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Impact On Contribution Of Information Technology In Growth Of Indian Economy

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ABSTRACT

Information technology is agitated with improvements in a variety of human and organizational problem-solving undertakes through the design, development, and use of technologically based systems and processes that magnify the efficiency and effectiveness of information in a variety of strategic, tactical, and operational situations. Five principle sectors in the IT industry, namely online businesses, IT services, IT-enabled services and software and hardware merchandise accepted most of the investments. The IT industry has improved over the years and has emerged to be a chief supporter to the global economic growth.

1. INTRODUCTION

Indian economy consists of three sectors. They are primary sector, secondary sector and the service sector. Economies tend to follow a developmental progression that takes them from a heavy reliance on primary, toward the development of manufacturing and finally toward a more service based structure. Information technology is an important prominent sector of the Indian economy. The Government of India has pinpointed IT industry as one of the major industries in India and it plays a major role in achieving the policy objectives like economic development. The ITindustry has improved over the years and has emerged to be a chief supporter to the global economic growth. The IT sector, comprised by the software and services, Information Technology Enabled Services (ITES) and the hardware segments, has been on a moderate growth direction with a steady rise in revenues as witnessed in the past few years. The size of this sector has increased at a rate of 35 percent per year during the last ten years. The share of information technology industry is 7 percent of gross domestic product (GDP) in Indian economy according to NASSCOM. The aim of this article is to examine the growth and performance of information technology industry in India.

2. OBJECTIVES

- To study the economic growth of information technology industry
- To examine the performance of information technology industry
- To study at employment opportunities in information technology industry

3. METHODOLOGY

The secondary data was obtained through booklets on the Five Year Plans, Economic Appraisals and policy notes published from time to time by the State Planning Commission of Government of Tamil Nadu. Apart from that, information was also collected from Economic

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Survey, journals, magazines, publications, reports, books, dailies, periodicals and articles related to the scope of the study.
The primary data has been collected from convenient random sampling method has been used in the selection of IT employees from IT companies. All 100 beneficiaries have been interviewed and the information is elicited by using well-structured questionnaire.

4. DEFINITIONS OF INFORMATION TECHNOLOGY

United Nations Educational, Scientific and Cultural Organization (UNESCO)defines IT as, scientific technology and engineering disciplines and the management techniques used in information handling and processing their application, computers and their interaction with men and machines and associated social, economic and cultural matters. According to **Indian Library Association** (ILA) glossary IT is the application of the computers and other technologies to the acquisition, organization, storage, retrieval and dissemination of information. Thus information science and technology, deals with the study of computers, telecommunication etc. for storing organizing and retrieving information of all kinds. The term "computer science" is usually reserved for the more theoretical, academic aspects of computing, while the vaguer terms "information systems" (IS) or "information services" may include more of the human activities and non-computerized business processes like knowledge management.

Information technology is agitated with improvements in a variety of human and organizational problem-solving undertakes through the design, development, and use of technologically based systems and processes that magnify the efficiency and effectiveness of information in a variety of strategic, tactical, and operational situations. Five principle sectors in the IT industry, namely online businesses, IT services, IT-enabled services and software and hardware merchandise accepted most of the investments. Compelling cost advantage coupled with available skilled force has driven this spectacular growth. Skilled manpower and multi lingual capabilities integrated with the advantages of lower costs can help the country to emerge as a frontrunner in KPO (Knowledge Process Outsourcing), globally. Increasing acceptance of technology in the domestic industries is already beginning to reflect in their increased performance and competitiveness, although many low-cost delivery destinations, such as China, Philippines and Vietnam, are appearing, India's leadership position cannot be challenged. Its benefit of long term cost competitiveness, supply of highly coached engineers and its expertise in action and quality will continue to foster its growth.

5. PROGRESS OF INFORMATION TECHNOLOGY INDUSTRY IN INDIA

The beginning of IT industry in India can be traced back to 1974 when Tata Consultancy Services (TCS) got its first US client - Burroughs Corporation, United States. The job promoted was to write software code for the Burroughs machines. Opportunity started the growth story of TCS, now a $10 billion company. Other IT giants also stated their growth stories with modest beginnings. Past period private businesses were not easy in India due to Government's strict restrictions and regulations. Things irradiated up only after 1991 with the government's policies of liberalization.

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6. PROGRESS OF THE IT SECTOR CAN BE STUDIED IN 5 STAGES

STAGE 1

In this first stage (Before 1980), Indian software industry was almost non-existent. IT industry in India started with hardware products. The IT sector was protected by the Indian Government through licensing and high tariff rates. Indian Government registered the potential of software sector to earn foreign exchange; it permitted import of hardware and export of software through its new software export scheme formulated in 1972. TCS was the first beneficiary of this scheme in 1974.

Stage 2: 1980 to 1990

The software exports were started by some high profile. In the companies like TCS, WIPRO, Infosys etc., the results were not very motivating. There were some problems with government policies like the export of software was resting on the imports of hardware. Moreover there were no suitable infrastructural facilities for software development. IT industry was under a lot of pressure. It was only in 1986 that the Indian Government took resolve to liberalize the IT sector and de-licensed the imports of hardware and for exporters, it was duty free.

Stage 3: 1990 to 2000

This period has perceived intensified competition in the IT sector. In this stage, there were some significant changes in Indian economy, including relaxation in the entry barriers, trade liberalization, opening up of Indian economy for foreign investments. Software front was moving more towards standardization and productivity development. Due to the liberalization, a flow of foreign investments came in India and MNCs in India were launched. "Offshore Model", "Onsite Model" and "Global Delivery Model (GDM) were inaugurated as part of the services.

Stage 4: 2000-2010

2000-2010 has been a period of sudden growth of the IT industry. Software service companies were obtaining good amount of foreign exchange as a result of cheap hardware, faster communication, and surrounding up of Software Technology Parks. In 2005 Special Economic Zone (SEZ) Act was progressed. It assisted in importing duty free hardware, and income tax exception on exports for 10 years. The result was an increase in the number of software companies. Information Technology Act progressed in 2000 gave a boost to e-commerce. National broadband policy declared in 2004 made broadband available to 20 million Indians by 2010. The policy of permitting companies to have 100% ownership without the need for an Indian partner assisted large multinationals open their development centers in India (Accenture, CISCO, DELL, GE, Oracle, Adobe, SAP, Philips, HP, and Google). CDAC (Centre for Development of Advanced Computing) designed a parallel machine named PARAM PADMA in 2003 which used 248 processors and a proprietary interconnection network. Its peak speed was 992 gigaflops and it was ranked 171 in the top 500 list of high execution computer in the world. Another important growth in the period 1998-2010 was the increasing use of computers in all walks of life like banks, offices, railway stations airports, Income Tax department etc. E-Governance grew rapidly during this period.

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Stage 5: Post 2010

Post 2010, India has become world's largest sourcing target for ITindustry. Online retailing, cloud computing and e-commerce are all providing to speedy growth of the IT industry. The rate of growth in IT sector for 2016-17 is approximately 12- 14%. India's internet operator base is the third largest in the world. Cloud services revenue in India is contemplated to reach US$ 1.26 billion in 2016, growth of 30.4 per cent.

7. SUBSCRIPTION OF IT SECTOR TO INDIA'S GROWTH STORY

Indian IT industry has reached phenomenal growth during the post-economic reform period. The liberalized policy regime, fast technological advancement, reduced prices of computer hardware, develop rapidly of computer science and Technology education, readiness of a large pool of talent to the industry relatively at lower cost, and all together have made significant contribution to the growth of this industry during the last 25 years.

PARTICIPATION TO INDIA'S ECONOMY IN TERMS OF GDP

The industry has offered significantly to the economy in terms of GDP, foreign exchange earnings and employments. Majority of the Fortune 500 and Global 2000 corporations are sourcing IT-ITES from India. There are around 600 centers set up by Indian IT companies in 78 countries provision to the IT related requirements of people in over 200 cities. They are executing very well and showing remarkable double digit growth in terms of national GDP. In the year 2015-16, revenues have raise from 1.2 per cent to nearly 9.3 per cent. The IT sourcing market of India has produce from 52 percent in 2012 to about 56 percent in 2016. The IT sector contributed to India's GDP by 7.7 percent in the year 2016. By 2020, this sector is expected to reach USD 225 billion target. India is becoming one of the most favoured destinations for business process outsourcing as far as IT enabled services are agitated. These services are boosting Indian economy and this is obvious in their contributions to national gross domestic product.

CREATION OF EMPLOYMENT OPPORTUNITIES

The high growth of IT industry in India has generated a large number of jobs thus raising the socio-economic level of a large number of families. The top IT companies in India that generate job opportunities in this field are Tata Consultancy Services(TCS), Wipro Technologies, Cognizant, Yahoo!, Google, Tech Mahindra, Infosys Technologies, HP ,Capgemini, iGATE Patni, Accenture, L&T, EY, Convergys, MphasiS, Genpact, HCL Technologies and Godrej Infotech. Cities like Bengaluru, Delhi, Noida, Gurgaon, Hyderabad, Chennai, Bombay and Cochin are some of the places which have developed into potential IT hubs of the country, thanks to the presence of these top IT companies. These are now key players which contribute to the growth of the Indian economy through telecommunication, software development, design, mobile commerce, e-commerce, BPO and knowledge process outsourcing (KPO), and other related business centers employ a large number of skilled and even unskilled people. The total employment in IT-ITES industry has been rising over the years and reached around 3.799 million in 2016-17. Around 6 percent of the employees working in IT-BPO industry come from the economically backward sections of the society. Employment to one person per family brings a large difference to their economic status.

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EMPLOYMENT IN IT-ITES INDUSTRY (IN MILLIONS)

YEAR	IT SERVICES AND EXPORTS	BPO EXPORTS	DOMESTIC MARKET	TOTAL EMPLOYMENT
2001-02	0.17	0.11	0.25	0.52
2002-03	0.21	0.18	0.29	0.67
2003-04	0.3	0.22	0.32	0.83
2004-05	0.39	0.32	0.35	1.06
2005-06	0.51	0.42	0.38	1.29
2006-07	0.69	0.55	0.38	1.62
2007-08	0.86	0.7	0.45	2.01
2008-09	0.92	0.79	0.5	2.21
2009-10	0.99	0.78	0.52	2.29
2010-11	1.15	0.83	0.56	2.54
2011-12	1.15	0.83	0.56	2.54
2012-13	1.29	0.88	0.6	2.77
2013-14	1.6	0.989	0.699	3.28
2014-15	1.74	1.03	0.745	3.515
2015-16	1.844	1.086	0.758	3.688
2016-17	1.956	1.097	0.768	3.799

* compiled by the author.

Source: NASSCOM http://www.mit.gov.in/content/employment

TABLE NO 1

Indian information technology industry has grown manifold during the period 1991-92 to 2016-17 as shown in above table 1.Increase in employment in IT-ITES services have helped other associated businesses like security, housekeeping, catering, transportation and real estate to grow. All these activities are contributing to the Indian economy in the form of taxes paid to the government.

8. AN ANALYSIS ON SOCIO – ECONOMIC PROFILE OF RESPONDENTS

Analysis and interpretation are central steps in the research process. The aim of the analysis is to organize, classify and summarize the collected data so that they can be better comprehended and interpreted to give answers to the questions that triggered the research. In this paper a detailed analysis of the collected data has been attempted as per the objectives stated earlier. Descriptive percentage analysis and Friedman test is applied to intercept opinion of IT employees.

FREQUENCY DISTRIBUTION OF THE RESPONDENTS BY OF THE IT EMPLOYEES

	PARTICULARS	FREQUENCY	PERCENTAGE
TYPE OF COMPANY	MNC	87	87
	Indian Company	13	13
	Total	**100**	**100.0**
	Male	69	69

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Gender	Female	31	31
	Total	**100**	**100.0**

Source: Primary Data

TABLE NO 2

Table 2 shows the distribution of sample size according to the kinds of company and gender. The Information Technology employees have larger number of respondents 87 per cent working in Multinational Companies, while 13 per cent of the respondents are working in Indian Companies. The reasons are the multinational companies provide not only high salaries but high levels of social benefits and good working conditions. They also organize many sponsored training programmes, seminars offer opportunity to work in new projects and to use new technology. 69 per cent of the respondents are male employees while 31 per cent female employees which is much lower to male employees.

FREQUENCY DISTRIBUTION OF THE RESPONDENTS BY THE MONTHLY INCOME

PARTICULARS	FREQUENCY	PERCENTAGE
Below 20,000	47	47
20,000 – 40,000	42	42
40,000 – 60,000	9	9
Above 60,000	2	2
Total	**100**	**100.0**

TABLE NO 3

Table 3 shows the distribution of sample based on their monthly income. Under belowRs 20, 000 is 47 per cent of the respondents, while it was 42 per cent for Rs 40,000 to Rs 60, 000.Earning capability plays a significant role in the life of an individual. IT employees are the one who earns very high salaries. The high scale of salary in the industry is attracting workers from other sectors.

FRIEDMAN TEST FOR SIGNIFICANT DIFFERENCE BETWEEN MEAN RANKS TOWARDS FACTORS OF JOB PERFORMANCE OF IT EMPLOYEES

FACTORS ON JOB PERFORMANCE	MEAN RANK	CHI-SQUARE VALUE	P VALUE
Good Relationship with Higher Authorities	5.55	49.05	<0.001**
Career Development	4.72		
Recruit people with Right Skills	4.58		
Promotion is based on merit	4.11		
Rewarded for the quality of effort	4.49		
Steps have been taken to poor performer	4.48		
Job satisfied economic and social aspirations	4.47		
Bonus received are satisfactory	3.60		

Note: ** Denotes significant at 1% level

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TABLE NO 4

The table 4 shows that Friedman test is carried out to know the mean ranks towards job performance. Since P value is less than 0.01, the null hypothesis is rejected at 1 percent level of significance. Hence, concluded that there is significant difference between mean ranks towards factors of job performance of IT employees. Based on mean ranks good relationship with higher authorities (5.55) is most effective in job performance is followed by Career Development (4.72), recruit people with right skills (4.58), rewarded for the quality of effort (4.49), Steps have been taken to deal with poor performer (4.48), Job satisfaction economic and social aspirations (4.47), Promotions in work unit is based on merit (4.11) and Bonus received are satisfactory (3.60).

9. CONCLUSION

One of the largest benefits that the computer and IT industry provides in India is the employment it can generate. Other advantages are export and Foreign Direct Investments (FDI). New markets have lead up in the Middle East, Africa, Eastern Europe, and South and South East Asia. India is now a great destination for IT outsourcing. There is no dearth of IT job opportunities in India. India (52 lakhs) is expected to overtake the US (42 lakhs) to have the most number of software developers in 2018.The IT industry is heavily influenced by factors like the global market and sustenance of its rate of growth. The recession in the United States also impacted the IT community in India negatively. As the global economy improves, and consumer confidence increases, investing in new technologies such internet of things, products and platforms, cloud computing, mobility and analytics etc. will enable vendors to gain efficiency, agility, access to consumers, and innovation. The Indian IT-BPM industry's continued success is providing a big boost to business and is expected to provide revenues up to USD 300 billion by 2020. But the road is full of challenges like competition, customer understanding, protectionism, economic volatility etc. The concerned stakeholders have to address all these challenges in order to survive. They will have to go for IT enabled digital transformation in order to compete in the globally connected world.Some challenges which the industry is facing are inadequate infrastructure, tax issues and limited preferential access for local firms. China and Taiwan are examples of low cost destinations, and India needs to change its current tax structure so that it can outdo competition from other countries.

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