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### SURVEY OF INFORMATION TECHNOLOGY IN INDIAN PUBLICITY

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#### ABSTRACT

Information Technology (IT) had a great impact in all aspects of life such as economy, businesses and enterprises. The global economy is currently undergoing fundamental transformation in which IT plays a key role. IT has a real impact in most of industries and in all aspects of economy, while businesses and enterprises continue to undergo considerable changes. Usage of these technologies is revolutionizing the rules of business, resulting in structural transformation of enterprises. Modern businesses are not possible without help of information technology, which is having a significant impact on the operations of Small and Medium scale Business (SMB). It is claimed to be essential for the survival and growth of economies in general. SMB is drawing attention in developed and developing countries as well as in transition countries. It is generally recognized that SMB play a vital role in the revitalization and development of national economy in many countries and particular in the context of India. It is encouraging the development of SMB and the role that SMB sector can play in promoting economic and social development by creating opportunities for employment. These components are described and discussed while more research and studies on the adoption of information technology in SMB in India are proposed as necessary.

#### I. INTRODUCTION

IT is define by "Information technology association of America( ITAA)" IT is the study, design, development, implementation, support on management of computer base information system particularly software's applications & computer hardware. There is an impression that India is world class in information technology (IT).this is mainly due to the success of India's software industry and contribution of people of Indian origin in IT resolution in the united states. The fact that IT sector in the country has increased at an incredible rate of 35% per year for the last 10 years reinforced the view that India is world class in IT. At the same time, India remains a poor country both in terms of the per capital income(PCI) and the human development index (HDI). As per 2004 Human development report , India is among the countries with the worst disparities between their gender related development index (GDI) and HDI values. Although the per capita income in the country during the last 10 years has increased at the rate of 4.1% per year ,more than 250million people still live below the official poverty line. This paper tries to examine whether IT can contribute to India's economic development in a broader way .It also examines the role of public policy , arguing that government should promote IT use and make it accessible to every section of the society besides removing the infrastructure constraints ,strengthening the training and education system , and introducing the flexible labor laws.

#### II. INDIA AS A KNOWLEDGE ECONOMY

The economic value of IT depends greatly on the levels of economic progress a nation has already achieved. IT has the potential to make existing processes more effective and efficient, but cannot substitute for the lack of a basic infrastructure. What is good for a developed country like the U.S. is not necessarily optimal for a developing country like India when those basic elements of infrastructure that support a successful economy such as educational opportunities, healthcare, electricity, drinking water, and capital are still in short supply. The impact of IT is best understood when the fundamental differences between the innovations and ventures of industrial and knowledge-based economies are recognized. Industrial growth yields from investments in large-scale infrastructure (e.g., railroads, roadways, power grids, and dams). These investments, in turn, support the growth of physical-asset intensive industries (e.g., the steel, chemical, and transportation industries) that create and move physical entities (e.g., people, water, and goods). The ventures of an industrial economy typically employ large numbers of workers with minimal training, education, and skills. These ventures have the potential to uplift large sections of the population.

#### III. PRESENT SCENARIO OF IT IN INDIA

Our society is being reshaped by rapid advance in it, computers, telecommunication networks & other digital systems that have vastly increased our capacity to know, achieve & collaborate. These technologies allow people to transmit information quickly & widely, linking distant places & to create communities that just a decade ago were unimaginable. today one can buy a musical greeting card with asiuc on chip that is 100 times faster than eniac .this extra ordinary pace of it evolution is bringing people



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&cultures together &creating new social dynamics in the process. the rapid evolution of digital technologies is creating not only new opportunities for the society but also ciiali .enges. entire industries have been restructured t0 better align them selves wth the realities of digital age.

### A. Information Technology & Employment

The potential contribution of information technology to employment generation is both direct and indirect. Directly, the growth of the computer hardware and software industries are generating new job opportunities in India. Indirectly, the adoption of computer technology by other industries expands the range of services they provide and can stimulate more rapid growth of these sectors. The indirect impact of IT is far larger than the direct impact. In the USA, it is estimated that for every direct job created in the IT industry, a minimum of ten additional IT-related jobs have been created in other industries in which IT is applied. This does not include the non-IT jobs created by the growth of other sectors of the economy under the stimulus of information technology. This 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.[1] Generally 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 has 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.[10] India's IT Services industry was born in Mumbai in 1967 with the establishment of Tata Group in partnership with Burroughs.[11] 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.[12]

## IV. ROLE OF IT IN INDIA

Information technology (IT) is playing a crucial role in contemporary society. It has transformed the whole world into a global village with a global economy, which is increasingly dependant on the creative management and distribution of information. Globalization of world economies has greatly enhanced the values of information to business organizations and has offered new business opportunities. Today, IT provides the communication and analytical power that organizations need for conducting trade and managing business at global level with much ease. To coordinate their worldwide network of suppliers, distributors and consumers, organizations have developed global information systems that can track orders, deliveries, and payments round the clock. This has been possible because of the development of IT in its present form. In the broadest sense, information technology refers to both the hardware and software that are used to store, retrieve, and manipulate information. At the lowest level you have the servers each with an operating system. Installed on these servers are things like database and web serving software. The servers are connected to each other and to users via a network infrastructure. And the users accessing these servers have their own hardware, operating systems, and software tools. In the last two decades, the Indian IT/ITES industry has contributed significantly to Indian economic growth in terms of GDP, foreign exchange earnings and employment generation. The industry has been the trigger for many "firsts" and has contributed not only to unleashing the hitherto untapped entrepreneurial potential of the middle class Indian but also taking Indian excellence to the global market. IT plays a vital role in today's global economy IT has made a significant impact in research & development. The research is being carried out in networking, computing, data representation & many other areas for exploring the exiting methodguies .the major areas ipacteo by the adwnt of it include business , media , education &so forth.

## V. SCOPE OF IT

We all know that the world had become impossible to move without Information Technology. The technologies are developing day by day. The fast growth in technological field had made the world a better and fast moving place. The growth is due to the increase in applications of computers in almost every field. Today in this article I am going to express ideas about Information Technology in front of you.

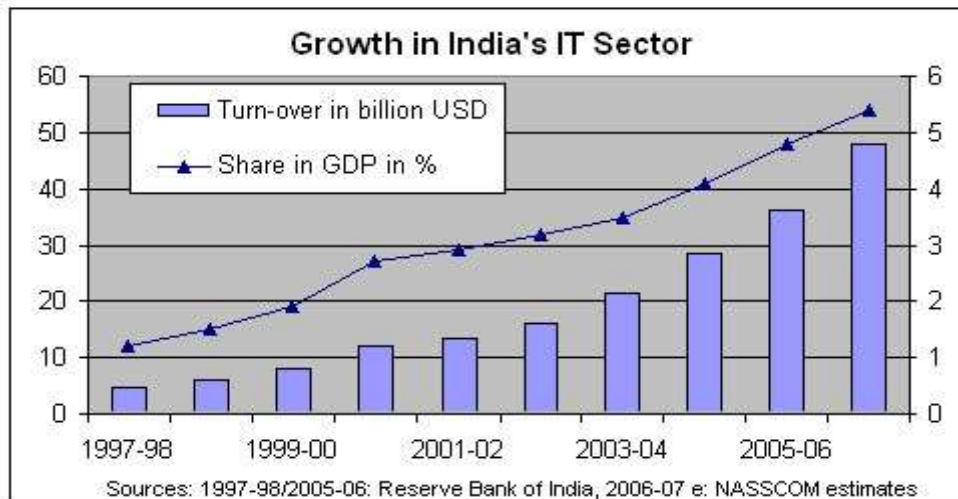
The scope of IT field will continue increasing even on next decades. this is modern time and Information Technology is a very important parts of everybody life without IT we can't do nothing. lot of field open for IT candidate like Telecom, hardware, Software, signaling,... today lots of organization spread in the world who related in IT. So enough scope available for IT.

IT supports the organization with phones, faxes, computers, etc. and that IT should not be a profit center. If someone in "IT" is making money for a non-IT business, he is probably doing engineering. As a software engineer, I often do IT work to get my job done, but my boss expects me to write software to meet my customer's needs. Information Technology is the new and the most captivating sector of the modern world. Every people and each of the organization are been fascinated by the technique of it.

Communication needs will continue to grow; the functions of e-mail, instant messaging, Weblogs, and wireless communications will improve as the demands of informational society increase so to fulfill the thirst Information Technology is needed.

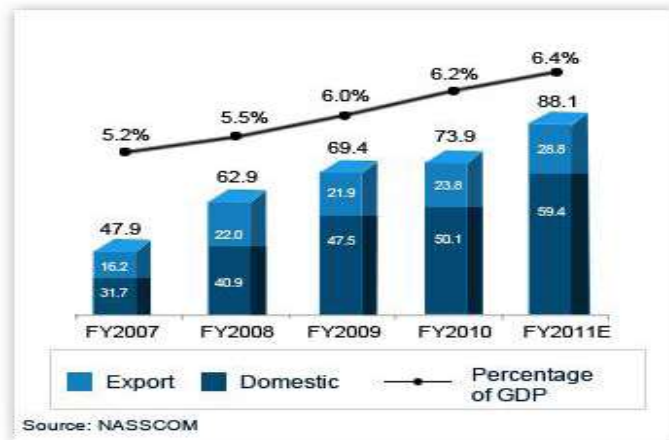
## VI. THE IT SECTOR IN INDIA

**Information technology in India** is an industry consisting of two major components: [IT Services](#) and [business process outsourcing](#) (BPO). The sector has increased its contribution to India's GDP from 1.2% in 1998 to 7.5% in 2012.<sup>[1]</sup> According to [NASSCOM](#), the sector aggregated revenues of US\$100 billion in 2012, where export and domestic revenue stood at US\$69.1 billion and US\$31.7 billion respectively, growing by over 9%. In IT, India has built up valuable brand equity over the years. In IT enabled services (ITES), India is emerging as one of the most preferred destinations for business process outsourcing (BPO). The importance of IT industry in the Indian economy can be gauged from the fact that its contribution to the national gross domestic product (GDP) has increased by seven fold in a span of just one decade from 0.6% in 1994-95 to 4.3% in 2004-05 (Table 1 on page 5). Although industry figures are not directly comparable with GDP as they are based on revenues rather than value added, they provide an indicator of growing importance of the IT sector in the country. Assuming that the Indian economy and IT sector will replicate the past six years performance during the next six years and value added in IT sector is two third of its sales revenue, the contribution of IT sector to national GDP will be around 8.5% during the



### Export vs. Domestic

Market Currently, export accounts for around 64% of the total IT sector revenue. The IT sector export revenue touched the mark of US \$ 18 billion during 2004-05, a jump of around 35% from the previous year (Table 2 on page 8). IT services & software accounts for 68% of the total export revenue whereas ITES-BPO contributes 28% of the same. The share of hardware in IT sector export revenue is just 4%. India's IT services and software export went from a few million dollars in the 1980s to over US \$ 12 billion in 2004-05. The financial service sector (banking, financial service, and insurance) accounts for the largest share of Indian software and services export at around 40% followed by the manufacturing with around 12%. Telecom equipment (9%), healthcare (5%), retail (5%), and telecom services (4%) are emerging areas of export.



**Export and Domestic IT market in India**

(in US \$ billion)

	2002-03	2003-04	2004-05
<b>IT services&amp; software</b>	<b>9.9</b>	<b>12.8</b>	<b>16.5</b>
-Export	7.1	9.2	12.2
-Domestic	2.8	3.6	4.3
<b>ITES- BPO</b>	<b>2.6</b>	<b>3.9</b>	<b>5.7</b>
-Export	2.4	3.6	5.1
-Domestic	0.2	0.3	0.6
<b>Hardware</b>	<b>3.6</b>	<b>4.8</b>	<b>6.0</b>
-Export	0.3	0.5	0.7
-Domestic	3.3	4.3	5.3
<b>Total IT industry</b>	<b>16.1</b>	<b>21.5</b>	<b>28.2</b>
-Export	9.8	13.3	18.0
-Domestic	6.3	8.2	10.2

**VII. THE INDIAN ADVANTAGE**

The above listed views 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 has got to offer. 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.

**VIII. 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.

**Information and communication technology as a strategic tool**

Information technology is not the cause of the changes we are living through. But without new information and communication technologies none of what is changing our lives would be possible. In the 1990s the entire planet is organized around telecommunicated networks of computers at the heart of information systems and communication processes. The entire realm of human activity depends on the power of information, in a sequence of technological innovation that accelerates its pace by month. Genetic engineering, benefiting from this wealth of information processing capacity, is progressing by leaps and bounds, and is enabling us, for the first time, to unveil the secrets of living matter and to manipulate life, with extraordinary potential

consequences. Software development is making possible user-friendly computing, so that millions of children, when provided with adequate education, can progress in their knowledge, and in their ability to create wealth and enjoy it wisely, much faster than any previous generation.

## **IX. NEED AND IMPORTANCE OF INFORMATION TECHNOLOGY IN EDUCATION**

### **Need of IT**

- Education is a life long process therefore anytime anywhere access to it is the need
- Information explosion is an ever increasing phenomena therefore there is need to get access to this information
- Education should meet the needs of variety of learners and therefore IT is important in meeting this need
- It is a requirement of the society that the individuals should possess technological literacy
- We need to increase access and bring down the cost of education to meet the challenges of illiteracy and poverty-IT is the answer

### **Importance of IT**

- anytime learning
- anywhere learning
- collaborative learning
- multimedia approach to education
- authentic and up to date information
- access to online library
- teaching of different subjects made interesting
- educational data storage
- distance education
- access to the source of information
- multiple communication channels-e-mail, chat, forum, blogs ,etc.
- access to open courseware
- better accesses to children with disabilities
- Reduces time on many routine tasks

### **IT, population, and education**

It is almost fashionable now to say that India's population constitutes one of her greatest assets. That viewpoint, in our opinion, is misleading. People are assets only when they can meaningfully participate in the cycle of value creation and consumption — either by exercising buying power, or creating products and services of value to others, or by creating and harnessing knowledge. By these standards — and at the risk of sounding draconian — a good fraction of India's population is a liability rather than an asset. The government can help transform this situation by building two pillars that have supported the growth of every successful economy, i.e., a reliable infrastructure core, and widespread access to education and training. We have touched on the interface between IT and infrastructure earlier — let us now discuss the IT-education interface. Distance learning and e-learning are already being touted in some quarters as solutions to India's education challenges. The proffered argument is that IT can enable the cheap and widespread delivery of education

### **IT and culture**

A knowledge economy is characterized by a culture of innovation. Such a culture has some key characteristics — incentives for innovation, and intellectual property protection. A culture that truly enhances innovation supports the view that to try hard and fail is perfectly fine. Yet, the educated Indian psyche has historically been averse to blessing the risky venture—in fact, education has been viewed as a way to avoid risky options, rather than as an enabler of intelligent risk-taking and entrepreneurship. This is a cultural mindset that hinders innovation, because meaningful innovation is almost never without significant risk.

## **X. ADVANTAGES OF IT**

- Increases production and saves time: Business use technology to automate tasks. A good example is a bakery which uses automated temperature sensors to detect any drop or increase in room temperature in a bakery. These sensors will send information directly to the operator and report any temperature change. This saves the bakery time and it also results into quality products.
- Improves communication through communication technology: With the help of communication technology tools like phones, video conferencing, electronic mail, databases just to mention but a few. Movement of information within an organization or business has become easy and first. Employees can easily move information across departments without having any interruptions. Tools like electronic mail, e-fax, mobile phones and text messaging enhance the movement of information among employees, customers and business partners or suppliers.



- Improves business to consumer relationship – Businesses have embraced the social technology to interact with their consumers and fans. This creates a strong business to consumer relationship and it results into business growth and expansion. Information technology can be used to improve customer service in so many ways. For example, businesses can use internet to inform their customers about great deals and discounts, this makes customers feel special and it can drive their desire to buy. A good customer service can be used as a great tool by any small business to gain competitive advantage.
- Improves on business competitive advantage: Companies have used technology to gain competitive advantage over their competitors. A business will improve on its technology and improve on its services and products which will make its customers happy, this will turn these happy customer loyal to that business and also invite more friends to use that service or product.

### **XI. FUTURE IN INFORMATION TECHNOLOGY**

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 meager, however, this number is slowly on the rise. 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 have currently in offer.

#### **Career in Information Technology**

IT students have a lot of scope for their future. Since the technologies and IT sectors are increasing day by day, the need of employers are also increasing. But just reaching IT field for the sake of a degree and a job wont give success. Because in coming future the IT Industries do not adopt employers having degrees for a short term course, they need really talented and well experienced employers to do their job. IT may be the best field for those searching for self employments

### **XII. CONCLUDING THOUGHTS**

The growth of the IT sector in India symbolizes the potential of Indian industry to perform at world-class standards. Led by some visionaries and supported by thousands of employees and entrepreneurs, the IT sector embodies much of what can go right when the spirit of human enterprise is given free rein. No doubt that IT fields are in its developing path. There will never be any degrading in its opportunities. IT may be the best field for those searching for self employments. If you are able to get success in your IT courses, then I can guarantee that your dreams will never die. The scope of IT field will continue increasing even on next decades.

- Very good future prospect
- IT is on going requirement of every nation opportunity for investor, entrepreneur, youth & countries
- Continuous growth year by year

### **XIII. REFERENCE**

1. Dr. Sanjay K. Singh is an Assistant Professor of Economics in the Department of Humanities and Social Sciences at IIT Kanpur, India.
2. Annual Report of “Electronics and Information Technology”, Ministry of Communication and Information Technology, Government of India, New Delhi.
3. To suggest a broad outline for National Policy on e-Inclusion for the identified target groups namely SCs, STs, Minorities, Women, differently abled, etc.
4. To identify various schemes of DIT which are suitable for implementing SCSP, TSP and gender budgeting.
5. To identify, develop and deploy appropriate technologies, products and e-Services including financial & health services as a part of e-Inclusive initiative.
6. To promote the development of applications and facilitation of content development in Indian languages specific for rural and semi-urban areas.
7. To identify the institutions and domain areas to establish R&D centres for e-Inclusion.
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9. GPS Signal Acquisition and Tracking – An Approach to wards Development of Software based GPS Receiver By Dinesh Manandhar, Yongcheol Suh, Ryosuke Shibasaki