

International Journal of Advance Research in Computer Science and Management Studies

Research Article / Survey Paper / Case Study

Available online at: www.ijarcsms.com

Growth and Productivity in Telecommunication sector in India

Anshi Tahiliani

Student, PG (Economics)

Dept. of Economics, St. Aloysius College (Auto.)

Jabalpur (Madhya Pradesh) – India

I. INTRODUCTION

Telecom is an essential infrastructure for economic development and quality enhancement for human beings. The Indian telecom network is the 8th largest in the world, 4th largest in Asia after China, Japan and South Korea and the second largest among the developing economies. Moreover, it has the second largest mobile subscriber base in the world.

Telephone is considered as the means for obtaining and sharing information. The use of telephone is different in different segments like somewhere it has a social motive whereas at the other end it has the purpose of gathering and collecting information. Just like every person has a different use of a commodity same way is with mobile phones as well. An adolescent will play games or watch informative videos whereas a teenager will become socially active in various social networking sites like facebook, twitter or quora so that he/she can interact with people from all over the world and get to know the various career opportunities in the fields that interest him.

Telephones are considered to be cost effective as well as a time saver machine, as it reduces the cost needed to travel and thus automatically saves time. Most of the people in India are owning a mobile phone these days. The initial cost of the handset purchase is bit more costly as compared to the land phone connections. But then people prefer it because, smart-phones these days not only helps them staying connected through the calling or texting mode but also has an internet option available which simplifies their quality of living: gain worldwide knowledge, working from home, staying updated with the new fashion trends.

In recent times, it is not only the salaried and elite class owning a decent handset, but also an average daily worker who is on daily wages of decent salary possesses a smart-phone or even if he is very meagerly paid then also atleast a small qwerty phone is in possession. Moreover, absence of telephonic cables and proper availability of landlines in rural areas has increased the use of cell-phones. It is an obvious reason that if the problem of telephonic cables exists, there will be surely a hindrance in mobile phone network and range as well. The most probable reason behind this is the public or private companies aren't willing to spend an enormous amount in installing the huge network towers because the customers in rural areas are comparatively less than the customers in urban sectors. And this is mainly because of the working class and quality of life being spent in that particular sector. According to Telecom Regulatory Authority of India (TRAI), the total telecom subscriber base in December 2015 stood at 1.04 billion, out of which 1.01 billion were mobile subscribers and 25.52 million were wire-line subscribers.

Taking the case of telephonic lines: Since these are simplified, easy to use and possess no network problems unlike mobile phones they are the quick way of communication in case of emergencies or any sort of trouble.

Internet and Extranet services are innumerable in nature. The concept of extranet is widely used in organized sectors: like hospitals, colleges, schools and companies. It is a private network that uses Internet technology and the public communication to securely share their private data with their employees, customers, share holders, partners and agents. For example: Vodafone has a separate network on which they collect, store, classify data according to the various segments in the company. Then these segments are mainly accessed by the employees whenever they receive a complaint regarding their services, it is checked on the

data available and thus a solution is provided accordingly. Moreover, this helps them in knowing several other factors that are related to their company's economic growth and development, just like the increase in turnover or increase in customer base compared to that in the previous year(s).

The Indian communication economy is growing at a very fast pace and is substantially contributing to our country's GDP (Gross Domestic Product). After independence, the country did have the know-how of the sector and because of the damage done to our Indian market it was not in favour to liberalise telecommunication sector as well. But in 1981, Indira Gandhi signed contracts with Alcatel CIT of France to merge with the state owned Telecom Company (ITI), to set up 5,000,000 lines per year. Because of some political opposition the policy was let down. But again it was followed up under the prime-minister-ship of Rajiv Gandhi. He invited a US based NRI and a former Rockwell International executive to set up a Center for Development of Telematics (C-DOT) which manufactured electronic telephone exchanges in India for the first time. Moreover in 1985, the Department of Telecom (DoT) was separated from Indian Post and Telecommunication Department.

The Government of India is nowadays easing business for the private companies as well. The 'Make in India', 'Digital India', 'Stand up India' are the major such reforms to promote liberalization and globalization of telecommunication services along with the other services. These liberal policies are being greatly accepted by the producers as well as the consumers. Because the producers are getting an opportunity to enter into the Indian market with ease whereas the consumers are enjoying better facilities and of course a greater number of choices so that they can choose the best.

II. OBJECTIVE OF THE STUDY

1. To analyse the history and evolution of telecommunication sector in India
2. To identify the labour productivity in telecommunication sector in India
3. To know the condition of employment in telecommunication sector in India
4. To provide suggestions

III. HISTORY OF TELECOMMUNICATION IN INDIA

Being a British Colony, both telegraph and telephones were introduced into India almost contemporaneously with United Kingdom. Telecommunication services first started in India in the year 1851 through operational land lines near Kolkata. The person, who pioneered telegraph and telephone in India was Dr. William O'Shaughnessy, belonged to the Public Works Department all through the experimental stage. Electronic telegraph came into existence in 1854. Thus, in 1854, a separate department was opened so that the public can avail the telegraph facilities. Since British established their colony in India, telegraph and telephone lines were introduced contemporaneously with this colonial country.

In 1880, two telephone companies namely The Oriental Telephone Company Ltd. and The Anglo Indian Telephone Company Ltd. approached the government of India to establish telephone exchanges in India. The proposal was not accepted and the Government claimed that the telephone network was a Government monopoly and thus it will itself commence the work. The government then came up with a modification by 1881 and altered its decision by licensing Oriental Telephone Company Limited of England for opening telephone exchanges at Kolkata, Mumbai, Chennai and Ahmedabad. And in that year only the telephone service was made operational. Telephone services actually spread into the geographical extent of India in 1882.

On 28th January, 1882, Major E. Baring, member of Governor General of India's council confirmed the opening of Telephone exchange in Kolkata named "Central Exchange" and it carried 93 subscribers. The telegraph, and later the telephone were introduced in India in 1882 and were viewed by the British as tools of command and control that were essential to maintain law and order in the country. In 1883, the British combined the telegraph services with postal services to further increase their command and control in India. Runners, stationed at telegraph offices, carried telegrams to remote post offices,

there by linking the British rulers with even the most distant pockets of India. Bombay also witnessed the opening of Telephone Exchange in 1887.

Telecom sector is one of the major sectors in India where GDP and National Income are growing at sustainable rates. As India has been declared as the fastest growing economy in the world, in the same way it is among the fastest growing industries in the world.

Indian Telecom market can be classified into two major segments:

1. Fixed Service Providers (FSPs)

2. Cellular Service Providers.

By the term Fixed Service Providers, it is very clear that the connections are fixed which implies it consists of landlines and PCO's. Public Call Office is a telephone facility availed by the people in rural as well as urban people, this facility is given by few vendors in public places in India. PCO's have been in use before the mobile phones were invented. Its' not in much use today but still it holds a lot of importance where there is no scope for mobile phone networks especially in rural areas. It is of great importance in institutions: schools and colleges, hospitals and security forces.

This is because a landline is interconnected with various other landlines in the whole institution. This facility is called CENTREX. It is a central office based communication service, which integrates all multiple telephone lines (Existing and New) into a single highly functional communication group with more distinctive features without any additional equipment at ones premises

In the cellular services, there are mainly two subdivisions. They are CDMA and GSM. In the GSM sector, the major players are Vodafone, Airtel, Tata Docomo, Idea cellular, Aircel and so on. The National Company BSNL also has its GSM service named "Cell one" which has a major share in the semi urban and rural areas. Since the CDMA service has been stopped by the government, therefore the major companies which use to dominate the CDMA Market (Reliance Communications and Tata Indicom) have come to a standstill. Previously, both the sectors of cellular services competed well, perfect competition existed according to the demand supply chain, but now only GSM works.

IV. LABOR PRODUCTIVITY IN TELECOMMUNICATION SECTOR IN INDIA

The major objective of every country is to stabilize and strengthen its economic, social and political integration. Moreover, being aware of the worldwide happenings and thus staying competitive is another thing to be kept in mind. Therefore, each country tries to be its best by improving its technology, preferring skilled labour over unskilled labour, using more of technology and less of labour so that the input cost is less than the output cost. Productivity plays an important role in the manufacturing, servicing or any part of the sector. According to Blinder & Baumol (1993), nothing can reduce poverty rates, increase leisure quality and ability of a country to finance its education system, health care, environmental safety and art better than the growth of productivity. Krugman (1992), Gomez, Musso, Stocker & Turunen (2006), Bagley (2010), Frankel & Kendrick (2008) also agrees that the ability of a country to improve living standard depends on its ability to prompt labour productivity and efficiency growth.

The factors of productions are taken into consideration for the estimation of productivity i.e. the land, labour and capital. Many authors suggest using labour productivity as the quantity reflecting wellness of the state economy. According to Van Ark & Monnikhof (2000) the development of a state or sector (industry) economy may reflect the efficiency of employed labour force. The competitiveness of a particular country is not only measured by the quantity but also by the great difference it makes in different group of countries. For example: EU -27 has observed a sustainable development and great progress in productivity.

Impact of Information and Communication technology on labour productivity

The advanced technology is slowly grabbing a hold on all the economies whether developed, under-developed or developing irrespective of the ratio they are holding. Science developments have taken over the job of the labours. Every economy has become a capital intensive rather than labour intensive because the total cost of production in making of a commodity is much less than the total cost involved in labour intensive structure. Though it isn't easy to evaluate the cause and effect of technological, social, political and economic development of ICT on labour productivity, still it can be taken into account that the significant amount of progress in ICT is the main cause of changes in economy in both government companies and private companies.

Nevertheless, the ICT is of great importance because it has dramatically increased the business that has implemented it. Communication technologies may further increase efficiency and efficacy of the present economic structure, major companies and thus greatly influence the growth of the value of that company. A number of authors reveal the impact of ICT development on the growth of economy, including also the growth of labour productivity, on the theoretical level. According to Zhen-Wei Qiang, Pitt & Ayers (2003), there are three channels through which ICT can influence labour productivity and economics growth:

- 1) TFP growth in sector producing ICT;
- 2) Capital Deeping and
- 3) TFP growth through reorganization and ICT usage.

According to authors (Zhen-Wei Qiang, Pitt & Ayers, 2003), the ICT revolution partly consist of higher productivity growth in industries producing ICT, driven by rapid technological progress. The main characteristic of this revolution is the rapidly increasing computing power of new ICT products. In particular memory chips, with a long as "Moore's law" holds, double their computing power every 18 months. Such performance increases are equivalent to rapid TFP growth in ICT-producing sectors, which in turn raise the average TFP growth of the economy.

The ICT can influence productivity when higher levels of financial investment in ICT bring about new products and falling prices. This may lead to an increase in the real capital stock per worker – that is, ICT-related capital deepening across the economy (implying a lower of the marginal cost of capital). To the extent that ICT as a substitute for other firms of capital and labour, it frees productive resources to expand the overall output of economy to the extent that is a complement, it raises productivity of the existing capital stock and of labour.

V. EMPLOYMENT IN TELECOMMUNICATION SECTOR IN INDIA

The telecom services have a plethora of employment opportunities. It is not only restricted to calling or messaging. Just by a broadband connection, one can earn millions or even tons of money. School students or students who are pursuing graduation or post graduation can submit their writings and earn a handsome amount if they are good at creative writing. Photographers can upload their collection and thus fix a price to sell their clicks online. Engineers can develop several software that are useful to a company for selling it online. Fresh architecture graduates can start taking up clients for designing offices or institutions. Doctors that are specialized in a particular field get consultancy fare from all around the globe. Through interaction one can receive important tips regarding their health. Through proper communication network, manufacturers can take the information and details of the amount of raw material that is being produced and the amount of time it will take to reach his factory. Then the manufacturers stay in touch with the middleman so that the final goods are transferred to the retailer. In case of any fault or defect in the product the manufacturer is informed through this easy mode of communication channel and thus the role of middleman can be abolished here. This will reduce the need to travel or send letters through post.

Telecommunication sector has an increased demand for talent and greater potential in semi-urban towns and are looking at hiring talent especially from Tier 3 to Tier 6 towns. This is done directly through the campuses. Most corporates prefer hiring employees from Tier 3 and Tier 4 because the willingness to learn and grow are better than those from Tier 1 and Tier 2 campuses. Moreover, they are more flexible and open to relocate to bigger towns if the need arises.

According to THE HINDU, dated 5th Sept 2016, the government is to implement a new scheme which will provide mobile phone access to 55,000 villages, particularly those in Border States and in the Himalayan region, to push forward its flagship for Digital India programme. This scheme will be funded by the Universal Service Obligation (USOF), maintained by the government to help fund projects to boost connectivity in rural areas. This will further help in providing employment in the rural sectors. Moreover, the Center is also in middle of executing the Bharat Net project which aims to connect all of India's households, particularly in rural areas, through broadband by 2017.

VI. PROVIDING SUGGESTIONS FOR TELECOMMUNICATION SECTOR IN INDIA

- ✚ To keep up with the ongoing expansion of mobile ecosystem, especially with the high bandwidth of application and services such as watching movie without buffering, the sector has to increase the quality of bandwidth and frequency.
- ✚ There is no doubt that the Indian Telecom companies are advancing their technologies but the Indian technology is not keeping its pace if compared to developed nations, the speed in mbps that they offer is comparatively very less.
- ✚ Towers need to be setup not only in urban but rural and semi-urban areas as well.
- ✚ Moreover the towers set-up should be accordingly, so that no ill-effects are on the health of people living near the telecom towers.
- ✚ Long-term spectrum availability, small cells, continued backhaul, spectrum efficiency improvements are required to ensure continued mobile broadband momentum.

VII. CONCLUSION

It can be concluded that the Indian Telecom Industry plays an inevitable role in the growth and development of our country. It contributes equally in social, economical and political development of our nation. The different telecom service providers provide a different kind of plan for voice as well as data usage, which gives the customer a fair amount of choice to choose the network which suits best for them. This service can be availed in rural as well as urban sectors of the economy but yes the network services may differ.

The Indian Telecom industry has been growing at an average rate of 35% a year for two decades. It is growing a fast pace. No doubt it has been considered as an important tool for the socio- economic development of GDP in our country. FDI limit for telecom sector was increased from 74% to 100% in August 2013. This is one of the reasons that India is considered as the fastest growing economy in the world. Moreover, it is the 5th topmost employment generator after Indian Defense Forces, Indian Railways and two others. The major addition of data services in the telecommunication has added a cherry to the cake and since the consumer satisfaction is the highest, thus the profit maximization is also at its peak. The Ministry of Communication and IT has already extended its reach to the Zenith points like Siachen and Jammu Kashmir area especially the valley with a bit of improvisation still required but then BSNL has have a good hold over the political and social causes through the implementation of this feature. BSNL being a public telecom entity not only provides a good network in the valley but also safeguards and tracks records of any miscommunication or mishandling by anti-social elements in the disputed area. Since the telecommunication sector is growing rapidly, it is presumed to provide over a 4 million jobs in the coming 5 years. Therefore, this sector has a great scope to expand one's career and the youth who are always innovative and energetic to bring something new into this world.

References

1. **Ms. Pritish, and Dr. Taruna Saxena**, “ An Analysis of the Indian Telecom Industry”, *IOSR Journal of Business and Management (IOSR-JBM)*, Volume 17, Issue 10 .Ver. II PP 35-42, (Oct. 2015).
2. **Daily newspaper**: The Hindu dated 5th September 2016
3. **Daily newspaper**: The Hindu dated 10th September 2016
4. **Alma Maciulyte-Sniukienea and Elina Galie-Sarkane**, “Impact of information and telecommunication technologies development on labour productivity” *Procedia - Social and Behavioral Sciences* 110 (2014) 1271 – 1282 1877-0428 © 2014 Selection and peer-review under responsibility of the Contemporary Issues in Business, Management and Education conference. doi: 10.1016/j.sbspro.2013.12.974
5. **Science Direct** Contemporary Issues in Business, Management and Education 2013 :2278-487X, p-ISSN: 2319-7668. PP 25-36 www.iosrjournals.org
6. **Dr. Gopika.G.G**, “Growth and Development of Telecom Sector in India” *IOSR Journal of Business and Management (IOSR-JBM)* e-ISSN Volume 16, Issue 9.Ver. I (Sep. 2014).
7. **Lars-Hendrik Roller and Leonard Waverman**, “Telecommunications Infrastructure and Economic Development” ISSN Nr.0722-6748, FS IV 96-16, WZB, Social Science Research Center, Berlin.

AUTHOR(S) PROFILE

Anshi Tahiliani, currently pursuing Masters in Economics from St. Aloysius College, Jabalpur (M.P), India. Completed her schooling from St. Joseph's Convent, Jabalpur (M.P).