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AN OVERVIEW OF GROWTH OF IT SECTOR IN INDIA

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Abstract: **The last two decades show enormous development in IT sector and it ensures an upward trend since the 1990's. The highly talented human resources with excellent infrastructure facilities, the IT sector achieved significant growth in major parts of the country. IT industries contribute a very large percentage to the economy and agriculture occupies the position of predominant player and main employer of the nation. In new millennium this industry is the country's significant growth engine by achieving significant milestones in revenue growth, employment generation and foreign exchange earnings.**

1. INTRODUCTION

India has been experiencing number of transformations in the economic and technological spheres and these changes helped to achieve a faster economic growth, eradication of poverty and unemployment. India's focus has been changed to tertiary sector apart from its early emphasis on primary sector. IT sector is considered as one of the major contributors to tertiary sector. It is one of the most important and fast growing industries in the world which includes digital processing, storage and communication of information of all kinds. It holds an important strategic place in Indian economy. Information Technology changed the identity of India from a slow moving bureaucratic economy to global player of world class technology and it is included as an essential part in modern education. Today it is India's largest and most diverse private sector employer.

IT industry consists of IT Services and Business Process Outsourcing (BPO). It plays a pivotal role in contributing substantially to increase in GDP, employment, and exports. The part played by IT sector is highly important in terms of employment generation, revenue, foreign exchange earnings, standard of livings etc. and has played a major role in placing the country on the global canvas.

IT sector plays a key role in the growth of service sector and it provides formal, productive and improved employment conditions as compared to the other traditional sectors. But the fact that is proven shows that the educational facilities for women increases and now women occupy an important position in IT labour force. The sudden and huge rise in IT industry provides rewarding opportunities within the country by reducing the extent of brain drain. IT industry offers 1.1 million jobs in last 5 years (NASSCOM, 2017) and has become a major career provider in young educated Indians. The last two decades show enormous development in IT sector and it ensures an upward trend since the 1990's..

2. DATA SOURCE AND METHOD

For a detailed analysis of the growth of IT sector in Kerala, relevant data were collected from secondary data. Relevant secondary data were collected from journals, brochures, other research publications and official websites of NASSCOM (National Association of Software and Service Companies), Ministry of Electronics and Information Technology, Government of India (GOI), STPI (Software Technology Parks of India) and Techno park, Thiruvananthapuram. The secondary sources of information are essential to understand the growth of IT sector within India and Kerala.

3. RESULTS AND DISCUSSION

An analysis of the growth of IT sector in India enable us to understand different stages of growth of IT sector and how much this sector struggled to come into this current position.

3.1 Growth of IT Sector In India

Different kinds of transformations are undergone in the technological and economic spheres of India which aim to ensure livelihood security and social justice. It was a policy which comprises of welfare state philosophy, centralized planning, state controlled industrialization and market mechanisms that led India till 1980's.But that gave way for a new market driven economy of neo-liberalization in 1990's . State control on market mechanism declines, opening up gates for multinational and foreign investment in domestic market, public-private partnership, fast expansion of educational arrangements and Information and Communication Technology. A brief outline of the growth of IT sector in India since 1960's is given in the following paragraphs.

3.1.1 Sixties and the Seventies

Indian Government with the help of Dr. Homi J Bhaba committee identified the need for a strong indigenous electronic base for security and national development. By understanding the importance of software exports, SEEPZ (Santacruz Electronics Export Processing Zone) was set up in Bombay in 1973. Even before that IITs and IIMs are started in 50s and 60s. Many Governments created Electronics Corporations like KEONICS in Karnataka, KELTRON in Kerala , UPTRON in Utter Pradesh . In 1977, the National Informatic Centre (NIC) was set up for designing and implementing a district level planning system based on a network called the NICNET. This period also saw the emergence of Wipro and HCL as leading hardware companies. Certain software companies like Tata Consultancy Services (TCS) and Infosys and Tata Unisys developed many application software packages aimed purely at the domestic market. In the late seventies, many pioneering companies were born in the private sector. This includes DCM, HCL, ORG, NELCO, PCL and Wipro that will mini computers and later PCs and there were peripherals manufactures too.

Academic Institutions play an important role in the development of IT sector.IIT Kanpur got an IBM 1620 way back in 1963 and TIFR bought a CDC 3600 in 1965. The Computer Society of India (CSI) founded in Hyderabad with Prof. R. Narasimhan as the Founding President and Major General Balasubrahmanian as the Founding Secretary. He was the Founder / Head of both NCST and CMC. TIFR (later named as NCST) was very much involved in the growth of IT in India. The Computer education sector in India saw tremendous advances during this period. The IITs, the Regional Engineering colleges and many local engineering colleges introduced Computer Science and Information Technology courses at the Bachelors-level and in the early 1970s IITs had introduced Computer Science Education at the Master s and doctoral level.

3.1.2 The Eighties

The IT sector's growth began accelerating in the 1980s. Many software companies took birth in 1980s – Infosys, Mastek, Patni, Sathyam, Softek, Tata Infotech and Wipro. American and European clients contracted for Indian engineers to be sent overseas to work on sight on client projects. In 1980-81, the Industry employed about 2000 people in 25 firms and generated thirty million dollars in exports. NICNET in1982 brought Internet to Govt. offices and ERNET in 1986 brought Internet to educational and research institutes in India. The Rangarajan Committee on bank advised the Government on the computerization road map for the nationalized banks. Though an agreement is signed between the employees union and the bank management, the National Organization of Banks expresses shock over the decisions. In 1984 the New Computer Policy announced by Dr. N. Sheshagri and the Software Policy of 1986 kick- started the Indian IT story.

The formation of NASSCOM in 1988 (that sprang into action from 1990) gave a fillip in to the nascent Software industry. NASSCOM is the India's National Association of Software and Service Companies. It is the premier trade body and the chamber of commerce of the IT software and services industry in India. It was set up to facilitate business and trade in software and services to encourage advancement of research in software technology. It has been the strongest proponent of global free trade in India. It encourages its members to adopt world class management practices, build and uphold highest quality standards and become globally competitive.

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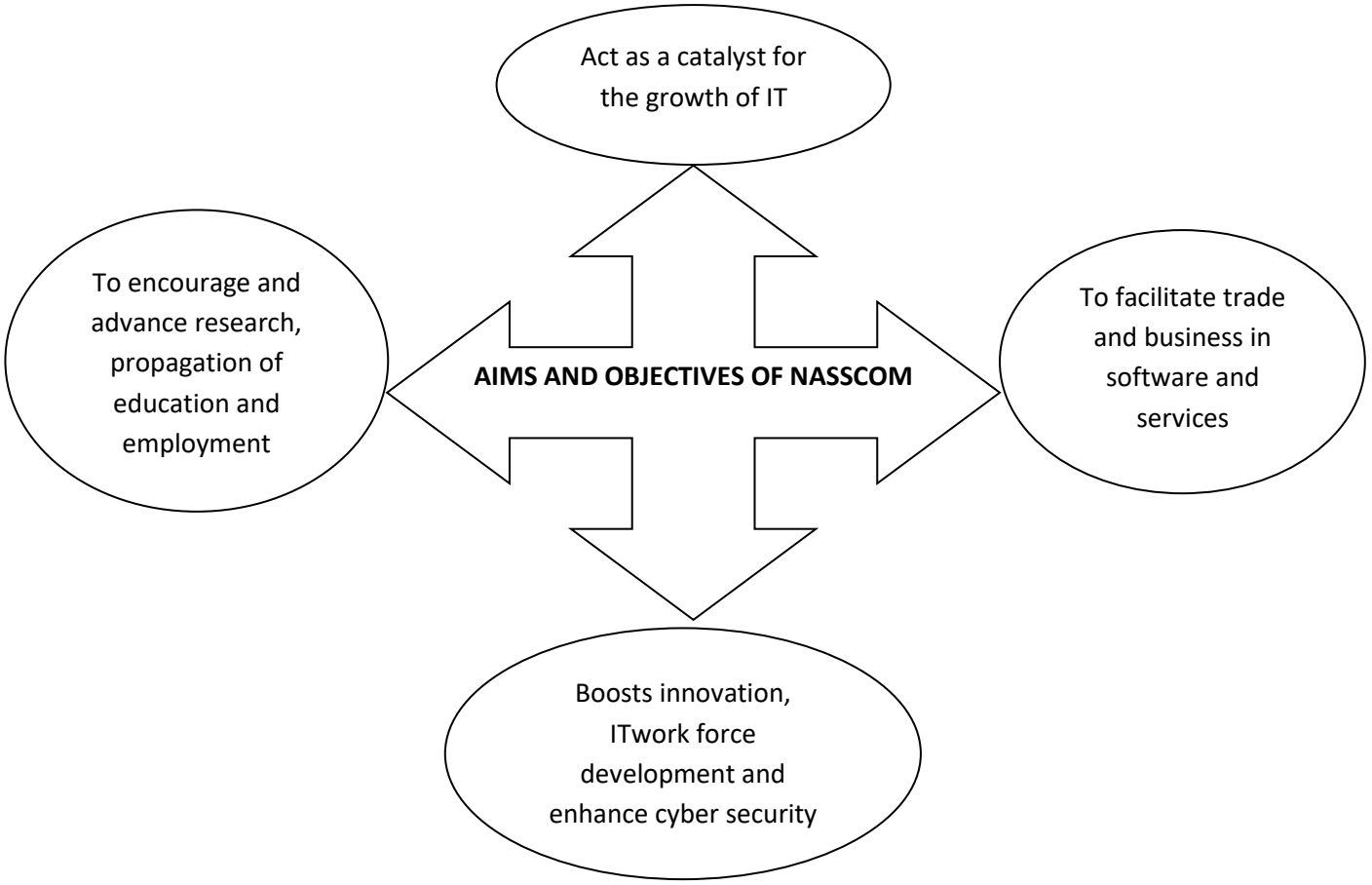
Figure 1.1

AIMS AND OBJECTIVES OF NASSCOM



Source: Compiled by the Investigator from various NASSCOMM reports.

Role of academic institutions is very prominent in promoting IT sector in eighties.C- DAC (Center for the Development of Advanced Computing) was set up in 1988 to usher in supercomputing ; its Param and later Param Pams Adma series made debut into the Super 500 list for the first time from India. GIST (Generalized Indian Script Terminal) started special programs like MCA (Master of Computer Applications) that was planned at IITs and launched various universities in 80s , helped the growing Indian software industry immensely. Other initiatives in manpower development include the highly successful programs from NCST in Bombay and later in Bangalore. And the accelerated man power development on electronics and computing through DOEACC and DRDO.

3.1.3 The Nineties

The nineties saw spectacular success of the Indian software industry. Finance Minister Dr. Manmohan Singh initiated the reform process in 1991 helped the Indian software industry and due to the highly talented human resources , good infrastructure facilities and policy offered by the Union and State Government, the IT sector grew in major parts of the country. An important step towards the growth of IT sector in India has been the establishment of Software Technology Parks of India (STPI) by the Ministry of Information Technology. The STPI policy removed the 'Inspector Raj' from software companies, the bonus of corporate tax exemption and duty free of hardware made the Indian software companies profitable. In early nineties US based companies began to outsource work on low- cost and skilled talent pool in India. (IBEF January 2016) .The BPO industry grew enormously in the 90s with established players Infosys and Wipro entering the space. The software companies in India had outstanding achievements in the quality levels. Motorola Bangalore centre was the first in the World to achieve the SEI Level 5 level of quality. By 1999 six of the 12 SEI level 5 companies in the World were Indian companies. Software industry grew to $ 1 billion by 1995 and to $ 8 billion by year 2000 (Yojana, Vol 51, November 2007).

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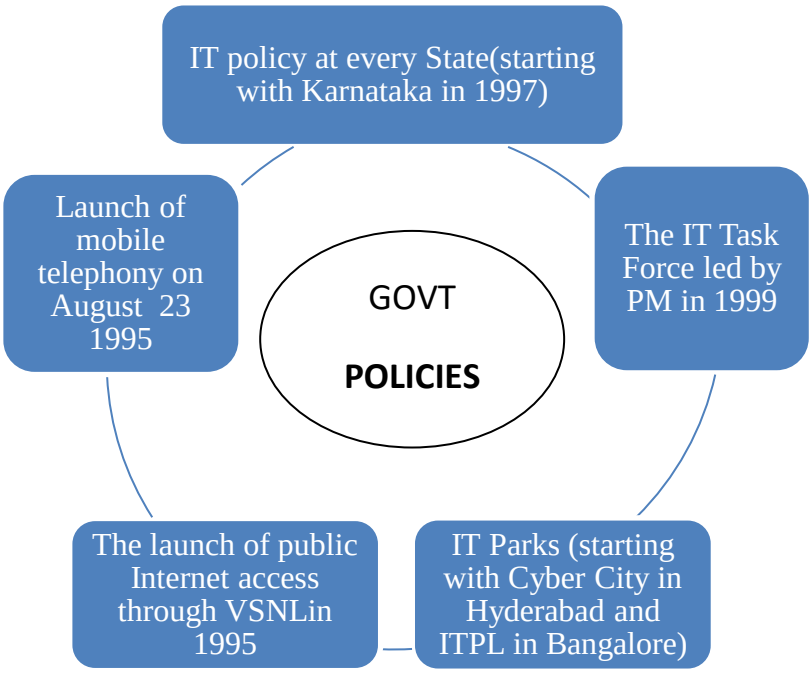
After the economic reforms of 1991-92, major fiscal incentives provided by the Government of India and the State Governments, like, liberalization of external trade, elimination of duties on imports of information technology products, relaxation of controls on both inward and outward investments and foreign exchange, setting up of Export Oriented Units (EOU), Software Technology Parks (STP), and Special Economic Zones (SEZ), has enabled India to flourish and acquire a dominant position in world's IT scenario. The nineties also saw a 'direct push' from the Government through a number of policy measures

Figure1.2

GOVT POLICIES



Compiled by the investigator by using data from Dataquest, December 2006 .

With spectacular growth in Indian IT industry, there was a phenomenal growth in the quantity of undergraduate computer science (and related programmes); more than 200000 under graduate engineers in computing and related disciplines are coming out of Indian universities today, though there is considerable room for improvement in quality. Starting in late nineties, many of the Regional Engineering Colleges (REC) were upgraded to National Institutes of Technology (NIT) with more funding from the Central government and autonomy. A string of IIITs (Allahabad, Bangalore, Gwalior and Hyderabad) started functioning from late nineties.(Yojana,Vol. 51, November 2007)

3.1.4 Current Decade

The information Technology (IT) industry is one of the fastest growing sectors in India. In the 21st century, India has risen to the position of one of the largest IT capitals of the world. The most prominent IT hub is IT capital Bangalore and the other emerging destinations are Chennai, Hyderabad, Mumbai, Pune, Jaipur, Kolkata, and Thiruvananthapuram. India's growing stature in the Information Technology enabled the country to form close ties with both the United States of America and the European Union. Many predicted that by 2000 end the Indian Software story will be 'finished' but the story got more interesting in the past fifteen years. A successful experience working with Indian vendors on Y2K updates led to increased confidence off shoring and a sustained increase in demand growth.

The global economic depression of 2009 did not affect much the Indian IT industry. It was a temporary setback and to certain extent it affected the man power. Despite the global economic slowdown, the Indian IT software and services industry maintain a steady pace of growth. 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 in the global sourcing market. The growth of IT services was fastest growing in 2010 by 22.7% and aggregating export revenues of US $ 33.5 billion , accounting for 57% of total export. IT sector provide

unparalleled contribution to India. Today, IT sector is India's largest and most diverse private sector employer, with a 3.7 million direct employment and more than 10 million indirect jobs. Start-ups are boosting India's next wave of technical growth and India became 3rd largest technology start up base.

IT industry has been identified as one of the major industries by the Government of India. The contribution of IT sector to India's GDP has increased to approximately 9.5 percent in 2015 from 1.2 percentage in 1998 (Government of India, 2016). Nearly 10 percent in the contribution of GDP indicates that the IT sector has grown to considerable heights. IT sector adds 1,60,000 employees and provided direct employment to 3.7 million people and indirect employment to 10 million people. In 2015-16, India's Information Technology and business process management industry added $ 130 billion incremental revenue as against $118 billion. During 2015-16, industry's exports are estimated to grow 13 per cent at $88 billion (Nasscom, 2016). Export of IT industry is estimated about USD 107.8 billion in the year 2016-17 that is rose up to 9% as compared to last year which was USD 97.8 billion. Domestic Revenue of IT industry is estimated about Rs1408 billion in the year 2016-17(NASSCOM). The growth rate of IT sector is estimated at a rate of 12-14% for the year 2015-16 and it is expected triple in the year 2025 with US$ 350 billion. Indian IT's core competencies and strengths have attracted significant investments from major countries. Indian IT's core competencies and strengths have attracted significant investments from major countries. India is the world's largest sourcing destination for the information technology (IT) industry, accounting for approximately 67 per cent of the US$ 124-130 billion market. The industry employs about 10 million workforces. More importantly, the industry has led the economic transformation of the country and altered the perception of India in the global economy. India's cost competitiveness in providing IT services, which is approximately 3-4 times cheaper than the US (IBEF March, 2017).. Indian start-ups are estimated to have raised US$ 1.4 billion across 307 deals in quarter ending March 2016.

4. CONCLUSION

The growth and prosperity of India's IT industry depends on some factors. These factors are technically skilled professionals, English speaking population, lowest cost, robust Telecom Infrastructure and favourable governmental policies. The IT industry in India has seen massive change, growth and development over the years. In India, the number of graduates addition to talent pool in India grew at a CAGR of 9.4 per cent and added around 5.8 million graduates to the talent pool during FY15(IBEF, January 2016).Additionally, the growth of the IT sector is expected to bring about a corresponding growth in other sectors like employment, exports and Foreign Direct Investments. IT sector is also intimately linked to other relevant sectors like biomedical technology, defense and infrastructure. Thus the future of the IT sector will directly impact the growth of the nation.

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