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Automation seen as killing employment opportunity in Indian it sector

Basavaraj Nagesh Kadamudimatha

Lecturer in Commerce, S.G. Arts, Science and Commerce, College, Koppal, Karnataka, India

Abstract
Information technology (IT) is the use of any computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data. IT sector contribute to increases in GDP and also provides employment opportunities to large number of people in the world but recently because of automation in IT sector leads to decrease in employment opportunity. Automation is the use of machines and technology to make processes run on their own without manpower. This paper examines that automation reduces the manpower level and as a result of it be as killing opportunity of employment in IT sector. A US based research firm is predicting that India's IT service industry will lose 6.4 lakh low skilled jobs to automation in next five years by HFS Research. Automation leads to increase in efficiency in work and also improve the level of productivity but reduce manpower level. This enables in downtrend in level of employment in Information Technology sector.

Keywords: Automation, Information Technology, Level of Productivity, Unemployment

1. Introduction
IT is a subset of Information and Communication. Information and Communication field covers the design, administration and support of computer and telecommunications systems. 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 revolution 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 reinforces the view that India is world class in IT Information technology (IT) is the use of any computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data. IT includes several layers of physical equipment hardware, virtualization and management or automation tools, operating systems and applications software used to perform essential functions. User devices, peripherals and software, such as laptops, smartphones or even recording equipment, can be included in the IT domain. IT can also refer to the architectures, methodologies and regulations governing the use and storage of data.

2. Methodology
2.1 Nature of study
The study is mainly descriptive in nature. Secondary data are used for the purpose of the study

2.2 Secondary data
Secondary data was collected from websites, various articles and journals

2.3 Limitation of the study
- Lack of primary data
- Time consuming
- As the research mainly depends on secondary data, it may not be hundred per cent accurate.
- The study is restricted to India only

3. Objectives
- To understand automation impact on employment opportunity
- To understand the significance of automation
- To study about the IT sector in India

3.1 History of information technology sector in India
1. Before 1991
In 1965, immigration laws in USA were modified and the restrictions on immigrants were reduced considerably. As a result a lot of Indian professionals migrated for research opportunities in USA. The IT revolution in USA and the much fancied Silicon Valley in the US during the 80s and 90s could not have been possible without the work of these migrated Indians. What this migration did for the Indian IT industry was creating innumerable opportunities in the USA in the IT sector. Due to the fast growing IT sector in USA, there was a need for IT professionals outside USA. India had a huge number of educated people and the education in India being in English, there was a large population of English speaking technically strong people in India. Hence outsourcing of work started gaining momentum and this led to the huge boom in the IT sector in India, whose most of the work is exporting software and software services to the US and other overseas clients.
Tata Consultancy Services (TCS) was started by the TATA group for software development services in India in 1968. TCS started the software services by developing punched card facilities for TATA steel employees (TSICO). The first overseas client for TCS was Burroughs Corporation, United States. The job of TCS was to write software code for the Burroughs machines in 1974. With word of mouth, TCS grabbed a number of projects, small and big during the following years and today TCS is India's top IT company with a turnover of more than $10 billion. In 1966, Azim Premji became the chairmen of the large company WIPRO and the focus of WIPRO was concentrated on the IT services sector. Patni Computer Systems started developing software and

providing services since the beginning of the company in 1972 (At that time it was named Data Conversion Inc). In 1981, Infosys was founded by Narayan Murthy and his colleagues. Infosys was completely committed towards providing quality software services and also developed an IT business model which was later followed by most of the IT companies in India. The Indian economy during this period was completely controlled by the Indian Government and there were strict restrictions and regulations for private business entities in India. Hence there was no major growth in the IT sector in India till 1991

2. After 1991

The Indian government had strict control over the private business entities in India before liberalisation of economy in 1991. Moreover, the wide area networks and internet lines were completely controlled by the central government. As a result, the Indian IT sector was totally held back due to these restraints on the functioning of the software services providers. The first major IT reform by the Indian Government was the creation of corporation called Software Technology Parks of India (STPI). This corporation provided satellite links to major IT developers enabling them to transmit the work done in India directly abroad. This reduced the costs incurred to the Indian IT companies as well as helped the clients in US trust Indian industries and go for outsourcing. Finance minister, Dr. Manmohan Singh, introduced the major economic reforms in 1991 to solve the debt problem created during that time. As per these economic reforms the international integration became possible. The huge restrictions on overseas business were lifted and foreign investments were welcomed. As a result, the IT industry in India became free and the business of outsourcing would finally gain momentum with more and more clients and enterprises going for outsourcing of IT. Also, the inception of Windows and other user friendly operating services made the PC experience even more simple and less time consuming. Coupled with development of high level programming languages like Basic, C and others, the Indian IT brains had the perfect platform to rise in the global arena. The Indian IT sector boomed and growed at gain of nearly 50% every year.

Another major event for Indian IT industry post the 1991 reforms was the Y2K bug. Fear of a complete breakdown of computer services, the US corporations outsourced all the equipment and upgrading work to Indians. The task of rectifying the Y2K bug was thrown to the Indians and as a result the modification of all the codes and softwares, which were initially designed till a date of 1999, was to be edited and huge work was outsourced to the Indian IT industries. The Indian IT industry has helped provide a national GDP of more than 6% since these economic reforms took place 20 years ago and today, India is known as the IT hub of the world.

3.2 Advantages of information technology sector

1. Creation of new jobs

The best advantage of information technology is the creation of new and interesting jobs. Computer programmers, Systems analyzers, Hardware and Software developers and Web designers are just some of the many employment opportunities created with the help of IT.

2. Communication

With the help of information technology, communication has also become quicker, and more efficient. We can now communicate with anyone around the globe with fingertip. The internet has also opened up face to face direct communication from different parts of the world thanks to the helps of video conferencing. The flow of information is very fast and reaches at different sector in the world.

3. Cost-effective

Information technology has helped to computerize the business process thus streamlining businesses to make them extremely cost effective money making machines. Computerized, internet business processes have made many businesses turn to the Internet for increased productivity, greater profitability, clutter free working conditions and global clientele. It is mainly due to the IT industry that businesses have been able to make their processes more streamlined, thereby becoming more cost-effective and consequently more profitable. People are able to operate their businesses 24x7, even from remote locations only due to the advent of information technology.

4. Storing and Protecting Information

IT provides a low-cost business options to store and maintain information that may be important from a business or service point of view. Virtual vaults and other such security systems not only store vital data but also allow control over the access to such information. IT security systems will also protect virtual data from being hacked or wiped out in case of any technical failure.

5. Globalization

IT has not only brought the world closer together, but it has allowed the world's economy to become a single interdependent system. This means that we can not only share information quickly and efficiently, but we can also bring down barriers of linguistic and geographic boundaries. True globalization has come about only via this automated system. The creation of one interdependent system helps us to share information and end linguistic barriers across the continents. The collapse of geographic boundaries has made the world a 'global village'. The technology has not only made communication cheaper, but also possible much quicker and round the clock. The wonders of text messages, email and auto-response, backed by computer security applications, have opened up scope for direct communication

3.3 Revenue growth is in double digits whereas headcount additions have slipped to single digits

Indian IT sector moved towards two digits in revenue growth whereas the total headcounts has decreased to one digit because of automation

Table 1

Year	It Export		Total Headcount	
	$ Billion	Revenue Growth (Y-O-Y)%	('000 NOS)	Increase (Y-O-Y)%
FY2006	24.2		1,293	
FY2007	31.7	30.9	1,621	25.4
FY2008	40.9	29.1	1,962	21.0
FY2009	47.5	16.1	2,197	12.0
FY2010	50.3	5.9	2,311	5.2
FY2011	59.5	18.4	2,584	11.8
FY2012	69.3	16.4	2,841	9.9
FY2013	77.0	11.1	3,052	7.5
FY2014	87.7	13.9	3,267	7.0
FY2015	98.2	12.0	3,485	6.7
FY2016	108.3	10.3	3,688	5.8

Source: Business Line November 28, 2016

The table explains that, increase in total headcounts has been continuously diminishing at decreasing rate. This significance the role of automation has been trimming manpower work. New-age technologies including automation and artificial intelligence are trimming manpower requirement. In past five years, while IT exports have grown at an average 13.7 per cent annually, the headcount growth has been only 8 per cent. In a report in June, HS Research said that by 2021 India could lose 6.4 lakh low-skilled positions in IT service and the BPO industry because of the automation of support and back-office processing work. Taking into account the new medium/high-skill jobs that will be created, it forecast a net job loss of 4.8 lakh. The loss in jobs will be largely in middle-level positions, says Pareekh Jain, Research Vice-President, HFR Research.

Unemployment rate may push up if the intake of fresher's by the IT industry drops and there is loss too. The IT sector is likely to add 5-6 lakh jobs between 2015-2016 and 2018-2019, or about two lakh jobs in a year, according to Nasscom. In the last five years, the industry generated 2.3-2.5 lakh jobs annually. By 2021, HFS Research said that the IT industry worldwide would see a net decrease of 9% in headcount, or about 1.4 million jobs, with countries like the Philippines, the United Kingdom and the United States also taking hits. India's information technology industry is expected to post the seventh straight year of improving productivity, as automation adds to efficiency and drives down hiring rates among software services companies. The industry is estimated to have required 16,055 engineers to generate every additional $1 billion of export revenue in 2015-16, compared with 31,846 engineers in 2009-10, according to Nasscom data - a near doubling of the efficiency with which labour is employed.

The main disadvantages of automation in IT sector, it falloffs the employment opportunities. There are advantages of automation in IT sector such as productivity increases, improved predictability of quality, and increased consistency of output, reduced direct human labour costs and expenses.

4. Findings

IT sectors revenue in India moving towards two digits but headcount moving towards single digits because of automation. Automation has its own advantages such as increase the efficiency level, reduce the cost of production, minimizing the error, etc. along with this its disadvantage is that it leads to unemployment opportunity. At forecast of impact of automation in Information Technology in India done a research by US based firm is predicting that India's IT service industry will lose 6.4 lakh low skilled jobs to automation by 2021 by HFS Research. And also HFS Research said that the IT industry worldwide would see a net decrease of 9% in headcount, or about 1.4 million jobs by 2021, with countries like the Philippines, the United Kingdom and the United States also taking hits

5. Conclusion

Indian IT sector growing at rapidly but the level of manpower is decreasing. Automation becomes an important in role of IT sector. The automation of IT is changing the way companies innovate. Automation leads to increases in level of productivity but reduces the manpower level. The total headcount, which we all expect will continue to grow less, than our revenues moving forward, due to the factors of automation and productivity in our operations. India has second largest population in the world with over than 1.2 billion. If the problem of unemployment occurs in Indian Information Technology sector result in huge problem in economic development. Due to unemployment, we cannot ignore automation at IT sector. So I suggest that if unemployment occurs in IT sector because automation then employees must have diversification option so that economic growth will be sustain and improves.

6. Reference

1. The role of Information Technology (IT) industry in India by Vijayasri GV. ISSN 2320-0073
2. Information Technology: Role, Advantages and Disadvantages by Dr. Prasanna M Kumar. ISSN 2277 128X
3. The role of information technology (IT) industry in India by Vijayasri GV. ISSN – 2320-0073.
4. Information Technology in India: Present status and future prospects for economic development by Sanjay K Singh
5. Information Technology: Role, Advantages and Disadvantages by Dr. Prasanna M Kumar. ISSN 2277 128X
6. The global information technology report 2015
7. http://economictimes.indiatimes.com/jobs/it-sector-to-lose-6-4-lakh-low-skilled-jobs-to-automation-by-2021-hfs-research/articleshow/53052040.cms
8. http://www.yourdictionary.com/automation
9. https://www.isa.org/about-isa/what-is-automation/
10. Business Line November 28, 2016