

# Innovations

## An Empirical Study on the Determinants of Service quality in Telecom Industry-A Case Study on BSNL

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**Abstract:** *The present paper addresses services quality determinants in Telecom sector with special reference to BSNL mobile users. Service quality is the global evaluation or attitude of overall excellence of service. Whether an organization provides quality services or not will depend on the customers' feedback on the satisfaction they get from consuming the products, since higher levels of service quality lead to higher levels of customer satisfaction. Service quality was found to have significant impact on customer satisfaction and value perceptions. In recent years the BSNL revenue and market share plunged into heavy losses due to intense competition in the Indian telecommunications sector. In this connection it is very important to analyze how BSNL is providing quality of services with that how BSNL customers are satisfied. A sample of 1000 respondents on the basis of stratified random sampling has been chosen for the study. The data collected were processed, analyzed and interpreted by applying statistical tools like descriptive statistics (mean, mode, median) were used to measure the SERVQUAL dimensions which are reliability, responsiveness, empathy, assurance and tangibility.*

**Key Words:** 1.Service quality, 2.Customer satisfaction, 3.Intense competition, 4.Market share.

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**Prelude:** The Indian telecom industry is one of the fastest growing industry in the world and it is predicted that India will have a billion plus mobile users by 2022. Since the past decade, the telecommunication activities have gained momentum in India and required efforts have been made by both governmental and non-governmental platforms to enhance the infrastructure. This idea is to help modern telecommunication technologies to serve all segments of India's culturally diversified society. According to the Telecom Regulatory Authority of India (TRAI), India's total telephone subscriber base is 1175.08 million which includes 1149.11 million wireless and 25.97 million wireline connections as on August 2022.

### Present Scenario of BSNL

Bharat Sanchar Nigam Limited (abbreviated BSNL) is an Indian state-owned telecommunications company headquartered in New Delhi, India. It was incorporated on 15<sup>th</sup> September 2000. It took over the business of providing telecom services and network management from the Central Government Departments of Telecom

Services (DTS) and Telecom Operations (DTO), with effect from 1<sup>st</sup> October 2000 on going concern basis. It is the largest service provider of fixed telephony and fourth largest mobile service provider in India, and is also a provider of broadband services.

Department of Telecommunications, had been a near monopoly during the socialist period of the Indian economy. During this period, BSNL was the only telecom service provider in the country. MTNL was present only in Mumbai and New Delhi. During this period BSNL operated as a typical state-run organization which is inefficient, slow, bureaucratic, and heavily unionised. As a result, subscribers had to wait for years to get a telephone connection. The corporation tasted competition for the first time after the liberalisation of Indian economy in 1991, which had given rise to tough competition from the private telecom service providers. BSNL has customer base of 112.12 million as on 30th September, 2022. However, in recent years the company's revenue and market share plunged into heavy losses due to intense competition in the Indian telecommunications sector.

### **Mobile phones in India**

Two politicians West Bengal Chief Minister Joythi Basu and Union Minister of communications Sukh Ram were the first official users of cell phones in India. Basu called up Ram on July 31<sup>st</sup> 1995 to inaugurate India's first cellular services (Modi Telstra) in Calcutta. But neither politicians nor the industry foresaw the telecommunication revolution in coming years. The wireless technologies currently used in Indian telecom industry are Global System for Mobile Communications (GSM) and Code Division Multiple Access (CDMA). There are primarily 9 GSM and 5 CDMA operators providing mobile services in 19 telecommunication circles and 4 metro cities, covering more than 2000 towns across the country. The entry of private service providers brought the inevitable need for independent regulation. The Telecom Regulation Authority of India (TRAI) was established in the year 1997 by an act of parliament. Telecom Regulatory Authority of India Act, 1997, to regulate the telecommunication services and to protect the interests of service providers and consumers of telecom services.

### **Service quality**

Service quality is the global evaluation or attitude of overall excellence of service. Whether an organization provides quality services or not will depend on the customers' feedback on the satisfaction they get from consuming the products, since higher levels of service quality lead to higher levels of customer satisfaction. There is a model of service quality named SERVQUAL which consists of five dimensions, reliability, responsiveness, empathy, assurance and tangibility which are used to measure the customer satisfaction levels.

There is a model of service quality named SERVQUAL which consists of five dimensions, reliability, responsiveness, empathy, assurance and tangibility which are used to measure the customer satisfaction levels. Che Aniza Bintichewel (2007) identified that there are five dimensions which influence customer satisfaction, loyalty and commitment they are service quality, assurance, empathy, tangibles, security and reliability. Sandhya Joshi (2011) founded that telecom companies need to focus on identifying the drivers of customer satisfaction and improving network coverage and providing personalized customer care service and providing training to employees to handle customer problems.

### **Customer satisfaction**

Customer satisfaction is the level of persons felt state resulting from comparing a product's perceived performance or outcome in violation to customer expectation. Customer satisfaction could be considered as comparative behaviour between inputs before hand and post obtainments. Service quality was found to have significant impact on customer satisfaction and value perceptions. Customer satisfaction has been a subject of great interest to organizations and the principal objective of organizations is to maximise profits and to minimise cost. Profit maximisation can be achieved through increase in sales with lesser costs. One of the factors that can help to increase sales is customer satisfaction. Customers are always aiming to get maximum satisfaction from the products or services that they buy. Winning in today's marketplace there is an essential need to build customer relationship and

not just building the products; building customer relationship means delivering superior value over competitors to the target customers. Snajeev and Rahul (2005) stated that the quality of telecom service is the end result of network designing, planning, operating and maintenance and the management of service delivery, serviceability, accessibility can increase the level of customer satisfaction. Rajesh Kothari et.al. (2009) concluded that the delivery of quality in service is an integral part of business not only for success but also for customer satisfaction, achieving and maintaining customer perceived service is an essential strategy.

**Objective:** To measure the services quality determinants in Telecom sector with special reference to BSNL mobile users.

### **Tools of data collection**

The primary data is collected through a pre-tested structured questionnaire (to the sample respondents) and through personal interviews with the executives and responses of the sample respondents. The secondary data includes published sources like journals, magazines, Newspapers, annual reports of service provider (BSNL), Ministry of Telecommunications, Telecom Regulatory Authority of India (TRAI), and also from various websites.

### **Tools of the analysis**

The data collected were processed, analyzed and interpreted by applying statistical tools like descriptive statistics (mean, mode, median) were used.

### **Sample of the study**

For the present study, the samples were chosen from the customers who are having the BSNL mobile connections. A sample of 1000 respondents on the basis of stratified random sampling has been chosen for the study (arrived at by considering 0.377% of mobile users in Khammam district, as on June 2022, i.e 2,65,000). Sample respondents were selected from 46 mandals of Khammam district and 0.0357% of mobile users from each mandals population constitute the sample for the study. The respondents are from various strata Viz. employees, businessmen, housewives, students chosen as respondents for this present study. The geographical area of the study is restricted to khammam district only. In the first stage, stratified sampling is done from 46 mandals of the district and in the second stage; convenient sampling was used to identify the villages. In the final stage, simple random sampling is applied for selecting the respondents. A total of 1000 respondents are selected for the study.

### **Scope of the Study**

The present study is aimed at understanding the BSNL services and to measure the services quality among BSNL mobile users. The scope of the present study is entirely focused on the mobile services rendered by BSNL in the Khammam District of Telangana state.

### **Service quality model or the 'GAP' model**

A customer's expectation of a particular service is determined by factors such as recommendations, personal needs and past experiences. The expected service and the perceived service sometimes may not be equal, thus leaving a gap. The service quality model or the 'GAP model' developed by a group of authors- Kevin, Kristine and Berry at Texas and North Carolina in 1985, highlights the main requirements for delivering high service quality. Customers generally have a tendency to compare the service they 'experience' with the service they 'expect'. If the experience does not match the expectation, there arises a gap. Five determinants that may influence the appearance of a gap were described by Parasuraman, Zeithaml and Berry. SERVQUAL model consists of reliability, responsiveness, assurance, empathy and tangibles.

**Reliability dimension:** Customer perceives the reliability dimension to be the most important of the five SERQUAL dimensions. In general it reflects on consistency and dependability of firm's performance. Customers are ready to spend more money if only the service provider will show up and conduct the transaction as promised. This dimension

reflects on keeping the promises, bill the customer accurately, keeping accurate records, and performing the services correctly at the very first instance.

**Descriptive Statistics:** While analyzing the descriptive statistics, the mean value of all the attributes is less than 3.56 which means the tendency of all attributes is towards neutrality. So mode value is considered for analyzing and interpreting the data.

**Table:1 Reliability dimension**

Reliability dimension	N	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Showing the keen interest in solving the problems of the customers	1000	3.56	4	5	1.395	-0.47	-1.178
Performing required services correctly in the very first instance	1000	3.23	4	4	1.331	-0.403	-1.047
Providing the services at the time it promises to do so	1000	3.2	3	4	1.38	-0.187	-1.273

Source: Primary data

Table 1 reveals that more number of respondents agreed that BSNL is showing keen interest in solving the problems of the customers. The analysis also indicates that the majority of the customers have agreed with the fact that the BSNL performing required services correctly in the very first instance and also BSNL providing the services at the time it promises to do so. Skewness of the distribution of data is negative for all the factors indicating that the numbers of respondents who have given positive response are more than the number of respondents who have given negative or neutral response. Kurtosis of the distribution is platykurtic which indicates that there are no extreme responses in the distribution.

**Responsiveness dimension:** Responsiveness reflects a firm’s commitment to provide its services in a timely manner. As such the responsiveness dimension of SERQUAL concerns the willingness and readiness of employees to provide a service. Responsiveness also reflects the preparedness of the firms to provide a service.

**Table: 2 Responsiveness dimension**

Responsiveness dimension	N	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Updating of the customers about the new service	1000	3.29	4	4	1.378	-0.245	-1.253
Willingness of the employees to help the customer	1000	3.12	3	4	1.347	-0.267	-1.179
Positive response of Employees towards customers	1000	3.08	3	4	1.391	-0.107	-1.325

Source: Primary data

Table 2 infers that the majority of the customers have agreed that company is updating the customers about the new service. The analysis also indicates that the employees of the company are willing to help the customer and also they are responding positively towards its customers. Skewness of the distribution of data is negative for all the factors indicating that the numbers of respondents who have given positive response are more than the number of respondents who have given negative or neutral response. Kurtosis of the distribution is platykurtic which indicates that there are no extreme responses in the distribution.

**Assurance dimension:** SERQUAL’s assurance dimension addresses the completeness of the firm, the courtesy it extends to its customers and the security of its operations competences pertains to the firm knowledge and skills in performing its services. Courtesy refers to the how the firms personnel interact with the customer and customers possessions. As such courtesy reflects politeness, friendliness and consideration of customer’s property.

**Table: 3 Assurance dimension**

Assurance dimension	N	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Behaviour of employees in instilling the confidence in the customer	1000	3.38	4	4	1.292	-0.351	-1.045
Consistent courteous of BSNL employees	1000	3.13	3	4	1.298	-0.279	-1.046
Knowledge of employees to answer the questions/queries of customers	1000	3.17	3	4	1.366	-0.194	-1.261

Source: Primary data

Table 3 presents that the majority of the customers have agreed that the behaviour of employees is in instilling the confidence in the customer and they are consistently courteous and also employees are having knowledge to answer the queries of customers. Skewness of the distribution of data is negative for all the factors indicating that the numbers of respondents who have given positive response are more than the number of respondents who have given negative or neutral response. Kurtosis of the distribution is platykurtic which indicates that there are no extreme responses in the distribution.

**Empathy dimension:** Empathy is the ability to experience another’s feeling as one’s own. Empathetic firms have not lost with what it is like to be a customer of their own firm. As such empathetic firms have to understand the need of their customers and make their services accessible to their customer. Empathetic firms have to provide their customers individualized attention when they requested, by understanding their specific needs and firms have to have convenient operating hours to the customers to provide its services.

**Table: 4 Empathy dimension:**

Empathy dimension	N	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Giving of the required and desired attention towards customers	1000	3.27	4	4	1.323	-0.29	-1.115
Understanding the specific needs of the customer	1000	3.11	3	4	1.38	-0.202	-1.233
convenient operating hours to the customers	1000	3.14	3	4	1.371	-0.151	-1.272

Source: Primary data

Table 4 reveals that the BSNL is giving the required and desired attention towards customers and understanding the specific needs of the customer. The study also indicates that the respondents agreed that company is having convenient operating hours to the customers. Skewness of the distribution of data is negative for all the factors indicating that the numbers of respondents who have given positive response are more than the number of

respondents who have given negative or neutral response. Kurtosis of the distribution is platykurtic which indicates that there are no extreme responses in the distribution.

**Tangibility dimension:** The tangibility dimension of SERQUAL compares customer’s expectations and firm’s performance regarding the firm’s ability to manage its tangibles. A firm’s tangibles consisting of wide variety of objects such as carpentering, desks, lighting, wall colours, brochures and appearance of firms personnel. Consequently the tangibles component in SERQUAL model reflects on equipment and facilities and personnel and communication material.

**Table: 5 Tangibility dimension**

Tangibility dimension	N	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
visibility of physical facilities	1000	3.33	4.00	4	1.318	-.305	-1.106
Appearance of employees are neat, well dressed and appear like professionals	1000	3.11	3.00	4	1.372	-.219	-1.198
Visually appealing of Materials associated with the service (such as pamphlets, statements, banners etc.)	1000	3.11	3.00	4	1.375	-.140	-1.269

Source: Primary data

Table 5 shows that employees have agreed the physical facilities in the company are visible and materials associated with the service (such as pamphlets, statements, banners etc.) are visually appealing at the company premises and also they agreed that BSNL employees are neat, well dressed and appear like professionals. Skewness of the distribution of data is negative for all the factors indicating that the number of respondents who have given positive response are more than the number of respondents who have given negative or neutral response. Kurtosis of the distribution is platykurtic which indicates that there are no extreme responses in the distribution.

**Observations:**

- More number of respondents agreed that BSNL is showing keen interest in solving the problems of the customers. The analysis also indicates that the majority of the customers have agreed with the fact that the BSNL performing required services correctly in the very first instance and also BSNL providing the services at the time it promises to do so.
- Majority of the customers have agreed that company is updating the customers about the new service. The analysis also indicates that the employees of the company are willing to help the customer and also they are responding positively towards its customers.
- Majority of the customers have agreed that the behaviour of employees is in instilling the confidence in the customer and they are consistently courteous and also employees are having knowledge to answer the queries of customers.
- BSNL is giving the required and desired attention towards customers and understanding the specific needs of the customer. The study also indicates that the respondents agreed that company is having convenient operating hours to the customers.
- BSNL employees have agreed the physical facilities in the company are visible and materials associated with the service (such as pamphlets, statements, banners etc.) are visually appealing at the company premises and also they agreed that BSNL employees are neat, well dressed and appear like professionals.

**Suggestions:**

- The BSNL has to focus more on improving service quality and level of customer satisfaction in order hold the existing customers and to attract new customers. BSNL can improve the service quality and level of customer satisfaction by demonstrating keen interest in solving the problems of customers and giving desired and required services to the customers in the very first instance and providing the services as it promised. The company has to update the customers about its new services, bill payments due dates and other services and also the employees of the company should show willingness to help the customers and respond positively towards customers.
- BSNL should pay more attention to instilling the confidence in the customers and the employees of BSNL should be friendly and courteous and should have the knowledge to answer the queries of customers. BSNL is required to focus more on customers and understand their specific needs and should have convenient operating hours to serve the customers. BSNL has to concentrate on its physical facilities should be visually appealing and have modern looking equipment and company's employees should be well dressed and appear like professionals and the material associated with service such as pamphlets, statements and banners should be visually displayed at the company premises.

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