CHAPTER - III

IT INDUSTRY IN INDIA

Information technology as an industry today occupies a strategic place in Indian economy and business. Its origin and growth in India have been phenomenal during the last two decades. Not only the economic and business environment has undergone a change but one can also see changes in the social sector as well. The education and employment fields have changed. It has played a key role in putting India on the global map. It has contributed substantially to the economic power of the country – it is envisioned to become a US $ 225 billion industry by 2020. With the new millennium, this industry has become the country’s premier growth engine, crossing significant milestones in terms of revenue growth, employment generation and value creation in addition to becoming the global brand ambassador for India.

The information technology industry in India basically consists of the software development sector. The industry consists of a large number and growing number of firms. According to NASSCOM the number of Indian software firms has grown from around 432 in 1996-97 to over 1300 in 2010. Many of these firms entered the industry after the economic liberalization and globalization of 1991. Today the industry consists of very big and leading companies like the Tata Consultancy Services (TCS), Infosys Technologies, and Wipro technologies as well as smaller ones like the KTwo Technologies. The top 25 companies account for over 60 % of software exports revenue.

The market leaders among the Indian Software firms are, for the most part, relatively new. With a few exceptions, notably Wipro, these firms specialize in software alone. This is in marked contrast to early entrants who had close links with computer hardware development. TCS was the first firm to agree in 1974 to export software in return for being able to import hardware. TCS, currently the largest Indian software firm, employs over 100,000 persons. Once the software exports gained ground a large number entrepreneurial firms entered the industry.

The software industry in India gained recognition in the early eighties, as companies took up posting of trained software manpower, especially to USA. Very soon several
companies started taking up software projects at customer sites, and sent their professionals to carry out this task. Starting with routine jobs, most companies graduated to more and more sophisticated tasks and India started getting recognized as having special talent for software development and management of software projects.

It was only in the early nineties, after the Indian software industry got sufficient recognition, that Indian companies were able to win contracts in a large way to carry out software projects off-shore (in India). From then on, projects have gotten more sophisticated and bigger. Today, even though the software tasks carried out by India for the West may amount to a small portion of the worldwide IT industry, Indian companies and professionals are regarded as amongst the best in the world.

The Economic Policy of 1991 gave further fillip to this trend. The entrants to this industry were of two types. The first type was the existing firms diversifying into software like the HCL and Wipro, as well as firms with large in-house data processing and system information capabilities such as the L & T (LTITL). There were others such as BFL, Sonata and Birla Horizons, which before their metamorphosis as software firms, were divisions of large and medium industrial groups. Then there are the new startups such as PCS, Datamatics, Info and Silverline. Current top management personnel in the industry were earlier in their career working with these pioneering firms. Indeed Infosys was founded by a group of seven PCS managers after breaking away from PCS.

In India, the software boom started somewhere in the late 1990s. Most of the Indian software companies at that moment offered only limited software services such as the banking and the engineering software. The business software boom started with the emergence of Y2K problem, when a large number of skilled personnel were required to fulfill the mammoth database-correction demand in order to cope up with the advent of the new millennium.

The profile of the Indian IT industry has been undergoing a change in the last few years, partly as it moves up the value chain and partly as a response to the market dynamics. Ten years ago, most US companies would not even consider outsourcing some of their IT projects to outside vendors. Now a vast majority of US companies
use the professional services of Indian Software engineers in some manner, through large, medium or small companies or through individuals recruited directly.

Although the entry into the industry still appears to be strong there are suggestions that the market leaders are beginning to identify niches and areas of specialization, in terms of technologies or functions as well as vertical domains (industrial sectors). More recently a couple of Indian firms like the BFL and IIS Infotech have been acquired by Dutch Bank and a British Software service company respectively. The latest acquisition in the industry has been the case of Patni Computers by the MPhasis and also the takeover of Professional Access by Oracle.

The continuing liberalization and economic reforms program of the Government of India, since 1991, aims at rapid and substantial economic growth and integration with the global economy in a harmonized manner. The new policies have made Governmental procedures transparent, eliminated administrative bottlenecks such as licensing in all areas where IT industry is connected, freed the industry from labour law restrictions and provided encouragement to entrepreneurs through market friendly systems. The Government has also made it easy the financing of the industry through liberal FDI - liberalization of foreign investments - and entry of multinationals into the IT industry with major financial share capital.

The Indian Government recognizes that IT will influence economic development extensively in the years to come. The Government constituted a Task Force on IT industry. This Task Force was given the responsibility to recommend the steps that the Government needs to take to remove the bottlenecks and boost the Information Technology industry within the country.

As for the State Governments in India are concerned most of them have liberalized policies to encourage the setting up of the IT based industries. They are making available the land and other resources needed by the IT organizations. The procedure of issuing license and clearance to start the new organizations have been made simple through the “Single Window Clearance” systems – chief among these states are Karnataka, Andhra Pradesh, Tamil Nadu, Maharashtra, Haryana, Madhya Pradesh, Orissa, Pondicherry, West Bengal, etc.
One of the major reasons of excellent and consistent growth of Indian software industry can be attributed to continuous liberalization of policies of the Government of India. NASSCOM and the Government of India have worked together in close cooperation over a long time for forming and implementing these policies. NASSCOM lobbied with the Government and secured income tax exemption for profits of software exports. The Government gradually and systematically reduced import duty on computer software from a high 114 % to 0%. Copyright laws were also provided to the IT software and service industry by the Government of India. More importantly, the Government of India constituted a new Ministry to provide safeguards and protection to the IT industry – the Ministry of Information Technology under an independent Minister of State. This step has helped to promote and achieve the full potential of the Indian IT industry. Constraints have been comprehensively identified and steps taken to overcome them and also to provide incentives. Thus for example, venture capital has been the main source of finance for software industry around the world. But majority of the Software units in India is in the small and medium sector and there is a critical shortage of venture capital kind of support. In order to alleviate this situation and to promote Indian IT industry, the Government of India has set up a National Task Force on IT and Software Development to examine the feasibility of strengthening the industry. The Task Force has already submitted its recommendations, which are under active consideration of the Government. Norms for the operations of venture capital funds have also been liberalized to boost the industry. The Government is also actively providing fiscal incentives and liberalizing norms for FDI and raising capital abroad.

Furthermore, recently an IT committee was set up by the Ministry of Information Technology, Government of India, comprising of Non Resident Indians (NRIs) Professionals from the United States to seek expertise and advice and also to set up U.S. investments in India’s IT Sector. The Committee is chaired by Minister of Information Technology and the members include Secretary, Ministry of Information Technology and a large number of important Indian American IT entrepreneurs. This group is expected to:

- Monitor global IT development and refine Indian IT policy to meet global requirements. Specifically, this will help angel investors, venture creators and incubators.
Promote the growth of human resource development in the IT sector with the aim of creating quality-based education.

Promote R & D in the sector by identifying thrust areas and drawing up a blueprint for action.

The global economic depression of 2009 did not affect much the Indian IT industry. It was a temporary setback or a passing phenomenon for the Indian Software companies in general affecting the manpower to certain extent. Despite the global economic slowdown, the Indian IT software and services industry is maintaining a steady pace of growth. The industry while did not go for fresh recruitment during this period sparely resorted the lay-offs of employees. Many adopted redeployment measures to retain the employees. When demand returned in 2010, the combined effect of all the factors helped India grow faster than its competitors, accounting for almost 90% incremental growth in the global sourcing market.

According to “IT-BPO Sector in India: Strategic Review 2011” a report brought out by the NASSCOM and McKinsey combine recently, the sector is estimated to aggregate revenues of US $88.1 billion in FY 2011 with the IT software and services sector (excluding hardware) accounting for US $76.1 billion revenues. The Report estimates export revenue to gross US $59 billion in FY 2011 and contribute 26% as its share in total Indian exports, employing around 2 million employees. Over FY 2010 the growth of IT services was fastest – growing by 22.7% and aggregating export revenues of US $33.5 billion, accounting for 57% of total exports. Today India exports software and services to nearly 95 countries around the world. The share of North America (US and Canada) in India’s software exports is about 61%. In 1999-2000, more than a third of Fortune 500 companies outsourced their software requirements to India.

India is a preferred destination for companies looking to offshore their IT and back-office functions. It also retains its low-cost advantage and is a financially attractive location when viewed in combination with the business environment it offers and the availability of skilled people.

The IT sector coupled with BPO sector has become one of the most significant growth catalysts for the Indian economy. In addition to fuelling India’s economy, this
industry is also positively influencing the lives of its people through an active direct and indirect contribution to the various socio-economic parameters such as employment, standard of living, and diversity among others. The industry has played a significant role in transforming India’s image from a slow moving bureaucratic economy to a land of innovative entrepreneurs and a global player in providing world class technology solutions and business services. The industry has helped India to transform itself from a rural and agriculture-based economy to a knowledge based economy. The efforts of the industry towards the holistic development of the Indian economy and society will continue making a positive impact and changing lives as it has done so far. Further, the industry has acted as socially responsible corporations playing an active role in regional development across India, empowerment of diverse human assets, driving technology and innovation to transform client business, and enhancing the overall brand image of India.

The Indian Information Technology industry account for a 5.19 % of the country’s GDP and export earnings as of 2009, while providing employment to a significant number of its tertiary sector workforce. More than 2.5 million people are employed in the sector either directly or indirectly, making it one of the biggest job creators in India and a mainstay of the national economy. In 2010-11, annual revenues from IT-BPO sector are estimated to have grown over US $ 76 billion compared to China with US $ 35.676 billion. The following are the recent initiatives in Information Technology Services in India:

**National e-Governance Plan (NeGP):** The Government of India accords high priority to improve the quality of the citizens by providing basic services at their doorstep and has formulated a NeGP covering 27 mission mode projects and eight support components to be implemented at central, state and local Government levels, at an estimated cost of US $ 4.71 billion.

Department of Technology has issued guidelines for Capacity Building and Institutional Framework for e-governance under NeGP.

**Statewide Area Networks (SWANs):** The Government has approved a scheme for establishing SWANs across the country in 29 states and 6 Union Territories with a
total outlay of US $682.27 million over a period of 5 years. During 2008, SWAN has been implemented in 5 States/UTs.

Department of Information Technology has issued guidelines for Technical and Financial Support for establishment of State Data Centre.

**State Data Centers (SDCs):** SDCs have been identified as one of the important elements of the core infrastructure for supporting e-Governance initiatives under NeGP. It is proposed to create data repositories/data centers in various states and UTs so that common secured data storage could be maintained to serve host of e-Governance applications. The scheme for establishment of SDC in 29 States and 6 UTs has been approved by the Government of India in 2008.

**Common Serviced Centers:** The objective of CSCs is to develop a platform that can enable Government, private and social sector organizations to align their social and commercial goals for the benefit of the rural population in the remote corners of the country through a combination of IT-based as well as non-IT-based services. CSC requests for proposals (RFPs) have been issued for 25 States and UTs. Of these, 23 States and UTs have completed the service centre agency (SCA) selection process covering 1,02,827 CSCs.

**National Knowledge Network:** National, Knowledge Commission has recommended setting up of high-speed digital broadband network with adequate capabilities and access speed to encourage sharing of resources and collaborative research. The primary objective of the proposed integrated National Knowledge Network is to provide gigabit broadband connectivity to all institutions of higher learning and research in the country. An allocation of Rs. 100 crore was made in the year 2008 for implementing the scheme.

**Electronics Hardware Manufacturing:** Electronic hardware manufacturing continues to be a thrust area for the Government. The special incentive package scheme (SIPS) to encourage investments for setting up semiconductor fabrication and other micro and nano technology manufacture industries in India. Sixteen proposals involving an investment of the order of Rs. 1,55,000 crores, over a period of 10 years covering setting up of semiconductor fab, LCD panel manufacturing and solar photovoltaics including polysilicon, have been received under the scheme.
**Software Technology Parks of India (STPI):** Software Technology Parks of India (STPI) is a society set up by the Department of Communication & Information Technology (DIT) in 1991, with the objective of encouraging, promoting and boosting the software exports from India. STPI maintains internal engineering resources to provide consulting, training and implementation services. Services cover network design, system integration, installation, operations and maintenance of application networks and facilities in varied areas. The Scheme integrates the concept of 100 per cent export oriented units (EOUs), export processing zones (EPZs) of Government of India and the concept of Science parks/technology parks, as operating elsewhere in the world. A distinctive feature of STP/EHTP Scheme is that it provides single-point contact services for member units.

**Community Information Centre (CIC):** Government has initiated the setting up the CICs in the hilly and far-flung rural areas of the country with an objective to bring the benefits of IT to the people for socio-economic development of these regions and to alleviate the digital divide between urban and non-urban areas.

**Open Technology Center (OTC):** Government has initiated the setting up of an Open Technology Centre through NIC, aimed at giving effective direction to the country on Open technology in the areas of open source solutions, open standard, open processes, open hardware specifications and open course-ware.

**Other Initiatives: Nano Technology:** DIT started nanotechnology development program during the 10th Plan with an objective to create infrastructure for research in nano-electronics and nanometrology at the national level and also to fund small and medium level research projects in specific area such as nanomaterials, nanodevices, carbon nano tubes (CNT), nanosystem, etc.

**High Performance/Advanced Computing - High Performance Computing:** In the strategic area of High Performance Computing (HPC), Center for Development of advanced Computing (C-DAC) has developed in-house expertise for design and development of parallel processing technology based HPC systems, application development environments, system software tools and utilities, as well as development and porting of application. C-DAC’s PARAM series of HPC systems have 60 installations worldwide.
**Grid Computing:** Grid Technologies provide dependable, pervasive, secure and inexpensive access to high-end geographically distributed computational resources. C-DAC has set up a nationwide grid of HPC systems named Garuda, which enables collaborative R & D among HPC user community in various sectors of science and engineering.

The industry is in an expansion mode right now, with dozens of new offshore IT services vendors emerging everyday, the industry has a high probability of being subjected to the 80:20 rule in not too distant a future. In perhaps another ten years, 80 percent of all outsourced offshore development work will be done by 20 percent of all vendors, a small number of high quality, trusted vendors. Only a few select countries and only the most professional companies in those countries will emerge as winners. India will definitely be the country of choice for offshore software development. We have the potential to become and remain the country of choice for all software developments and IT enabled services, second only to the USA. The third choice could be far distant.

India is among the three countries that have built supercomputers on their own. The other two are USA and Japan. India is among six countries that launch satellites and do so even for Germany and Belgium. India's INSAT is among the world's largest domestic satellite communication systems. India has the third largest telecommunications network among the emerging economies, and it is among the top ten networks of the world.

To become a global leader in the IT industry and retain that position, we need to constantly keep moving up the value chain, focusing on finished products and solutions, rather than purely on skill sets and resumes. We need to be able to package our services as products, rather than offering them as raw material. We need to be able to recognize and build up on our strengths and work on our weaknesses.

**The Observations of NASSCOM-McKinsey Report on Indian IT Industry 2011**

According to the survey conducted by these agencies – “IT-BPO Sector in India: Strategic Review 201” : The sector is estimated to aggregate revenues of USD 88.1
billion in FY2011, with the IT software and services sector (excluding hardware) accounting for USD 76.1 billion of revenues. During this period, direct employment is expected to reach nearly 2.5 million, an addition of 240,000 employees, while indirect job creation is estimated at 8.3 million. As a proportion of national GDP, the sector revenues have grown from 1.2 per cent in FY1998 to an estimated 6.4 per cent in FY 2011. Its share of total Indian exports (merchandise plus services) increased from less than 4 per cent in FY1998 to 26 per cent in FY2011.

**Exports Market:** Export revenues are estimated to gross US $ 59 billion in FY2011 accounting for a 2 million workforce.

- **Geographic focus:** The year was characterized by a consistent demand from the US, which increased its share to 61.5 per cent. Emerging markets of Asia Pacific and Rest of the world also contributed significantly to overall growth.

- **Vertical Markets:** While the sector’s vertical market mix is well balanced across several mature and emerging sectors, FY2011 was characterized by broad based demand across traditional segments such as Banking, Financial Services and Insurance (BFSI), but also new emerging verticals of retail, Healthcare, Media and Utilities.

- **Service Lines:** Within exports, IT Services segment was the fastest growing segment, growing by 22.7 per cent over FY2010, and aggregating export revenues of USD 33.5 billion, accounting for 57 per cent of total exports. Indian IT service offerings have evolved from application development and maintenance, to emerge as full service players providing testing services, infrastructure services, consulting and system integration. The coming of a new decade heralds a strategic shift for IT services organizations, from a ‘one factory, one customer’ model to a ‘one factory, all customers’ model. Central to this strategy is the growing customer acceptance of Cloud-based solutions which offer best in class services at reduced capital expenditure levels.

The BPO segment grew by 14 per cent to reach USD 14.1 billion in FY2011. The year also witnessed the next phase of BPO sector evolution - BPO 3.0 - characterized by greater breadth and depth of services, process re-engineering across the value chain, increased delivery of analytics and knowledge based services through
platforms, strong domestic market focus and SMB centric delivery models. During the year, the BPO sector growth was affected by delayed decision making and deal restructuring in the first half of the year, though it picked up momentum in the second half. Changing demand patterns led to revamp of operations for service providers - high focus on client relationships, mining existing clients and restructured operations to provide focused vertical solutions. Further, the industry focused on achieving excellence in business process management, and delivering strong transformational benefits creating revenue impact for clients.

The engineering design and products development segments generated revenues of USD 9 billion in FY2011; growing by 13.6 per cent, driven by increasing use of electronics, fuel efficiency norms, convergence of local markets, and localised products. Increasing confidence in relationships between customers and service providers successfully executing a variety of activities across low-medium-high complexity projects has led to increasingly larger sizes of projects being sourced from India.

**Domestic Market:** Domestic IT-BPO revenues excluding hardware are expected to grow at almost 16 per cent to reach ` 787 billion in FY2011. Strong economic growth, rapid advancement in technology infrastructure, increasingly competitive Indian organizations, enhanced focus by the government and emergence of business models that help provide IT to new customer segments are the key drivers for increased technology adoption in India:

- IT services is one of the fastest growing segment in the Indian domestic market, rising by 16.8 per cent to reach ` 501 billion, driven by localised strategies designed by service providers.

- Domestic BPO segment is expected to grow by 16.9 per cent in FY2011, to reach US $ 127 billion, driven by demand from voice based services, in addition to adoption from emerging verticals, new customer segments, and value based transformational outsourcing platforms Indian software product segment is estimated to grow by 14 per cent to reach US $ 157 billion, fueled by replacement of in-house software applications to standardized products from large organizations and innovative start-ups.
Government sector is a key catalyst for increased IT adoption- through sectors reforms that encourage IT acceptance, National e-Governance Programs (NeGP), and the Unique Identification Development Authority of India (UIDAI) program that creates large scale IT infrastructure and promotes corporate participation

**Indian IT-BPO Value Proposition**

India has retained it,s position as the leading global shoring destination with a 55 per cent share of global IT and BPO market in 2010, and been able to increase its market share in spite of competitive challenges presented by emerging off shoring destinations. This has been only possible due to the development of a set of factors unique to India, that multiply India’s value proposition manifold. While the cost advantage is unparalleled, India has the world’s largest pool of employable talent, service delivery infrastructure across multiple geographically dispersed locations within the country, and a supportive policy regime. However, the Indian global sourcing industry is no longer hinging its value proposition on cost, talent, infrastructure and processes which are considered as basic tools to operate in the global sourcing landscape. With customers also pushing for more collaborative contracts where there is business metric performance measurement and greater risk-reward sharing, Indian industry is increasingly being driven by the following factors:

**Transformational Business impact** – Client business transformation happening through-

- **Verticalised solutioning** – A number of organisations have restructured themselves around verticals and Centers of Excellences - so as to develop and deliver end to end services keeping in mind customer needs, creating products aimed at growing emerging markets and creating a substantial revenue impact for them. These verticalised business units act as a source of innovation and development of proof of concept solutions.

- **Technology enablement** – Development of solutions around platforms, cloud based products integrating business intelligence, and application development tools are proving to be game changers for an increasing set of customers. This is also prompting customers to move from CAPEX to OPEX based models.
• **Process innovation/re-engineering** – Coupled with automation and six sigma skills, incremental set of enhancements imbibing best in class learning and practices in established service delivery processes also have the ability to create wide ranging transformation for clients.

• **Service Delivery maturity** – India is the most mature outsourcing market, with Indian service providers having developed end to end service delivery capabilities around all verticals. Further, there is increased globalisation in service delivery, cross border collaboration and partnerships to enhance service offerings, and reengineering of the talent pool for greater productivity and efficiency.

• **Scalability** – India’s scale and flexibility is unique- a vast labour pool, network of Tier II/III cities offering further cost reduction and increased infrastructure spend are the cornerstones to this advantage offered by India over other locations. The demand side has also been maturing gradually, moving away from commoditized services at lowest possible cost to demand for higher end solutions and measurable business value. There is a highly rationalised and competent provider base which is again one factor where India scores over other countries.

• **Sustainability** – Industry focusing on sustainable practices – including diversity, green and corporate social responsibility.

**Future Outlook**

The underlying theme of 2010 has been the steady recovery from recession. Worldwide GDP, which had declined by 0.6 per cent in 2009, grew 5 per cent in 2010 and is expected to stabilise at about 4.4 per cent in 2011. Developing nations continue to grow faster than the developed countries by at least three times. IT spend is directly linked to growth in GDP and in line with this trend, IT spend in 2011 is expected to grow nearly 4 per cent. Worldwide IT spending will also benefit from the accelerated recovery in emerging markets, which will generate more than half of all new IT spending worldwide in 2011. In 2011, growth will reflect new demand for IT goods and services, not pent-up demand from prior years. 2011 will also see a major surge in
the use of private and public cloud and mobile computing on a variety of devices and through a range of new apps. Hardware is likely to grow the fastest at about 7 per cent, led by the refresh cycle in the Government sector. Shipments of app-capable, non-PC mobile devices (Smartphone, media tablets) are expected to outnumber PC shipments.

IT services is expected to grow by about 3.5 per cent in 2011 and 4.5 per cent in 2012. While focus on cost control and efficiency/productivity remain, customers are also evaluating how investments in IT impact can further business goals – ROI led transformation - leading to an increase in project-based spending. Services such as virtualization, consolidation, and managed services that focus on ROI in the short term will drive opportunities in the market. Emerging Asian enterprises across multiple industries will continue to accelerate services spending in their efforts to challenge existing global MNCs. Organizations will look for alternative IT models - Cloud, on-demand services and SaaS – in order to reduce hardware infrastructure costs and provide scalability on demand. Worldwide packaged software revenue is estimated to reach USD 297 billion in 2011, a Y-to-Y growth of over 5 per cent, led by emerging regions, such as APAC and LATAM. These regions are expected to invest heavily in enterprise software initiatives as they continue to round out the IT infrastructure necessary to do business. Business Process Outsourcing spending is expected to be driven by analytical services, F&A and industry-specific BPO Solutions.

In the future, the global IT-BPO industry is likely to go through a paradigm shift across five parameters:

Markets – Growth will be driven by new markets – SMBs, Asia, public sector and government-influenced entities which will become a priority customer base.

Customers – Customers will demand ‘transformative’ value propositions, that go beyond lower-cost replication; as technology creates virtual supply chains, customers will require a seamless experience across time zones and geographies; increasing demand for innovation and end-to-end transformation.

Service Offerings – Offerings that are high-end, deeply embedded in customer value chains will emerge. Services and delivery will become location-agnostic leading to
new opportunities such as design services in manufacturing, Remote Infrastructure Management (RIM), etc. Solutions for the domestic market will be a key focus area

**Talent** – Government pressures to create local jobs and the need for local knowledge will alter the employee mix - a higher proportion of non-Indians with multilingual and localised capabilities. There will be a much greater focus on ongoing development of specialised skills and capabilities.

**Business models** – Driven by a focus on expertise and intellectual property, offerings will shift from piecemeal, technology-centric applications to a range of integrated solutions and higher-end services, spanning new service lines (e.g., green IT). While developed markets constitute the largest share of IT spend, increasingly emerging markets are spearheading growth as a large consumer base becomes increasingly tech-savvy and enterprises adopt IT solutions to improve their global competitiveness. Given this scenario, the Indian supply base has begun to explore market opportunities beyond US and UK. By 2020, new segments (SMBs), new verticals (Public sector and Defense, Healthcare, Utilities, Printing and Publishing) and new geographies (BRIC) will account for 50-55 per cent growth in the addressable market. India supply base is well placed to tap this potential, with their two decade long experience, mature service capabilities, presence in almost all verticals, global footprint and an abundant talent pool.

Suitably exploiting these emerging opportunities both in the global and domestic markets can help India reach US $ 130 billion in IT-BPO revenues by FY2015, a CAGR of 14 per cent. By FY2015, the Indian IT-BPO industry is expected to contribute about 7 per cent to annual GDP and create about 14.3 million employment opportunities (direct and indirect). Further, the India supply base has also begun to look for expansion across various non-metros both to control costs and have access to a large talent pool. This expansion has resulted in the development of a local talent pool and the physical and social infrastructure. The industry is now moving to rural areas creating employment, improving living standards, positively impacting career and personal development, empowering women and developing a social infrastructure, thus leading to balanced regional growth.
The government will be a key driver for increased adoption of IT-based products and solutions. It has embarked on various IT-enabled initiatives including in Public services (Government to citizen services, citizen identification, and public distribution systems), Healthcare (telemedicine, remote consultation, and mobile clinics), Education (eLearning, virtual classrooms, etc) and financial service (mobile banking/payment gateways), etc. These initiatives are expected to substantially improve the economic conditions of a large, under-served population, thereby reducing the government’s fiscal burden.

However, to realize this opportunity, all stakeholders – Industry, Government, Academia and NASSCOM – will need to jointly take decisive action to develop a high caliber talent pool, continue to harness technology for inclusive growth, foster a sustainable ecosystem for research and innovation, actively work to establish India as a trusted global hub for professional services, catalyze growth in the domestic market, and ensure adequate policy support to keep the momentum strong. Today the following companies are recognized as the top players in the IT sector in India:

1. Tata Consultancy Services (TCS),
2. Infosys Technologies Ltd.
3. Wipro Technologies Ltd.
4. Hewlett Packard,
5. IBM,
6. Satyam Computers (Mahindra-Satyam),
7. Hindustan Computers Ltd. (HCL)
8. Patni Computers (now taken over by Mphasis),
9. Polaris,
10. CISCO,
11. KPIT,
12. Cummins,
13. Kanaby,
14. Microsoft,
15. DELL,
16. Compute Infobase,
17. Accenture,
18. iFlex Solutions, (New ORACLE Financial Services)
19. Cognizant,
20. Sapient, and

Today, Bengaluru is known as *the Silicon Valley of India* and contributes 33% of Indian IT Exports. India's second and third largest software companies are headquartered in Bangalore, as are many of the global SEI-CMM Level 5 Companies. This Silicon Valley of India is the home for over 65% of the companies listed above as top IT organizations in the IT Sector. In other words, Bengaluru has been the destination for India’s young technical and engineering graduates to pursue their career in IT sector. A career in IT sector for them has become a golden goal to be achieved.

Direct employment in Indian IT-BPO sector crossed the 2.2 million mark, an increase of about 226,000 professionals over FY 2008; indirect job creation is estimated at about 8 million. IT services (including engineering services, R&D, Software products) exports, BPO exports and Domestic IT industry provides direct employment to 947,000, 790,000 and 500,000 professionals respectively.

Though Bengaluru is identified and recognized as the Silicon Valley of India, the industry today is spread to other locations such as Mumbai, Chennai, Hyderabad, Pune and NCR (the area around Delhi) One reason for the concentration of this industry in western and southern India is the existence of large number of engineering and technology educational institutions. The industry draws its manpower from these educational institutions.

The above discussion on the IT industry in India brings out one golden truth that the IT industry has become a means of transforming the Indian economy and society. It has not only given a significant place to India in the global economy but added a new feather in its cap. The country has become the destination for many an international business organizations to partner with the Indian companies but has been able to convert the Indian business organizations into multinational organizations. IT has entered every walk of life of the Indian citizens. The socio-economic status of the average Indian has reached new heights. In all this the role of the IT industry in Bengaluru has been quite predominant. Today Bengaluru has made a name in the global industrial and economic scenario. A new concept has emerged - *Bangalored* -
a concept coined by the Americans. **During a period of less than two decades** the city of Bengaluru has become not only a metro city but an international hub of economic and industrial activities.

As a matter of fact, it was decided to study at least a part of the Information Technology industry in Bengaluru that would help to improve my knowledge and the educational qualifications. Since the IT industry as a whole and the IT organizations in Bengaluru in particular are facing the challenge of manpower supply and the managements of IT organizations have been struggling to retain their employees by developing different strategies, it was decided to take up this study on Employee Retention Strategies in IT Organizations in Bengaluru. But considering the large number of organizations and the time and other resources constraints in completing this study it was decided to select only a few organizations for the study utilizing the case study approach. Accordingly, nine organizations - Indian and multinationals – were selected for this study. The next two Chapters present the profiles of these organizations and give an account of the management of the employees and the employee retention strategies they have been following.