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## *Factors driving the growth of the telecom industry in India*

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### **Abstract:**

The expansion of the telecommunications industry as a key driver of greater productivity may be seen in contemporary societies and economies. The growth of other businesses and the economic activity of a country are both helped by the expansion of the telecommunications industry. The impact that this business has had on developing nations' economies in recent years has resulted in significant shifts in those nations' respective industries. A major factor in the rise of India's emerging and developing economies over the past decade has been the expansion of the country's telecommunications infrastructure.

### **Keywords:**

Competitiveness, India, Telecom Industry, Telecom revenues, Telecom Subscribers, Telecom Industry Policies and Regulations.

## **1. Introduction:**

India rapidly expanded over the previous decade to be the next nation's fastest telecommunications market, having more than 1.16 billion users. The rapid expansion of India's telecommunications market can be attributed in large part to the government's liberal and reformist policies, as well as to the high demand from Indian consumers (Bhavik Barot and Gurudutta Japee, 2020). Consumers can now get telecom services at reasonable rates because the government has facilitated market access to telecom equipment and established a fair and proactive regulatory environment (Bhavik Barot and Gurudutta Japee, 2020). As a result of FDI rules liberalization, this industry is now among the fastest expanding and the top 5 in terms of creating new jobs for citizens of the country.

### **1.1. Background:**

The rapid expansion of the telecom sector over the past few decades and the industry's outsized impact on national economies make it an intriguing field of research (Rahul Venkatram and Xue Zhu, 2012). Meanwhile, India's telecom industry has become one of the most competitive in the world, increasing at a rate of over 26 percent annually, and providing work for an estimated 10 million people.

### **1.2. Research aim:**

This research examines information from Indian telecommunication companies with the hope of influencing the issues that limit the sector's growth.

### **1.3. Research objective:**

The study's objectives are as follows:

1. To investigate what factors are contributing to the expansion of India's telecom industry?
2. To investigate the state of the Indian telecom industry and its potential for future expansion.

### **1.4. Research question:**

1. How much do competitive considerations in India's telecom market contribute to its revenue?
2. How does the telecommunications business work, and what variables affect it?

## **2. Literature review:**

This section of the Research summarizes the sources that were most helpful in creating the research. Each essential facet of the research topic is addressed in this chapter's several subsections.

### **2.1. Growth of the telecom industry:**

The expansion of the telecom sector by 65% is noteworthy. Between 400,000 in 2014 through 660,000 in 2021, the amount of smartphone towers has doubled. Similar to where the penetration of smartphones has climbed from 800,000 in 2014 to 2.3 million in 2021, the amount of mobile base station stations has increased by 187 percent (investindia, 2022).

Between 2023 and 2040, it is predicted the 5G technology will add almost \$450 billion to India's GDP. It is now proposed that the IMT/5G spectrum auction take the position at the end of July 2022.

### **2.2. Indian telecom industry:**

Market liberalization as well as expansion have propelled India's telecommunications sector into a position as one of the world's most competitive and rapidly developing during the 1990s. Rapidly expanding in the world. From less than 37 million subscribers around 2001 to more than 846 million in 2011, the industry has risen by more than twenty times within only ten years.

In India, telecommunication has helped the country's economy grow and has reduced the gap between the country's urban and rural areas in terms of access to the Internet. The quick progress in the telecom sector can be attributed to the government's liberal policies, which allow for simple entry into the market in telecom equipment and a somewhat regulatory framework for providing telecom services to Indian consumers at reasonable pricing. Below figure 1 shows the framework of the Indian telecom industry.

**2.3. Factors affecting the growth of the telecom Industry:**

The telecommunications sector is influenced by monetary and macroeconomic factors. The cost per plan made available to clients is additionally impacted by expenses (telecomepc, 2018). Construction costs for towers and other infrastructure are higher in outlying regions. The growth of the Western telecommunications market can be directly attributed to the sector's emphasis on innovation. Nonetheless, many Asian countries are currently out from the United States and seeing bottom-line consequences to their economy in areas such as novel wireless applications, reduced manufacturing advances, and handset design (telecomepc, 2018). Aspects such as service quality, laws, and policies are having a significant impact on developing the industry in emerging nations.

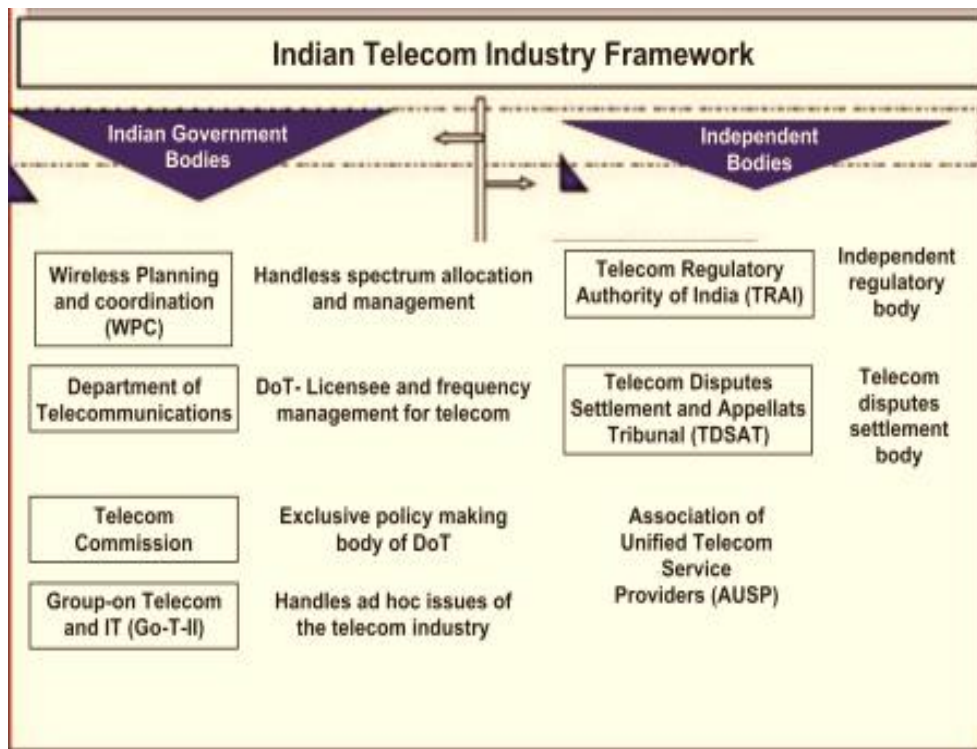


Figure. 1: Framework of the Indian telecom industry

**2.4. Future of the telecommunication industry:**

The future of the communications industry will continue to be determined by emerging, cutting-cutting-edge technologies such as fifth-generation (5G) wireless, the Internet of Things (IoT), and artificial intelligence (AI), among others (adaptit, 2022). Telcos need to adapt, adjust, adapt innovate its services, and offerings, including business models to make more than all of that this technology can offer if they want to keep up with the competition and stay ahead of the

curve (adaptit, 2022). Profitability and the industry's long-term viability will be affected by Telcos capacity to adapt quickly and nimbly in order to meet changing customer and corporate needs while also opening up new income streams.

### **3. Methodology:**

#### **3.1. Data collection:**

Information that has traditionally been associated with secondary sources like newspapers and the Internet. Analyzing the comments allowed us to infer that the three most essential factors are the number and subscribers, technological advancements, and government policies and regulations. The scientific process of revenue-affecting factors in the telecom business was constructed using the factors listed above.

#### **3.2. Data analysis:**

The investigation of the secondary influences on India's telecom business required the use of a wide range of techniques, which in turn necessitated the function of a wide range of techniques to analyze the collected information.

In this research, the authors find that the Granger Causality Method is a good fit for investigating the relationships between the three elements (the "Number of Subscribers," "Technology Innovation," and "Government Regulations and Policies") that influence telecom income. We were able to determine the three most influential elements in the Indian telecom industry's income. The expansion of the national telecom industry's bottom line is directly influenced by the elements. The following terms are defined operationally in order to analyze the partnership:

- The three variables that emerged serve as independent variables.
- The income generated by the telecom sector in India serves as the dependent variable here.

### **4. Findings and discussion:**

As a result of several factors, the Indian telecom industry has seen a meteoric rise in the total number of people that have signed up for it. The rate of technological advancement is by far the most important of these factors. The rise of high-speed networks and smartphones, for instance, has shifted customer preferences away from desktop PCs and toward mobile devices. The shifting demographic profile of developing economies has also contributed to the diversification of the market population, and the decreasing price of mobile handsets, as well as services, has lowered the barrier to entry. A sector's development is affected in some way by every new policy and any regulation enacted by the government or the competent authorities. Whether it's altering the industry's and customers' tax structures, encouraging new entrants, attracting foreign direct investment, improving connectivity in rural and distant locations, or any combination of these things. Their combined impact on expansion is complex and multifaceted. The political climate of the country is crucial to the successful execution of these rules.

While India's telecommunications sector has expanded significantly, it still has room for improvement relative to other countries' tele-densities. For instance, the commission's original projections for tele-density in its Tenth Plan, which called for 9.91 percent by March 2007, were off by nearly 65.0 million connections. The Indian government's policies aim to boost the development of the industry, but their implementation leaves much to be desired. This indicates that there is little connection between government policies and laws and the expansion of telecom corporations.

## **5. Conclusion:**

Telecommunications companies now play a significant role in the expansion of economies worldwide, especially in emerging nations. The health, educational, e-governance, regional development, etc. sectors all benefit from its growth and development, and it does so in ways beyond the financial. The conflict between India has acknowledged the power and significance of this rapidly developing industry. There still is a long way to go before both countries get the full benefits of the telecom business, despite their ongoing efforts to aid the sector by introducing reforms and modifying their laws and regulations.

Exciting new developments and rapid change are in store for the telecom industry in the years ahead. This is only the beginning of the possibilities presented by emerging technology and their applications. Smartphones and other portable electronic devices are rapidly replacing

personal computers in people's lives. The industry's impact on emerging economies like India would be fascinating to witness.

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