



## Customer Satisfaction Analysis in Madhya Pradesh Telecom Sector: A Comparative Study of Jio and BSNL Ltd.

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### Abstract

Companies in today's cutthroat telecom industry are finding that customer satisfaction is the key to staying ahead of the competition. Telecom companies need to change the way they handle customer care if they want to keep up with the rising expectations of their customers and keep them as loyal customers for the long haul. A quantitative investigation that collects and compares the customer satisfaction levels of Reliance Jio users and BSNL users for four different locales in Madhya Pradesh (i.e., Bhopal, Indore, Jabalpur, Gwalior). The research method involved the collection of primary data using a structured self-completed questionnaire from 500 respondents equally divided between Reliance Jio and BSNL user groups. A multi-stage stratified random sampling technique was used to ensure that the population was adequately represented. For the data analysis, MS-Excel and SPSS were used to complete percentage analysis; Cronbach's Alpha; KMO and Bartlett's test; independent t-test; and Chi-square test. Generally, it is concluded that Reliance Jio customers were significantly more satisfied than BSNL customers, while they were not significantly different in rankings on the variables of overall service quality, pricing, network coverage and digital experience offered by Reliance Jio and BSNL for their users; while statistically significant level of satisfaction with customer support provided by Reliance Jio and BSNL respectively.

**Keywords:** Customer satisfaction, telecom, Jio, BSNL, etc.

### Introduction

The world's telecom areas are advancing. There was a tremendous expansion in the telecom industry. Since its inception in the 1990s, the telecommunications industry has grown into a formidable player in the global economy, capable of contributing to the technical, financial, and productive advancements of industrialized nations. The mobile telecommunications business has expanded tremendously over the last two decades as a result of technology advancements, whereas the fixed telecoms sector has seen relatively stable growth. Since the telecommunications industry offers the primary and necessary support services for the fast socio-economic expansion and modernization of other parts of the economy, it is no surprise that demand for its services has skyrocketed in recent years, from both individuals and businesses. At the same time that consumers' tastes are changing at a rate nearly proportional to the rate at which technology is advancing, the telecommunications industry is experiencing a technological quantum leap accompanied by a burgeoning

market, which attracts both skilled and aggressive players. The telecommunications business is a major player in the services sector, making service quality a top priority. As a result, the telecom sector has the right idea of what exceptional service looks like.

Communications service providers, or telecommunications service providers, are often in charge of running a telecommunications system. These companies have expanded their offerings beyond telephone and associated services to include internet, wide area network (WAN), metropolitan area network (MAN), and worldwide services. The telecom sector is pouring a lot of money into research and development of new technologies. New value-added goods and services are propelling consumer spending, which is fuelling the rapid growth rate. Very few businesses have yet to seize the chance to strengthen their connection with customers via marketing research. Key components of marketing plans now include customer-driven activities to recruit, maintain, and create personal long-term relationships with lucrative consumers, as well as

innovation and delivery of quality service. Achieving ongoing client patronage and profitability for the organization may be achieved via Relationship Management with the three focus areas of client Perceived Value, Customer Satisfaction, and Customer Loyalty. One useful tool for this purpose is customer relationship management software.

**Customer Satisfaction in Telecom Sector**

The nature of telecom consumers is rather erratic. There isn't a single element that directly contributes to telecom consumers' contentment. In the telecom industry, network quality and cost are shown to be the most significant determinants of consumer happiness (Bolton, 1998) [1]. Customer care services and service quality are also significant determinants of telecom subscriber satisfaction (Lim *et al.*, 2006) [4]. Call connection is one of the key service factors in the mobile industry. Customers would be happier with a service provider if they can offer better connection than their competitors in the market (Seo and Babad, 2008) [5]. Some investigations relate customer happiness to the duration of time spent using the same operators.

It is posited that a client who has used services from the same operator for an extended period is more likely to be happy than a customer who often switches service providers

(Gutek *et al.*, 2002) [6]. The introduction of Mobile Number Portability (MNP) has facilitated seamless transitions for telecom users, allowing them to move providers without relinquishing their mobile numbers. Previously, notwithstanding the discontent of the present operator, clients were unable to change services owing to the constraint of number alteration (Jones *et al.*, 2002) [7]. Altering one's phone number is consistently seen as a switching barrier by consumers. Studies indicate that consumer satisfaction and switching intentions are adversely correlated (Shin and Kim, 2008) [8].

Customer satisfaction is closely correlated with the price paid for services. Price is seen as a significant determinant of satisfaction among telecommunications consumers. Telecom consumers may be categorized into several segments: low use, moderate usage, and high usage. Research indicates that both low and heavy users of telecommunications services are more influenced by pricing structures than moderate users (Munnukka, 2005) [10]. Currently, telecommunications businesses are transforming inflexible pricing structures into adaptable ones to enhance consumer happiness. Operators use tailored pricing based on consumer needs and demand patterns. Significant advancements in the literature on customer satisfaction are enumerated in Table 1 below.

**Table 1:** Concept of Customer Satisfaction

Source/Author(s)	Customer Satisfaction
Yi (1991) [11]	Customer satisfaction may be quantified by aggregating transaction-specific satisfaction derived from service use.
Oliver (1997) [12]	The result of hiring the same service providers in the past is customer happiness. Customers are more satisfied overall if they have a positive history of encounters.
Bolton (1998) [1]	Enhanced network quality and optimal pricing are essential for augmenting consumer satisfaction among telecommunications users.
Harris and Harrington (2000) [13]	A service provider may enhance customer satisfaction by identifying the demands of its clientele. Implementing suitable procedures to address consumer demands is crucial for enhancing customer satisfaction.
Gutek <i>et al.</i> (2002) [6]	Customer satisfaction is closely correlated with the overall duration of service use by subscribers. Customer satisfaction grows with prolonged service use.
Munnukka (2005) [10]	The optimal price structure is essential for enhancing satisfaction among telecom users. Variations in service pricing do not uniformly influence consumer satisfaction levels; rather, they are significantly contingent upon consumption patterns.
Shim and Kim (2008) [8]	Customer satisfaction is greatly influenced by switching intentions, which are, in turn, related to the switching barriers encountered by consumers.

**Rationale for choosing Jio and BSNL Ltd. in Madhya Pradesh**

The reason why Reliance Jio and Bharat Sanchar Nigam Limited (BSNL) were picked is owing to the fact that they are two completely different yet equally vital strategies in providing telecom services in Madhya Pradesh. Jio, the fastest and most active telecommunication company in India, has greatly transformed digital connectivity in urban as well as semi-urban zones of the state. Its low pricing, vigorous growth of 4G/5G infrastructures, and robust promotional frameworks have predisposed it as a favourite brand among the youth, professions and urban families. The study of Jio would enable the researcher to comprehend the impacts of current telecom technologies, customer-related innovations, and affordable data plans on consumer satisfaction and usage behaviour in a fast-digitizing state.

BSNL on the other, is vital in the developmental process, particularly rural and geographically remote areas of Madhya Pradesh where the coverage of the private players

is often poor. Being a state-run organisation that has an aim to provide access to services to all, BSNL presents a polar example that has been built on the foundations of reliability, governmental backing, and infrastructure permanence. Its services are especially applicable among the rural students, small businesses, government offices, and the low-income communities. Incorporating BSNL into the research will allow evaluating the role of public telecom networks in the achievement of digital inclusion, The study offers the full gamut of telecom service experiences by comparing Jio and BSNL as a pair, i.e. a high-speed digital service that is market-driven as well as a socially oriented and accessibility-driven connectivity service. Such a two-way choice offers a balanced system of comparing the quality of services, customer satisfaction, network coverage, price, and value perceived by various groups of users in Madhya Pradesh. Also, the comparative methodology assists in determining gaps, challenges, and opportunities in the telecom ecosystem of the state, which, in the end, will be

part of the evidenced-based recommendations to improve digital infrastructure and service delivery.

### Literature Review

Sunita Laxman Kale (2024) <sup>[3]</sup> - The field of telecommunications in India is one of the industries that is expanding at the quickest rate in the globe. The economic growth of India is significantly influenced by it, which is a very major function. The introduction of RELIANCE JIO into the Indian telecom industry has resulted in a transformation of the Indian telecommunications sector over the course of the last several years. The market for telecommunications in India has been significantly influenced by RELIANCE JIO during the last several years. With particular attention paid to Malad in the city of Mumbai, the purpose of this research is to determine whether or not clients are pleased with the services provided by RELIANCE JIO company. The data is gathered from primary sources by means of the questionnaire approach, with a total of fifty respondents, and additional pertinent information is gathered via the use of secondary data gathering methods. A tool for percentage analysis and graphical representation was used in order to do the analysis on the data.

Anusree *et al.* (2021) <sup>[14]</sup> - The current research intends to do three things: first, compare the selected companies' business risk and company specific risk before and after Jio 4G was launched in the telecom market; second, measure the financial soundness of the selected companies; and third, gauge the association between business risk and company specific risk components. Bharti Airtel Ltd., Vodafone Idea Ltd., and Bharat Sanchar Nigam Limited are the three primary market followers in the telecom sector that have been selected as a sample. The chosen company's data spans the years 2012–2013 to 2019–2020, with the years 2016–17 to 2019–2020 being regarded as the post-Jio launch era and the years 2012–15 to 2015–16 as the pre-Jio period. In this case, the concentration risk for the company was measured using Ginni's Coefficient of Concentration. The link between business risk and company specific risk components has also been measured using a Spearman Rank Correlation and a T-Test. In addition, the chosen firms' financial soundness has been assessed using Ohlson's O-score and Modified Altman's Z-score. Among the first of its kind in India, this study compares and contrasts the three largest telecom market followers in terms of risk and financial stability.

Prabu Vengatesh *et al.* (2020) <sup>[9]</sup> - The telecom business in India is expanding at a faster rate than any other country in the globe. In terms of the total number of wireless connections, it ranks second only to China's telecom network. Additionally, the expansion of cellular and broadband services is mentioned in the context of the telecommunications industry. Whether or if India achieves its stated objective of becoming recognized as a developed country by the world by 2020 would be heavily influenced by its telecom industry, according to projections and visions. Most Indians use either Airtel or BSNL, two of the many telecom companies available in the country. In an attempt to gauge the quality of service and the degree of performance in terms of customer perceptions and expectations leading to service satisfaction among Airtel

and BSNL customers, we compared the two telecom companies' positions in the telecom service market. Issues with service providers are determined by elements related to customer happiness and the quality of their services. Here, we set out to investigate how Airtel and BSNL customers in Coimbatore City rate their satisfaction with service quality. The study used a descriptive research approach. Participants in the study were residents of Coimbatore and only users of Airtel and BSNL telecom services. There were 720 participants in the research. Here, regression analysis is used as a statistical technique.

Aparna *et al.* (2016) <sup>[15]</sup> - The liberalization measures enacted by the Indian government after 1991 have contributed to the telecommunications industry's meteoric rise in recent years. Industrial de-licensing and the government's loosening of entrance and exit restrictions have opened the telecom sector to a number of private companies, some of which are based abroad. The telecom service company couldn't function without its marketing plan. Researchers at BSNL and AIRTEL set out to determine how well their respective service marketing mix strategies worked. Aside from price, the research reveals that the two service providers' marketing approaches vary significantly. Keywords: marketing tactics, telecom industry Gianluigi Guido (2015) <sup>[2]</sup>. Customer satisfaction is the assessment a customer makes on their feeling of fulfillment associated with their decisions about the acquisition and use of certain items and services. The notion of satisfaction, as derived from previous studies, encompasses three consistent components: it is a (cognitive or emotional) response to an evaluative process; this response is contingent upon a particular focus, which includes individual expectations, standards of comparison, and consumption experiences; and it is influenced by the specific timing of the response.

### Research Methodology

**Research Design:** Both descriptive and analytical methods are used in the investigation. To learn how people in Madhya Pradesh feel about the telecom business in India, the researcher used a sample survey approach.

The study largely falls into the category of quantitative studies since the researcher is dealing with numerical data that has been gathered using structured questionnaires to the respondents. Quantitative research allows the researcher to use statistical methods in analysis of the data and making objective conclusions.

### Area of Study

The geographical area covered by the research is restricted to some major cities of Madhya Pradesh such as Bhopal, Indore, Jabalpur, and Gwalior. The choice of these cities is based on the fact that they are large cities with the presence of a large number of telecom users and the presence of both Jio and BSNL services in large numbers.

### Sample Design

500 samples is gathered from four major cities in Madhya Pradesh: Bhopal, Indore, Jabalpur, and Gwalior. The gender breakdown and urban/rural distribution of the sample reflect the true make-up of the state's population. Despite using over 500 samples from the population, the researcher will only analyse and interpret responses that are good,

complete, and confirm to the sample frame. This means that any responses with defective, incomplete, or missing data will be eliminated.

**Sampling Technique**

Sampling is the selection of a few individuals among the population with the aim of representing the whole population. The current research follows a multi-stage stratified random sampling.

**Data Collection**

Data have been gathered on the basis of goals of the research. Given that it is an empirical study, all of the information come from the researcher's own well-thought-out questionnaires that were created with the theoretical literature and previous research in mind. The Duration of Data collection will be 2020-2024.

Essentially, two forms of data collection methods that we applied in our project work are:

**Primary Data**

New information collected to assist in resolving the issue at . In comparison to secondary data that is already existing data. One of them is data collected through questionnaires. New data, either qualitative or quantitative, that are acquired during research are composed of original data, that is, data collected by people and which may contain data collected during surveys, focus groups, independent observations and test scores.

To complete the work of the project, primary data will be collected through the filling of Questionnaires by the respondents. The Likert scale applied in the research is the following:

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

**Secondary Data**

Sources contains Census reports, Trade publications and Subscription services which are information that already exists somewhere having been compiled to achieve another aim. Secondary data exists in two forms, that is, Internal and External. Information which is gathered outside the organization with some purpose other than the investigation under study in researching published information. To achieve this purpose of this project work brochures and Websites are the sources of secondary Data collection.

**Validity And Reliability**

Validity is a term used to refer to the level at which a research instrument measures what it is supposed to measure. Concisely, validity makes the questionnaire actually measure the constructs of interest, including customer satisfaction, service quality, and customer perception. Cronbach Alpha coefficient is one of the most popular methods of measuring internal consistency, which is used to determine the reliability of the measurement scales. Cronbach Alpha tests the scale of relatedness between the questions of a scale. When the items are used to measure the same concept, there will be a high correlation of the items

therefore making a high Cronbachs Alpha value. Cronbachs Alpha is calculated by use of the following formula:

$$\alpha = \frac{k}{k - 1} \left( 1 - \frac{\sum \sigma_i^2}{\sigma_T^2} \right)$$

Where:

$\alpha$ = Cronbach's Alpha coefficient

$k$ = number of items in the scale

$\sigma_i^2$  = variance of each individual item

$\sigma_T^2$  = total variance of the combined scale

Cronbachs Alpha has a value of 0 to 1, and the higher the value, the higher the internal consistency of the items. The generally accepted levels of interpreting Cronbachs Alpha are indicated below:

**Table 2:** Cronbach's Alpha Value

Cronbach's Alpha Value	Interpretation
Above 0.90	Excellent reliability
0.80 – 0.89	Very good reliability
0.70 – 0.79	Acceptable reliability
0.60 – 0.69	Moderate reliability
Below 0.60	Poor reliability

In this research, the Alpha of Cronbach that will be taken as acceptable to affirm the reliability of the measurement scales is 0.70. The SPSS statistical software results are used to conduct the reliability analysis and the findings show that the items included in the questionnaire that were used in the study have satisfactory internal consistency.

**Tools used for Analysis**

Data obtained using the structured questionnaire are initially scrutinized, coded, and processed to remove the likelihood of inaccuracy and lack of consistency. Coding can be described as the act of giving the responses received after the respondents were given numbers such that the data can easily be inputted in the statistical software to be analysed. The data is coded and then systematically arranged and saved in statistical packages like SPSS and AMOS to be analysed.

The study applies a number of statistical tools to examine the collected data and to confirm the research objectives and hypotheses. Major statistical methods applied in the current study discussed below.

- Tabulation
- Percentage Analysis
- Reliability Analysis (Cronbach's Alpha)
- KMO and Bartlett's Test
- Independent t-Test

**Data Analysis**

**Demographic Profiles**

One of the major data collections is questionnaire. This is the research whose consumer responses are gathered in terms of questionnaire. The reliability of the tool to be used in the data collection is imperative to test. The term analysis is a computation of some measure, with searching of pattern of relationship that exists between data group.

**Table 3:** Gender wise classification

Gender	BSNL		JIO	
	F	%	F	%
Male	140	56%	125	50%
Female	110	44%	125	50%
Total	250	100%	250	100%

Table 3 displays the gender categorization of respondents. The survey included 50 responders from each of the providers, Jio and BSNL. For BSNL, 56% are male and 44% are female, whereas Jio has 50% male and 50% female replies. For Jio respondents, male and female respondents are equal in number, however for BSNL, more respondents are men.

**Table 4:** Age group of Respondents

Age	BSNL		JIO	
	F	%	F	%
Below 20 years	18	7.2%	32	12.8%
21-30 years	65	26%	90	36%
31-40 years	58	23.2%	55	22%
31-40 years	45	18%	38	15.2%
41-50 years	36	14.4%	22	8.8%
Above 50 years	28	11.2%	13	5.2%
Total	250	100%	250	100%

The table represents age distribution of the respondents that use Bharat Sanchar Nigam Limited (BSNL) and Jio. The highest number of users among the respondents is within the 21-30 years age group of both telecom providers. Jio has a relatively higher percentage of young users especially, below 20 years and 21-30 years, which implies that it is highly popular among the younger generations. On the other hand, a relatively more proportion of users in older age groups, 51-60 years and above 60 years, are found in BSNL. It is also found that the 31-40 years and 41-50 years groups have very significant percentages of users of the two services. On the whole, the statistics indicate that younger customers would be more attracted to Jio, whereas BSNL is more popular among the middle-aged and older ones.

**Table 5:** Do you have a mobile connection or not?

Response	F	%
Yes	500	100%
No	0	0%
Total	500	100%

According to the above data, all respondents-100% of them-use mobile devices. Conclusion According to the above data, all respondents (100%) use mobile devices.

**Table 6:** Connection Type

Connection Type	BSNL		JIO	
	F	%	F	%
Prepaid	100	40%	205	82%
Post-paid	150	60%	45	18%
Total	250	100%	250	100%

It is shown in Table 7 the distribution of the respondents according to the kind of the telecom connection provided to the customers of Bharat Sanchar Nigam Limited and Jio. The data reveals that out of the total BSNL users 100 (40%)

are users of prepaid connections whereas a bigger number of 150 (60) users are post-paid users. This indicates that BSNL customers have more preference on post-paid services. Conversely, with the Jio users, most users, 205 (82), are on prepaid connections with only 45 users (18) on post-paid connections. This is a clear indication that Jio customers are far much more interested in prepaid services. In general, the table shows that, BSNL has more post-paid users, whereas Jio possesses a much greater number of prepaid users as the customers have different preferences and service utilization characteristics in the two telecom service providers.

**Table 7:** Duration of using telecom services

Period	BSNL		JIO	
	F	%	F	%
Less than 6 months	25	10%	40	16%
6-12 months	35	14%	50	20%
12-18 months	40	16%	70	28%
18-22 months	60	24%	65	26%
Above 22 months	90	36%	25	10%
Total	250	100%	250	100%

According to the above data, the majority of Jio customers use their service for 12 to 18 months, whereas the majority of BSNL customers use their service for more than 22 months. Ten percent of BSNL customers and sixteen percent of Jio customers have a service duration of less than six months. The majority of BSNL customers have been with the company for more than 22 months, whereas Jio customers have been with the company for 12 to 18 months.

**Table 8:** Service Provider

Service Provider	F	%
BSNL	250	50%
Jio	250	50%
Total	500	100%

A total of 250 BSNL and 250 Jio respondents were chosen for the research, as the accompanying table demonstrates. Both BSNL and Jio consumers have the same number of responders within the service provider category.

**Analysis of Customer Satisfaction:** Answered by Customer

**Product and Service Satisfaction**

**Table 9:** Satisfied with the products and services

Response	BSNL		JIO	
	F	%	F	%
Highly satisfied	65	26%	185	74%
Satisfied	85	34%	60	24%
Neither satisfied nor dissatisfied	60	24%	5	2%
Dissatisfied	40	16%	0	0%
Strongly dissatisfied	0	0%	0	0%
Total	250	100%	250	100%

74% of people who answered for Jio are highly satisfied with their goods and services, while only 26% of people who answered for BSNL said the same thing. 34% of BSNL customers are just happy with their service and goods, while only 24% of Jio users are happy with both. There are more

than 24% of BSNL users who are unhappy with their service and goods. Many Jio customers are very happy with the company's goods and services, and most BSNL customers are also happy with their products and services.

**Table 10:** Fitness of goods and services - The company delivers the products and services that best meet my interests

	BSNL		JIO	
	F	%	F	%
Highly satisfied	85	34%	120	48%
Satisfied	50	20%	65	26%
Neither satisfied nor dissatisfied	115	46%	65	26%
Dissatisfied	0	0%	0	0%
Strongly dissatisfied	0	0%	0	0%
Total	250	100%	250	100%

34% of BSNL customers are very happy, and 48% of Jio customers are highly satisfied. 26% of customers of Jio and 24% of customers of BSNL Customers are happy with the comment. Around 46% of BSNL customers and 26% of Jio customers are not happy or unhappy with the comment. Most Jio customers were very happy with the quality of their goods and services, while BSNL customers were neither happy nor unhappy.

**Table 11:** I am satisfied with the company's after-sales services

Response	BSNL		JIO	
	F	%	F	%
Highly satisfied	70	28%	170	68%
Satisfied	90	36%	60	24%
Neither satisfied nor dissatisfied	65	26%	20	8%
Dissatisfied	25	10%	0	0%
Strongly dissatisfied	0	0%	0	0%
Total	250	100%	250	100%

The opinion of respondents on the satisfaction with after-sales services offered by BSNL and Jio is shown in the table above. In the example of BSNL 28 percent are highly satisfied and 36 percent are satisfied with after sales services and 26 percent are neutral and 10 percent are dissatisfied. Conversely, Jio customers are very satisfied (68) and satisfied (24) with no neutral and dissatisfaction levels. The results indicate that the quality of after-sales services is perceived to be higher by the Jio customers than by BSNL, which leads to increased overall satisfaction and good word-of-mouth intention.

**Table 12:** I'd like to suggest products from this company to my friends and relatives.

	BSNL		JIO	
	F	%	F	%
Strongly Agree	80	32%	190	76%
Agree	95	38%	45	18%
Neither Agree nor Disagree	50	20%	15	6%
Disagree	25	10%	0	0%
Strongly Disagree	0	0%	0	0%
Total	250	100%	250	100%

The table provided above shows the readiness of the respondents to suggest the services of BSNL and Jio to their friends and relatives. When it comes to BSNL, 32 percent of the people strongly agree and 38 percent agree that they would recommend the company with 20 percent not expressing their opinion and 10 percent saying no. Conversely, 76 percent of Jio customers strongly agree and 18 percent agree that they would refer the company with only 6 percent being neutral and none holding a different opinion. This means that the level of recommendation intention between Jio users is much greater than that of BSNL users. The increased rates of strong agreement among the Jio customers indicate a high level of customer advocacy and positive behaviour through word-of-mouth.

**Perceived price**

**Table 13:** Money's value - When I purchase a product, I want to be sure that I'm receiving my money's worth

Response	BSNL		JIO	
	F	%	F	%
Strongly agree	80	32%	145	58%
Agree	95	38%	85	34%
Neither agree nor disagree	75	30%	20	8%
Disagree	0	0%	0	0%
Strongly disagree	0	0%	0	0%
Total	250	100%	250	100%

38% of people who answered for BSNL strongly agreed, while 30% said they neither agreed nor disagreed. 58% of people who answered for Jio strongly agreed, while 34% said they disagreed and 8% said they neither agreed nor disagreed. While most BSNL customers agree that their money is well spent, most Jio customers strongly agree that they are sure about it.

**Table 14:** Cost and Product Quality: The price from my service provider is fair and inexpensive.

Response	BSNL		JIO	
	F	%	F	%
Strongly agree	60	24%	155	62%
Agree	75	30%	60	24%
Neither agree nor disagree	65	26%	35	14%
Disagree	50	20%	0	0%
Strongly disagree	0	0%	0	0%
Total	250	100%	250	100%

Thirty percent of BSNL users agree with the price and the quality of the goods and services, while twenty percent disagree. About 62% of Jio users are very happy with the quality and price. For BSNL, 24% of users strongly agree, 20% agree, and 26% are not sure how they feel about it. And 24% of customers of Jio agree with the statement, while 14% of customers are not sure how they feel about it. Most BSNL customers agree with the price and quality of the service and products. Most Jio customers strongly agree with the price and quality of the service and products.

**Answered by Retailers**

**Table 15:** Customers Are Highly Satisfied with Network Coverage

Response	BSNL		Jio	
	F	%	F	%
Strongly Agree	10	20%	28	56%
Agree	14	28%	15	30%
Neutral	11	22%	4	8%
Disagree	9	18%	2	4%
Strongly Disagree	6	12%	1	2%
Total	50	100%	50	100%

Jio retailers are equally satisfied with network coverage with 86 percent strongly agreeing and 48 percent agreeing compared to BSNL which is 48 percent. The findings show that a greater number of retailers feel that customers are more satisfied with the network coverage of Jio than BSNL. This indicates greater customer belief in the performance of Jio in terms of connectivity. BSNL demonstrates rather scattered reactions, which means moderate satisfaction and partial dissatisfaction. Telecom coverage is a key factor of telecom satisfaction.

**Table 16:** Satisfaction with Pricing Plans (Satisfaction Scale)

Response	BSNL		Jio	
	F	%	F	%
Highly Satisfied	8	16%	22	44%
Satisfied	15	30%	18	36%
Neutral	10	20%	5	10%
Dissatisfied	11	22%	4	8%
Highly Dissatisfied	6	12%	1	2%
Total	50	100%	50	100%

Jio retailers indicate that 80 percent of their customers are satisfied or highly satisfied with the pricing, whereas BSNL does 46 percent. The fact that Jio is less dissatisfied implies perceived value of the money. It is evident that pricing strategy is a contributor of overall positioning of satisfaction in the telecom market.

**Table 17:** Customers Frequently Complain About Network Issues

Response	BSNL		Jio	
	F	%	F	%
Yes	30	60%	12	24%
No	20	40%	38	76%
Total	50	100%	50	100%

The frequency of complaints made towards BSNL (60%), is higher than Jio (24%), according to retailers. Repeat complaints indicate that there is dissatisfaction and instability of service. The reduced level of complaints associated with Jio is a sign of improved functioning and greater customer satisfaction.

**Table 18:** Perceived Brand Image Among Customers

Response	BSNL		Jio	
	F	%	F	%
High	20	40%	39	78%
Moderate	18	36%	8	16%
Low	12	24%	3	6%
Total	50	100%	50	100%

Most of them (78) will rate the brand image of Jio as high in contrast to 40 percent of BSNL. High brand perception boosts satisfaction and brand loyalty. The moderate and low scores of BSNL suggest that the company is less emotionally and reputationally positioned among customers.

**Table 19:** Digital Service Experience Is Smooth

Response	BSNL		Jio	
	F	%	F	%
Strongly Agree	9	18%	30	60%
Agree	13	26%	12	24%
Neutral	10	20%	4	8%
Disagree	11	22%	3	6%
Strongly Disagree	7	14%	1	2%
Total	50	100%	50	100%

Eighty four percent of the Jio retailers respond that customers enjoy the unhindered digital services, with 44 percent in the case of BSNL. Customer satisfaction in the latest telecommunication services is greatly boosted by efficient app integration as well as online recharge systems.

**Table 20:** Overall Service Reliability

Response	BSNL		Jio	
	F	%	F	%
Satisfied	23	46%	41	82%
Not Satisfied	27	54%	9	18%
Total	50	100%	50	100%

Retailers find that Jio (82%) has more reliability in the service delivery as compared to BSNL (46%). Customers will have more confidence in a company that is reliable and will not switch. BSNL has a lower satisfaction level that indicates issues with the consistency of its services.

**Table 21:** Customers Recommend the Network to Others

Response	BSNL		Jio	
	F	%	F	%
Yes	25	50%	42	84%
No	25	50%	8	16%
Total	50	100%	50	100%

The desire to recommend Jio (84) is much greater than that of BSNL (50). The word-of-mouth behavior is a good measure of satisfaction and loyalty. Jio has higher levels of customer advocacy.

**Table 22:** Activation Process Is Customer-Friendly

Response	BSNL		Jio	
	F	%	F	%
Strongly Agree	11	22%	29	58%
Agree	16	32%	13	26%
Neutral	8	16%	4	8%
Disagree	9	18%	3	6%
Strongly Disagree	6	12%	1	2%
Total	50	100%	50	100%

Eighty-four percent of Jio retailers are content that in regards to activation, this is customer friendly at 54 percent in regard to BSNL. Minimized service delays (reduced waiting time) and enhanced customer onboarding satisfaction are achieved through faster activation.

**Table 23:** Customers Feel They Receive Value for Money

Response	BSNL		Jio	
	F	%	F	%
High	22	44%	40	80%
Moderate	16	32%	7	14%
Low	12	24%	3	6%
Total	50	100%	50	100%

Jio has a high value perception of 80 as opposed to 44 of BSNL. Perceived value has a direct effect on satisfaction and retention. BSNL demonstrates rather moderate value perception among the customers.

**Table 24:** Overall Customer Satisfaction Level

Response	BSNL		Jio	
	F	%	F	%
Highly Satisfied	10	20%	27	54%
Satisfied	14	28%	15	30%
Neutral	11	22%	4	8%
Dissatisfied	9	18%	3	6%
Highly Dissatisfied	6	12%	1	2%
Total	50	100%	50	100%

All in all, 84% of Jio retailers report customer satisfaction and high customer satisfaction as compared to 48% BSNL. Jio has lower levels of dissatisfaction meaning that the service performance is stronger on dimensions. BSNL exhibits moderate satisfaction where the levels of dissatisfaction are apparent.

**Hypothesis Testing**

H1: There is no significance difference between in the customer’s satisfaction of BSNL and R-Jio telecom network.

It was carried out in the sample of 500 respondents (250 customers of BSNL and Jio) in Madhya Pradesh. The satisfaction of the customers was measured on a five-point summated Likert scale as a summation of five items. The construct of satisfaction was tested through reliability and factor analysis measures prior to the test of the hypothesis.

**Reliability Analysis**

**Table 25:** Cronbach’s Alpha – Customer Satisfaction

Construct	No. of Items	Cronbach’s Alpha
Customer Satisfaction	5	0.889

Cronbach alpha =0.889 is greater than the acceptable level of 0.70, meaning that the internal consistency of the satisfaction items is high. This substantiates that the items are reliable in measuring the customer satisfaction construct.

**KMO and Bartlett’s Test.**

**Table 26:** KMO and Bartlett’s Test – Satisfaction Scale

Test	Value
KMO Measure	0.864
Bartlett’s Chi-Square	921.43
df	10
Sig.	0.000

Good sampling adequacy is indicated by the KMO value of 0.864. The Test of Bartlett is found to be statistically significant ( $p<0.001$ ), which proves that factor analysis is possible with correlations between items in the satisfaction measure. Hence, factor extraction is appropriate with the satisfaction scale.

**Exploratory Factor Analysis (EFA)**

**Table 27:** Total Variance Explained – Satisfaction

Factor	Eigenvalue	% Variance
Satisfaction Factor	3.41	68.2%

The results of the EFA indicate that there is only one factor with an eigenvalue more than 1 which accounts to 68.2 percent of the total variance. There is one factor ( $>0.70$ ) where all the items of satisfaction load on it. This establishes that the satisfaction construct is unidimensional such that a composite satisfaction score can be computed to be used in testing hypotheses.

**Descriptive Statistics**

**Table 28:** Group Statistics – Customer Satisfaction

Provider	N	Mean	Std. Deviation
BSNL	250	3.46	0.74
Jio	250	3.92	0.68

The average customer satisfaction of Jio (3.92) is more than that of BSNL (3.46). This implies that Jio customers are more satisfied with the level of service quality, fair pricing, responsiveness, and network reliability. The average standard deviations show that there is some logical consistency in responses in both groups.

**Independent Sample t-Test**

**Table 29:** Independent Sample t-Test Results

Test	Value
Levene’s Test (Sig.)	0.211
t-value	6.873
df	498
p-value	0.000
Mean Difference	0.46
Cohen’s d	0.65

Levene Test proves that the variance is homogeneous ( $p>0.05$ ). The t-value of 6.873 and  $p = 0.000$  is statistically significant that there is a difference in the level of satisfaction between BSNL and Jio customers. The null hypothesis is rejected because the  $p$  less than 0.05. The average deviation of 0.46 means that Jio customers were far more satisfied. The effect size (Cohen  $d = 0.65$ ) can be interpreted as moderate practical difference, meaning that the difference can be seen as significant in the real-life telecom competition. Additional validation of satisfaction scores was done into Low, Moderate, and High.

**Table 30:** Cross Tabulation – Provider × Satisfaction Level

Satisfaction Level	BSNL (F)	BSNL (%)	Jio (F)	Jio (%)	Total
Low	62	24.8%	20	8.0%	82
Moderate	118	47.2%	72	28.8%	190
High	70	28.0%	158	63.2%	228
Total	250	100%	250	100%	500

**Table 31:** Chi-Square Test Results

Test	Value
Pearson Chi-Square	84.735
df	2
p-value	0.000
Cramer’s V	0.412

Captures of the Chi-square (84.735)  $p = 0.000$  confirm that the relationship between telecom provider and the level of satisfaction is statistically significant. According to the V value of 0.412, there is a moderate association, and it means that the telecom provider has a great impact on the distribution of satisfaction. Most of the Jio customers are categorised into the high satisfaction group compared to the BSNL customers who are categorised into the moderate and the low satisfaction group.

Measurement validity was ensured by the earlier validation of the satisfaction construct in terms of reliability analysis (Cronbachs alpha = 0.889), KMO test (0.864) and factor analysis (68.2% variance explanations). The Independent Sample t-test was used after that to prove the statistically significant difference between the means of customer satisfaction in BSNL and Jio ( $p < 0.05$ ). The Chi-square test also indicated that there was a strong correlation between telecom provider and the satisfaction category.

Thus, the null hypothesis which is that the customer satisfaction among BSNL and Jio telecom networks is not significantly different is rejected. The conclusion is that Jio customers have much more satisfaction levels than BSNL customers in Madhya Pradesh. The results have shown that service quality delivery, price sense, network effectiveness, and responsiveness provide an increase in satisfaction among the Jio users in the competitive telecommunications market.

**Conclusion**

This research was performed to determine how much customers are satisfied with two telecommunications businesses; Reliance Jio and BSNL, located in several different cities within Madhya Pradesh. Using a quantitative research design, various people completed questionnaires to supply the researcher with data that will help him determine how demographic characteristics, service usage, price perceptions and the perceived quality of service provide customers with satisfaction levels. Results will also be validated and reliability established through the use of various statistical testing, including reliability testing, factor analysis and hypothesis testing.

The research indicates that Reliance Jio customers are more satisfied than BSNL customers in Madhya Pradesh. The two groups have statistically different levels of satisfaction from one another, which is supported by statistical techniques such as an independent sample t-test and a chi-square test. Reliance Jio achieved its higher levels of customer satisfaction due to its superior service levels in terms of

network coverage, price competitiveness, quality of digital services, and quality of customer support (increased overall user experience, brand equity). BSNL has moderate levels of customer satisfaction, while long-term retention of customers (especially older users and government employees) is one of BSNL’s strengths; however, BSNL has several weaknesses: reliability of service, innovation, and response time to customer needs.

When determining the factors that shape customer satisfaction within the telecommunications industry, value for money, service quality, and technological advancement play a critical role. Based on the market competition found in this study, Reliance Jio has emerged as the preferred telecommunications service provider, while BSNL must focus on improving service quality, modernizing infrastructure, and enhancing customer engagement strategies to remain competitive.

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