

Indian Telecom Overview and Government Policies Impact

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Abstract

The Telecommunications Industry of India is one of the largest and leading industries in the world connecting different parts of the country through various modes like basic connectivity, telephony, radio, television, satellite and internet. The Telecom Regulatory Authority of India governs Indian telecom industry by providing a regulatory framework and favorable environment for its proficient operation. The Indian telecom industry stands as the second- largest in the world due to its rapid progression and is in cut -throat competition while compared with telecom industries of the other developed countries. The telecommunication services offered by this industry are easily accessible at affordable prices to the customers of urban and rural areas of India. India's telecom network encompasses a highly developed and unique technology in the world. In this research paper, main emphasis has been placed to bring to light the magnitude and development of telecommunication sector in India and few key Govt. regulations that impact industry. Data has been collected from multiple sources including books, journals, websites, newspapers etc. The paper describes the current scenario of Indian telecom sector

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I. Introduction

The Indian Telecom Industry is considered to have a vital role in development of the country's GDP on the whole by contributing towards the immense growth, quick expansion and evolution of various sectors of the nation. This industry not only increased the GDP of India, earns profit for the Indian Government but also created immense employment opportunities for a great number of people. The Indian Telecom Industry is very vast consisting of many companies that make hardware, produce software & also retailing of these services. Presently, it contributes to annual revenue of approximately USD 50,000 million. Not only Government owned telecom units but the Indian Telecom market has also attracted many national & international investors to enter the market who started offering their telecom services as fixed communication, mobile communication and data services to the customers' at the most reasonable prices. The Government of India has introduces several policies to ensure competitiveness among operators. Due to the rapid progression in technologies, the telecom operators of India are working actively in order to adapt themselves to the changing technology to continue existing in the market. Internet penetration among Indian Telecom consumers has grown tremendously during the past few years owing to the unprecedented growth of wireless telephony in India and infrastructure which not only is beneficial for the telecom industry but has positive effects on the entire economy of India. The industry has the world's second highest number of internet users. The Indian Telecom Industry has undergone a considerable transformation from being a Government owned enterprise to that of a competitive environment after its liberalization in 1991. The rapid escalation in the telecom sector of India has been made possible due to the active participation of private service providers, revenue generated through Foreign Direct Investment (FDI), series of reforms instigated by the Government and through the adoption of latest technologies.

II. Objectives:

The objectives of the research paper study are:-

1. To analyze the history and evolution of Indian Telecom Industry.
2. To review impact of Government Telecom policies on telecom Industry

III. Methodology:

The present study is based on secondary data obtained from various website published by Telecom Regulatory Authority of India (TRAI), Department of Telecommunication (DoT) and the reports from Government of India and other sources. Different telecom magazines, newspapers and journals were consulted

for gathering of information. Information was also collected by holding discussions with knowledgeable persons employed at different levels across telecom domain. Report also referred An Analysis of the Indian Telecom Industry DOI: 10.9790/487X-171023542 www.iosrjournals.org 36 | Page levels in various telecom companies of India.

IV. Discussion:

This study has been conducted to depict the history and evolution, present trends and expected future opportunities in the Telecom Industry of India. Here, the researcher has also discussed about the various Government Telecom Policies changes that impact this industry. The various milestones of the Indian Telecom industry like first 100 million subscribers, Growth of internet penetration, Tele-density etc also included in details of this study.

History of Indian Telecom Industry

The mobile phone introduced in India in 1995 and struggled for the first three years to reach the 1 million mark in 1998. Growth started picking up thereafter to reach 3 million in year 2000, 5 million in 2001, and then 10 million in year 2010. Later due to a variety of reasons like a new telecom policy that removed the problems of mobile operators and the crashing of handset prices, mobile telecom subscription exploded in the country to reach 100 million in June 2012. India's mobile phone subscriber base crested the 1 billion users mark in 2015, as per data released recently by the country's telecom regulator. But experts see the milestone as the beginning of some dramatic action rather than as a climax. It is expected that most of these billion mobile subscribers will become smartphone users in the next couple of years. It will be about exploding growth in data usage and internet access through the mobile, which will get millions of Indians conducting business, getting social and participating in governance through their phones.

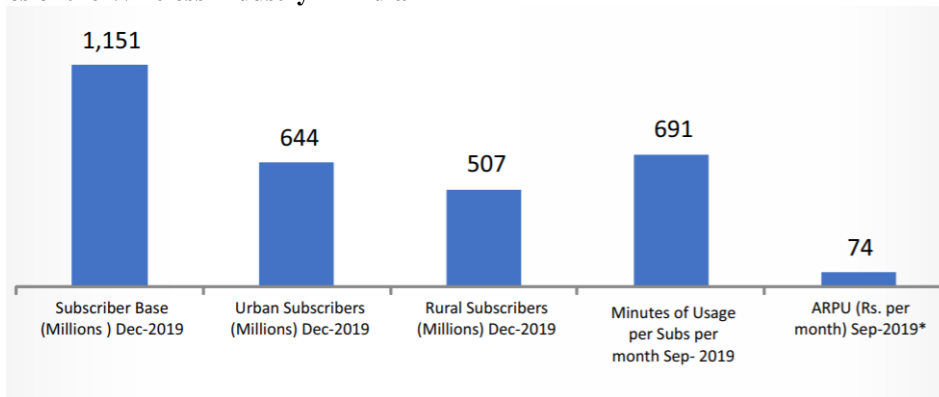
India and China are the only two countries in the world with over a billion people. China crossed the 1 billion mobile users' landmark in 2012. In India, the user base has climbed this mark rapidly in 2016 with the advent of ultra-affordable devices and call tariffs that are the world's cheapest.

The **drivers of this remarkable growth** in India is favorable regulatory climate, falling tariffs, slow growth in the deployment of wired telecommunications infrastructure and the wireless carriers' aggressive strategies to reach new areas of the country. Perhaps most importantly, India's mobile-phone adoption is being boosted by the rising financial fortunes of a large portion of the population. Also, India's wireless service rates are now among the lowest in the world. From their peak rate of around 50 cents per minute in 2013, mobile tariffs have decreased significantly and now are in the range of less than 2 cents per minute. This decline in rates is expected to continue in the future. Meanwhile, wireless carriers over the last few years have spread their networks in India's rural and semi-urban areas to tap the next wave of growth. According to a report published by IAMAI & Indian Express, the total internet penetration in India has crossed mark of 600 million in 2020 with an estimated 40% Year on Year growth during the first half of 2021. Mobile internet penetration on the other hand, is estimated to grow 60%+ Year on Year in the same time frame.

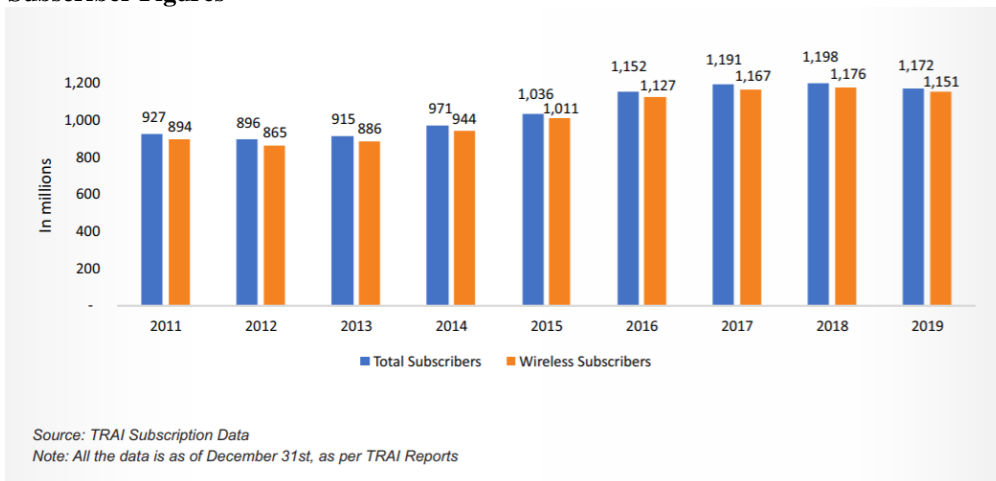
The success of mobile telephony in India has had all the "formulas of success" built into it – competition, development of technology, availability of affordable instruments and, the biggest of all, the great Indian middle class. The success of 3G & 4G services has proved that the Indian market is an extremely price-sensitive market and only when tariffs are really affordable, can a technology be said to have achieved mass success. Therefore, while 5G is significantly higher in quality and can improve the way India communicates, its potential would only be a result of its adaptability to the Indian masses.

As per TRAI telecom subscription report, Indian telecom base crossed 1000 Mn mark to reach ever highest mobile subscriber base. There were few peak years like 2016 which witnessed 100+ million new mobile subscribers which added on various telecom networks, with Reliance Jio literally shaking the complete industry.

Key Statistics of the Wireless Industry in India



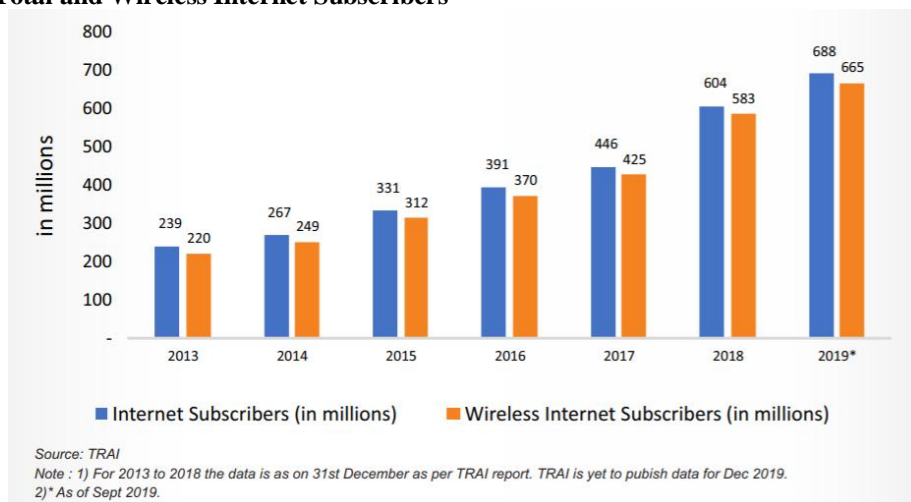
Industry Subscriber Figures



4.1 Data adoption trends

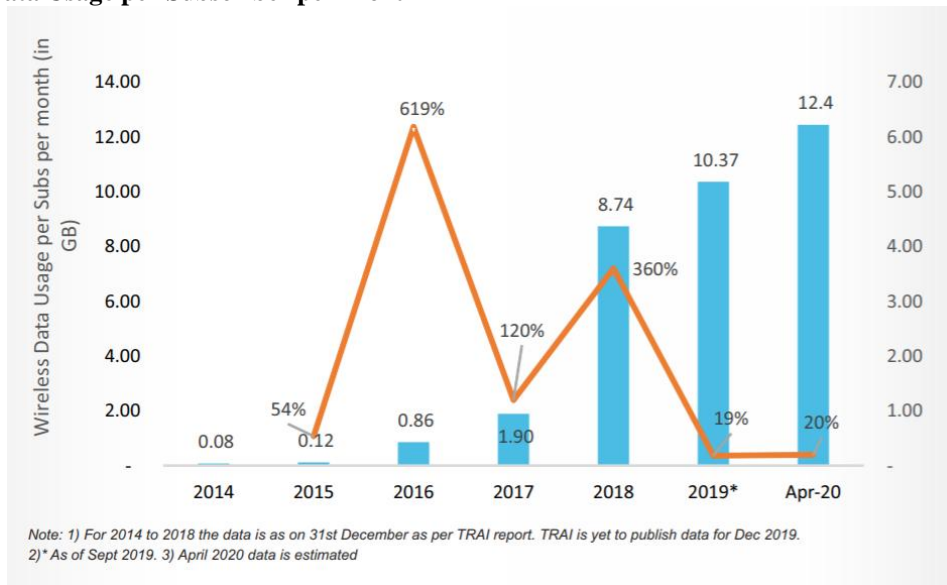
With 4G introduction data adoption increased multifold, further making Indian telecom space hyper competitive and ultra low cost for end consumers. With increasing Smartphone demands India became the first choice of mobile phone makes and content creators

PAN India Total and Wireless Internet Subscribers



More than 200% increase in the wireless internet subscribers between December 2013 to December 2019 with a CAGR of around 20% between this period.

Wireless Data Usage per Subscriber per Month



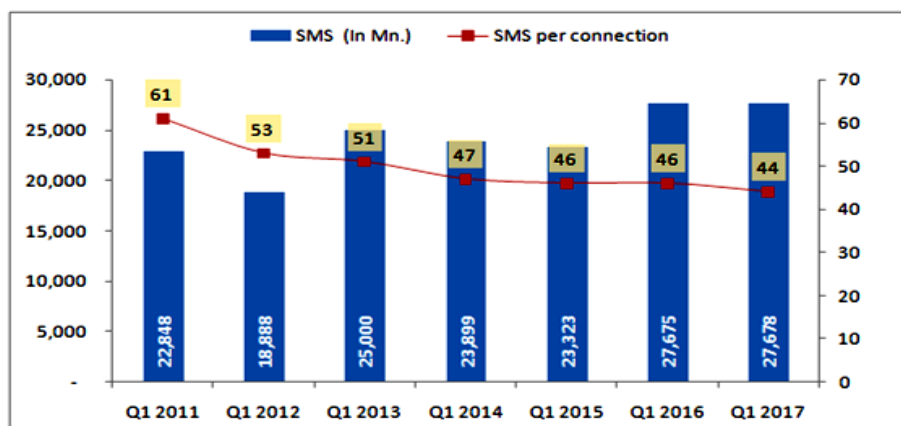
Wireless Data Usage per subscriber per month has increased by almost 13 times since 2016.

V. Govt. Policies impacting Telecom

5.1 SMS capping policy: The researcher’s here objective was to carry out impact of Govt. on Indian India Telecom Industry using secondary data.

Customer’s quarterly SMS data in millions (Vodafone India)

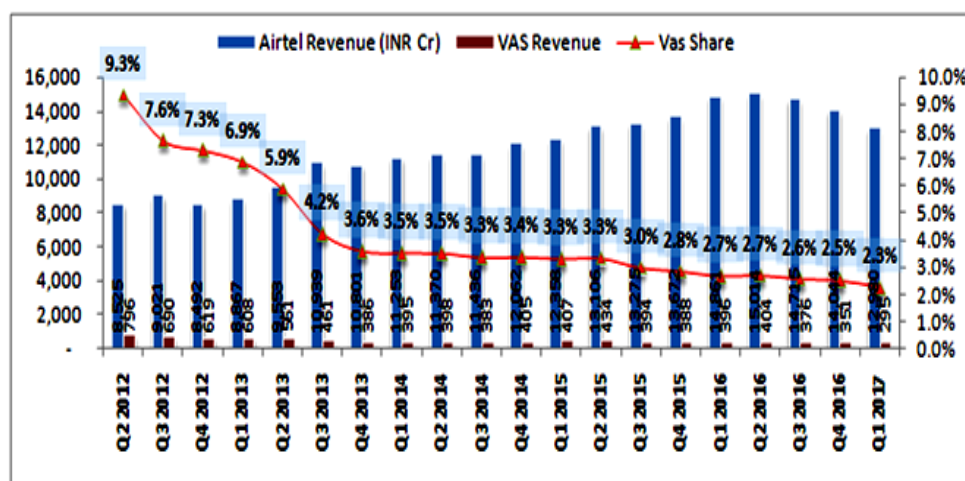
Metric	SMS (In Mn.)	SMS per connection
Q1 2011	22,848	61
Q1 2012	18,888	53
Q1 2013	25,000	51
Q1 2014	23,899	47
Q1 2015	23,323	46
Q1 2016	27,675	46
Q1 2017	27,678	44



While analyzing external environment, which impact consumer behaviour researcher first did analysis on SMS (short message service) data of Vodafone India. TRAI (telecom regulatory of India) **implemented temporary restriction of bulk SMS in Q4 of 2012** where they restricted number of SMS/SIM to 100 and then further regularize this restriction at 200 SMS/day in December 2012. This regulation has impacted consumer SMS usage behavior and usage per connection dropped to 44 from 61 in 2011. This regulation was brought in existence for restriction of Bulk Marketing & Spam SMS.

5.2 VAS Double consent Policy: Multi layer customer consent for VAS subscription Impact t on VAS revenue VAS Share to Gross Revenue (Airtel India)

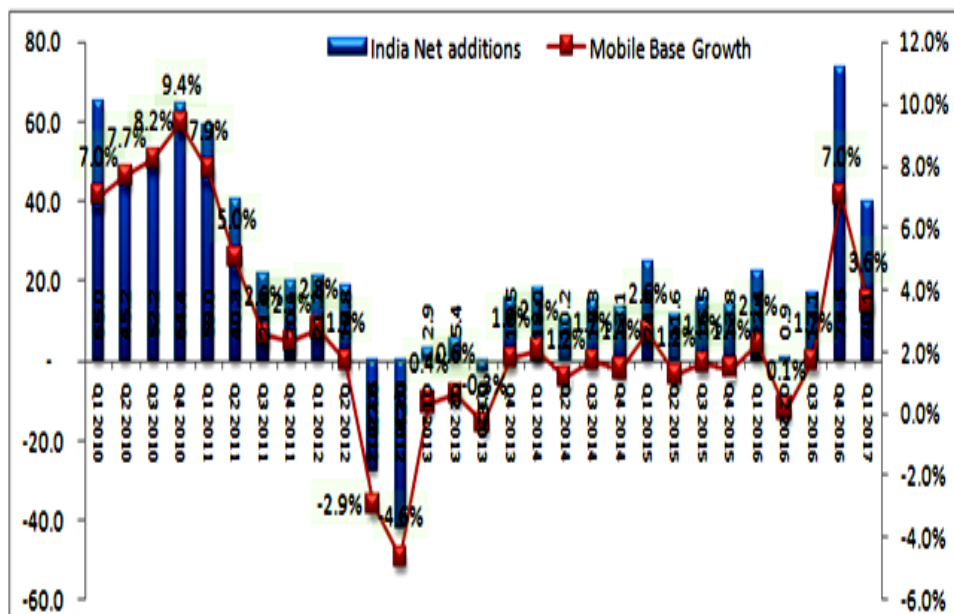
Attribute	Airtel Revenue (INR Cr)	VAS Revenue (INR Cr)	Vas Share
Q2 2012	8,525	796	9.3%
Q3 2012	9,021	690	7.6%
Q4 2012	8,492	619	7.3%
Q1 2013	8,867	608	6.9%
Q2 2013	9,553	561	5.9%
Q3 2013	10,939	461	4.2%
Q4 2013	10,801	386	3.6%
Q1 2014	11,253	395	3.5%
Q2 2014	11,370	398	3.5%
Q3 2014	11,436	383	3.3%
Q4 2014	12,062	405	3.4%
Q1 2015	12,358	407	3.3%
Q2 2015	13,106	434	3.3%
Q3 2015	13,275	394	3.0%
Q4 2015	13,672	388	2.8%
Q1 2016	14,861	396	2.7%
Q2 2016	15,014	404	2.7%
Q3 2016	14,715	376	2.6%
Q4 2016	14,044	351	2.5%
Q1 2017	12,980	295	2.3%



VAS (value added service) revenue is a key performance parameter for telecom operators till **quarter-2 of 2013**. Jul'13 TRAI mandated double telecom operators to have double consent for VAS activation. This regulation impacted VAS industry adversary and many VAS companies have to close businesses. Attached table and graph show Airtel India's quarterly revenue data which shows VAS revenue contribution to gross revenue **dipped to 2.3% from 9.3%** in quarter-2 of 2012. Although overall Airtel revenue didn't take a dip but absolute VAS revenue fallen to **295 Crores from initial 796 Crores**.

5.3 Impact of New acquisition policy on customer’s additions

Metric	India Net additions	Mobile Base Growth
Q1 2010	65.0	7.0%
Q2 2010	45.2	7.7%
Q3 2010	52.2	8.2%
Q4 2010	64.4	9.4%
Q1 2011	59.0	7.9%
Q2 2011	40.3	5.0%
Q3 2011	21.8	2.6%
Q4 2011	20.1	2.3%
Q1 2012	21.2	2.8%
Q2 2012	18.8	1.7%
Q3 2012	-27.6	-2.9%
Q4 2012	-42.0	-4.6%
Q1 2013	2.9	0.4%
Q2 2013	5.4	0.6%
Q3 2013	-3.0	-0.3%
Q4 2013	15.5	1.8%
Q1 2014	18.0	2.1%
Q2 2014	10.2	1.2%
Q3 2014	15.3	1.7%
Q4 2014	13.1	1.4%
Q1 2015	24.6	2.6%
Q2 2015	11.6	1.2%
Q3 2015	15.5	1.6%
Q4 2015	13.8	1.4%
Q1 2016	22.4	2.3%
Q2 2016	0.9	0.1%
Q3 2016	17.1	1.7%
Q4 2016	73.5	7.0%
Q1 2017	40.1	3.6%



Interpretation: New subscriber's acquisitions define the ongoing health and popularity of a telecom company and Net addition (new gross addition minus churn) per quarter is the most important industry KPI that regulator and investors keep a close watch for defining the dominancy of an operator in market. Industry having positive net additions means new subscribers are getting added this clearly state a good health of industry. **First time in Q3 of 2012** Industry net additions were negative which means customer's churn was much higher than new customer addition. This phenomenon was happened first time industry because that's when Industry decided to stopped selling pre-activated SIM cards and customer verification process came in play. Industry base was shrunk to as **high as 8% during these 4 quarters**. Impact of process changes was completely visible here to Industry.

VI. Future Growth Opportunities in The Indian Telecom

Industry The Indian Telecom Industry has been considered as an essential tool for the socio- economic development and for growth of GDP in the country. The Indian mobile economy is growing rapidly. The Government had done attractive changes in FDI limit during August 2021 which has made the telecom industry one of the fastest growing and a top five employment opportunity generator in the country. Changes in FDI has been done to ensure continuous flow of investments in the industry to expand the reach of mobile operators. The Indian Telecom industry has undergone a progressive shift from voice services to data services, thereby creating a new direction for 5G adoption at earliest. The Ministry of Communication and IT also planning to extend high speed 4G mobile coverage, including voice calling, to far flung remaining areas, creating a more inclusive telecom network across the country. This industry is expected to provide more than 2.0 million jobs in the coming five years. Therefore, this will be favorable to professionals who aspire to pursue their career in this industry. The Indian Telecom industry has been growing at an average of 35% a year for close to two decades which is beneficial to the country. The industry has touched the lives of billions of Indians and will continue to remain a significant growth driver in the future also

VII. Conclusion

1. The telecom industry has reached new heights in India with more than 1 billion users in March 2015, the drivers of this remarkable growth in India is favorable regulatory climate, falling tariffs, slow growth in the deployment of wired telecommunications infrastructure and the wireless carriers' aggressive strategies to reach new areas of the country.
2. External factors like telecom policies directly impact customer's mobile usage like SMS capping, VAS double consent, New costumer acquisition policy all pertaining to changes made by TRAI (Telecom regulatory association of India) or telecom companies in the market which shows that any change in the policy directly effects the consumer's attitude, in all three instances there was a direct drop in customer usage or customer base

It can be concluded that the Indian Telecom Industry contributes significantly to the overall GDP & socioeconomic development of India. Data adoption is further essential tool for the growth of the nation across all digital fields. The various telecom service providers offer voice and data services to the customers across different regions of the country including both urban and rural areas thereby facilitating the growth of this industry & country.

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