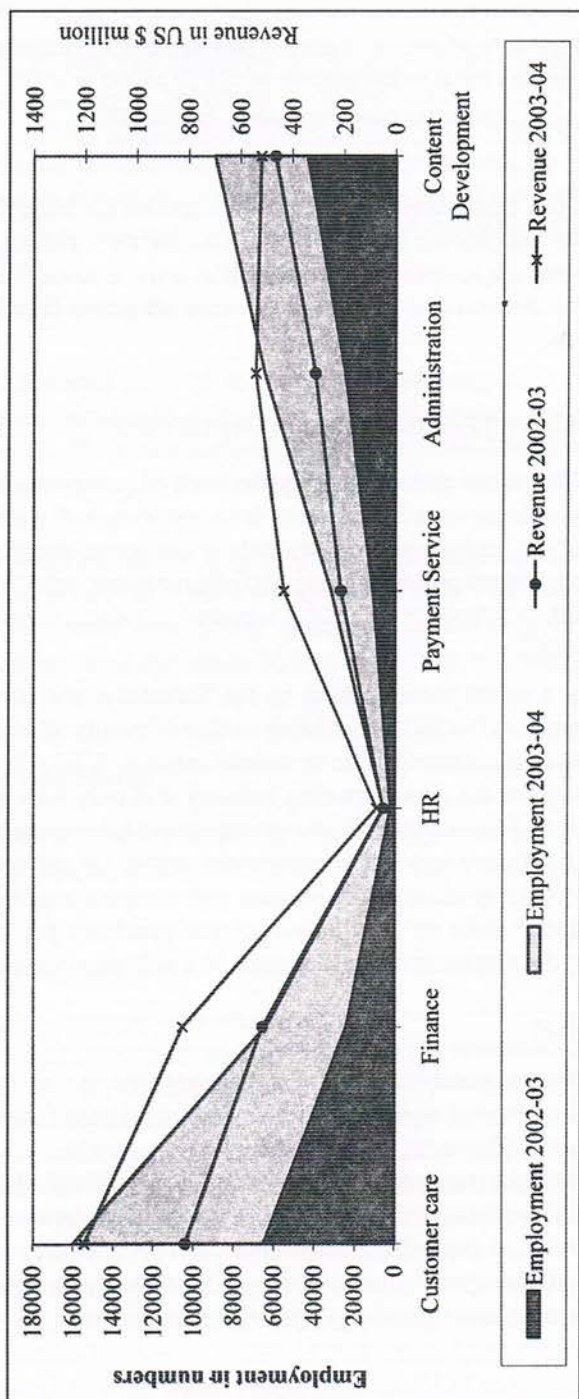
Representation of employment and turnover figures with regard to different subsectors of the BPO market (Figure 8) shows that human resource-related work has the lowest share, although according to a Gartner survey this appears to be the most promising area in the global market. Customer care has the highest share, and both turnover and employment show considerable increase over the years (2002-2003, 2003-2004).

4.1. Knowledge process outsourcing

As the BPO industry in India slowly matures in traditional services like customer care or medical transcription, it is gradually moving toward the higher-end, knowledge-intensive outsourcing applications. However, as discussed above, India is still far from capturing the full potential market. At present, while some of the knowledge process outsourcing (KPO) firms are engaged in more research-oriented higher-end work in some of the existing fields (e.g., equity research in financial services), others have taken up entirely new areas (like biotechnology or remote education). The basic attempt is to leverage the Indian labor efficiency arbitrage by moving up the cliched value chain. In India the new knowledge-intensive areas developing in the BPO sector are as follows:

- (a) Equity research: analysis of stock market data, assessment of volatility, etc.
- (b) Risk analysis: relating to investment or credit card operations, etc.
- (c) Photography management: managing photography sites, developing software for search operations, etc.
- (d) Tele-radiology: analysing intricate human body images
- (e) Actuarial analytics
- (f) R&D activities in biotechnology and drugs and pharmaceuticals

Figure 8. Employment and turnover in different BPO segments



Source: NASSCOM [2004].

³NASSCOM, Satyam Computer, www.nasscom.org.

According to "evaluateserve" India has provided US\$ 720 million KPO services and it would increase to US\$ 12 billion in 2010.

Source: *economictimes.com*, July 22, 2004.

Setting up a call center is expensive, payment cycles are long, the competition is intense, and the margins are small. However, for the KPO, although investments are high, the returns are lucrative and competition is not intense. Thus, if they can create a niche for themselves, KPOs may be more attractive than lower-end and high-volume BPOs.

5. Quality models for IT-enabled outsourcing services³

As the ITES/BPO sector attains maturity, the issue of quality is assuming greater importance for companies in India. Most BPO firms operating in this industry conform to one or more of the leading quality standards in use across the globe. Currently, the quality models that are popular among BPO organizations include the following: the ISO 9001:2000, SW-CMM ver 1.1, CMMi version 1.1, P-CMM version 2.0, MBNQA 2002, and COPC 2002.

According to a recent industry study by the National Association of Software and Services Companies (NASSCOM), existing models of quality often provide limited guidance for ITES-BPO companies due to various reasons. While the ISO 9001 was developed initially for the manufacturing industry and only later interpreted for the service sector and for software development, SW-CMM was created to provide a benchmark for software process improvement. CMMi, on the other hand, was developed to provide guidance for software and systems engineering process improvement, and P-CMM to provide workforce practices for improving the management and development of human assets in a software organization.

5.1. ISO9001: 2000

This is the recent quality management standard that can be applied to both product and service-oriented organizations to achieve standards of quality recognized throughout the world. However, there are some limitations when it is applied to the ITES sector. The NASSCOM study cites some shortcomings: it did not address the overall issues of risk, confidentiality and security, or personnel performance management; and it was deficient in capturing, analysing, and disseminating organizational experiences or in covering critical precontractual issues such as negotiation, pricing, proposals, contracting, and technology upgrade and licensing.

5.2. SW-CMM ver 1.1

The Capability-Maturity Model for Software is used by the software companies to identify best practices to help them boost the maturity of their processes. SW-CMM was upgraded in 2000 to Capability Maturity Model Integration (CMMI). This standard also has its deficiencies: it did not cover service deployment, delivery, and enhancement stages in the contract-execution phase, or address issues of relationship management, risk, confidentiality and security, and critical pre-contract and post-contract requirements.

5.3. COPC

COPC was founded in 1995 to focus on improving call-center operations, monitoring best practices in call centers, and training call-center vendors for certification. COPC, the study showed, lacked the additional focus on managing appropriate technology and knowledge base to improve a company's service capability.

Indian BPO companies are acquiring these certifications to improve quality compliance and attract business from abroad. Further, as India does not have domestic privacy or data security acts, companies adhere to quality norms to show compliance. Government initiatives in this regard are very much needed by the industry.

6. Government initiatives

Several government initiatives in recent years have been directed toward the IT and ITES sectors, which have substantially improved India's potential and attractiveness.

6.1. Telecom infrastructure

Spectacular change in India's international bandwidth situation was observed with the launch of the country's first private overseas cable on

There has been more than 70 percent decline in telecom tariffs in the country.

April 9, 2002. The 3,200 km long submarine cable linking the southern Indian city of Chennai with Tuas in Singapore was built by Network i2i, a 50:50 joint venture between India's Bharati group and Singapore telecommunications, at an estimated cost of US\$ 250 million. This was part of the US\$ 650 million undersea cable network between the two countries [NASSCOM 2002a:252]. With the liberalization of the sector and the resulting entrance of several players, there has been an efficiency boost for Videsh Sanchar Nigam Limited (VSNL), the Indian public sector company now partially owned by the Tatas. A large number of Indian BPOs access bandwidth

through VSNL. Other private operators like Reliance and Disnet DSL also plan to lay undersea cables with considerable bandwidth in the near future. Other initiatives are as follows:

- (a) There is substantial investment in establishing technology parks in different states. These parks provide ready infrastructure for entrepreneurs.
- (b) Initiatives to attract investment in two-tier cities through establishment of technology parks and other benefits.
- (c) Conducive regulatory environment.
- (d) Tax holidays and rebates in customs duties.
- (e) Exemption from stringent labor laws.
- (f) One hundred percent foreign equity permitted in this sector.

Besides the initiatives from the central government, state governments of the different provinces also have introduced investment-friendly IT policies.

6.2. The role of NASSCOM

The NASSCOM has played a crucial role in the development of the IT and ITES sectors in the country and in building up the India Inc. brand. It has been carrying out continuous research in this field and providing valuable information to Indian entrepreneurs. Its role in showcasing India as a prime destination to the companies abroad is also commendable.

In the future, as the industry diverges into different fields, NASSCOM will need to use a targeted approach to reach out to key customers and convince them of the potential of Indian companies.

NASSCOM should also push for the speedy implementation of key regulatory reforms to unlock domestic demand [NASSCOM 2002a].

7. Conclusion

Thus, with the initiatives of the government, NASSCOM, and entrepreneurs, the Indian business landscape is beginning to see an ITES revolution. According to a NASSCOM estimate, the sector can generate an additional one million jobs in the near future and almost about Rs 85,000 crore of annual revenue, most of which will be from exports. Thus the sector has immense potential. India should try to remove its infrastructure hurdles, which currently hamper the industry's growth. Because of poor roads and transportation, BPO companies need to spend substantial amounts on their employees' transport needs. Smaller cities must also be developed in light of overcrowding in metropolises and the increasing costs of operation.

India should also explore possibilities of collaborating with other countries like China, the Philippines, or Singapore. The BPO market is indeed very large, and currently only a meager proportion is outsourced to offshore locations. Thus the potential market size is substantial, and there is space for players of all countries. Although there are some backlashes in developed countries due to loss of jobs, these are not based on firm arguments [Bhagawati, Panagariya, and Srinivasan 2004]. With this in mind, one should develop the industry through greater cooperation with a view to making Asia a prominent outsourcing location.

References

- Bhagawati, J., A. Panagariya, and T.N. Srinivasan [2004] "The muddles over outsourcing", *Journal of Economic Perspectives* **18**: 93-114.
- NASSCOM [2002a] NASSCOM Mckinsey report. New Delhi: NASSCOM.
- NASSCOM [2002b] Handbook of ITES services. New Delhi: NASSCOM.
- NASSCOM [2004] Fact sheet on ITES-BPO. www.nasscom.org.
- NASSCOM [2004, 2005] Strategic review. New Delhi: NASSCOM
- Telecom Regulatory Authority of India (TRAI) [2004] "Fixation of ceiling tariff for international private leased circuit (IPLC)", Consultation Paper No. 10/2004, Economic Division, April 30.
- Todd, F. [2003] "China: the next big wave in offshore", outsourcingasia.com.
- Unesco [2002] Global education digest: comparing education statistics across the world. Montreal: UNESCO Institute for Statistics.
- Williamson, O.E. [1967] "Hierarchical control and optimal firm size", *Journal of Political Economy* **75**: 123-138
- World Bank [2004] Development indicators. Washington D.C.: World Bank.