

TELECOMMUNICATION INDUSTRY IN INDIA- A STUDY ON ITS TREND AND GROWTH

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Abstract

The study has been undertaken to analyse growth of telecommunication industry in India. The study used secondary data for analysis for the study period of ten years 2006-07 to 2015-16. The researchers have used percentage, mean, standard deviation (SD), co-efficient of variation (CV) and compounded annual growth rate (CAGR) as statistical tools. The researchers found that Indian telecommunication industry got a tremendous development during the study period. Average annual growth rate of total telecom subscribers in India is 17.79 per cent, it was observed that wireless telecom connection increased rapidly, whereas wireline connection went down during the study period. People in India have preferred wireless telecom connection rather than wireline connections. It was also observed that internet connection in India met drastic growth during the study period than other type of telecom connections. The study also evidenced that the penetration rate of telecom connections met a drastic growth during the study period, it increased from 17.45 to 79.80 connections per 100 people and the penetration rate of internet connection also met rapid growth. Penetration rate of internet subscription increased from 3.95 to 34.83 connections per 100 people.

Key words: Internet, telecommunication, penetration, wireless and wire-line.

Introduction

Communication is essential in the life of any human being. Communication has come across many developments from gesture to the latest technologies. Oral communication is most likely mode of communication by people since the communicator can express their feelings and actually what are in their mind to communicate. In India telephone and mobile phone communication is becoming popular and penetration of using mobile phone is very high. Both government and private companies are providing mobile phone services in India. Now mobile phone service providers give services of voice call, short message services (SMS), internet and other add-on services. Indian telecommunication industry is one of the fastest growing industries in the country. It helps the economy in several ways such as giving employment both directly and indirectly,

enables communication faster and cheaper, increasing national GDP and so on. Hence the researchers have intended to study the growth of telecommunication industry in India.

Review of Literature

Kateja and Jha (2008) investigated causal relationship between telecommunications industry and economics growth in India. The researchers found that in short run growth of telecommunication is influenced by growth in GDP, while reverse is not true.

Sadr, Hossein Mohammand Seyed, Farahani Gudarzi, Yazdan (2012) examined the causal relationship between information and communications technology (ICT) development and economic growth in the Iran over a period of 1980-2010. They found a one –way causal relationship from economic growth to ICT development for Iran.

Kawaljeet kaur and Neena Malhotra (2014) made a causality analysis between telecommunication and economic Growth in India. The study used data over a period from 1976 to 2012. The overall results of causality indicate a long run relationship between telecommunications and economics growth at aggregate level as well as at sectoral level.

Vinay S.Joshi, Kapil Arora and Anukool Manish Hyde (2015) undertook a study on Functioning of Telecom Regulatory Authority of India. Telecom sector in other developing countries is one of the major contributors in the overall growth of the country's economy. In India, inspite of good work done by TRAI, there are reasons with not allowing telecom sector to settle down built investors trust. Also it is concluded that there is no impact of age/experience/ qualification and designation of the respondents on the perception of TRAI functioning.

Statement of the Problem

Telecommunication industry is one of the key industries in India. Recent developments in the industry have given a big revaluation in communication. Especially mobile phone services and their add-on services like internet services and so on let communication easy and low cost. Wire-line and wire-less telecommunication are the components of telecommunication in the country. Apart from that, internet is the fastest progressing telecommunication component in India. Numbers of internet subscribers are keeping on increasing. The researchers have studied the growth of telecommunication industry in India in terms of total telecom subscribers, wire-line subscribers, wire-less subscribers and internet subscribers.

Objective of the study

The study has been undertaken with the following objective.

- To study the growth of telecommunication industry in India in terms of
 - Number of total telecom subscribers
 - Number of wire-line subscribers

- Number of wire-less subscribers and
- Number of internet subscribers

Methodology

The study has been undertaken with secondary data. The research work required data related to Number of total telecom subscribers, Number of wire-line subscribers, Number of wire-less subscribers, Number of internet subscribers and population of the country. Number of telecom subscribers, wire-less and wire-line subscribers are collected from Annual Reports of Telecom Regulatory Authority of India (TRAI) and number of internet subscribers and population of the country were collected from www.internetlivestats.com. The research period is ten years from 2006-07 to 2015-16. The researchers have used percentage, mean, standard deviation (SD), co-efficient of variation (CV) and compounded annual growth rate (CAGR) as statistical tools.

Results and Inferences

This part of the research work presents the results of the analysis of the growth of telecom subscribers and internet subscribers, mean, standard deviation, co-efficient of variation, CAGR and penetration of telecom and internet subscribers. Table 1 gives the results of growth of telecom subscribers in India.

Table 1: Growth of Telecommunication Subscribers

Year	Wireline	Growth	Wireless	Growth	Total	Growth
2006-07	40.75	-	165.11	-	205.86	-
2007-08	39.42	-3.26	261.07	58.12	300.49	45.97
2008-09	37.96	-3.70	391.76	50.06	429.72	43.01
2009-10	36.96	-2.63	584.32	49.15	621.28	44.58
2010-11	34.73	-6.03	811.59	38.89	846.32	36.22
2011-12	32.17	-7.37	919.17	13.26	951.34	12.41
2012-13	30.21	-6.09	867.8	-5.59	898.01	-5.61
2013-14	28.5	-5.66	904.51	4.23	933.01	3.90
2014-15	26.59	-6.70	969.89	7.23	996.48	6.80
2015-16	25.22	-5.15	1033.63	6.57	1058.85	6.26
Mean	33.25		690.89		724.14	
SD	5.52		316.39		311.26	
CV	16.60		45.80		42.98	
CAGR	-4.68		20.13		17.79	

Source: Computed from data collected from TRAI Reports.

Table 1 shows that telecommunication industry has grown at a rapid rate during the study period in terms of number of telecom subscribers. Total telecom subscribers in India went up drastically, the calculated value of CAGR is 17.79 per cent. Except during 2012-13, during all other years total telecom subscribers increased over the previous year, the growth rate is found to be very high from 2007-08 to 2010-11. Total

telecom subscribers in India increased from 205.86 million in 2006-07 to 1058.85 million during 2015-16. It is also observed that wireless telecom subscribers in India achieved a very high rate of growth during the study period. The calculated value CAGR of wireless telecom connections is 20.13 per cent. This type of connections increased from 165.11 million in 2006-07 to 1033.63 million in 2015-16. A considerable decline has been found in wire-line telecom connections in India during the study period, the calculated value of CAGR is negative at 4.68 per cent. Wire-line subscribers are declined from 40.75 million in 2006-07 to 25.22 million subscribers. The results of mean, SD and CV shows that moderate level of deviation is found in total telecom subscribers and wireless telecom subscribers but the level of deviation is low in case of wire-line telecom subscribers.

Penetration is the number of telecom subscribers per 100 people in the country. It has been calculated as number of telecom subscribers divided by population of the country and multiplied by 100. Table 2 gives the results of penetration rate of total telecom subscribers in India.

Table 2: Penetration Rate of Telecom Usage

Year	Telecom Subscribers	Population	Penetration
2006-07	205.86	1179.68	17.45
2007-08	300.49	1197.07	25.10
2008-09	429.72	1214.18	35.39
2009-10	621.28	1230.98	50.47
2010-11	846.32	1247.44	67.84
2011-12	951.34	1263.59	75.29
2012-13	898.01	1279.5	70.18
2013-14	933.01	1295.29	72.03
2014-15	996.48	1311.05	76.01
2015-16	1058.85	1326.8	79.80

Source: Computed from data collected from TRAI Reports.

Table 2 reveals that penetration rate of total telecom was very low during 2006-07, it was 17.45 connections per 100 people in the country, it increased to 25.10 during 2007-08, it increased further to 35.39 and 50.47 during next two years, in other words during 2009-10 fifty per cent of our population had telecom connection either wired or wireless. Penetration rate went up to 75.2, but during 2012-13 penetration rate went down to 70.18 and it increased further during following years and the penetration rate stood at 79.80 during 2015-16.

Internet is one of the important components in telecom services. Table 3 presents the results of growth of internet connections and penetration rate of internet subscribers in India.

Table 3: Growth and Penetration of Internet Subscribers

Year	Internet	Growth	Total population	Growth	Penetration
2006-07	46.60		1179.68		3.95
2007-08	52.43	12.51	1197.07	1.47	4.38
2008-09	62.17	18.58	1214.18	1.43	5.12
2009-10	92.32	48.50	1230.98	1.38	7.50
2010-11	125.62	36.07	1247.44	1.34	10.07
2011-12	158.96	26.54	1263.59	1.29	12.58
2012-13	193.20	21.54	1279.5	1.26	15.10
2013-14	233.15	20.68	1295.29	1.23	18.00
2014-15	354.11	51.88	1311.05	1.22	27.01
2015-16	462.12	30.50	1326.8	1.20	34.83
Mean	178.07		1254.56		
SD	138.21		49.35		
CV	77.61		3.93		
CAGR	25.79		1.18		

Source: www.internetlivestats.com

Table 3 shows that internet connection in India increased at very high rate during the study period, average annual growth rate of internet subscribers is 25.79 per cent, it is considered very high. Internet subscribers in India was 46.60 million during 2006-07, it increased to 125.62 million connections during 2010-11, further increase was found during the subsequent years and it went up to 233.15 million connections during 2013-14, total internet subscribers increased to 354.11 during 2014-15 and number of internet subscribers achieved a hike during 2015-16 and stood at 462.12 million subscribers. Constant growth was identified in number of internet subscribers in India during all the years of the study period as shown by the percentage change in internet subscribers over the previous years. The penetration rate of internet subscribers in India also increased drastically during the study period. It was only 3.95 per cent 100 person during 2006-07, it went up to 10 per 100 person during 2010-11, the penetration rate of internet subscribers in India was increasing during subsequent years and the penetration rate is 34.83 per 100 person during 2015-16.

Conclusion

The present study has been undertaken to analyse growth of telecommunication industry in India. The study used secondary data and analyses are made with appropriate statistical tools for the study period of ten years 2006-07 to 2015-16. The researchers found that Indian telecommunication industry got a tremendous development during the study period. Average annual growth rate of total telecom subscribers in India is 17.79 per cent, it was observed that wireless telecom connection increased rapidly, whereas wireline connection went

down during the study period. People in India have preferred wireless telecom connection rather than wireline connections. It was also observed that internet connection in India met drastic growth during the study period than other type of telecom connections. The study also evidenced that the penetration rate of telecom connections met a drastic growth during the study period, it increased from 17.45 to 79.80 connections per 100 people and the penetration rate of internet connection also met rapid growth. Penetration rate of internet subscription increased from 3.95 to 34.83 connections per 100 people.

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