

# Chapter 18

## Indian Telecom Industry: Challenges and Use of Analytics to Manage Customer Churn

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### ABSTRACT

*This chapter begins with an introduction to the telecom sector, communication using mobile phones, and evolution of wireless communication. It presents the current scenario in this sector, the challenges faced by the telecom industry, especially with ever increasing data network traffic. Finally, the possibilities of harnessing the power of big data analytics, new techniques, and technologies that drive innovation in telecom are presented to help service providers make better decisions and react quickly to threats on the competitive horizon.*

### AN INTRODUCTION TO THE TELECOM SECTOR

In the past couple of years, telecommunication has developed as one of the basic pillars of infrastructure growth. It has become one of the key segments of financial and social growth, which is essential for overall progress of the country. The telecommunications segment, as an industry in India, is one of the most promising in the world and has become the largest telephone network in the world, second after China (Trai, 2014).

Reforms in the Indian telecom sector, like, carefully, selecting privatization and allowing competition in various sections of the telecom industry, have led to its gradual growth. In India, the competition in the private sector for telecom was introduced through value-added services in the year 1992, and then, slowly, cellular and basic services were opened for private competition (D & B Research, 2009). In 1997, an independent regulator for telecommunication services, the Telecom Regulatory Authority

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of India (Trai, 2014), was established. Competition in the international long distance (ILD) and in the national long distance (NLD) telephone services were introduced in the beginning of the present decade (Bhattacharya, 2010).

During the early days, only two public sector enterprises, governed by the Government, had dominance in fixed line and land line telecommunication services because of their huge user base. Their dominance can be understood by comparing their figures, as on December 31, 2001. BSNL and MTNL, the two Public Sector Enterprises (PSEs), had 34.73 million Direct Exchange Lines (DELs), while there were only 0.45 million privately owned DELs. These two public sector enterprises were permitted to enter in the cellular sector at the start of the current decade, which is quite late, in comparison to the private players. Hence, their mobile subscriber base is very small as compared to the private operators.

*As per TRAI, private operators held 91.45 per cent of the total wireless market share (in terms of the subscriber base), while state-owned operators, such as Bharat Sanchar Nigam Limited (BSNL) and Mahanagar Telephone Nigam Limited (MTNL) held 8.55 per cent market share. However, in the wire-line space, operators like BSNL and MTNL held a share of 72.79 percent (Telecom News India, 2016).*

Telecom sector in the country has seen exponential growth due to a series of reforms initiated by the Government, followed by inventions in the area of wireless technology and active participation of the private sector. Government policies and regulatory framework formulated by Telecom Regulatory Authority of India have provided an encouraging atmosphere for the service providers. These initiatives have enhanced the availability of telecom services at a reasonable price to the customers and have made the telecom sector more competitive. In the last two decades, Indian telecommunication sector and mobile telephone segment have got specific attention and focus, which has completely changed the way information and data are shared and communicated. Its stunning growth has helped millions of people stay connected.

This progression, in any case, has and keeps on being at the expense of the atmosphere controlled by an unmanageable and wasteful model of energy generation and utilization. At the same time, this advancement additionally comes with disadvantages, raising crucial questions on the forthcoming operational and financial model of the Telecommunication segment.

## **EVOLUTION OF TELECOM SECTOR IN INDIA**

Telecommunication in India was first introduced in 1851, when the first telephone land lines near Kolkata (which was known as Calcutta then) were laid by the Government. Formal introduction of telephone services in India were made much later, in the year 1881. Considering this, the telecom sector in India is more than 165 years old. Further, Indian telephone services were combined with the postal system in 1883. Post-independence, after 1947, all foreign telecommunication companies were converted to state-owned to create a body, known as the Post, Telephone and Telegraph (PTT), which was administrated by the Ministry of Communication. Until 1984, the Indian telecom sector was completely owned by the Government and the private sector was allowed to manufacture telecommunication equipment only after that. In 1984, the Indian government established Centre for Development of Telematics (C-DOT) - an independent body, to focus all its efforts towards R&D in the telecom segment and to build state-of-the-art telecommunication expertise to meet the rising demands of the telecommunication network in

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