

CHALLENGES OF INDIAN TELECOM INDUSTRY

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ABSTRACT

Telecommunication has become a crucial component of the infrastructure of the Indian economy as a direct result of the rise of globalisation, which has resulted in the proliferation of the internet, smart phones, online shopping, and social media. Over the past 10 years, the Indian telecom sector has experienced rapid growth as a result of legislative liberalisation, structural reforms, and competition; as a result, it is now one of the primary drivers of India's rising standard of living. The Indian telecom industry is now characterised by intense rivalry and continuing price wars. This is due to the fact that there are about a dozen telecom service providers competing in the wired and wireless segment. The government has been regularly adopting appropriate fiscal, regulatory, and promotional measures, including foreign direct investment (FDI), with the goal of increasing local demand and generating volumes for the industry. In point of fact, India's telecommunications sector has quickly become one of the most lucrative in the whole globe. In the fiscal year 2009, India's teledensity stood at 36.98%; but, as of November 2015, it has climbed to 81.82%, placing it among the highest in the world. However, a significant portion of this increase can be attributed to the mobile telecommunications industry, which has experienced exceptional growth, with mobile subscriber numbers rising at an incredible rate, from 10 million in 2002 to 1009.46 million in May 2015 [as of May 2015] [as of May 2015]. This essay makes an effort to grasp a number of opportunities that will appear in the telecom services industry in light of all of these changes. At the same time, however, it takes into account the challenges and dangers connected with the current economic climate.

Key Words: *Globalization, Liberalization, Teledensity, FDI, Opportunities and Challenges.*

1 INTRODUCTION

Over the course of the past 25 years, the Indian telecom sector has experienced rapid expansion, propelling it to the forefront of global competition and making it one of the top prospective markets overall. Over the course of recent years, India's telecommunications sector has seen a number of significant shifts. The most important variables that have been responsible for laying the groundwork for the expansion of this sector are the many legislative shifts and technological advancements that have taken place. The National Telecommunications Policy, sometimes known as the NTP, was implemented in 1994, which was the year when the industry was liberalised. The Telecom Regulatory Authority of India, also known as TRAI, is an independent regulator that oversees the telecommunications industry in India. It was established in 1997 with the goal of reducing the amount of involvement that the Indian government has in the day-to-day operations of telecom companies.

At this time, the global market for telecommunications services places India in second place. During the past ten years, it has seen a substantial increase in the number of subscribers, with a compound annual growth rate (CAGR) of 19.96 percent. From 14.6 percent in the fiscal year 2007 to 81.38 percent in the fiscal year 2016, the teledensity of the mobile sector increased about six times. From 8.6 million in 2006 to 342.65 million in March of 2016, the total number of Internet subscribers in the country expanded at a compound annual growth rate of 78.81 percent, bringing the total to 342.65 million. Given the favourable regulatory backing provided by the government and the arrival of 4G, it is anticipated that the industry would see an incredibly high growth rate over the course of the next several years. Bharti Airtel, Vodafone, Idea, and Reliance were the top five competitors in the industry in 2016, followed by Bharat Sanchar Nigam Ltd., also known as BSNL.

When the Indian government first let private companies to engage in the telecommunications industry in the 1990s, the industry in India saw the first significant wave of reforms in its history. As a result of this campaign, significant shifts occurred in the industry with regard to the legislation governing ownership, services, and communications infrastructure. Following this phase were a number of joint ventures between the state and foreign firms. During this time period, the Indian telephony services went through a period of technical upheaval, and the growth of mobile telephony continued. In India, the first mobile telephone service was made available to the public in July of 1995.

During the first decade of the 21st century, the government took more steps toward liberalising the entry of domestic as well as international investors into the industry, particularly in the area of mobile telecommunications. The result was that a significant number of Indian people, particularly members of the Indian middle class, had access to services at more reasonable prices. The number of mobile subscribers had a year-on-year increase of fifty percent during the fiscal year of 2008 (FY08).

Another recent upheaval occurred in 2016, when Jio entered the market. Jio promised that it will provide free phone conversations, lower data costs, and more competition among Indian telecom carriers. It has not only elevated the telecommunications sector to a new level in terms of prices, services, and technology, but it has also given mobile users enormous expectations. At the time of the launch announcement, the price of the Internet data was Rs 50 per gigabyte. This was the lowest cost available anywhere in the globe (GB). In addition, through the end of 2016, the company gave away all of its services for free as part of a campaign (which was further extended till March 31, 2017). It is anticipated that this type of cutthroat disruption brought about by a new operator (with enormous financial strength) will bring about consolidation in the market.

All of the main telecom companies in India were shaken up as a result of these events in the telecom sector. Jio has proven to be a game-changer, and the pricing strategy of the firm has disrupted the whole industry. As a result, all of the telecom providers have been obliged to find methods and means to survive and compete with the increased level of intensity in the market. Jio's plan is to concentrate its efforts on the data industry rather than the voice business since the data market has the potential to see a high rate of development. The data pertaining to voice and non-voice service revenues of the main three industry participants (Bharti, Vodafone, and Idea) illustrate this tendency as well, despite the fact that the voice market in India has already reached its mature stage. Jio's network is technologically more advanced and sophisticated for high-speed data business in comparison to other networks already operating in the market. This is in addition to Jio's distinctive price proposition.

The major participants in this business, such as Bharti, Vodafone, and Idea, all represent this tendency. Jio's network is technologically more modern and sophisticated for high-speed data business compared to the networks of other current participants in the industry. This is in addition to Jio's distinctive price proposition.

It is common knowledge that data may be used to generate a significant amount of income. Every operator needs to have the goal of increasing their share of the entire data market area. In order for this to be accomplished, it is necessary for operators to overcome the following challenges:

- Availability of sufficient spectrum
- Technology to enable faster connections and availability by new compression and other techniques
- Making available more innovative and interesting applications for customer's usage.

To make all of this possible, the government and the regulatory bodies (TRAI) need to come up with the appropriate combination of policies.

It is imperative that all components of the echo system, including operators, phone makers, software/application developers, and infrastructure suppliers, maintain their flexibility and good health.

The INSAT system of the country, which is one of the largest domestic satellite systems anywhere in the world, has been of significant assistance to the nation of India's telecommunication industry. All regions of India are connected to one another by a plethora of different modes of communication, including the telephone network, the internet, radio, television, and satellite. Because of the various proactive and positive decisions made by the government over the past decade, the telecom industry in India has experienced a rapid growth over the past decade. These decisions include regulatory liberalisation, structural reforms, and competition. The success of the telecom industry in India is one of the major catalysts in India's success story. At this time, every aspect of the telecommunications industry is accessible to involvement from the private sector. Notable telecommunications companies in India include BSNL, MTNL, Airtel, Vodafone, Idea, Aircel, Reliance Communications, TATA Teleservices, Infotel, MTS, Uninor, TATA DoCoMo, Videocon, Augere, and Tikona Digital. Other major companies include TATA DoCoMo, Videocon, Augere, and Tikona Digital. An essential part of the procedures for formulating policy and enforcing regulations is the examination of the functions performed by the Department of Telecommunications (DoT), the Telecom Regulatory Authority of India (TRAI), and the Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT), the three primary regulatory agencies in India's telecommunications industry. In an effort to curb the steadily rising incidence of lost phone conversations, the Telecom Regulatory Authority of India (TRAI) has mandated that customers of telecom providers be offered financial compensation in the event that their calls are interrupted. The regulations for spectrum trading have been approved by the government of India. These rules will enable telecom firms to purchase and sell rights to idle spectrum among themselves, which would stimulate further consolidation in the telecom industry.

As of September 2015, the Indian Telecommunications network had a total of 1022.61 million customers, making it the second biggest network in the world. It is possible for it to have one of the world's lowest call charges thanks to the existence of mega telephone networks and the intense rivalry that exists between them. It boasts the third-largest Internet user base of any country in the world. At the end of June 2013, the number of people using the internet in India was estimated to be 190 million by the Internet and Mobile Association of

India (IAMAI). However, a significant portion of this expansion may be credited to the exceptional rise in mobile telecommunications. The number of mobile users increased at an astounding rate, going from 10 million in 2002 to 1009.46 million in May of this year. IDC, a research company, projects that the total revenue from the mobile services industry in India would reach USD 37 billion in 2017, representing a compound annual growth rate (CAGR) of 5.2 percent between 2014 and 2017. Additionally, it is anticipated that by the year 2020, India would become the fourth largest market for smartphones.

A large number of foreign telecom operators have entered the market as a result of the easing of FDI restrictions, which has resulted in an increase in the FDI limit for the industry from 49 percent to 74 percent. In the past few years, the industry has been given a huge boost by the influx of foreign direct investment (FDI), and the attractiveness of the sector has helped to keep the FDI inflows expanding at a steady rate. According to statistics that was made public by the Department of Industrial Policy and Promotion, the sector was successful in luring foreign direct investment (FDI) of 17.7 billion USD between April 2000 and September 2015. The presence of foreign companies has not only led to a faster development of infrastructure and an improvement in the quality of the network, but it has also opened up the domestic industry to competition from foreign companies, which has made it possible for technology to be transferred, markets to be accessed, capacities to be created, and organisational skills to be honed. The information technology industry, the business process outsourcing (BPO) industry, and the banking and financial services sector are all dependent on dependable telecommunication infrastructure, and the telecom sector has been instrumental in the creation of jobs for a vast pool of talented and knowledgeable professionals in these industries. It is anticipated that by the year 2020, the industry would have created 4.1 million extra employment in the market as a result of its exponential growth. With an investment proposal of 7,000 crores, the Government of India intends to roll out free high-speed Wi-Fi in 2500 cities and towns across the country over the course of the following three years. BSNL would be responsible for the implementation of this plan. According to GSMA's projections, the number of people using broadband services in India would increase to 250 million connections by the year 2017.

CHALLENGES IN TELECOM SERVICES:

The Inability to Clearly Define New Business Metrics

The transition in business models from minutes to bytes has not been accompanied by a corresponding change in the metrics and key performance indicators (KPIs) that operators use to manage their operations on the company's internal level and communicate their performance and prospects to the outside world. As the value of usage evolves from minutes of usage to amounts of data, operators will need to move away from their legacy tactics that are centred on customer retention. These efforts have had the impact of commoditizing the value of minutes and bandwidth in the eyes of customers. The operators have an immediate and critical need to develop a new and distinct set of KPIs that prioritises the needs of the consumer.

Changing Customer Expectations

If operators want to fend off the competitive threat posed by over-the-top providers, they need to understand rapidly shifting customer expectations and behaviours and come up with appropriate responses. This is because global technology brands are now at the forefront of consumers' minds, and technology cycles are moving at a rapid pace. Today's operators are required to provide effective services in relation to all of the customer service quality parameters, including network availability and accessibility, network congestion, call

drop rate, metering and billing credibility of both postpaid and prepaid customers, accessibility of call center/customer care, and resolution of their complaints on time. Operators require accurate, fast, and complete business information and customer analytics, supported by aligned and integrated operational support and billing systems, in order to develop lucrative customer propositions and enhance their time-to-market for new services.

Privacy, Security and Resilience

Customers are more likely to put their faith in operators as opposed to social networks because customers view operators as the security guarantors for a variety of services. However, they continue to hold operators liable for risks that originate from third parties, including mobile malware assaults and malicious apps. Operators should work closely with governments to clarify their responsibilities in areas such as anti-terrorism, cyber crime, and content for children. Additionally, operators should collaborate with suppliers and partners to address privacy and security concerns in newly emerging service areas, such as cloud security and mobile app development.

Lack of Confidence in Return on Investment

Although operators have shown that they are skilled at managing capital investment and striking a flexible balance between that investment and free cash flow and dividends, it is becoming increasingly obvious that tight control of capex can hinder their ability to expand new services in a timely manner. Therefore, businesses need to keep their commitment to investing in growth prospects while also keeping a careful eye on advances in both technology and customer preferences. This will guarantee that they invest their money in the appropriate areas at the appropriate time.

Lack of Organizational Flexibility

Operators have already made major modifications to their organisations due to the fact that their organisational structures are exposed to influences such as the move to data services, the increase of partnerships, and the growing requirement for speed-to-market. However, there is a need for more. The time has come for operators to realign their various business units in order to optimise the economies of scale and scope within their respective geographic footprints. At the same time, they must find a way to reconcile the opposing forces of regional sensitivity and global strength.

Table 1: Indian Telecom Market Structure as of November 2017

Market Leaders	Reliance Jio, Bharti Airtel
Market Challengers	Vodafone Essar Limited, Idea Cellular Limited
Market Follower	Tata Teleservices, Bharat Sanchar Nigam Limited, Mahanagar Telephone Nigam Limited.

As per table 2, Airtel and Reliance are the market leaders as per revenue generation. Vodafone Essar and Idea Cellular are market challengers. Tata services, BSNL and MTNL are market followers.

Lack of Regulatory Certainty on New Market Structures

It is becoming increasingly important for governments and regulators to adopt policies that are pro-investment in order to maintain the sector's momentum. Additionally, it is important for operators to form positions that are workable on a variety of issues, including the increasing relationship between fixed and mobile policies. Concurrently, all of these organisations need to collaborate in order to establish more clarity regarding the regulatory measures that are being taken.

Failure to Capitalize on New Types of Connectivity

The idea of connection is being redefined as a result of the introduction of new forms of connectivity, such as machine-to-machine (M2M), which requires operators to adopt new methods. The operators need to build new understandings of connectivity and focus on new development sectors rather than continuing to conceive of connections in human terms. This may be accomplished through the formulation of rational acquisitions and partnerships, both of which are vital for achieving success in developing market areas such as mobile advertising, cloud computing, and carbon footprint control.

Road Safety

The concept of connection is being rethought as a consequence of the advent of new types of connectivity, such as machine-to-machine (M2M), which calls for operators to embrace new ways. This is necessary because M2M connectivity needs operators to adopt new methods. Instead than continuing to conceive of connections in terms of people, the operators need to construct new understandings of connectedness and focus on new development sectors. This may be achieved through the creation of reasonable acquisitions and partnerships, both of which are essential for attaining success in expanding market sectors such as mobile advertising, cloud computing, and the control of carbon footprints.

Health Hazards

A significant cause for worry on a worldwide scale is the effect that the electromagnetic frequency (EMF) radiation that is emitted by cell phones and cell towers has. Even while the effects of the radiation on human health and the environment are still not fully understood, there is a growing concern that consistent, long-term exposure might lead to life-threatening conditions such as cancer and brain tumours. Despite this, municipalities and towns are protesting against the placement of cellular towers in their neighbourhoods and towns because of the negative impression associated with them. The construction of the telecom infrastructure would only be further hampered as a result of this. Another major cause for worry is the fact that many young people have become addicted to the use of social networking sites and programmes, which limits their ability to move around freely and raises the risk of lifestyle-related illnesses among this demographic.

Green Telecom

The market for mobile telephones in India is now the second largest in the world and the one that is expanding the quickest. The use of power and energy for the operation of telecommunications networks is by far the most significant source of carbon emissions within the telecommunications sector. It is anticipated that the overall emissions produced by the telecom industry in India will account for around one percent of the total CO₂ emissions produced in the nation. It is of the utmost importance to promote the use of renewable energy

sources, such as bio-diesel and other forms, for the operation of cell towers so as to reduce their overall carbon footprint.

FOREIGN DIRECT INVESTMENT IN INDIAN TELECOMMUNICATION SECTOR

As was just said, India's telecommunications industry has been the sector with the quickest growth rate over the past ten years. This is because of the new Indian economic strategy that was implemented in 1991, which encouraged foreign telecommunications companies to enter in the Indian telecom business. It increased the level of rivalry between domestic and international businesses. The initial stage permitted a foreign contribution of up to 26 percent, which meant that the remaining 74 percent of the investment had to come from the domestic market. In later years, the proportion of foreign investment in this area increased all the way up to one hundred percent. Over the course of 2016, the total amount of foreign direct investment (FDI) received by the telecom industry was \$8, 923, 75 million.

Table 2 Foreign Direct Investments in India

Periods	Total Investment in India (Rs. in Ten million)	Total Inflow in Telecommunication Industry		% of FDI inflows in telecom area over total FDI
		Rs. in Ten million	Growth rate in percent	
2012-13	89153.26	2691.25	-	3.15
2013-14	93263.56 (103.26)	2252.52 (79.13)	-20.67	2.19
2014-15	14566.68 (158.00)	5077.26 (184.34)	85.24	3.27
2015-16	202502.66 (224.62)	11684.81 (424.68)	324.68	5.77
2016-17	172570.14 (191.42)	12269.66 (445.93)	345.93	7.11
2017-18	162665.79 (180.43)	7542.04 (274.11)	174.11	8.64
2018-19	248754.05 (275.92)	9011.53 (327.52)	227.52	9.62

Since the beginning of this decade, investments made by foreign telecom companies have been quite successful in the Indian market. It was previously permitted with 74 percent, but the most recent judgment raised it to 100 percent from the previous level of 74 percent. The Foreign Direct Investment (FDI) flow was 89153.26 (Rs. in Ten Million) in 2012-13, but it is now 248754.05 (Rs. in Ten Million) in 2018-19, representing a growth rate of 227 percent, which is great for the telecom industry.

Objectives

1. To understand the opportunities and challenges in the telecom services.
2. To know the emerging trends in telecom services.

CONCLUSION:

Despite the fact that the telecom industry in India has experienced exponential growth over the past few years and has been a significant contributor to economic growth, the intense competition and tariff wars have resulted in a negative impact on the revenue of players. This is despite the fact that the telecom industry in India has been a significant contributor to economic growth. The Indian telecommunications business will thrive in spite of the difficulties since there is an enormous amount of untapped potential in terms of new subscribers. India is still one of the markets with the lowest level of competition in the rural sector, making it one of the most appealing markets for the telecommunications industry. In addition to the government's plans to launch services of the next generation, commonly known as 4G, across the country, there is a strong emphasis on the expansion of rural telecommunications infrastructure. The operators are in the process of expanding their business and making significant investments in the telecommunications infrastructure. A favourable investment climate and revolutionary reforms focused on increasing rural telecom coverage have been instrumental in building a positive outlook amongst global investors. As a direct result of this, foreign telecom companies are acquiring considerable stakes in Indian companies. India has a rapidly expanding middle class with increased purchasing power. Over the course of the previous decade, the Indian telecom industry went through a period of dramatic transition, which was driven in large part by different regulatory measures. It has seen an incredible expansion over the past few years, and it is well positioned to make a significant advance in the years to come as well.

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