



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Telecommunications And Economic Development- An Overview

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ABSTRACT :

It is widely accepted that telecommunications as a part of infrastructure as well as a component of information communications technologies (ICTs) are essential to countries' economic development. Obviously, investing in telecommunications infrastructure does itself stimulate economic growth because its products (like cable, switches) lead to increases in the demand for the goods and services used in their production. However, the economic returns on telecommunications infrastructure investment are much greater than the returns on just the telecommunications investment itself, because telecommunications are connected to other sectors of the economy through back-up and forward-linkages, having spillover effects on these sectors and creating externalities

KEYWORDS:-Satisfaction, Private Linkage- telecommunication services

Introduction :

Telecommunication sector has started receiving attention of policy makers since adoption of liberalization policy in India in 1991. In pre-liberalization period, the telecommunication services were government-owned monopoly. The government used to charge the monopoly rent in terms of heavy monthly rentals for using a telephone[^] and high call rates - local as well as long distance. The services were unsatisfactory and the waiting list for providing a fixed-line connection was also very long. It was common experience that the number of telephone faults was high and time taken for fault correction was also very long. Though the demand for telephones existed even at that time, supply factors prevented effective utilization of telecommunication infrastructure and therefore the growth of telecommunication sector in India was sluggish in pre-liberalization period. Adoption of liberalization policy opened the doors for private players, thereby introducing competition in the telecommunication sector. Over and above this, adoption of liberalization policy also attracted many other businesses and foreign participation in sectors other than telecommunications. Large population of India, resulting in availability of cheap labour attracted many multinationals to India with an incentive of reducing their cost of production / operation because of relatively lower wage rates. The large labour force with skills in speaking, reading and writing in English language compared to many other developing countries attracted many outsourcing units, which led to proliferation of Business Process Outsourcing (BPO), Knowledge Process Outsourcing (KPO) and information Technology Enabled Services (ITES) industries. Telecommunication technology is the backbone of all these industries. Telecommunications is the quickest and the most convenient means of communication compared to posts, telegrams, etc. for communicating across borders. Invention of Facsimile (Fax Machines) and concept of e-mails made even written communication simpler and cheaper

The entry of private and international players in the field of telecommunications started posing competitive threats to the government-owned Bharat Sanchar Nigam Ltd. (BSNL). The competition amongst telecommunication service-providers also led to improvement in quality of services. The waiting list for availing a fixed-line phone connection reduced drastically. Mobile phone connections are available on demand. The competition in telephone (both - fixed-line as well as mobile) handset industry resulted in the availability of better quality handsets at reduced prices. Moreover, mobile phones and Internet telephony (Voice over Internet Protocol - VoIP) have now become close substitutes to fixed-line phones, though in its initial years of introduction, the cost of operation was very high.

The entry of private telecommunication service providers from India as well as abroad necessitated the regulation of their entry and operations. In order to regulate their entry and operations, National Telecom Policy (NTP) was first announced in 1994. Since then, minor amendments as well as major changes are announced from time to time. New Telecom Policy (NTP) was announced in 1999 to overcome the lacunae of NTP 1994 and Broadband Policy was announced in 2004 to regulate VoIP over and above data transfer and also for addressing spectrum[^] related issues. F Though the Telecom Policy had regulations for entry and operations, it did not regulate the prices of telecommunication services. The increasing number of telecommunication service providers and price wars because of absence of regulation of prices of telecommunication services created non-collusive oligopoly market for telecommunication services. There are presently six telecommunication service providers each in fixed-line services as well as mobile services in the country. The call rates, rates for add-on services and attractive schemes generated large demand for telecommunication services - especially mobile phones and WLL (Wireless in Local Loop - a variant to fixed-line phones, wireless with limited mobility). However, later Telecom Regulatory Authority of India (TRAI) had then to intervene to restrict the frequency of change in rates to three months. In present scenario, the divide between Internet and telecommunication is very fast getting narrow. Voice over Internet Telephony (VoIP) has also been legalized in India. At the

same time, handsets of mobile phones have a built-in facility of General Packet Radio Service (GPRS), a service which enables the user to connect to Internet, visit websites and check e-mails. In this context, a wider term 'Information and Communication Technology' (ICT) is being used to describe convergence of telecommunication technology with Internet. The Internet density (number of Internet users per 100 people) is still very low and therefore the data are not adequate for getting any meaningful pattern and doing further analysis. The reason for low Internet density is that the cost of availing Internet facilities was also very high. Computers and laptops are required for availing internet facilities and prices of these items are quite high for Indian consumers. In recent past, usage of Internet by households has improved with reduction in prices of computers and Internet charges. The demand for Internet was generated through institutions, organizations and large corporate houses. Very few households demanded the services of Internet. Therefore, the present study however, focuses the discussion only to telephones - fixed-line as well as mobile phones.

Rationale of the Study :

Development of telecommunication sector is important for several reasons. The importance of telecommunications differs between households and business / organizations. For households, telecommunication services is a consumption good and has an autonomous demand. For households telecommunication services can be useful for:

1. Social networking.
2. Domestic work for buying consumables, booking tickets, net banking etc.
3. Though rare, but for emergency calls such as to police, ambulance etc.

Long ago, possession of fixed-line phone was considered to be prestigious and therefore, demand for telecommunication services may arise out of social prestige consideration. If the household also use telephone investment in stock market then part of the expenditure will be considered as investment expenditure. For business houses or other organizations, it is an investment good and therefore, has a derived demand. Thus, development of telecommunication sector might be useful / beneficial to business in following ways:

1. Direct marketing.
2. Customer Relationship Management (CRM).
3. Interaction with suppliers for timely supply of raw materials.
4. Teleconferencing for holding meetings with officials in different locations of the country / across different countries.
5. HR practices
6. Administration
7. Security - to take care of theft, fire etc.
8. Disaster management

In both the cases - households and business, the time saved on commuting several kilometers can be saved by making one phone call. Thus, use of telephones makes time more valuable, thereby increasing the opportunity cost of time. This time saved on commuting can then be used for some other productive purpose. The opportunity cost of time for business is usually higher as compared to household. The use of telecommunication services in business houses also vary according to the size of the business and the spread - local, regional, national or international. Second important aspect of telecommunication is that with increasing demand for telecommunication services, there is a need to expand telecommunication infrastructure. Expansion of telecommunication infrastructure will have more than proportionate impact on economic development because telecommunication infrastructure is characterized by network externality and therefore, every additional user of telecommunication services benefits the existing users. Telecommunication services may be perceived as a private good if owned by household or an individual; the network externality characteristic of telecommunication services makes it a public good. The Public Call Offices (PCOs) for local as well as long-distance calls makes it a public utility. One PCO in an area can benefit all the households in its vicinity. Thus, the benefit of PCO is also manifold. Some latest available statistics of Indian telecommunication sector show the importance of telecommunication infrastructure. Table 1.1 shows the Foreign Direct Investment (FDI) and investment by Indian Financial Institutions from August 1991 to March 2003.

Summary and Policy Recommendations :

The major concern of development economists was to understand the issues pertaining to causes of growth. Right from classical theorists, the important determinants of economic development were capital stock and labour force. The capital stock was visualized to be in the form of physical infrastructure like roads, power, railways, ports etc. Later on, neo-classical theorists stressed importance of technological progress along with capital stock and labour force. The propounders and supporters of endogenous growth models focused on the causes of differences in growth rates of different countries, rather than the factors affecting development. Here too, the economists emphasized on technological progress for economic growth. However, they were of the opinion that technological progress is endogenous to economic growth. They stressed that mere presence of capital stock is not sufficient for economic development but its efficient use is more important. The efficiency is determined from the extent of technological innovation and progress because they believed that efficiency of use of existing infrastructure can increase with better or improved technology. Endogenous growth models also encourage public-private partnership for efficient allocation of resources and attaining economies of scale. This study has attempted to examine the impact of telecommunications on economic development and also causality between these two variables. The major objectives of this study are :

1. To examine the relationship between telecommunications and economic development, and to study the direction of causality, as to whether

telecommunication sector development leads to economic growth or vice versa using macro-level data

2. To examine the pattern of usage of fixed-line and mobile phone as well as to examine the perceptions of users about advantages and disadvantages of telephones using micro-level data collected through primary survey.

Information technology has, in recent past, become key factor in contributing towards growth of Indian economy. The growth of Information Technology primarily depends on growth of telecommunication sector. Thus, the role of telecommunication sector in economic development cannot be ignored. The economic survey 2007-08 mentions that the telecommunication sector has emerged as one of the key sectors responsible for India's resurgent economic growth. Telecommunication is an important component of infrastructure.

Policy Recommendations

1. Present policy of liberalization should be continued.
2. Spectrum policy must come up with an efficient way of allocating spectrum, and if possible generate more spectrum.
3. Allocation of funds in five year plans, though gradually rising, should be still increased. There is a lot of untapped market in India for telephones - both fixed-line and mobile. Allocation can be increased either directly or by attracting more FDI
4. More focus should be given on creation of telecommunication infrastructure in rural areas.

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