

## GROWTH OF TELECOMMUNICATION INDUSTRY IN INDIA

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### **Abstract**

In India, telecommunication industry is one of the largest service providing sectors with a huge customer base. India is the second largest subscribers market in the world next to China. Because of the huge population in India, it will be helpful to the telecommunication industry to grab the customers rapidly compared to other services. Hence, the study attempts to determine the history of telecommunication industry, growth of telecommunication industry in India and the current scenario of telecommunication sector.

**Keywords:** Telecommunication industry, customers and services

### **Introduction**

India is the world's second-largest telecommunication market, with around 1,177.02 million telephone subscriber bases at the end of January 2020. The telecom market can be split into three segments – wireless, wire line and internet services. The wireless market segment comprises of 1,156.44 (98.25%) million of the total subscriber base, Urban segment comprises of 644.54 (55.73%) million and Rural segment comprises of 511.90 (44.27%) million as of January 2020.

### **History of Telecommunication in India**

Telecommunications in India began with the introduction of the telegraph. The Indian postal and telecom sectors are one of the world's oldest. In 1850, the first experimental electric telegraph line was started between Calcutta and Diamond Harbour. In 1851, it was opened for the use of the British East India Company. The Posts and Telegraphs department occupied a small corner of the Public Works Department, at that time.

The construction of 4,000 miles (6,400 km) of telegraph lines was started in November 1853. These connected Kolkata (then Calcutta) and Peshawar in the north, Agra, Mumbai (then Bombay) through Sindwa Ghats, and Chennai (then Madras) in the south; Ootacamund and

Bangalore. William O'Shaughnessy, who pioneered the telegraph and telephone in India, belonged to the Public Works Department, and worked towards the development of telecom throughout this period. A separate department was opened in 1854 when telegraph facilities were opened to the public.

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 exchange in India. The permission was refused on the grounds that the establishment of telephones was a Government monopoly and that the Government itself would undertake the work. In 1881, the Government later reversed its earlier decision and a licence was granted to the Oriental Telephone Company Limited of England for opening telephone exchanges at Calcutta, Bombay, Madras and Ahmadabad and the first formal telephone service was established in the country. On 28 January 1882, Major E. Baring, Member of the Governor General of India's Council declared open the Telephone Exchanges in Calcutta, Bombay and Madras. The exchange in Calcutta named the "Central Exchange" had a total of 93 subscribers in its early stage. Later that year, Bombay also witnessed the opening of a telephone exchange.

### **Post-Independence**

On the eve of Independence, there were only 9022 telegraph offices and only 403 departmental telephone exchanges. The number of telephone was 91,424 of which 2345 were private. Private branch exchanges had 30,245 telephones. A licensed private company in Bihar was serving the coal-field area and had eight exchanges with 1,359 telephones (DoT Publications). During the research, it was found that telecom service in India started in the private sector first. Later it was completely nationalized and in the year 1991, it was opened for the private players.

### **Telecom Regulatory Authority of India (TRAI)**

In pursuance of the National Telecom Policy, in 1994 the Central Government was committed to set up an independent regulatory body for the telecommunication sector. Telecom Regulatory Authority of India (TRAI) was finally announced in January 1997. By the time a number of operators were in a position to extend radio paging, cellular mobile telephone services, and electronic mail and data communication services.

Letters of intent were also issued to eight private operators for 12 Telecom Circles for providing basic services. There has been growing insistence from the industry for the

setting up of the statutory regulatory body for the smooth and efficient functioning of Telecom services in the country. An independent regulatory authority was required to be in place as an important component of the process of economic reform. The constitution of the TRAI was expected to go a long way towards further strengthening investors' confidence and ensuring fair competition.

The functions of the body were defined as:

“To recommend entry of new service providers, ensure technical compatibility and effective connectivity between different service providers, ensure compliance of terms and conditions of license facilitate competition and promote efficiency and sustained growth of telecommunications services, monitor the quality of service provided by the service providers, inspect the equipment used and recommend the types to be used by the service providers, settle disputes between services providers, render advice to the central government on matters concerning development of telecommunication technology and industry, protect the interest of the consumers of telecommunication service and ensure effective compliance of universal service obligations” (DoT, 2006).

TRAI was given powers to regulate tariff, notwithstanding the Indian Telegraph Act 1885. The government order said “notwithstanding anything contained in the Indian Telegraph Act, 1885, the Authority may, from time to time, by order, notify in the Official Gazette the rates at which the telecommunication services within India and outside shall be provided under this act including the rates at which messages shall be transmitted to any country outside India, provided that the Authority may notify different rates for different persons or class of persons for similar telecommunication services and where different rates are fixed the authority shall record the reasons therefore. However, the Telecom Regulatory Authority of India will only adjudicate disputes which may arise between service providers or between a service provider and a group of consumers, but will not adjudicate on matters which are within the purview of MRTP (Monopolies and Restrictive Trade Practice) as well as consumer forums” (DoT, 2006).

**Objectives:**

**To study the growth of telecommunication sector in India**

**Current scenario of telecommunication sector in India**

**Table 1: Highlights of Telecom Subscription Data as on 31<sup>st</sup> January 2020**

<b>Particulars</b>	<b>Wireless</b>	<b>Wire line</b>	<b>Total (wireless and wire line)</b>
<b>Total Telephone subscribers (Million)</b>	<b>1156.44</b>	<b>20.58</b>	<b>1177.02</b>
Net addition in January, 2020 (Million)	5.00	-0.42	4.528
Monthly Growth Rate	0.43%	-2.00%	0.39%
<b>Urban Telephone subscribers (Million)</b>	<b>644.54</b>	<b>18.21</b>	<b>662.75</b>
Net addition in January, 2020 (Million)	0.56	-0.26	0.30
Monthly Growth Rate	0.09%	-1.42%	0.05%
<b>Rural Telephone subscribers (Million)</b>	<b>511.90</b>	<b>2.37</b>	<b>514.27</b>
Net addition in January, 2020 (Million)	4.44	-0.16	4.28
Monthly Growth Rate	0.87%	-6.21%	0.84%
<b>Overall Tele-density (%)</b>	<b>85.92</b>	<b>1.53</b>	<b>87.45</b>
Urban Tele-density (%)	140.20	3.96	144.16
Rural Tele-density (%)	57.76	0.27	58.03
Share of Urban subscribers	55.73%	88.47%	56.31%
Share of Rural Subscribers	44.27%	11.53%	43.69%
<b>Broadband Subscribers (Million)</b>	<b>654.30</b>	<b>19.08</b>	<b>673.39</b>

**Source: TRAI press release No.29/2020, dated: 08/05/2020**

The number of telephone subscribers in India increased from 1,172.44 million at the end of December 2019 to 1,177.02 million at the end of January 2020, thereby showing a monthly increase rate of 0.39%. Urban telephone subscription increased from 662.45 million at the end of December 2019 to 662.75 million at the end of January 2020, and the rural subscription increased from 509.99 million to 514.27 million during the same period. The monthly growth rates of urban and rural telephone subscription were 0.05% and 0.84% respectively during the month of January 2020. The overall tele-density in India declined from 88.56 at the end of December 2019 to 87.45 at the end of January 2020. The urban tele-

density declined from 156.26 at the end of December 2019 to 144.16 at the end of January 2020. Rural tele-density increased from 56.67 at the end of December 2019 to 58.03 at the end of January 2020. The share of rural and urban subscribers at the end of January 2020 was 43.69% and 56.31% respectively.

**Table 2: Telecom Development Indicators (2015-2019)**

Sl. No.	Item		At the end of				
			March 2015	March 2016	March 2017	March 2018	March 2019
1	Number of Telephones(in Millions)	Overall	996.13	1059.33	1194.99	1211.80	1183.41
2		Wire line	26.59	25.22	24.40	22.81	21.70
3		Wireless	969.54	1034.11	1170.59	1188.99	1161.71
4		Rural	416.08	447.77	501.81	525.87	514.27
5		Urban	580.05	611.56	693.18	685.93	669.14
6		Tele density	Overall	79.36	83.40	93.01	93.27
7	(Telephones per 100 persons)	Rural	48.04	51.26	56.98	59.25	57.50
8		Urban	149.04	154.18	171.52	166.64	159.66
9	% age share	Wireless	97.33	97.62	97.96	98.12	98.17
10		Public	10.53	10.26	10.26	10.86	11.28
11		Private	89.47	89.47	89.74	89.14	88.72
12	% age growth of total telephones over previous year		8.04	6.34	12.81	1.41	-2.34

**Source: DOT (Compiled Data)**

The above table 2 reveals the Telecom Development Indicators from March 2015 to March 2019 indicates that, Total Number of Telephones at the end of March 2015 were 996.13 million and it was increased to 1183.41 at the end of March 2019. Wire line telephones were 26.59 million at the end of March 2015 and it was decreased to 21.70 at the end of March 2019. Wireless telephones at the end of March 2015 were 969.54 and it was increased to

1161.71 at the end of March 2019. Rural telephones at the end of March 2015 were 416.08 and it was increased to 514.27. And in Urban, telephones were 580.05 at the end of March 2015 and it was increased to 669.14 at the end of March 2019.

The tele-density (telephones for 100 persons) which was 79.36% in March 2015 increased to 90.10 in March, 2019. Thus there has been continuous improvement in the overall tele-density of the country. The rural tele-density (telephones for 100 persons) which was 48.04 in March 2015 increased to 57.50 in March, 2019. The urban tele-density (telephones for 100 persons) increased from 149.04 in March 2015 to 159.66 in March, 2019

Wireless telephones have maintained highest percentage of share at the end of March 2015 were 97.33% to 98.17 at the end of March 2019, within that, public telephone company had highest percentage of share when compare to public telephone company.

The percentage growth of total telephones which was 8.04 in March 2015 decreased to -2.34 in March 2019.

**Table 3: Trend of Total Telephones and Tele density in the Country (2015-2019)**

At the end of March	Total Telephones(in Millions)	Tele density (%)
2015	996.13	79.36
2016	1059.33	83.40
2017	1194.99	93.01
2018	1211.80	93.27
2019	1183.41	90.10

**Source: DOT (Compiled Data)**

The above table 3 highlighted that, the trend of total telephones and tele density in the country from 2015-2019, the total telephones which was 996.13 millions in March 2015 increased to 1183.41 million in March, 2019. Thus, there has been continuous improvement in the total telephones of the country. Tele density which was 79.36% in March 2015 increased to 90.10% in March 2019. Therefore, there was an improvement in the tele density of the country.

**Table 4: Number of Mobile Phone and Landline Subscribers (2015-2019)**

At the end of March	No. of Mobile Phone Subscribers (in Millions)	No. of Landline Subscribers (in Millions)
2015	967.54	26.59
2016	1034.11	25.22
2017	1170.59	24.40
2018	1188.99	22.81
2019	1161.71	21.70

**Source: DOT (Compiled Data)**

The above table 4 represents that, the Number of Mobile Phone and Landline Subscribers in the country from 2015-2019, the total number of mobile phones which was 967.54 million in March 2015 increased to 1161.71 million in March, 2019. Thus, there has been continuous improvement in the total mobile phones of the country. Number of landline subscribers which was 26.59 million in March 2010 decreased to 21.70 million in March 2019. Therefore, there was a decreasing trend in the landline subscribers of the country.

**Table 5: Telephone Subscribers in India (Percent Share) (2015-2019)**

At the end of March	Wire line	Wireless	Rural	Urban	Public	Private
2015	2.67	97.33	41.77	58.23	10.07	89.93
2016	2.38	97.62	42.77	57.73	10.26	89.74
2017	2.04	97.96	41.99	58.01	10.22	89.78
2018	1.88	98.12	43.40	56.60	10.86	89.14
2019	1.83	98.17	43.45	56.55	11.28	88.72

**Source: DOT (Compiled Data)**

The above table 5 represents that, the percentage share of the Telephone Subscribers in India from 2015-2019, the percentage share of wire line telephone subscribers, which was 2.67% in March 2015 decreased to 1.83% in March, 2019. Thus, there has been continuous decreasing in the wire line telephone subscribers of the country. Wireless telephone subscribers which were 97.33% in March 2015 increased to 98.17% in March 2019. Therefore, there was an increasing trend in the wireless telephone subscribers of the country. Rural subscribers percentage share in March 2015 was 41.77 and in March 2019 was 43.45. Urban subscribers share in March 2015 was 58.23% decreased to 56.55% in March 2019.

Therefore, urban subscribers decreased gradually when compared to rural subscribers. Percentage share of public company was 10.07 in March 2015 decreased to 11.28. But, in private company which was 89.93% in March 2015 increased to 88.72.

**Table 6: Internet Subscribers in India (in Millions) (2015-2019)**

At the end of March	Total	Narrowband	Broadband	Wired	Wireless	Urban	Rural
2015	302.36	203.15	99.20	19.07	283.29	194.80	107.56
2016	342.65	192.90	149.75	20.44	322.21	230.71	111.94
2017	422.20	145.68	276.52	21.58	400.62	285.68	136.52
2018	493.96	81.35	412.60	21.24	472.72	348.13	145.83
2019	636.73	75.37	561.36	21.68	615.05	409.72	227.01

**Sources: DOT (Compiled Data)**

The above table 6 revealed that, the Internet Subscribers in India for the year 2015-2019. The total internet subscribers in March 2015 were 302.36 million increased to 636.73 million in March 2019. Narrowband used in March 2015 was 203.15 million decreased to 75.37 million. Broadband users in March 2015 were 99.20 million increased to 561.36 million. Wired internet users in March 2015 was 19.07 million increased to 21.68 million. Wireless internet subscribers in March 2015 were 283.29 million increased to 615.05 million. Internet subscribers in urban in March 2015 was 194.80 million increased to 409.72 million. Rural internet subscribers in March 2015 were 107.56 million and increased to 227.01 million in March 2019.

**Table 7: Telecom Subscribers in Karnataka (2015-2019) (millions)**

At the end of March	Total	Wire line	Wireless	Public	Private
2015	60.32	2.28	58.05	8.10	52.22
2016	63.60	2.26	61.34	8.25	55.35
2017	71.39	2.24	69.14	8.26	63.13
2018	69.22	2.22	67.00	8.33	60.89
2019	70.39	2.15	68.24	8.21	62.17

**Source: DOT Compiled Data**

The above table 7 revealed that, the Telecom Subscribers in Karnataka for the year 2010-2019. The total subscribers in Karnataka in March 2010 were 39.91 million increased to 70.39 million in March 2019. Wireline subscribers in March 2015 were 2.78 million and decreased to 2.15 million. Wireless subscribers in March 2015 were 37.13 million and increased to 68.24 million. Out of 39.91 million total subscribers of Karnataka in March 2015, 6.04 millions of subscribers belong to public company and 33.87 millions belongs to private company. Further, Out of 70.39 million total subscribers of Karnataka in March 2019, 8.21 millions of subscribers belong to public company and 62.17 millions belongs to private company.

### **Conclusion:**

In today's world of globalization there is a rapid increasing in using telecommunication services in a huge manner in the same way there is a cut throat competition in the services also, but in the telecommunication industry, only few company's they have enjoying the profit in a large scale. In the competitive world of business, people would expect quality products and quality services. Thus, service providers have to understand the ever changing preferences and the behavior of consumers constantly in order to satisfy and serve them better.

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