


CHAPTER – II

ANALYSIS OF GROWTH AND DEVELOPMENT OF IT INDUSTRY

2.1 INTRODUCTION

This chapter gives us a clear idea about the growth and development of IT sector in India. It also throws light about the IT industry in tamilnadu and a list of notified IT/ITES Special Economic Zones in Tamil Nadu.
2.2 IT SECTOR IN INDIA

India is the world's largest sourcing destination for the information technology (IT) industry, accounting for approximately 52 per cent of the US$ 124-130 billion market. The industry employs about 10 million People and continues to contribute significantly to the social and economic transformation in the country.

The IT industry has not only transformed India's image on the global platform, but has also fuelled economic growth by energising the higher education sector especially in engineering and computer science. India's cost competitiveness in providing IT services, which is approximately 3-4 times cheaper than the US, continues to be its unique selling proposition (USP) in the global sourcing market.

The Indian IT and ITES industry is divided into four major segments – IT services, business process management (BPM), software products and engineering services and hardware.

The IT-BPM sector in India grew at a compounded annual growth rate (CAGR) of 25 per cent over 2000-2013, which is 3-4 times higher than the global IT-BPM spend and is estimated to expand at a CAGR of 9.5 per cent to US$ 300 billion by 2020.

India has emerged as the fastest growing market for Dell globally and the third largest market in terms of revenue after the US and China, said Mr. Alok Ohrie, Managing Director, Dell India.
2.2.1 Market Size

India, the fourth largest base for young businesses in the world and home to 3,000 tech start-ups, is set to increase its base to 11,500 tech start-ups by 2020, as per a report by Nasscom and Zinnov Management Consulting Pvt Ltd.

India’s internet economy is expected to touch Rs.10 trillion (US$ 161.26 billion) by 2018, accounting for 5 per cent of the country’s gross domestic product (GDP), according to a report by the Boston Consulting Group (BCG) and Internet and Mobile Association of India (IAMAI). In December 2014, India’s internet user base reached 300 million, the third largest in the world, while the number of social media users and smart phones grew to 100 million. Public cloud services revenue in India is expected to reach US$ 838 million in 2015, growing by 33 per cent year-on-year (y-o-y), as per a report by Gartner Inc. In yet another Gartner report, the public cloud market in the country was estimated to treble to US$ 1.9 billion by 2018 from US$ 638 million in 2014. The increased internet penetration and rise of e-commerce are the main reasons for continued growth of the data centre co-location and hosting market in India. The market size of IT industry and BPM in India is estimated to have generated US$ 108 billion in revenue during the fiscal year 2013. The domestic user size also has a continual growth since 2008. In the sector-wise breakup of export revenue, IT services have contributed 57.9%, BPM sector contributed 23.5 % and software and engineering services has contributed 18.6 %.
**Figure 2.1**

Market size of IT industry in India (USD billion)

<table>
<thead>
<tr>
<th>Year</th>
<th>Export</th>
<th>Domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY08</td>
<td>41</td>
<td>22</td>
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<tr>
<td>FY13</td>
<td>76</td>
<td>32</td>
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</tbody>
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Source: Indian brand equity foundation

**Figure 2.2**
2.2.2 Investments

Indian IT sectors’s core competencies and strengths have placed it on the international canvas, attracting investments from major countries. The computer software and hardware sector in India attracted cumulative foreign direct investment (FDI) inflows worth US$ 13,788.56 million between April 2000 and December 2014, according to data released by the Department of Industrial Policy and Promotion (DIPP).

The private equity (PE) deals increased the number of mergers and acquisitions (M&A) especially in the e-commerce space in 2014. The IT space, including e-commerce, witnessed 240 deals worth US$ 3.8 billion in 2014, as per data from Dealogic.

India also saw a ten-fold increase in the venture funding that went into internet companies in 2014 as compared to 2013. More than 800 internet start-ups got
funding in 2014 as compared to 200 in 2012, said Rajan Anandan, Managing Director, Google India Pvt Ltd and Chairman, IAMA.

Most large technology companies may have so far focused primarily on bigger enterprises, but a report from market research firm Zinnov highlighted that the small and medium businesses will present a lucrative opportunity worth US$ 11.6 billion in 2015 and US$ 25.8 billion in 2020. Moreover, India has nearly 51 million such businesses of which 12 million have a high degree of technology influence and are looking to adopt newer IT products, as per the report.

Some of the major investments in the Indian IT and ITES sector are as follows:

- Wipro has won a US$ 400 million, multi-year IT infrastructure management contract from Swiss engineering giant ABB, making it the largest deal for the technology company.
- Tech Mahindra has signed a definitive agreement to acquire Geneva-based SOFGEN Holdings. The acquisition is expected to strengthen Tech Mahindra’s presence in the banking segment.
- Tata Consultancy Services (TCS) plans to set up offshore development centres in India for Japanese clients in a bid to boost the company's margin in the market.
- Reliance is building a 650,000 square feet (sq ft) data centre in India—its 10th data centre in the country—with a combined capacity of about 1 million sq ft and an overall investment of US$ 200 million.
Intel Corp plans to invest about US$ 62 million in 16 technology companies, working on wearable, data analytics and the Internet of Things (IoT), in 2015 through its investment arm Intel Capital. The Indian IoT industry is expected be worth US$ 15 billion and to connect 28 billion devices to the internet by 2020.

Keiretsu Forum, a global angel investor network, has forayed into India by opening a chapter in Chennai. With this, the Silicon Valley-based network will have 34 chapters across three continents.

**Figure 2.3**

![Indian IT Revenue (USD billion)](chart)

Source: Indian brand equity foundation

### 2.2.3 Export

Export from IT industry and BPM sector has recorded a major growth of US$ 48 billion in the financial year 2011 and it has grown to US$ 106.111
billion. The training expenditure of IT and BPO sector which is about 2% of the industry revenue is spent on training employees in IT-BPM sector.

**Figure 2.4**

*Training expenditure by Indian IT-BPO sector*

- Recruitment cost: 6%
- Salaries for inhouse training staff: 27%
- Employee welfare: 19%
- External training (existing employees): 13%
- Other costs: 11%
- External training (new recruits): 24%

Source: Indian brand equity foundation

**Figure 2.5**
2.2.4 Recent development

The economic effect of the technologically inclined services sector in India—accounting for 40% of the country's GDP and 30% of export earnings as of 2006, while employing only 25% of its workforce is summarized by Sharma (2006): "Today, Bangalore 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-CMMI Level 5 Companies." Numerous IT companies are based in Mumbai such as TCS(among India's first and largest), Reliance, Patni, L&T Infotech, Myzornis Corporation and i-Flex.

Thiruvananthapuram (Trivandrum), the capital of Kerala state, is the foremost among the Tier II cities that is rapidly growing in terms of IT
infrastructure. As the software hub of Kerala, more than 80% of the state's software exports are from here. Major campuses and headquarters of companies such as Infosys, Oracle Corporation, IBS Software Services and UST Global are located in the city. India's biggest IT company Tata Consultancy Services is building the country's largest IT training facility in Trivandrum—the project is worth INR10 billion and will have a capacity of 10,000 seats. The completion of the facility is expected in 2014 or 2015.

On 25 June 2002, India and the European Union agreed on bilateral cooperation in the field of science and technology. A joint EU-India group of scholars was formed on 23 November 2001 to further promote joint research and development. India holds observer status at CERN, while a joint India-EU Software Education and Development Center will be located in Bangalore.

2.2.5 Major IT hubs in India

2.2.5.1 Bangalore:

Popularly known as the Silicon Valley of India and IT Capital of India, Bangalore is considered to be a global information technology hub and largest software exports from India. The top Indian IT service providers like Infosys and Wipro are headquartered in Bangalore. It is also country headquarters to many top firms like Intel, Texas Instruments, Bosch, Yahoo, SAP labs, Continental and many more. Bangalore alone has more than 35 percentage of all the IT companies present in India and contains close to 5000 companies making it the largest IT contributor in India.
2.2.5.2 Chennai:

Chennai is the second largest exporter of IT and ITES in India. Some of the major companies operating from Chennai are Accenture, Cognizant, TCS, Syntel, Wipro, Infosys, Verizon, L&T, HCL, Amazon.com, eBay, Paypal, Polaris, Patni, Capgemini and many major global IT service providers. The city has a world class IT infrastructure with dedicated expressway nicknamed as IT expressway, and many other IT parks promoted by both government and private entities. The city's strong industrial base also favours setting up of many major R&D centers in its vicinity.

2.2.5.3 Hyderabad:

Hyderabad is the third major IT hub in India. It has become the first destination for the Microsoft development centre in India and largest software development centre outside their headquarters in Redmond, Washington. Facebook is also based here. It is also known as Cyberabad which consists of many multi-national companies such as Google, Cognizant, Tata Consultancy Services.

2.2.5.4 Delhi:

The national capital region comprising Delhi, Gurgaon and Noida is a major cluster of software development.

2.2.5.5 Pune:

Major Indian and International firms based in Pune. It is one of the biggest global IT service & outsourcing exporter of India. The next biggest IT
park of India (Rajiv Gandhi IT Park at Hinjewadi) is expected to scale up to phase 7. It is also known as Tech City, which consists of many multinational companies such as TCS, Tech Mahindra, Capgemini, Syntel, Infosys etc., and is one of the IT hubs of India. Pune also has the headquarters of C-DAC.

2.2.6 Employment generation

IT sector has also led to massive employment generation. The industry continues to be a net employment generator expected to add 230,000 jobs in FY2012, thus providing direct employment to about 2.8 million and indirectly employing 8.9 million people. Generally, it is a dominant player in the global outsourcing sector. However, the sector continues to face challenges of competitiveness in the globalized and modern world, particularly from countries like China and Philippines.

India's growing stature in the information age enabled it to form close ties with both the United States of America and the European Union. However, the recent global financial crises have deeply impacted the Indian IT companies as well as global companies. As a result hiring has dropped sharply, and employees are looking at different sectors like the financial service, telecommunications, and manufacturing industries, which have been growing phenomenally over the last few years. India's IT Services industry was born in Mumbai in 1967 with the establishment of Tata Group in partnership with Burroughs. The first software export zone SEEPZ was set up here way back in 1973, the old avatar of the modern day IT Park. More than 80 percent of the country's software exports happened out of SEEPZ, Mumbai in 1980s.
2.2.7 Future of IT Industry

The Indian IT market currently focuses on providing low cost solution in the services business of global IT. Presence of Indian companies in the product development business of global IT is very meagre, however, this number is slowly on the raise. US giants that outsource work to India, do not allocate the high end SDLC (Software Development Life Cycle) processes like requirement analysis, high level design and architectural design, although some Indian IT players have enough competency to take up and successfully complete these high level software jobs. The other prominent trend is, IT jobs, that were earlier confined to Bangalore, are slowly starting to experience a geographical diffuse into other cities like Chennai, Hyderabad and Pune. The growth is not fast paced, this, can be largely attributed to the lethargic attitude of the government in providing proper telecommunication infrastructure. The penetration levels are higher for mobile, but, the speed at which the backbone infrastructure works (network speed) and the coverage it offers are far below what other countries of the world currently offer.

Figure 2.6
2.2.8 The Indian Advantage

The views listed above might possibly work against India’s’ dream to become the biggest contributor to world IT business. But, if there is one factor that is particular only to India, and, the one that can nullify all negative factors lined up against it, would be, the volume of young, English speaking talent pool that India offers. This number far exceeds, any other country can generate in the coming years. It cannot be denied that China is gearing up to reduce the English fluency gap but at the same time, doing it with ease like India is a topic of discussion.

2.2.9 From Services to Product Orientation
The migration of Indian IT companies to mainstream product development is not happening any time in the near future. This primarily can be attributed to the fact that was discussed in earlier section, which is, lack of innovation culture amongst the top hierarchy of the firm and less availability of skilled management graduates in the country. However, what might possibly happen is global multinationals that are currently outsourcing services and back office jobs to India might outsource more of higher level jobs in SDLC (Software Development Life Cycle) like requirement analysis and architecture design. The other opportunity is, Indian subsidiaries of global multinationals might take up significant chunk of the product development than what they are currently doing. This however is not happening currently because the global IT firms are still not comfortable in working out a way to extract high end work from Indian companies.

2.2.10 Research and Development - The new drivers

The research in the industry was earlier concentrated towards programming technologies like Java. In the recent times, the research focus changed towards technologies like mobile computing, cloud computing and software as a service. This shift is attributed to the preference of clients towards the ubiquitous computing over standalone computing and the growing demand for low cost computing solutions.

2.3 CONCLUSION
IT and ITES sector has made a significant contribution to the economic growth of India. Various statistics show that export from IT and ITES sector keeps on increasing year after year. There is a famous saying in English that “Information is wealth”. Information Technology industry adds wealth to the Indian nation.

CHAPTER- III
ANALYSIS OF DEMOGRAPHIC PROFILE OF RESPONDENTS AND THEIR OPINION TOWARDS OCB DIMENSIONS

3.1 INTRODUCTION:
This chapter deals with the analysis of demographic profile of respondents and their opinion towards OCB dimensions. Data analysis is considered to be a vital step in research. After collection of data with the help of relevant tools and techniques, the next logical step is to analyse the demographic profile of the IT professionals with respect to their gender, age, nativity, position in management, qualification, work experience, pay scale, non-cash benefits, reasons for providing rewards and recognition, level of satisfaction towards performance appraisal, level of satisfaction towards company policies, level of satisfaction towards company training, opinion about working environment, opinion about safety standards, involvement in corporate social responsibility, performance appraisal basis, voluntariness to