

# GROWTH AND DEVELOPMENT OF TELECOM SECTOR: A COMPREHENSIVE STUDY OF ASSAM TELECOM CIRCLE

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## ABSTRACT

*Over the past decade, Assam telecom sector has witnessed many positive developments in the state. Assam Telecom Circle has achieved a lot in this sector in terms of accessibility and connectivity throughout the state. Different network service providers are playing a vital role by effectively delivering a new hub and implementing distribution strategy for rural markets in the area. Assam Telecom Circle has attained the large subscriber network with the total number of subscribers' base 1,53,97,268 (TRAI,2014) and claiming a tele-density of 48.63% (TRAI,2014) as on January'14. With an increasing competition among the service providers in the state, their contributions to subscribers by providing different services through mobile devices are also increasing. Keeping these in view, the present study analyses the growth and development of telecommunication sector and its service providers in Assam Circle.*

**Keywords:** Assam Telecom Circle, Growth & Development, Indian Telecom Sector, Service Providers.

### Introduction:

Liberalization, privatization and globalization initiated all round reforms in many sectors, especially in developing economies, like India. It is a fact that the growth of a country as a knowledge based economy will only be possible when there will be development and expansion in the telecommunication and IT sector. Many developing countries have realized the importance of telecom sector for economic development of the country. In the later part of 20<sup>th</sup> century, India also realized that improvement of effective and efficient means of communication is very essential to transform itself into a developed country; however states like Assam realized the same only in the beginning of the 21<sup>st</sup> century. Very exponential growth of Telecom Sector in Assam Circle can be seen only in the last decade, which helped the state in its economical development. This sector has really perceived the most structural, fundamental and institutional restructuring. Assam Telecom Circle has faced challenges in liberalizing its telecom sector from a monopoly to a decentralized competitive model.

### Review of Literature:

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. According to TRAI report 2013-14, today the Government of India seems to have realized the requirement of immediate reform to give the impetus to the growth of the telecommunication sector for the development of the country. India telecom is an economic miracle in the making. Ernst (2011), 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 socio-economic development. It is said that, the advantages of the advent of telecommunication are manifold and explicitly verifiable from phenomenal success of the sector,(Tarab,2012). She also added that the addition of over 18 million connections per month puts the telecom sector on strong footing at a global platform. According to Nasit, (2011), Indian Telecom Sector mobile telephony is called as "sun-rise industry", as it is one of the rapid by growing industries in the country, particularly with rate of subscriber base tele-density and traffic. He also added

that, Indian Telecom Sector holds huge potential for growth in future. Shah (2008) said that, through increased competition in all the states of India, the service providers are expected to become more sensitive and responsive to the customers' needs and choices and endeavour to give them greater satisfaction. According to Tarab (2012), since the Government and the private sector is joining hands the condition of the telecom sector in a state like Assam has improved a lot and is on its way to growth and development. The annual plan of BSNL pays special emphasis on accelerated growth of telecommunication facilities under Special Component Plans in North-Eastern Region including Assam Telecom Circle, (Annual Report, Dot, 2012-13).

**Objectives of the study :**

The objectives of the research study are-

1. To examine the growth and development of telecommunication sector in Assam Circle.
2. To examine and highlight the contribution of different service providers in the growth and development of Telecommunication sector in Assam Circle.

**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 tools like year-wise Percentage of market share of different service providers, annual growth rate, percentage and ratio of different segments were calculated.

**Discussion:**

This study has been drafted to portray the present scenario of the telecom sector in Assam. Here, the researcher has also discussed about- Service providers of Assam Circle, Tele-density, Wireless Vs Wire-line, Market share of different service providers and their positions etc. It has been seen that the Telecom Circle of Assam has registered a phenomenal growth during the 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.

**Service Providers of Assam Circle:**

Assam Circle is fully covered by Assam Licensed Service Area, which has many players in telecom service presently, they are-

1. Bharat Sanchar Nigam Limited (BSNL)
2. Bharti Airtel Limited

3. Reliance Telecom Limited
4. Vodafone Spacetel Limited
5. Dishnet Wireless Limited (Aircel)
6. Idea Cellular Limited

**Tele-density of Assam Circle:**

Tele-density represents the number of telephone (wireless and wire-line) per hundred populations. While observing the tele-density of Assam Circle, a gradual growth can be seen.

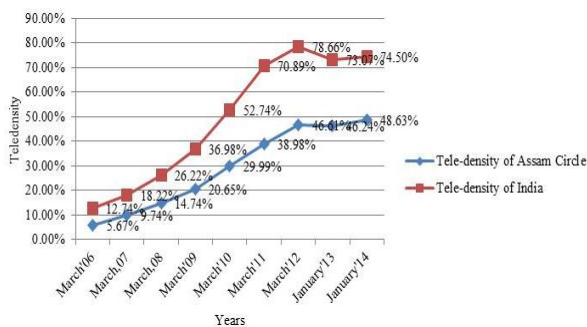
**Table1: Tele-density of Assam Circle**

Tele-density As On	March 2006	March 2007	March 2008	March 2009	March 2010	March 2011	March 2012	January 2013	January 2014
Assam Circle	5.67%	9.74%	14.74%	20.65%	29.99%	38.98%	46.61%	46.24%	48.63%
All India	12.74%	18.22%	26.22%	36.98%	52.74%	70.89%	78.66%	73.07%	74.50%

**Source:** TRAI, Press Release, 2012, 2013 and 2014.

The tele-density of Assam Circle of March 2006 was 5.67%, which has increased up to 46.61% in March 2012 and further increased to 48.63% in January 2014.

**Figure 1: Tele-density of Assam Circle**



**Source:** TRAI, Press Release, 2012, 2013 and 2014.

Figure 1 reflects a similar trend of tele-density of Assam Circle and India as a whole.

**Wireless Vs Wire-line:**

In the present era of development, people prefer wireless telephone over wire-line telephone because of convenience, affordability and handiness. The share of wireless phone has been also increasing since last few years in Assam circle. When both the wireless and wire-line here compared, it is observed that the proportional increase of wireless is much higher than wire-line.

**Table2: Wireless Vs Wire-line telephone**

Assam Circle	Wireless Connections (in numbers)	Wire-line Connection (in numbers)
January,2012	1,40,09,483	2,30,987
January,2013	1,42,74,011	1,94,115
January'2014	1,52,10,559	1,86,709

Source: TRAI, Press Release, 2012, 2013 and 2014

The wireless subscriber base in Assam Circle has increased to 1,52,10,559 and wire-line subscribers base has increased to 1,86,709 at the end of January 2014.

**Figure 2: Wireless Vs Wire-line subscriber base in Assam Circle**



Source: TRAI, Press Release, 2012, 2013 and 2014

Big gap between the numbers of wireless and wire-line telephone subscribers can be observed because; wireless telephones have become more affordable and convenient to use and so, today it has come within the reach of a common man.

**Wire-line Connection:**

In Assam Circle, BSNL and Vodafone are giving the service of wire-line telephone connectivity. As on January'2014, BSNL is having the market share of 99.47%, which is very high as compared to the market share of Vodafone.

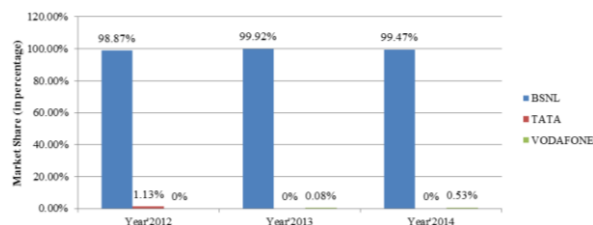
**Table3: Wire-line subscribers' base**

S.N	Operators in Assam	January'12 (number)	Market Share 2012, (%)	January 2013 (number)	Market Share 2013, (%)	January2014 (Number)	Market share (%)
1.	BSNL	228385	98.87	193965	99.92	185719	99.47
2.	Vodafone	----	----	150	0.08	990	0.53
3.	Tata	2602	1.13	----	----	----	----
Total		230987	100	194115	100	1,86,709	100

Source: TRAI Press Release, 2012, 2013 and 2014

It is observed that the number of wire-line telephone connection in BSNL is 1,85,719 and Vodafone has 990 connections in the month of January'2014. Tata had 1.13% of market share in the circle as on January'2012. However, the market share of Vodafone has slightly increased in the financial year 2013-14 compare to the financial year 2012-13.

**Figure 3: Market share of wire-line service provider**



Source: TRAI, Press Release, 2012, 2013 and 2014

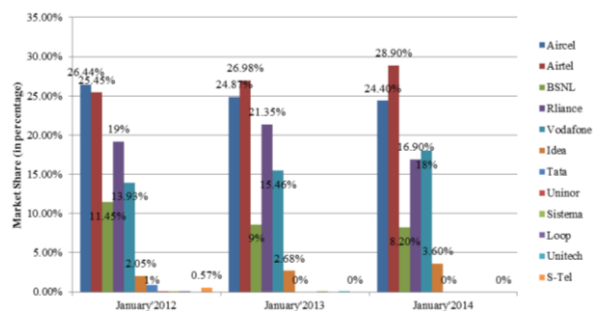
From the above bar graph, it is reflected that as long as the wire-line connectivity is concerned, the only public sector company BSNL has dominated the Assam Circle. However, wire-line subscriber base is decreasing day by day in the circle.

**Mobile Connection, Market Share and Market Position:**

The many fold growth of wireless subscribers can be seen in Assam Circle, out of which Airtel has the maximum subscribers' base today. As on January 2014, number of subscribers for Airtel is 43,94,850, which represent 28.9% market share of the circle. Aircel has 37,06,030 subscribers' base along with 24.4% market share and holding 2<sup>nd</sup> position in the year 2013-14.

Vodafone has 18% market share with 27,28,862 subscribers' base on January'2014, which is also a very huge number compare to their subscribers' base on 2012 and 2013. Market share of Reliance Communication and BSNL are 16.9% and 8.2% respectively. The only public sector player of the circle BSNL is not doing very good in the region as their market share has dropped from 11.45% of the year 2012 to 8.2% of the year'2014.

**Figure 4: Service Provider's market share of mobile connection**



Source: TRAI Press Release, 2012, 2013 and 2014

From the above table, it can also be observed that the number of subscribers has increased from 1,40,09,483 of January'2012 and to 1,42,74,011 in the month of January'2013. It means there is a rapid growth in wireless telephone in the Assam Circle.

**Table 4: Mobile connection, market share and position of service provider**

Sr.no.	Operators in Assam	January'12 (Number)	Market Share (%)	Position	January'13 (Number)	Market share (%)	Position	January'14 (Number)	Market Share (%)	Position
1.	Aircel	37,04,649	26.44	1	35,50,416	24.87	2	37,06,030	24.4	2
2.	Airtel	35,65,349	25.45	2	38,51,324	26.98	1	43,94,850	28.9	1
3.	BSNL	16,04,587	11.45	5	12,30,918	8.62	5	12,53,553	8.2	5
4.	Reliance	26,86,136	19.17	3	30,48,336	21.35	3	25,79,770	16.9	4
5.	Vodafone	19,51,967	13.93	4	22,08,121	15.46	4	27,28,862	18	3
6.	Idea	2,87,682	2.05	6	3,82,840	2.68	6	5,47,494	3.6	6
7.	Tata	1,27,535	0.91	7	----	----		----	----	
8.	Uninor	127	.0009	11	----	----		----	----	
9.	Sistema	1134	.008	9	1280	.009	7	----	----	
10.	Loop	325	.0023	10	----	----		----	----	
11.	Unitech	----	----		776	.0054	8	----	----	
12.	S-Tel	79,992	0.57	8						
Total		1,40,09,483	100		142,74,011	100		1,52,10,559	100	

Source: TRAI Press Release, 2012, 2013 and 2014

**Table 5: Number of BTS in Assam Circle as on June, 2012**

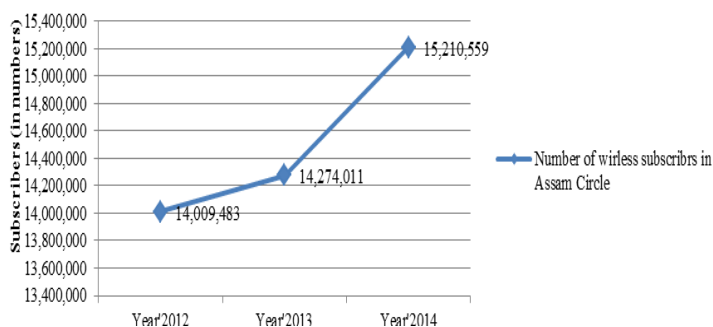
Company	Airtel	Aircel	Vodafone	Reliance	BSNL	Idea	Tata
Assam	2598	2518	2409	1950	1733	673	295
NE (except Assam & Sikkim)	1496	1721	1140	753	1605	709	189

Source: Ministry of Communication & IT, Department of Telecommunications, 2012

However, if consider North-East (except Assam Circle and Sikkim), Airtel has maximum number of BTS, then followed by BSNL, Airtel and Vodafone.

**Figure 5: Growth of wireless telephones in Assam Circle**

Number of wireless subscribers in Assam Circle



Source: TRAI Press Release, 2012, 2013 and 2014

**Table 6: Mobile coverage along Highways/Railways routes of operators**

Service Area	Ways	Total KM	BSNL	AIRCEL	AIRTEL	RELIANCE	VODAFONE	IDEA
Assam Circle	National Highways	2836	2545	2752	2315	1997	2317	879
	State Highways	3215	1593	2320	NA	1185	2488	373
	Railways	2216	1914	2081	2242	2169	1394	692

Source: Report of Ministry of Communication & IT, 2012

The number of wireless subscriber base has further increased to 15,210,559 in the month January'2014.

### **BTS (Base Terminal Stations) of major Telecom Operators:**

Bharti Airtel Limited has maximum number of BTS in Assam Circle, followed by Aircel, Vodafone, Reliance, BSNL, Idea and then Tata.

### **Mobile coverage along highways/Railways routes by Service Providers:**

Service providers of Assam Circle has the coverage on different routes come under National Highways, State Highways and Railways. Table of total kilometres covered by different service providers has given below:

From the table no 06 it can be seen that, Aircel has maximum coverage on National Highways, Vodafone has maximum coverage on State Highways and Airtel has maximum coverage on Railways, as on January'2012.

### **Mobile Coverage in Headquarters of Major Operators:**

Telecom network of telecom operators cover many District headquarters, Sub-Divisional headquarters, Tehsil Headquarters, Block Headquarters and Villages of Assam Circle. Number of these Headquarters and Villages covered by different operators are given below:

Table 7 All most all the operators have covered equal numbers of District Headquarters (DHQs). Reliance Communication has covered maximum number of Block Headquarters as well as Villages compare to other major operators.

### **Proportion of VLR (Visitor Location Register) subscribers**

The proportion of VLR subscribers is approximately 86.49% and 90.40% of the total wireless subscriber base reported by service providers as on the year January' 2014 in India and Assam Circle respectively.

From the table 8 it is reflected that the proportion of VLR percentage is increasing day by day. The proportion of VLR subscribers of different service providers of the Circle is given below:

Below table 9 reflected that the proportion of VLR subscribers of the total wireless subscribers' base is increasing in Assam Circle and it is highest in Bharti Airtel, followed by Vodafone, Idea and so on in the financial year 2013-14.

### **Mobile Number Portability:**

As per the data reported by the service providers, the subscribers that have submitted their requests to different service providers for porting their mobile numbers in India and Assam circle have given below.

According to different service providers, the number of subscribers that have requested for Mobile Number Portability is increasing in Assam Circle every year.

### **Conclusion:**

The telecom sector has been growing continuously in Assam Circle. The sector has not only led to rapid growth, but also helped a great deal in maximization of consumer benefits across the circle as a result of unrestricted competition. This sector in Assam Circle has witnessed a continuous rising trend in the total number of people using telephones, especially the wireless segment. The Government's policies have also encouraged the telecom sector to penetrate in the new market in the circle. Therefore this sector is found to be in a growing path and with its potential will continue to do so in the future also. The enhancement of connectivity has a significant influence in bridging the gap of remoteness in this part of the country.

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**Table 7: Mobile coverage of major operators**

Service Area	HQ/Villages	Total	BSNL	AIRCEL	AIRTEL	RELIANCE	VODAFONE	IDEA
ASSAM	DHQs	27	27	27	27	27	26	19
	BHQs	223	217	217	NA	223	NA	60
	Villages	25124	17556	12401	16805	18671	12011	2736

Source: Report of Ministry of Communication & IT, 2012

**Table 8: Proportion of VLR**

Year	VLR subscribers proportion (India)	VLR subscribers proportion (Assam)
January'2012	73.60%	82.13%
January,2013	82.08%	85.46%
January'2014	86.49%	90.40%

Source: Press Release, TRAI, 2012, 2013 and 2014

**Table 9: Proportion of VLR subscribers**

Assam Circle	Aircel	Bharti	BSNL	Idea	Reliance	Vodafone	Sistema	Unitech	Loop	STel	Tata	Total
Year												
January,2012	78.37	95.65	70.72	94.52	68.88	90.03	87.88	----	7.69	52.77	74.34	82.13
January'2013	84.92	97.45	71.40	90.92	67.98	96.45	85.23	15.46	-----	-----	-----	85.46
January'2014	85.73	98.05	81.05	93.01	82.11	96.04	-----	-----	-----	-----	-----	90.40

Source: Press Release, TRAI, 2012, 2013 and 2014

**Table 10: MPN in Assam Circle**

Year	MNP in India (in millions)		MNP in Assam Circle (in millions)
January'2012	37.11		0.085
January,2013	84.26		0.333
January'2014	111.94	0.399	

Source: Press Release, TRAI, 2012, 2013 and 2014

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