

Born and brought up journey of Indian IT & ITES Sector: A detailed literature review.

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Abstract:

Information Technology (IT) is a technology and knowledge-based industry. IT industry holds production, development, administration, storage and delivery of information. There are four major elements of the IT industry - (i) IT services, (ii) ITES (IT Enabled Services), (iii) Software Products & (iv) Hardware. All these components are advancing well and also contributing well in India's economy in the past few years.

The foundation of the IT industry in India was in the year 1974 when TCS got the first client from US- Burroughs Corporation. TCS is the first Indian company to get the project from the US to write software codes for Burroughs machines. This was the first footstep of the software industry in India. In 1986 the Indian government took a significant decision of Liberalisation of the IT sector. From 1986 to 2017 India has become the World's largest IT sourcing destination, and still, it is the preferred destination for IT and ITES services worldwide. Bangalore (Now Bengaluru), Chennai, Hyderabad, Pune, NCR and Mumbai are the supreme destinations for the IT outsourcing from different countries.

In the year 2005 SEZ Act was passed which became the very successful year for the IT industry in India with total software and services revenues of \$ 22 billion and the employment count in this particular sector crosses one million. In 2013, India's IT sector constituted 8% of the total GDP of the country. India's total software product market grew at 9.5% in the financial year 2017 to reach USD 7 billion. (Exports grew 7.8% to reach USD 2.3 billion.)

This study tried to review and focus on the various available works of literature and research works on the growth of IT sector in India and its contribution to economic development.

Key Words: IT Sector, Indian IT Sector, Software, IT and ITES.

Objectives of the study

This study on the review of the literature on 'Evolution and growth of IT sector in India' undertakes the following objectives:

1. To find out the various research works done so far in the area of Evolution and growth of IT sector in India.
2. To highlight the growth of the IT industry in India, so far.
3. To highlight the contribution of the IT industry to Indian economy.

Introduction

In India, before 1970 regional markets were utterly absent and government policy towards the private enterprise was very unsympathetic, till that time IT/ software industry did not have their presence in India.

Then in 1972, the Indian government introduces Software Export Scheme after the realisation of the potential of the software sector to earn foreign exchange. TCS was the first India IT Company to get the

benefit of this scheme. In 1974 TCS got first US client - Burroughs Corporation. TCS is the first Indian company to get the project from the US to write software codes for Burroughs machines. This was the origin of the software industry in India.

Though the software industry started early in 1974 but the government's contrary policies related to the software and hardware import and export (Export of software was on the import of the hardware) was the hurdle for the growth of the industry, and also unavailability of modern infrastructure was another factor to pull back the growth of software industry. Then in 1986 Indian Government realise the potential of IT / Software sector and took a vital decision of Liberalization of IT Sector.

After liberalisation Indian IT sector started experiencing the growth and competition, during 1990 to 2000 Indian economy had experienced the extensive developments like reducing the trade entry barriers, trade liberalisation, welcoming the foreign investments etc. Because of the liberalisation, IT sector started booming with the foreign investments, MNCs were started operations in India and more modern and developed services in software sector like on-site, off-shore and Global Delivery Model were introduced. Later that IT sector started developing like never before and still it is booming like anything, in addition to this government passed the SEZ Act in 2005 that helped in the import of duty-free hardware, relaxation in taxes etc. These all policies and decisions took the IT sector ahead it was earlier by the increase in the number of many new companies. As per NASSCOM, the software industry in India ten years back was not more than Rs. 3 billion, whereas it has reached Rs. 243.5 billion in 1999-2000.

India's GDP and IT Industry Growth:

GDP and IT Industry Growth Years	GDP Growth (USD Billion)	IT Growth (USD Billion)	% share of IT Industry in GDP
1997-98	411.570	5.0	1.2
1998-99	440.597	6.0	1.4
1999-00	461.914	8.2	1.8
2000-01	473.050	12.1	2.6
2001-02	494.997	13.4	2.7
2002-03	573.167	16.1	2.8
2003-04	669.442	21.5	3.2
2004-05	783.141	28.2	3.6
2005-06	877.224	37.4	4.3
2006-07	1098.945	47.8	4.3
2007-08	1232.946	64.0	5.2

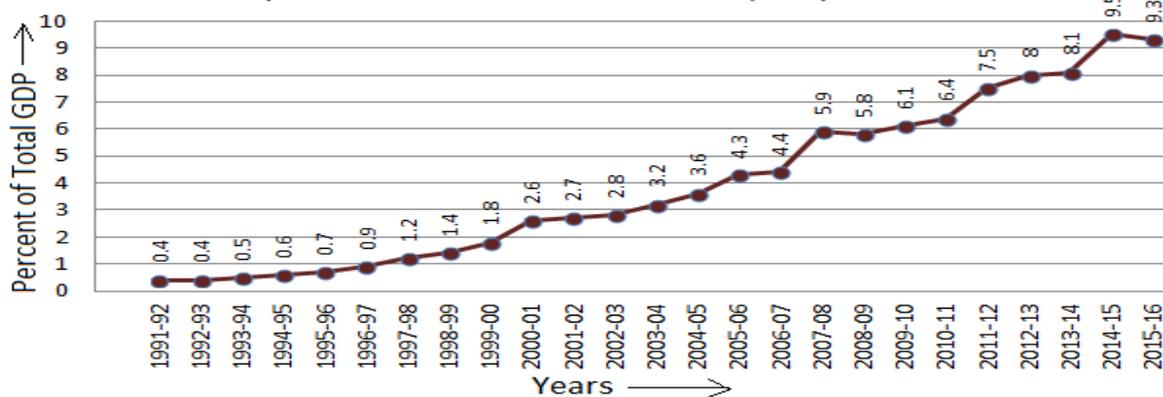
Source: (i) www.adb.org

(ii) www.nasscom.org.

There are many factors which facilitated the fastest growth and developments of IT industry in India are –

- Availability of skilled and low-cost human resources in bulk, because of the more IITs and engineering colleges which produces engineers in large quantity every year.
- Foreign Investment in IT industry.
- Encouragement to entrepreneurial culture by the government.
- SEZ, IT Act, Foreign direct investment, relaxation in taxes and transparent policies.
- Availability of state-of-the-art infrastructure with secure connectivity.
- Familiarity with the English language (India has the second largest pool of English speaking scientific professionals in the world, stands second only to the USA) (www.nasscom.org.).

Graph 2 IT Sector's Share in GDP (in %) of Total GDP



Source: Dataquest (India).

Literature Review:

Venkateshwara: A report on Indian Software Industry (2001): After the birth and slow growth of IT in India, India keeps moving in global customised software flow with 20.0% share and product package market not less than 1.0 % in the year 2000. From this year the domestic market started growing globally particularly in the service segment.

According to a 2005 study by the McKinsey Global Institute, global employment in IT Services was 6.3 million FTEs, projected to grow to 6.9 million by 2008. Of these positions, 42% were filled by professional software/IT engineers, 24% by generalist university graduates, and 12% by support staff, with the remaining 22% comprised of middle and senior managers, analysts, and finance/accounting professionals.²⁹ IT Services employment was concentrated primarily in advanced economies with 74% of employment located in North America, Western Europe, and Japan. India had the most substantial employment among lower-cost countries with 6%.

According to Karnik “India has few important reasons to be an important destination for IT outsourcing, one is the availability of qualified engineer in bulk, another reason is availability of English speaking human resources in large quantity, availability of modern telecommunication infrastructure with continuous improvement, government policies and amendments in IT related laws and policies and effective regulatory regime that favour the growth of industry” (2005).

Rafiq Dossani(2005): Domestic startups come into view as the critical factor for the commencement and innovations in the unfriendly industrial policy atmosphere. Software industry needed to shift the gear, and it shifted the gear with the help of supportive policies. These changes were in support of domestic firms in programming services. Afterwards, friendly policies and technological changes lead to encourage conglomerate entries, and exceptional value added outputs.

Jeffrey Tucker, Stephen Chen, Corrie DeCamp (2006): Need to grow time, pushes the companies for the mergers and not to get inclined on each other region. All at once, customer CIOs tried to take benefit of their vendors’ competition because they began to downsize their portfolios. Small and mid-sized firms face the risk from big fishes as the smaller amount of opportunities on hand for the growth in the unexploited market and with the extent of economics.

Report sure (2006): Industry Survey Global Software: In the year 2000, there was a curb incorporate on technology, after dotcom explodes worldwide. The software products and ITSI (IT Service Industry) made excellent healing of USD 1.13 trillion in the year 2005 with the growth of 11.37 %.Two success

factors, 1- Increasing the trust and confidence in internet-based technology and 2- development in the industries model has brought growth in the industry, as a whole.

Monthly Monitor, 2007 & NASSCOM, Strategic Review, 2006: Indian IT & ITES both have played a remarkable role in attracting the foreign exchanges for India, and the current adopted development pattern shows the export growth of IT & ITES of India. In earning the Forex, IT & ITES played a vital role for India. As per the strategic review, 2006, the share of total receipt from trade reached double of last five years. The export increases to \$ 23.9 billion from \$ 6.2 billion along with Forex \$139 billion from \$6.2 billion in the FY2006. Further export and Forex reached \$ 31.3 billion and \$ 272.3 billion, respectively.

Joel Jones, Junaid Mohiuddin (2007): To be successful, Software companies need to make the necessary changes in business models and their processes that counterpart the distribution pattern equally important to product and services innovation.

A survey was conducted on software customers, according to that survey, the majority of the corporations are looking for the business models rather than general licences and maintenance model. According to that survey, 80% plan on spending on a subscription or on-demand models, whereas the transaction-based model 60% and 33% plan on software purchases.

Ashish Kumar, Dr S.K.Jha (2013): The business life over the past three decades has been radically changed due to the developed ability of microchip concerning storing and processing the information and as a result of this decidedly fewer businesses remain lacked by the Information and Technology Revolution. Those companies who did not put together their business with IT have gone out of the operation because their competitors did it; as a result it is essential that business managers are now well well-versed about the uses and the potential of Information technology. Information technology has the signature on the society along with the business arena.

Ishmeet Singh & Navjot Kaur (2017): IT and ITES sector in India has shown the noticeable growth in the last decades because of the various schemes and developments by State and Central government like liberalisation of foreign trade, relaxation in duties on IT import, launching and establishing the Export Oriented Units, Software Technology Parks, reduction on foreign exchange, Special Economic Zones etc. If India constantly keeps this growth, then it is expected that it will reach up to \$ 300 billion till 2020.

Methodology

This review is descriptive, and it is based on secondary data. This literature review was performed by searching and reviewing the different research papers, articles, theses and reports published in different print and online journals and books mainly between 2001 and 2017.

Conclusion:

Though the foundation of IT in India was in 1974 but till 90s industry had almost insignificant status due to many reasons. The industry has started showing its high glimpse from the late 90s because of many favourable policies by government to attract foreign IT giants in India, availability of highly skilled, qualified English speaking human resources in bulk that too at low cost as compared to US market, modern and hi-tech infrastructure those have helped India to become the most favourite destination for IT outsourcing and so far the IT journey showing the noticeable growth and GDP contribution. If the journey goes at the same speed, then it is expected that it can reach up to USD 300 billion by 2020.

Scope of the study:

This is research has limited scope from the evolution of IT in India till 2016. This is consecutive study highlighting the born and brought up journey of IT and ITES industry in India.

References:

- [1] Kaur et al., Vol.5 (Iss.6): June, 2017] ISSN- 2350-0530(O), ISSN- 2394-3629(P) ICV (Index Copernicus Value) 2015: 71.21 IF: 4.321 (Cosmos Impact Factor), 2.532 (I2OR) InfoBase Index IBI Factor 3.86
- [2] Rafiq Dossani, Senior Research Scholar, Asia-Pacific Research Center, Stanford University, CA 94305-605, Origins and Growth of the Software Industry in India.
- [3] Ishmeet Singh and Navjot Kaur. (2017). "Contribution of information technology in growth of indian economy." International Journal of Research - Granthaalayah, 5(6), 1-9. <https://doi.org/10.5281/zenodo.805859>
- [4] Ashish Arora Carnegie Mellon University, the Indian Software Industry and Its Prospects.
- [5] Contribution of Information Technology in growth of Indian economy, Ishmeet Singh 1, Navjot Kaur 2, [Kaur et al., Vol.5 (Iss.6): June, 2017] ISSN- 2350-0530(O), ISSN- 2394-3629(P).
- [6] Department of Industrial Policy & Promotion, Government of India, Ministry of Commerce and Industry (http://dipp.nic.in/English/Publications/FDI_Statistics/2016/FDI_FactSheet_OctoberNovemberDecember2016.pdf)
- [7] Rajaraman, V., (1955-2010), History of Computing in India. Supercomputer Education and Research Centre, Indian Institute of Science, Bangalore 560 012 (2015).
The IT-BPM Sector in India: Strategic Review 2015. NASSCOM
- [8] Mathur, S.K. (2006). Indian Information Technology Industry: past, present and future and a tool for national development. Journal of Theoretical and Applied Information Technology, 50-79
- [9] Seema Joshi, 2008, IT and ITES as an Engine of Growth: An Exploration into the Indian Experience.
- [10] Report on Indian Software Industry by Scope marketing & information solutions private limited, October 2001
- [11]: Pankaj Ghemawat, Steven a. Altman August 2007. The Indian IT Services Industry in 2007