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Telecom Sector in India: Past, Present and Future

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Abstract

Globalization, privatization and liberalization accelerated all round reforms in many sectors, especially in developing economies, in the world. Developing countries- like India have realized the importance of communication in the later part of 20th century. According to DoT (2013), today Indian Telecommunication Sector is one of the fastest growing telecom sectors and it has become the second largest network in the world, next to China. The Government of India really has encouraged the telecom sector to penetrate in the new markets across the country by adopting appropriate policies. Therefore this sector is found to be in a growing path and with its potential will continue to do so in the future also. Keeping these in view, the present study analyzes the history & evolution of Indian Telecom Sector, its growth & developments in present scenario along with the future opportunities of the sector in India.

Key words: Indian Telecom Circle, Growth & Development, Service Providers, Market share.

1. Introduction: The Indian Telecom Sector has emerged as one of the critical components of economic growth required for overall socio-economic development of the country as there is a positive correlation between the penetration of mobile services and internet on the growth of GDP of a country. According to Joshi (2014), World Bank believes that an increase in mobile and broadband penetration increases the per capita GDP by 0.81% and 1.38% respectively in the developing countries. After post-liberalization, exponential growth on Telecom Sector in India can be seen, which actually helped the country for its economical development, (Nasit, 2011). According to Earnst and Young (2011), Indian telecom is an economic miracle in the making. They said that connecting such a vibrant economy of more than a billion people together and with the rest of the globe is an extraordinary achievement in terms of a nation's socioeconomic development.

According to Shah (2008), the development of the Telecom Sector of India has experienced a major process of transformation in terms of its growth, technological content and market structure in the last decade through policy reforms introduced by Government of India. The sector has undergone a dramatic transformation from the government monopoly to a competitive environment after liberalization, where multiple private players could enter and started giving services to customers. According to Tarab (2012), the joint effort of Government and private players of this sector has improved a lot and on its way of growth and development. Active participation of the private companies, foreign direct investment, sequence of reform measures initiated by the Government and wireless technology- played an important role in phenomenal growth of the sector in the country. It has become a very essential service, needed for rapid growth and modernization of various sector of the country's economy.

2.Objectives of the study:

The objectives of the research study are-

1. To study the history and evolution of the Telecom Sector in India.
2. To study the present trends and future growth opportunities of the Telecom Sector in India.

3. Methodology: It is based on secondary data collected from the Department of Telecommunication, Telecom Regulatory Authority of India, Ministry of Communication, the reports from Government of India and other sources. In order to study the specified objectives, statistical tool like year-wise Percentage of market share of different service provider, annual growth rate and percentage were calculated.

4. Discussion: This study has been drafted to portray the history & evolution, present trends and future opportunities in the telecom sector of India. Here, the researcher has also discussed about-Growth of Telephones, Tele-density, Public Vs Private telecom sector, Wireless Vs Wire-line segments, Service providers and their market share etc. It has been seen that the Telecom Sector of India has registered a phenomenal growth during last few years, propelled largely by the unprecedented growth of the mobile telephony and infrastructure which not only is beneficial for the telecom sector but has a multiplier effects over the entire economy.

4:1 History of Indian Telecom Sector: The history of Indian Telecom Sector began in 1851, when The British Government were laid down the first operational landlines in Kolkata, (Tarab, 2012). In 1881, a separate telephone services were introduced by opening telegraph facilities to the public. The telephone services were merged with the postal system in the year 1883. In the beginning, Rajdhani of East India Company was situated at Kolkata; but in the year 1911, the capital got shifted to Delhi and continued to be capital of India. At that time, Public Works Department (PWD) was running the functions of telecom operations with head office at New Delhi. Gradually the control of telecom operations transferred to Director General Postal and Telegraph (DGP&T) from PWD, from DGP&T to Department of Telecommunication (DoT), from DoT to Department of Telecom Service (DTS), and finally landed in Bharat Sanchar Nigam Limited (BSNL). All these years, New Delhi continued to be the head office of Telecom Sector.

In the year 1923, Indian Radio Telegraph Company (IRT) was formed. In the year 1947, just after the independence, all the foreign telecommunication companies were nationalized to form Telephone, Telegraph and Post (PTT), which was run by the Government of India, under Ministry of Communications in a monopoly manner. To get better performance, Government decided to bring the Indian Telecom Sector under the roof of state's control. In 1980, private sector was allowed in manufacturing telecom equipment's, which initiated reforming the telecommunication sector.

4:2 Evolution of the Telecom Industry -Important Milestones:

1984	Manufacturing of subscriber terminal equipment opened to private sector.
1985	Telecom was constituted into a separate department with a separate board.
1986	MTNL and VSNL created as corporations.
1988	Government introduces in-dialling scheme. PABX services only within a building, or in adjoining buildings.
1989	Telecom Commission formed.
1991	Telecom equipment manufacturing opened to private sector. Major international players like Alcatel, AT&T, Ericsson, Fujitsu, and Siemens entered equipment manufacturing market.
1992	VAS sector opened for private competition.
1993	Private networks allowed in Industrial areas.
1994	Licenses for radio paging (27 cities) issued.
May, 1994	New Telecom Policy Announced.
Sep, 1994	Broad Guidelines for private operator entry into basic services announced.
Nov, 1994	Licenses for cellular mobiles for four metros issued.
Dec, 1994	Tenders floated for bids in cellular mobile services in 19 circles, excluding the four metros, on a duopoly basis.
Jan 1995	Tenders floated for second operator in basic services on a circle basis.
July 1995	Cellular tender bid opened.
Aug, 1995	Basic service tender bid opened; the bids caused lot of controversy. A majority of bids were considered low.
Dec, 1995	LOIs issued to some operators for cellular mobile operations in circle.
Jan, 1996	Rebidding takes place for basic services in thirteen circles. Telecom Regulatory Authority of India (TRAI) formed by ordinance.
Oct, 1996	LOIs being issued for basic services.
March, 1997	The TRAI Act was passed in Parliament.

June, 1998	Several VASs available through private operators becomes operational.
March, 1999	Announcement of National Telecom Policy.
Jan, 2000	Amendments made to the TRAI Act.
Aug, 2000	Announcement of Domestic Long Distance Competition Policy.
Oct, 2000	Planned Corporatization of DoT.

Source: www.bsnl.co.in

4:3 Trends in Indian Telecom Sector: Telecommunication sector in India can be primarily subdivided into two broad segments, they are- Fixed Service Providers (FSPs) and Cellular Service Provider (CSPs). Indian Telecom Sector constitutes some essential telecom services like Telephone, Radio, Television, Internet etc. Now-a-days, Indian Telecom Sector is specially giving importance on latest technologies like GSM (Global System for Mobile Communication) and CDMA (Code Division Multiple Access) along with Fixed Line, PMRTS (Public Mobile Radio Trunking Services) and WLL (Wireless Local Loop).

4:3:1 Growth of Telephones: Infrastructural development of the country plays an important role in the development of Telecom Sector of India. The Government of India is providing certain benefits especially to infrastructure companies and also encouraging the private players to participate through investment in this sector. As a result very good growth in this sector can be seen in the country.

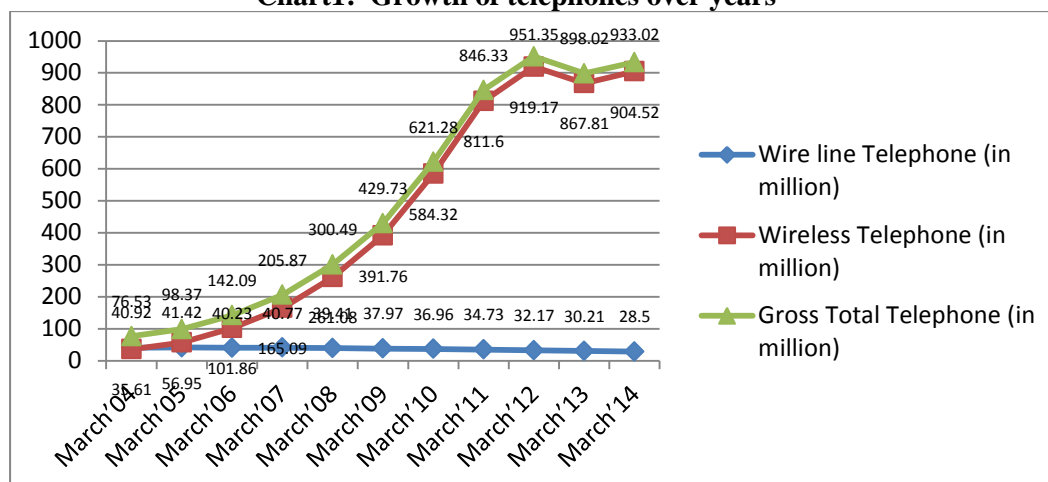
Table1: Growth of Telephones over the years (in million)

Sr. No.	Years	Wire line	Wireless	Gross Total	Annual Growth %
1.	March'04	40.92	35.61	76.53	40
2.	March'05	41.42	56.95	98.37	29
3.	March'06	40.23	101.86	142.09	44
4.	March'07	40.77	165.09	205.87	45
5.	March'08	39.41	261.08	300.49	46
6.	March'09	37.97	391.76	429.73	43
7.	March'10	36.96	584.32	621.28	45
8.	March'11	34.73	811.60	846.33	36
9.	March'12	32.17	919.17	951.35	12
10.	March'13	30.21	867.81	898.02	-6
11.	March'14	28.50	904.52	933.02	4

Source: Dept. of Telecommunication (DoT), Annual Report, 2010-11, And Annual Report, 2013-14

The table shows there is positive growth in case of wireless and slight negative growth in case of wire line telephones.

Chart1: Growth of telephones over years



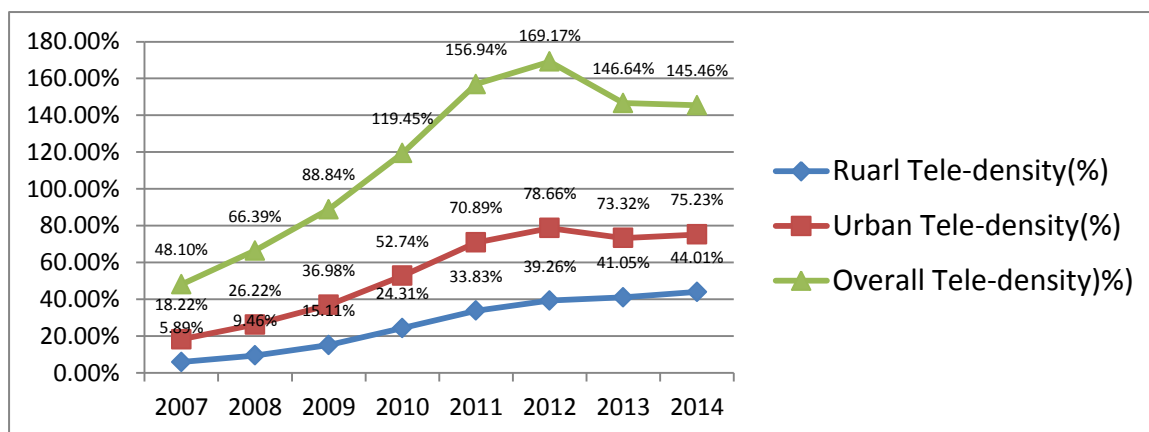
Source: DoT, Annual Report 2010-11 and Annual Report 2013-14

From the above line graph it is reflected that there is a positive percentage growth of number of total telephones over previous years, except in the year 2012-13 which was due to the removal of inactive mobile telephone connections by the service providers.

4:3:2 Market Potentialities: India has become one of the fastest growing mobile markets in the world. In India, the mobile service was commercially launched in August, 1995. In first few years, the average monthly subscriber’s additions were around 0.05 to 0.1 million only and total mobile subscribers base in December 2002 was 10.5 million, (Annual Report, DoT 2002-03). However, subsequent Annual reports reflect that in the year 2003-04 and 2004-05, the numbers of mobile subscribers’ additions increased to around 2 million per month due to number of proactive initiations taken by the regulators and licensors. The total number of telephone subscribers has reached 922.04 million at the end of January, 2014. The overall tele density has increased to 74.50 in January, 2014. The total wire line subscription and wireless subscription has reached to 28.72 million and 893.31 million respectively. In the last few years, along with the growth of mobile subscribers, there is an exponential growth in case of subscriber base of Fixed line services as well as Internet services. Thus building on the growth trend in subscriber base experienced since 2000.

4:3:3 Tele-densities: Tele-density is an important indicator of telecom penetration in the country, which represents the number of telephone per hundred populations. There is a very exponential growth of tele-density in our country due to evolution of hi-tech wireless technologies. The Tele-density of March 2004, which was 7.02% has increased up to 53.46% in March, 2010 and further raised up to 74.5% in January’2014.

Graph 2: Trends in Tele-density from 2007 to 2014.



Source: DoT Annual Report 2013-14

According to DoT Annual Report (2013-14), at the end of financial year 2014, India’s tele-density has increased to 75.23% from 73.32% as on April 2013. During this one year period, there is a declination in urban tele-density; however rural tele-density has increased. The urban tele-density registered a decline from 146.64% to 145.46% and rural tele-density increased from 41.05% to 44.01%.

Rapid increase in rural tele-density is very important for the economic and social development of rural areas, which then influence the overall development of the country. India Government has adopted various measures for the spreading out of mobile network in distant rural areas. Private telecom service providers also trying very hard for the expansion of rural tele-density by providing good services in those remote areas, as urban areas already has got saturated.

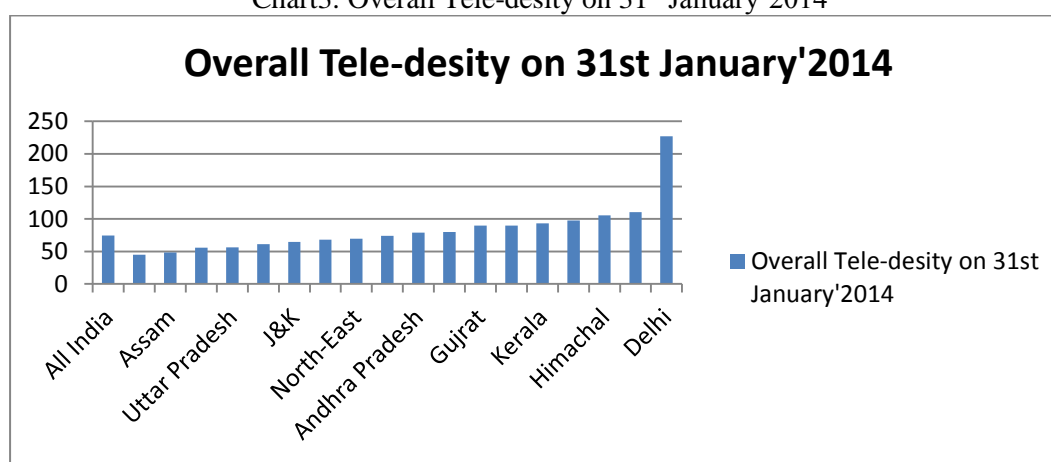
Table 2: Overall Tele-density (Circle/State Wise) - As on January, 2014

Sr. No.	Place	Tele-density
1.	All India	74.50
2.	Bihar	45.06
3.	Assam	48.63
4.	Madhya Pradesh	55.98
5.	Uttar Pradesh	56.24

6.	Odisha	61.08
7.	J&K	64.81
8.	West Bengal	68.32
9.	North-East	69.46
10.	Rajasthan	74.08
11.	Andhra Pradesh	78.77
12.	Haryana	79.78
13.	Gujarat	89.75
14.	Maharashtra	90.01
15.	Karnataka	93.39
16.	Kerala	97.68
17.	Punjab	105.56
18.	Himachal	106.31
19.	Tamil Nadu	110.56
20.	Delhi	227.2

Source: TRAI Press Release, 2014

Chart3: Overall Tele-desity on 31st January'2014



Source: TRAI Press Release, 2014

4:3:4 Public Vs Private: There is a continuous rise in the number of wireless telephones of the private sector operators compare to public sector in Indian Telecom sector in last decade. The total number of telephones of the private sector is 812.96 million, whereas in public sector it is 120.05 million at the end of the March 2014.

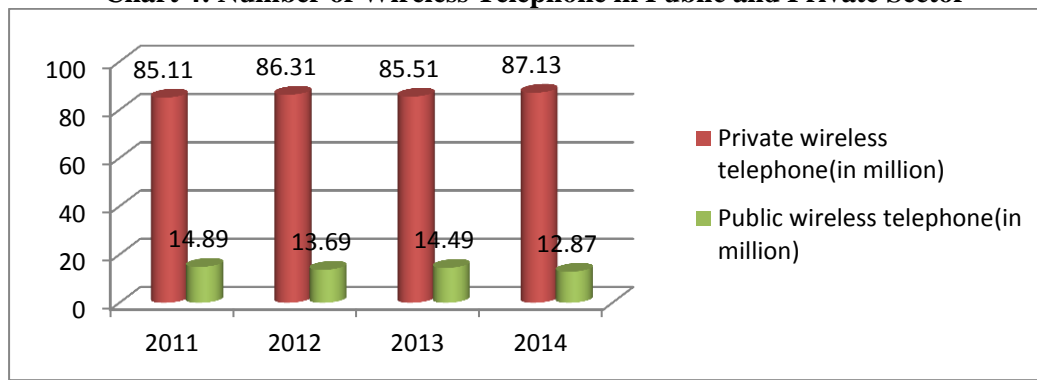
The percentage share growth of wireless public and wireless sector for last four years has given below.

Table 3: Growth of public and private wireless telephone percentage share in last four years

Sr. No.	Segment	March'2011	March'2012	March'2013	March'2014
1.	Public	14.89	13.69	14.49	12.87
2.	Private	85.11	86.31	85.51	87.13

Source: DoT Annual Report, 2013-14

Chart 4: Number of Wireless Telephone in Public and Private Sector



Source: DoT Annual Report, 2013-14

From the chart, it can be explained that the number of wireless telephone connections in private sectors are increasing day by day, whereas it is gradually decreasing in public sector. In wireless telephone, private sector now dominates the Indian Telecom Sector.

4:3:5 Wireless Vs. Wire line: In the Telecom Sector of India, while the wireless telephones continued to grow, the wire line telephones are declining day by day. The number of wireless telephone is 904.52 million, whereas the wire line telephone is 28.50 million at the end of March 2014.

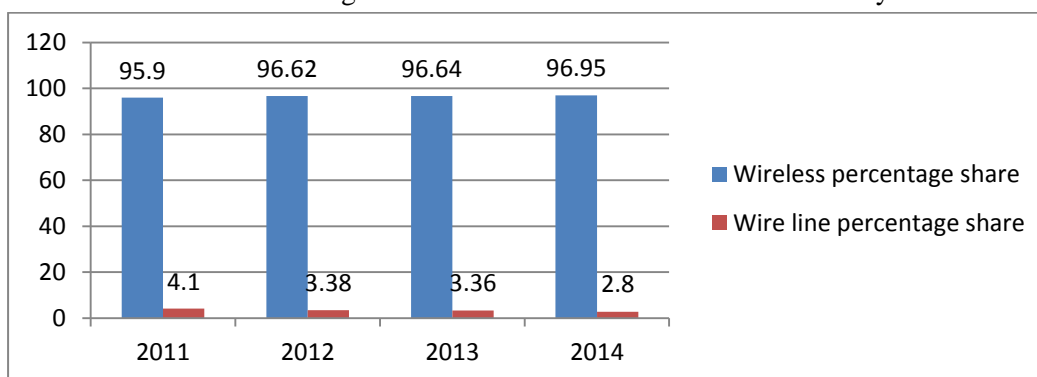
Table 4: Percentage share of wireless and wire line in last four years

Sr. No.	Segment	March'11	March'12	March'13	March'14
1.	Wireless	95.90	96.62	96.64	96.95
2.	Wire line	4.10	3.38	3.36	3.05

Source: DoT Annual Report, 2013-14.

While noticing the percentage share of wireless and wire line telephone in last four years, it can be seen that there is a positive growth in wireless and negative growth in wire line telephones.

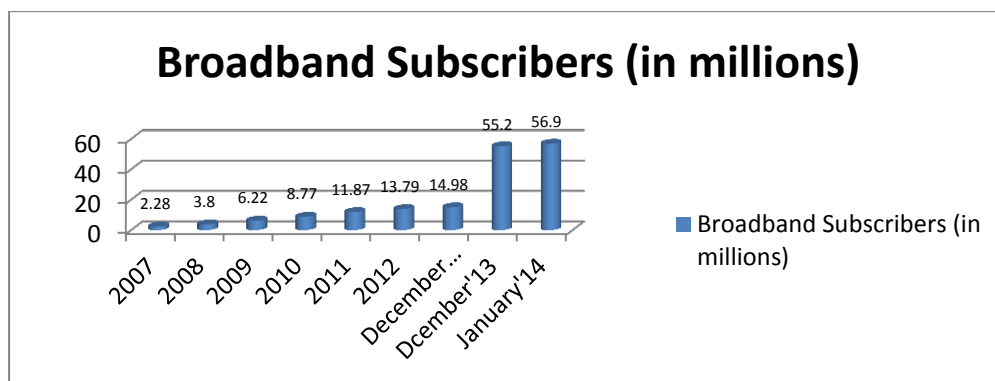
Chart 5: Percentage share of wireless and wire line in last four years



Source: DoT Annual Report, 2013-14

4:3:6 Broadband: Existence of Broadband connectivity is really an integral driver for the improvement of socio-economic performance of the country. This service enables to give guidance to individuals make them aware of many things like- accessing new career and educational opportunities.

Graph 6: Broadband Subscribers during 2007-2014



Source: DoT, Annual Report 2011-12 and TRAI, Press Release, January 2014.

Government is trying to provide the Broadband facilities in rural and remote places, which will help to bridge the gap between the development of rural and urban areas which is very much essential for the overall development of the country.

4:3:7 Foreign Direct Investments:

The rapid growth and development of Telecom Sector of India is motivating major global players to invest their money in this sector. Due to privatization, liberalization and globalization, Foreign Direct Investment in India has been really increasing especially in the last decade. On August'2013, Government raised FDI limit for telecom services to 100% from 74%, to attract the inflow of FDI. By doing this, Government of India is trying to make the Telecom sector more attractive and investor friendly for others. Due to the existence of FDI in Telecom Sector of India, there is an opening for advanced technological skills, availability of huge amount of funds in the market, worldwide market competition etc. So, it has become a challenging task to maintain the balance between economic gains from foreign investment and national telecommunications sovereignty.

4:3:8 Tariffs: According to Department of Telecommunication, today in India, the telecommunication service is one of the lowest in the world. The consumers in the Indian market have immensely getting the benefits from such lower tariffs which is a major reason for explosive growth in this sector, (Nasit, 2011). Related to tariff-setting, TRAI had issued its first directive for re-balancing tariffs. Consequently, it conducted periodic reviews to make changes in the tariff levels whenever found necessary.

4:3:9 Mobile Number Portability: Mobile Number Portability requests have been increased day by day. About 111.94 million subscribers have been submitted their requests to different service providers present in that particular area, for porting their mobile number. Till now maximum number of requests have been received in Rajasthan from MNP Zone-I and in Karnataka from MNP Zone-II.

4:3:10 Mobile Service Providers of India: There are many mobile network operators in India having different subscriber's base and so market share. A table have given below showing their subscribers base and market share as on January' 2013 and January'2014.

Table 5: Market share of different mobile service providers as on January'13 and January'14.

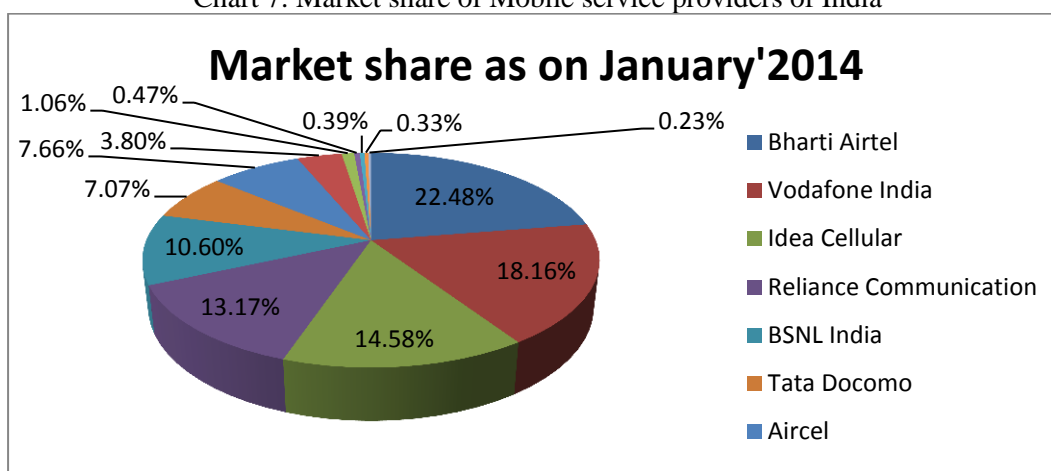
Sl. No.	Operator's Name	Market share January'2013	Market share January'2014
1.	Bharti Airtel	21.35%	22.48%
2.	Vodafone India	17.2%	18.16%
3.	Idea Cellular	13.49%	14.58%
4.	Reliance Communication	13.71%	13.17%
5.	BSNL India	11.62%	10.60%
6.	Tata Docomo	7.85%	7.07%

7.	Aircel	7.14%	7.66%
8.	Telewings	----	3.80%
9.	Sistema	1.66%	1.06%
10.	Videocon	0.26%	0.47%
11.	MTNL India	0.60%	0.39%
12.	Loop Mobile	0.35%	0.33%
13.	Quadrant	----	0.23%
14.	Unitech	4.65%	----
15.	HFCL	0.18%	----
			100

Source: TRAI, Press Release, Year-2013 and 2014

Bharti Airtel, Vodafone India, Idea and Reliance Communication have secured 1st, 2nd, 3rd and 4th rank as long as market share is considered on January'2014

Chart 7: Market share of Mobile service providers of India



Source: TRAI, Press Release, Year 2014

4:4 Future Growth Opportunities of Indian Telecom Sector: According to TRAI, two other associated aspects for market growth are- availability of spectrum and availability of resources for network development and expansion. According to the report of Department of Telecommunication, Government of India has raised the Foreign Direct Investment (FDI) limit for this sector to hundred percent on August'2013 to ensure continuous flow of investments to expand the reach of mobile operators. Telecom operators are working on a segmented approach to know the market potential and then to achieve their forecasts and target. According to DoT (2013-14), Department of Telecommunication is planning to serve the nation in its diversity, modern telecommunication facilities will be facilitated to all the rural and remote corners of the country. In this regard, telecom sector will give special focus on unreserved areas in North-Eastern region and backward states of the country. At the same time, an all-inclusive legislation is required to encourage healthy competition, simplify processes and procedures, stimulate innovation and build linkages with other upcoming sector with the help of facilitating rapid growth of the economy by using communication technology.

3.Conclusion: It can be concluded that the growth and development of Telecom sector of India has made it a key contributor in India's economic and social up gradation. Every functional division and service provider of Telecom Sector of the country is trying to provide world class telecom infrastructure in its area of operation to give services to its customers and so, helping the country to progress in the global scenario.

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