IT AND ITES INDUSTRY IN INDIA

1. INDUSTRY OVERVIEW

Background

Over the past decade, information technology industry has become one of the fastest growing industries in India. Strong demand over the past few years has placed India amongst the fastest growing IT markets in the Asia- Pacific region. The Indian software and information technology enabled services (ITES) industry has grown at a compounded annual growth rate (CAGR) of 28 per cent during the last five years. It is expected that the contribution of IT and ITES to India's GDP will rise to 7 per cent by 2007-08 against 5.4 per cent in 2006-07.

The key segments that have contributed significantly (96 percent of total) to the industry's exports include – Software and services (IT services) and ITES, i.e. business services. Over a period of time, India has established itself as a preferred global sourcing base in these segments and they are expected to continue to fuel growth in the future.

The total number of IT and ITES- BPO professionals employed in India is estimated to have grown from 284,000 in 1999-2000 to 1,287,000 in 2005-06, growing by 230,000 in the last year alone. In addition, Indian IT - ITES is estimated to have helped create an additional 3 million job opportunities through indirect and induced employment.

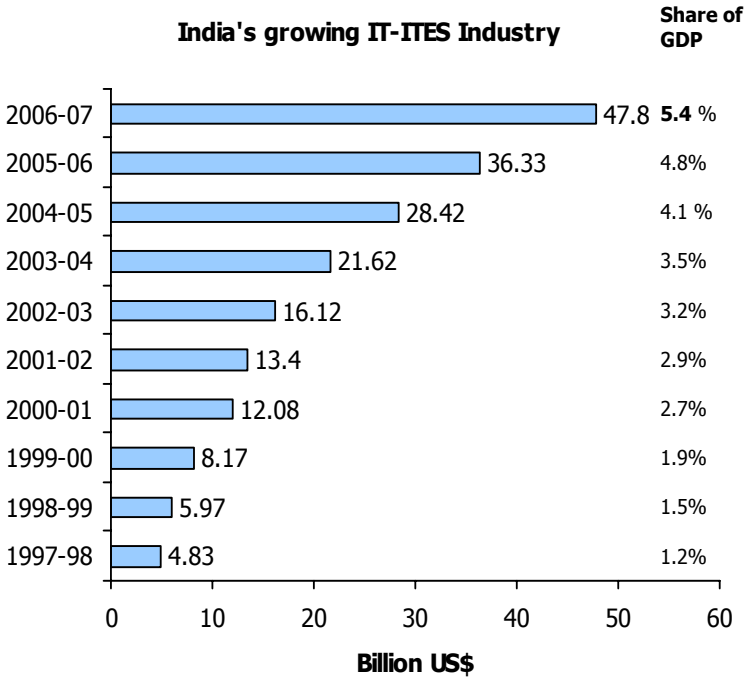
Recognizing the advantages of multi-country service delivery capabilities to better manage evolving customer requirements and execute end-to-end delivery of some new services, Indian companies are enhancing their global service delivery capabilities through a combination of Greenfield initiative, cross-border M&A, partnerships and alliances with local players. Global software product giants such as Microsoft, Oracle, SAP, etc., have established their captive development centres in India.

India's record on information security ranks better than most locations. The authorities in India are maintaining a keen emphasis on further strengthening the information security environment in the country. Specific initiatives underway include enhancing the legal framework through proposed amendments to the IT Act 2000, increasing interaction between industry players and enforcement agencies to help create greater awareness about information security issues and facilitate mutual support.

A majority of companies in India have already aligned their internal processes and practices to international standards such as ISO, CMM, six sigma, etc., which has helped to establish India as a credible sourcing destination. As of December 2005, over 400 Indian companies had acquired quality certifications with 82 companies certified as SEI CMM Level 5- higher than any other country in the field.

2. CURRENT STATUS

The Indian IT sector (including the domestic and exports segments) grew at an estimated 28 per cent in the financial year 2006-07. Total revenue aggregate for the sector is estimated at US$ 47.8 billion, nearly a ten-fold increase over the aggregate revenue of US$ 4.8 billion, reported in 1997-98, and direct employment is likely to cross 1.6 million.3 As a proportion of national GDP, the revenue aggregate of the Indian technology sector has grown from 1.2 per cent in 1998 to an estimated 5.4 per cent in 2006-07. Net value-added by this sector, to the economy, is estimated at 3-3.5 per cent for 2007.

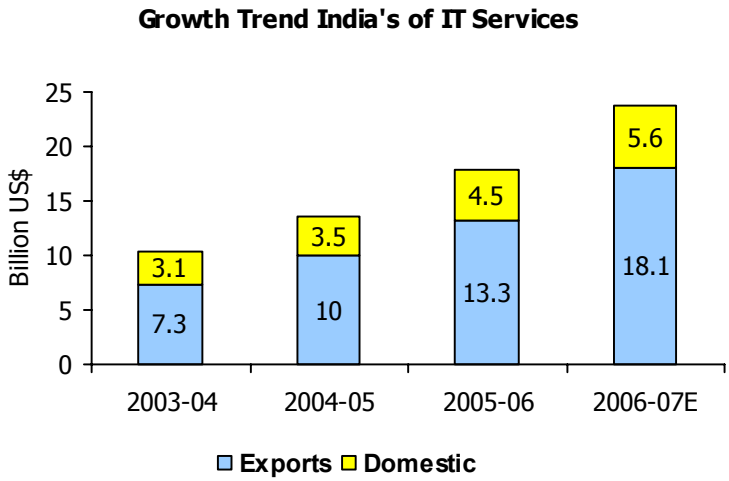


Source: NASSCOM

2.1 IT Services

Service and software exports remained the mainstay of the sector; 2006-07 export growth likely to beat forecasts and exceed 32 percent. While the US and the UK remained the dominant markets, contributing to 67 percent and 15 percent of total exports respectively, firms are also explored the new geographies for business development, and to strengthen their global delivery footprint. Banking, Financial Services and Insurance, and Technology (Hi-tech/ telecom) are the main verticals, accounting for nearly 60 percent of the total; Manufacturing, Retail, Media, Utilities, Healthcare and Transportation follow – also growing rapidly.

IT services exports, accounting for 55-57 per cent of total exports, grew at an estimated 36 percent and reached an estimated US$ 18.1 billion in the financial year 2006-07. Newer areas of application and infrastructure management, testing, etc. are gaining traction, with their share in the business-mix growing steadily.



Source: National Association of Software and Service Companies

2.2 ITES-BPO

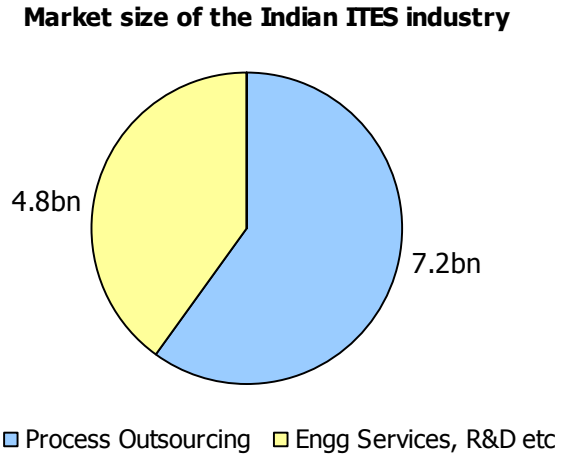
Outsourcing work in India began in 1993 when American Express started using its India operations to provide book-keeping support to is other Asian operations. India's ITES industry can trace its origins to the Y2K problem, which first started in 1995-96 and culminated in December 1999. It required fixing the codes of hundreds of thousands of mission critical computer programmes before the arrival of the year 2000. A vast portion of the work fixing these programmes was outsourced to India.

Another factor contributing to the initial growth of the India ITES industry was the buoyant US (and global) software market during the late 1990s. Many companies outsourced their software requirements to India. While some companies outsourced such work to their captive units in India, other contracted out to external, third-party providers. Following the stock market down run of 2000 and the economic recession in the US during 2001-02, US companies began looking for ways to cut cost. One solution was to outsource back-office functions to the other countries with cheaper but qualified labour. The cost of significantly qualified and competent labour in India are among the lowest in world. Another reason for companies to outsource is the competitive advantage gained by working around the clock.

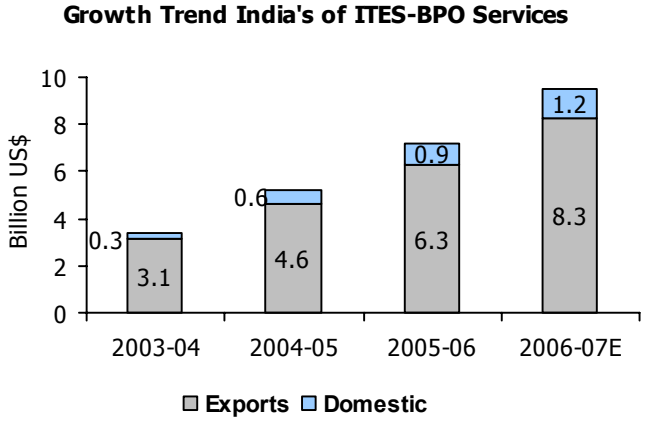
BPO continues to grow in scale and scope, with firms increasingly adopting a vertical focused approach. The India ITES industry has evolved significantly over the past few years.

Total market size of the Indian ITES industry is US$ 12 billion in 2005-06

- Process outsourcing contributes -USD 7.2 bn
- Engg Services, R&D etc - USD 4.8 bn



Exports have grown from US$ 3.1 billion to US$ 8.3 billion in the same period.



Source: National Association of Software and Service Companies

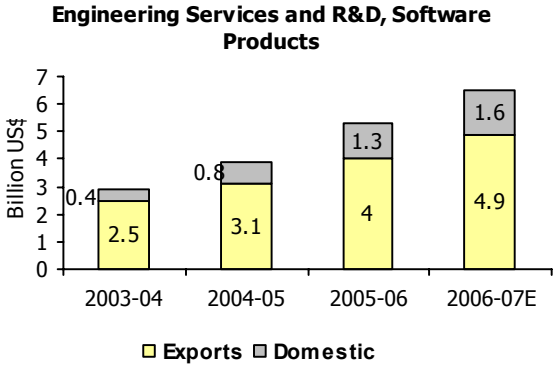
Total exports for this segment estimated to exceed US$ 8.3 billion in the financial year 2006-07, grew by 32 percent over the previous year. Lastly, increasing traction in offshore product development and engineering services is supplementing India's efforts in own IP creation. This group is growing at 22-23 percent and is expected to report USD 4.9 billion in exports, in FY 2006-07.

Service-line expansion is aiding service providers to take on larger and more complex deals, and is driving up the average ticket size of contracts awarded to Indian firms. High

offshore component of delivery and superior execution in multi-location delivery continue to be key differentiators. Broad-based industry structure; IT led by large Indian firms, BPO by a mix of Indian and MNC third-party providers and captives, reflects the depth of the supply-base. While the larger players continue to lead growth, gradually increasing their share in the industry aggregate; several high-performing SMEs also stand out.

2.3 Engineering Services and R&D, Software Products

Indian R&D services and software product exports, though at a nascent stage, is expected to grow rapidly (growth forecasts are US$ 8-11 billion by 2008-10. (Source: NASSCOM). The key opportunity areas within R&D services and software products include embedded software and systems and offshore product development.



A number of large multinational corporations source a part of their embedded system requirements from India either through captive design centres or through vendors. Some of these companies include Samsung, Texas Instruments, Delphi, STMicroelectronics, Motorola, Intel, Analog Devices and National Semiconductor.

Apart from multinational corporations sourcing requirements from India, there are over a 100 Indian companies operating in the embedded software solutions domain. Also, in addition to the export of products developed by the offshore units on behalf of MNCs, a few Indian vendors (e.g. Infosys, I-Flex Solutions) have successfully expanded their revenue streams to include their own software products.

2.4 Major Indian IT and ITES Companies in India

2.4.1 Tata Consultancy Services

Name	Tata Consultancy Services
Year of Establishment	1968
Company Profile	TCS is Asia's largest IT services firm with annualised revenues of over US $4 billion (estimated for FY 2006-07) and has the largest number of employees

	among all the Indian IT companies with strength of over 87,000. TCS's services includes application development and maintenance, business intelligence & performance management, business process outsourcing, engineering and industrial services, enterprise solutions (CRM, ERP, SCM), IT Consulting, IT Infrastructure Services, testing and quality assurance to the industries banking, energy and utility, financial services, life sciences and health care, insurance, media and entertainment, manufacturing, telecommunications, retail and consumer goods and transportation.
Turnover/Sales	USD 5.7 billion (Annual Sales)
Marketing Network	TCS operates across more than 41 countries and has more than 155 offices across the globe.
Acquisitions/Strategic Alliances	The company has recently done some strategic acquisitions like FNS, Tata Infotech & Comicrom which will boost its offerings to the market.
Future Prospects	The industry is likely to continue its growth trend with the ongoing outsourcing boom. Driven by strong demand conditions, new customer additions, big deal wins and employee additions, domestic software companies are set on a high growth path

2.4.2 Wipro Technologies

Name	Wipro Technologies
Year of Establishment	1997
Company Profile	Wipro Technologies is a global services provider delivering technology-driven business solutions. Wipro is the World's first CMMI Level 5 certified software services company and the first outside USA to receive the IEEE Software Process Award. . It is a subsidiary of Wipro Limited (incorporated 1946, in operation since 1945). It is headquartered in Bangalore.
Turnover/Sales	USD 4 billion (Revenue)
Marketing Network	Wipro has 53 development centers across globe
Acquisitions/Strategic Alliances	In 2007, Cisco and Wipro will build new IT infrastructure service solutions that combine Cisco's industry-leading networking solutions with Wipro's infrastructure and managed services portfolio In 2005, The HP-Wipro global partnership strengthened further with the former extending its

	system integration partnership of the entire portfolio of HP OpenView suite of software to Wipro. In 2002, Wipro has entered into strategic alliance with IBM. As part of the alliance, Wipro would market and integrate IBM's server and storage products including pSeries, iSeries, iSCSI and network attached storage products to Indian customers.
Future Prospects	

2.4.3 Infosys Technologies

Name	Infosys Technologies
Year of Establishment	1991
Company Profile	Infosys Technologies Limited is one of the leading information technologies (IT) Services Company headquartered in Bangalore, the capital of Karnataka. Infosys' service offerings span business and technology consulting, application services, systems integration, product engineering, custom software development, maintenance, re-engineering, independent testing and validation services, IT infrastructure services and business process outsourcing.
Turnover/Sales	USD 4.18 Billion (Revenue)
Marketing Network	Infosys has a global footprint with over 40 offices and development centers in India, China, Australia, the Czech Republic, Poland, the UK, Canada and Japan. Infosys has over 91,000 employees.
Acquisitions/Strategic Alliances	
Future Prospects	

2.4.4 Satyam Computer Services Ltd

Name	Satyam Computer Services Ltd
Year of Establishment	
Company Profile	Satyam Computer Services Ltd. (NYSE: SAY) is a global IT consulting and services provider, offering a range of expertise aimed at helping customers re-engineer and re-invent their businesses to compete successfully in an ever-changing market. More than 51,000* highly-skilled professionals in Satyam work Onsite, Offsite, Offshore and Nearshore, to provide

	customized IT solutions for companies across several industries.
Turnover/Sales	
Marketing Network	Satyam's network spans 55 countries, across six continents
Acquisitions/Strategic Alliances	
Future Prospects	

Headquartered in Hyderabad, Satyam Computer Services Ltd. offers a variety of IT services spanning across different industry verticals.

The company employs more than 40,000 IT professionals across development centers in India, the United States, the United Kingdom, the United Arab Emirates, Canada, Hungary, Singapore, Malaysia, China, Japan and Australia. It serves over 489 global companies, 156 of which are Fortune 500 corporations. Satyam has strategic technology and marketing alliances with over 50 companies.

Verticals in Satyam serve different industry domians Aerospace and Automobile (AnA), Banking & Capital Markets (BCM), Communication Service Providers (CSP), Resources, Energy & Utilities (REU), Hi Tech & Discrete Manufacturing (HTDM), Insurance, Healthcare & Life Sciences (IHL), Media and Entertainment Product Lifecycle and Engineering Solutions (PLES), Retail, Distribution & CPG (RETL) Transportation & Services (TnS) Independent Validation Solutions (IVS) - provides software testing services. IT Infrastructure Management Services (IMS) - manages core networks, data centers and servers of clients. Real Estate Life science

Satyam has been accorded the prestigious recognition by Most Admired Knowledge Enterprise as a top Asian knowledge organization.

2.4.5 HCL

Founded in 1976, HCL is one of the leading Indian global Technology and IT enterprises with annual revenues of US$ 3.90 billion. The HCL Enterprise comprises two companies listed in India, HCL Technologies and HCL Infosystems. This is one of India's original IT garage start ups. Its range of offerings span R&D and technology services, enterprise and applications consulting, remote infrastructure management, BPO services, IT hardware, systems integration and distribution of technology and telecom products in India.

The HCL team comprises 43,000 professionals of diverse nationalities, operating across 17 countries including 360 points of presence in India. HCL has global partnerships with several leading Fortune 1000 firms, including several IT and Technology majors.

2.4.6 IBM India

IBM has been present in India since 1992. Since inception, IBM in India has expanded its operations considerably with regional headquarters in Bangalore and offices in 14 cities including regional offices in New Delhi, Mumbai, Kolkata and Chennai. IBM India is now the fourth largest employer in the Indian IT industry - only behind TCS, Infosys and Wipro.

India has the second largest workforce for IBM now, second only to its home - the IBM US. Although IBM India fits in its worldwide business plans primarily as a cost saving delivery center, it also has some of its research, consulting and other centers of excellence based out of India.

3 INVESTMENT POLICY AND REGULATIONS

Information Technology has given India a formidable brand equity in the global markets. Keeping this in view, the Government has set up a National Manufacturing Competitiveness Council (NMCC) to provide a continuing forum for policy dialogue to energize and sustain the growth of manufacturing industry including IT hardware.

India has been successfully promoting reforms in all the constituents of the Internet, Communication and Entertainment sector. Being a signatory to the Information Technology Agreement of the World Trade Organization, the customs duty on all the specified 217 items has been eliminated, from March 1, 2005.

3.1 Industrial Approval Policy

Industrial Licensing has been virtually abolished in the Electronics and Information Technology sector except for manufacturing electronic aerospace and defence equipment.

There is no reservation for public sector enterprises in the Electronics and Information Technology industry and private sector investment is welcome in every area.

Electronics and Information Technology industry can be set up anywhere in the country, subject to clearance from the authorities responsible for control of environmental pollution and local zoning and land use regulations.

3.2 Foreign Investment Policy

A foreign company can start operations in India by registration of its company under the Indian Companies Act 1956. Foreign equity in such Indian companies can be up to 100 per cent. At the time of registration it is necessary to have project details, local partner (if any), structure of the company, its management structure and shareholding pattern. Registration is a kind of formality and it takes about two weeks. It can forge strategic tie up with an Indian partner.

A joint venture entails the advantages of established contracts, financial support and distribution-marketing network of the Indian partner. Approval of foreign investments is through either automatic route or Government approval.

Foreign technology induction is encouraged both through FDI and through foreign technology collaboration agreement. Foreign Direct Investment and Foreign technology collaboration agreements can be approved either through the automatic route under powers delegated to the Reserve Bank of India (RBI) or otherwise by the Government.

3.3 Foreign Trade Policy

In general, all Electronics and IT products are freely importable, with the exception of some defence related items. All Electronics and IT products, in general, are freely exportable, with the exception of a small negative list which includes items such as high power microwave tubes, high end super computer and data processing security equipment.

Export Promotion Capital Goods scheme (EPCG) allows import of capital goods on payment of 5 per cent customs duty. The export obligation under EPCG Scheme can also be fulfilled by the supply of Information Technology Agreement (ITA-1) items to the DTA provided the realization is in free foreign exchange.

The import of second hand computers including personal computers and laptops are restricted for imports.

3.4 SEZ Scheme

Special Economic Zone (SEZ) is a specifically delineated duty free enclave and shall be deemed to be foreign territory for the purposes of trade operations and duties and tariffs. SEZ unit may import/procure from the DTA without payment of duty all types of goods and services, including capital goods, whether new or second hand, required by it for its activities or in connection therewith, provided they are not prohibited items of imports.

The units shall also be permitted to import goods required for the approved activity, including capital goods, free of cost or on loan from clients. SEZ unit may, on the basis of a firm contract between the parties, source the capital goods from a domestic/foreign leasing company. SEZ unit shall be a positive Net Foreign Exchange earner. Net Foreign Exchange Earning (NFE) shall be calculated cumulatively for a period of five years from the commencement of production.

As per the 'Special Economic Zones Rules, 2006', notified by the Department of Commerce, in case a SEZ is proposed to be set up exclusively for electronics hardware and software, including information technology enabled services, the area shall be ten hectares or more with a minimum built up processing area of 1,00,000 square meters.

3.5 Export Promotion Schemes

Special schemes are available for setting up Export Oriented Units for the Electronics/IT Sector. Various incentives and concessions are available under these schemes. The schemes are:

- Export Oriented Unit (EOU) Scheme
- Electronics Hardware Technology Park (EHTP) Scheme
- Software Technology Park (STP) Scheme
- EOU/EHTP/STP Schemes

Units undertaking to export their entire production of goods and services, except permissible sales in the Domestic Tariff Area (DTA), may be set up under the EOU, EHTP or STP Scheme for manufacture of goods, including repair, re-making, re-conditioning, re-engineering and rendering of services. Trading units, however, are not covered under these schemes.

100 per cent Foreign Direct Investment is permitted through automatic route for the units set up under these schemes. These units may import and/or procure from the DTA or bonded warehouses in DTA, without payment of duty, all types of goods, including capital goods, required for its activities, provided they are not prohibited items of import in the ITC(HS). The units shall also be permitted to import goods including capital goods required for the approved activity, free of cost or on loan/lease from clients.

A unit under any of these schemes may, on the basis of a firm contract between the parties, source the capital goods from a domestic/foreign leasing company without payment of customs/excise duty. This unit shall be a positive net foreign exchange earner. Net Foreign Exchange Earnings (NFE) shall be calculated cumulatively in blocks of five years, starting from the commencement of production.

Supplies of Information Technology Agreement (ITA-1) items and notified zero duty telecom/electronic items effected from EOU/EHTP/STP units to DTA will be counted for the purpose of fulfillment of positive NFE.

The Software Technology Parks of India (STPI) scheme has played a pivotal role in catalyzing the growth of this sector and supporting its rapid proliferation across the country. The tax holiday has helped attract much needed investments (MNC and Indian) in the sector and the virtual model has allowed firms to avail benefits without constraints on their choice of location – encouraging entrepreneurship and integrated growth.

Although the existing term of the STPI scheme is nearing its end (in 2009) the Government intends to continue the benefits offered, by introducing similar provisions in the Special Economic Zones (SEZ) policy – and further relaxing the minimum area requirements (to qualify for an SEZ status), for the IT-BPO sector..

4 INVESTMENT OPORTUNITIES AND CHALLENGES

4.1 Opportunities

India offers a unique combination of attributes that have established it as the preferred offshore destination for IT-BPO. Over 2001-2006, India's share in global sourcing is estimated to have grown from 62 per cent to 65 per cent for IT and 39 per cent to 45 percent for BPO. The visibly higher preference for India is driven by its unmatched superiority when measured across a range of parameters that determine the attractiveness of a sourcing location.

4.1.1 Abundant Human Resource

With over half the population of India aged less than 25 years; India's young demographic profile is a unique and an inherent advantage. This, complemented by a vast network of academic infrastructure and the legacy effects of British colonisation has contributed to an unmatched mix and scale of educated, English-speaking talent.

Notwithstanding the strong fundamentals (of a disproportionately large talent pool), there has been growing concern about parts of the available pool being unsuitable for employment.

The Indian IT-BPO sector has taken the lead in ensuring that requisite remedial actions are undertaken – well in time – to avoid any form of a talent crisis. Training has become a regular and signifi cant component in the induction process of all IT-BPO firms. Several firms have also established dedicated facilities and teams, for employee skill enhancement initiatives.

In addition to firm level efforts that are more focused on the immediate requirements, the industry is also driving a series of concerted efforts to structurally address the talent concerns.

4.1.2 Cost Advantage

India has a strong track record of delivering a significant cost advantage, with clients' regularly reporting savings of 25-50 percent over the original cost base. This cost advantage achievable from outsourcing to India is unlikely to go away – for a considerable period.

4.1.3 Emphasis on Quality and Information Security

Since the inception of the industry in India, players within the country have been focusing on quality initiatives, to align themselves with international standards. Over the years, the industry has built robust processes and procedures to offer world class IT software and technology related services.

Today, India-based centres (both Indian firms as well as MNC-owned captives) constitute the largest number of quality certifications achieved by any single country. As of December 2006, over 440 Indian companies had acquired quality certifications with 90 companies certified at SEI CMM Level 5 – higher than any other country in the world.

4.1.4 Rapid Growth in Key Business Infrastructure

India's core proposition of talent, quality, security and cost advantage would be inconsequential without the rapid growth in availability of high quality telecommunication connectivity across the country.

Over a span of little over a decade, the Indian telecom market has evolved from a public sector monopoly to thriving free-market competition. Carefully crafted policy has helped drive a balanced agenda for the sector by influencing a decline in pricing and increased affordability on one hand and increasing access penetration and usage on the other, resulting in strong growth. The IT-BPO sector has been a key beneficiary, with the cost of international connectivity declining rapidly and service level quality improving significantly.

Telecom penetration in the country has increased from a modest 3.6 percent in 2001 to over 12.6 percent in 2006, and is targeted to reach to 29.6 percent by 2009. While the wire-line segment continues to witness steady growth, rapid adoption of wireless telephony has made India the fastest growing market in the segment. At the end of 2006, there were over 98 million wireless subscribers in India, up from barely 4 million in 2001. Importantly, this growth is taking place, not only in existing urban centres – but increasingly in satellite towns and smaller cities, with IT-BPO firms driving much of the demand.

Deregulation of the aviation sector has provided a significant fillip to the availability and affordability of airline travel which in turn has also helped add a larger number to the list of delivery locations for potential expansion. The recent moves to privatise the development and maintenance of airports in key metros, and to develop greenfield airports in 35 other non-metros are expected to further improve access to domestic air travel.

Nonetheless, other elements of urban infrastructure are beginning to show some signs of strain – predominantly in the key metropolitan hubs of the country. Recognising that availability of adequate, quality business and social infrastructure is an imperative for continued growth of industry and for overall socio-economic development, the Government has made infrastructure creation a key priority in its planning efforts. It is estimated that India will need investments of over USD 300 billion in various elements of infrastructure development.

Given the magnitude of investments required, and the strong health of the private sector (vis-à-vis its position at the time of India's independence) – the Government is actively seeking public-private-partnerships to play a greater role in infrastructure development.

So far, the response from the private sector (domestic as well as foreign players) has been promising and the Government is working towards ensuring an enabling policy environment to sustain the momentum.

4.2 Key Challenges

4.2.1 Small players

Most of the Indian BPO companies have a few million $ revenues which is very small by international standards. Therefore, clients are doubtful of their long-term sustainability and hesitate to give them large contract. Due to small size and cut throat competition some companies might vanish failing to respect the contract, and thus marring the image of whole BPO industry. Small and desperate players are driving down the prices to grab the business causing irrational pricing behavior and are also failing to deliver.

4.2.2 High attrition

The attrition rate is as high as 60 per cent and because of this, the cost of training goes up. On an average, the cost as the cost of training is about Rs 40,000 to Rs 60,000 per agent.

4.2.3 Margin

Due to a very strong competition from China and other Asian countries the profit margins are getting squeezed.

4.2.4 Infrastructure

Unreliable power supply necessitates creation of own backup thus adding to cost. India also suffers from paucity of bandwidth and time required to get a connection is large.

4.2.5 Weak Brand

Indian BPO companies do not have a brand which is recognized globally e.g.-: Accenture, Ernst & Young are known for their BPO services.

4.2.6 MNC influx

Many large MNCs are opening their BPO offices in India to leverage cost advantage. It can hamper the growth of domestic BPO companies.

4.2.7 Backlash in US & Europe

There is a rising misconception in developed nations that Indians are snatching away service jobs. So their governments are also pressurized to ban outsourcing which will hamper growth of BPO industry.

4.2.8 Low capacity utilization

Average capacity utilization is less (about 1.6) which affects the profitability of the company. Newer entrants like China are introducing English in their curricula at large scale so within few years it will have a large English speaking population thus threatening India in non-voice business.

4.2.9 New technology

Any technological breakthrough can wipe out entire range of low end jobs. e.g.-: Medical transcription was a thriving industry in India, but a voice based software which could prepare documents form voice completely wiped out the jobs