
Digital Technology, Employment and Economic Growth

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Introduction

Digitalization means doing many things with the use of digits but it requires huge investment in hardware, software, cables and spectrum. The present India is considered to have 65% of the population which is below the age of 35. It means India has very sound and active population in the working age group. By 2050, this young population would be getting old and without work. Therefore it is important to get the young population quickly placed into labor force. Getting into productive labor force in the present world is no mean task. First of all as the students think of choosing a stream after their matriculation or senior secondary most of them prefer to go for general or professional college education because it is easily available. But on the contrary India is expected to lead in terms of vocational education in order to get the full benefit of present demographic structure and hence proper mainstreaming for manufacturing sector is the key to success as most of the jobs are to be created in the sector.

India and Information Technology

India has now grown in terms of IT and software services, BPO etc., and their advantage was available within India even in 1980s when railway reservation was done with the use of software or IT application. But with the flux of high speed computers the IT has manifested in varied applications used in every walk of life. Initially IT began to be developed through cable network which requires hard investment. But with the emergence of broad band and spectrum, the cable network no doubt is still important but its structure and quality are extremely enhanced to get them laid quickly over thousands of miles. The spectrum as these are accessed from communication satellite is becoming so popular over distance telecommunication. It means the use of electric current to push forward the message is now being replaced by the electronic and communication system based on electronics per se. Electronics is based on digital mathematics whose algorithm is most efficient and hence its applications are also very fast. Electronics involve the transmission of message through air as well as it can be done through sophisticated cable. In urban areas telephone operators fix up the transmission of tower at closer places depending upon the teledensity to be achieved but still there are complaints of disruption in the voice or signal going off.

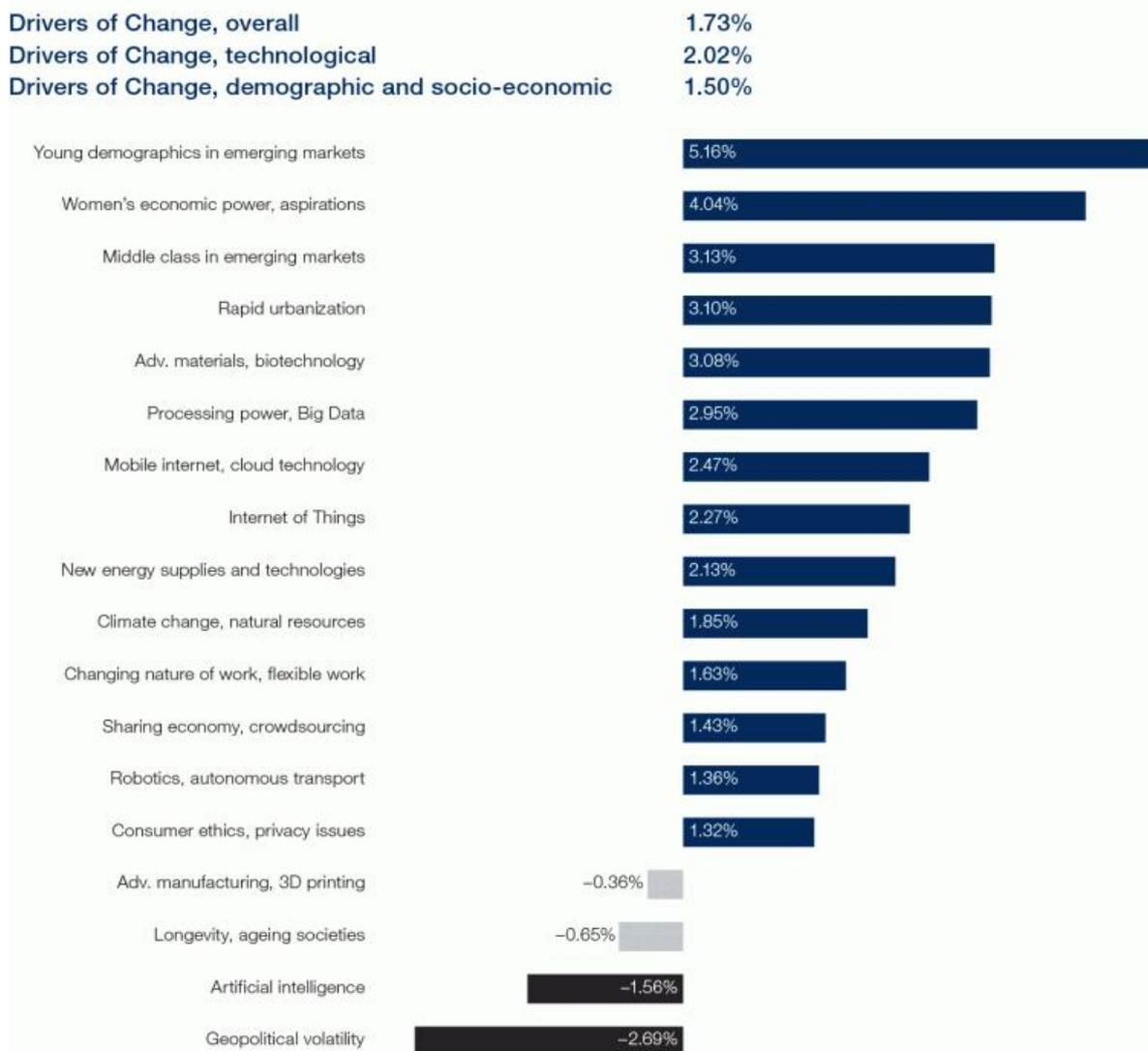
Generation of Technology

The spectrum are recognized as 2G, 3G, 4G as more features upgrade the spectrum to new generation where G is meant for generation. As the advanced countries are revolutionizing in 3D printing, artificial intelligence, robots and remote sensing to finish up the products of high value and the global value chain is becoming more prominent, India is lagging behind in the manufacturing sector because of the limited accessibility of digital technology. Before, the manufacturing sector is to be given boost which in the present environment is old generational, digital movement in India is extremely important. Unless the network which can carry the information from one place to other is complete no extra gain is possible. In rural areas where digital technology is just beginning one can see the glaring difference between urban and rural inhabitant on any knowledge issue. India still had vast illiterate because there was limited physical infrastructure to educate them. Electricity continued to reach in rural areas very slowly. The business in rural areas could not flourish because of the poor road conditions and lack of institutions. India is squandering vast resources on subsidies because these are not properly targeted and hence incurring loss after loss.

Employment and Information Technology

Since the employment rate is poor and unemployment among the youth is very high the governments from time to time have framed some policies to create an environment where the literacy can be improved as fast as possible and employment generation is also noticeable.

Figure 4: Employment effect of drivers of change, all job types
Compound growth rate, 2015-2020, %⁷



Source: Future of Jobs Survey, World Economic Forum.

Note: Names of drivers have been abbreviated to ensure legibility.

The biggest employment decline of any job family is expected in Office and Administrative roles, which are expected to be negatively affected by a perfect storm of technological trends that have the potential to make many of them redundant, such as mobile internet and cloud technology, Big Data analytics and the Internet of Things, but also factors such as climate change and resource efficiency and workplace flexibility that undermine the rationale for maintaining a large workforce within these roles.

Impact of global financial crisis on IT

After global financial crisis India has been losing on IT and ITeS as more and more countries are becoming inward centric and hence outsourcing is under siege. In recent years many IT professional had to sacrifice

their job. Many countries earlier had disadvantage on software application, this is being overcome with digital application and hence the loss is obvious. On one hand IT services are outsourced in low volume and secondly India is making progress on digitalization slowly India may lose the advantage of services and manufacturing if digitalization is not moved swiftly. Therefore it is important for all students choosing any stream for further studies they should continue to develop the taste of digitalization for their studies as well as occupation. India is ranked lowly in ease of doing business. In case the use of digitalization is made there is every chance that ease of doing business can improve a lot.

Payments and Digitalization

E commerce is now 15 years old and many consumers are finding the online purchase convenient and cost effective. The physical space as used to be required for storing commodities, it is now becoming less in demand with the application of e-commerce as the goods can be transported from one place to other not necessarily in housing them in the full space shop or mall. There is saving of time and labor force when e-commerce is used. The cost of these efforts is passed on to consumers. The demat of share certificates was done with a view to speed up the trading and discover the prices of securities. The growth of stock markets and commodities exchanges speak volume about the digitization. The use of digitization increased when India embarked upon the path of liberalization as more and more MNCs found it a good place to do business but the way China has moved fast on the growth of MNC is unimaginative. China along with physical infrastructure has also focused on the digitization in order to keep the business and consumers at ease. The movement of cargo is many times faster in China than in India. The order booking and payment is very fast with digitization. The international payment system is based on SWIFT and CHIPS. India banking network is not so wide that each person can have the benefit of banking going there physically which demands the efforts and time. Hence use of digitization has made payment simpler. Payment banking is the method with which once the saving account is opened in any bank the transfer is easier on line and also payment can be made using mobile phone. Mobile application for accessing tourism and booking hotels is becoming popular as these are based on digitization.

Government has spent lot of time in paying wages on line and also transferring the subsidies straight in the account of the beneficiaries. Public distribution system is now being shifted to Aadhar portal which is also based on digital technology. Traffic control and flights are now being done with the help of digital technology. The digital technology has been brought into application wherever it was too compelling and it was to attract MNCs but its pace is not hand in glove with the supply needed to reap the demographic dividend. Students need to be motivated for entrepreneurship in the absence of vocational education. The manufacturing demands great deal of Business process Management (BPM) as it is the simplified way of doing business and maintaining inventory. Now a days inventory management is not done manually in advanced countries as it can be tentative at the most. But where the finished goods are deposited every minute there should be proper nexus between inventories and finished goods. Secondly the finances are equally important to have good business prospects. As the investment and surplus go hand in hand in the business, the financial digitization is extremely important for all businesses.

In the global value chain as many components move from many countries to one country where the finished product is made, the digital technology in ensuring the movement of components is all the more important to keep the business floating. The application of digital technology has suddenly increased as India has adopted GST. Now it is becoming compulsory to maintain on line record of the transaction and payment by every seller and buyer and it is possible with digitization. Students need to involve in the innovation to gain on start-up as they tend to gain knowledge in their field. Lot of data input is required and to be kept in electronics form when any design or intellectual property is to be discovered. Therefore, their interest in understanding the basics of digital technology is extremely important. The present day manufacturing as based on automation, intelligence and 3D printing all the by product of digitization demand services of digitization. For example as the news is submitted to the editor through digital technology, the processing of news in the media physically by the editor also requires the digital services by few more. There is double impact on employment. Most of

the business consultancies are based on the digital technology, as inputs and reports are generated and transmitted digitally. Those who are pursuing law have much better advantage as they tend to engage in counseling their clients. No meeting is required. Rather the documents can be uploaded and inputs and dialogue can be maintained on line. The search engines are giving great help to readers and professional to access any material of their choice. Therefore writing an article and research papers has become lot more easily.

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