A Study on Customer Perception and Satisfaction towards Public and Private Telecom Industry in Chhattisgarh

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Abstract - The purpose of the paper is the review the service quality dimensions related to customer service quality applied to telecom industry. The past few years, marked a dramatic change in the Telecom Industry, due to which there exists tough competition in the market. To survive in this cut and throat competition every private telecom industry wants to retain its customers. For this each player in the telecom industry is aware about customer perception and strives to fulfill customers' satisfaction. The paper studies the gap in service quality of telecom sector in terms of customers' expectations and perceptions using the Servqual Model.

Keywords: Telecom, SERVQUAL, customer service quality, perception, satisfaction

I. INTRODUCTION TO TELECOM INDUSTRY

India's telecommunication network is the second largest in the world by number of telephone users (both fixed and mobile phone) with 1.183 billion subscribers as on 31 May 2019 (TRAI, 2018). It has one of the lowest call tariffs in the world enabled by mega telecom operators and hyper-competition among them. As on 31 July 2018, India has the world's second-largest Internet user-base with 460.24 million broadband internet subscribers in the country (TRAI, 2019). As of 31 December 2018, India had a population of 130 crore people (1.3 billion), 123 crore (1.23 billion) Aadhaar digital biometric identity cards, 121 crore (1.21 billion) mobile phones, 44.6 crore (446 million) smartphones, 56 crore (560 million or 43% of total population) internet users up from 481 million people (35% of the country's total population) in December 2017, and 51 per cent growth in e- commerce (Indian Express, 2019). Indian telecom industry underwent a high pace of market liberalization and growth since the 1990s and now has become the world's most competitive and one of the fastest growing telecom markets. The industry has grown over twenty times in just ten years, from under 37 million subscribers in the year 2001 to over 846 million subscribers in the year 2011. India has the world's second- largest mobile phone user base with over 1157.04 million users as of July 2018. The telecommunication sector is playing an important role in the economic development of any country because of increased progress in technology and a massive competition among all service providers in telecommunication sector (Roos and Edvardsson 2008). Due to privatization and liberalization of policy, telecommunication sector is experiencing phenomenal global change all over the world (Beard and Hartmann 1999).

II. PROBLEM STATEMENT

The only Indian public telecom company Bharat Sanchar Nigam Limited (BSNL) has been suffering because of switching behaviour of customers. There are many private players of telecom industry have been able to capture a large proportion from BSNL after the permission from the government against theentry of private companies (Anandita, 2019). India has very little penetration of fixed line in its network whereas, most of the developed countries have a very high penetration of fixed lines (telephone line that travelled through a metal wire or optical fibre as part of a nationwide telephone network). The countries having high fixed line penetration are able to operate broadband over the fixed line and thus are much ahead of India in terms of download speeds. Downloading speed in India is 512 kbps compared to other nations who have touched the speed of 100 Mbps (Drishti, 2021). Private Service Providers when entered the sector, started deploying a network using cellular technology that has a limitation in terms of download speeds. Though India has almost 1.2 billion connections the fixed line is around 18 million. Broadband Connectivity on fixed line is also poor. Only around 25% of Towers in India are connected with fibre networks, whereas in developed nations, it is in excess of 70%. 5G Network requires towers to be connected to with very high-speed systems. Those high speeds are not possible on the present radio systems. But are possible on fiber system (Vineeta and Joti, 2021). Sometimes, states governments charge a huge amount for permitting the laying of fibre etc. (A right of way is a type of easement that allows a person to pass through another's land). It takes a long time to get right-of-way permissions and thus India is yet not able to exploit the full potential of 4Gnetworks. Huge fluctuations in the duties on Telecom Equipment which contribute to

connecting the whole system from centre server to the consumer. Major telecom Operators are reporting losses and financial stress. One operator, even, has recently announced bankruptcy. This shows that the current tariff system is not financially viable for telecoms.

III. OBJECTIVES OF THE RESEARCH

To outline the telecom industry scenario in Chhattisgarh

To compare the customers' perception between public and private telecom services

To explore the factors of customers' satisfaction towards telecom services

IV. LITERATURE REVIEW

Debnath (2008), in his study, he explained that the prime focus of theservice providers is to create a loyal customer base by benchmarking their performances and retaining existing customers in order to benefit from their loyalty. With the inception of LPG in 1991, and with a view to expand and improve telecom infrastructure has opened a great chance to the participation of the private sector, and also the Government of India permitted foreign companies holding 51 percent equity stake in joint ventures to manufacture telecom equipment in India. The Indian Government has announced a changing of the existing policy, which allows private firms to provide communication services and eradicated the monopoly of the state-owned telecommunication sector. These changes has been benefited with many companies and enhancing the industrial growth. Kumar (2009), in their study titled "Customer Satisfaction and Discontentment vis-a-vis BSNL Landline Service: A Study" analyzed that at present, services marketing plays a major role in the national economy. In the service sector, telecom industry is the most attractive and active participation with the customer support. Even though the telecom industry is growing hastily, India's telecom density is less than the world's average. This study identifies the perception level of customer and also analyzes the switching over behaviour of the customer. The switch over of the other mobile customer has highly affected by BSNL and focused more alert to run its business and survive in the market. Seth et al (2010), in their study titled "Managing the Customer Perceived Service Quality for Cellular Mobile Telephone: an Empirical Investigation" analyzed that there is relative importance of service quality attributes and showed that responsiveness is the most importance dimension followed by reliability, customer perceived network quality, assurance, convenience, empathy and tangibles. The identifiable resources are concerned to focus on the need of the customer. The study concludes that the development of a consistent and suitable instrument for assessing customer perceived and expected with the service quality for cellular mobile services. Jessy (2011) in his study "An analysis on the customer loyalty in telecom sector: Special reference to Bharath Sanchar Nigam limited, India" concluded that, the purpose of this paper was to investigate the factors that influence customer loyalty of BSNL customers. The factors that influencing the switching over with mobile service is regarding image, relationship with friends, trustworthiness, more value-added services and network coverage. The favourable aspects of the switching over by the BSNL is influenced the customer loyalty. The BSNL services has very cost effective and still lose its customer due to look away from the issue of cost and poor network quality. The quality of customer services as per the expectations of the customers has focused with new technologies; features are being introduced in mobile services. BSNL need to focus with the upgrade the technologies and same way to initiative need to attractive for the market as per the customer expectation. These initiatives should be taken to improve as the functional service quality such as reliability, assurance, empathy and overall satisfaction of the customers. Sivarthina and Aranganathan (2011) in their study "Conceptual framework of Mobile Marketing: Spamming the consumer around the world" found that, Mobile phones can also be an extremely cost-effective communication channel as well as an efficient way of delivering a marketing message. The mobile service provider has also concentrated the promotion strategies as an integral part of any brand's marketing campaign due to competitive scenario. It has become an important tool for engagement of new brands and aims to fulfil the gap of expectation and actually perceived. The popularity of the Mobile Internet has attractive from the youth as well as business needs to achieve a significant attachment in the mobile service provider. The study has pointed out the success of mobile advertising will directly depend upon the market penetration and the success of Mobile Internet users. Mallikarjuna et. al., (2013) in their study "Customer switching in mobile industry - an analysis of pre-paid mobile customers in AP circle of India" found that, Switching is quite high in the pre-paid customer segment due to low switching costs and competitive tariff plans. With entry barriers easing and mobile number portability around the corner, there is a high probability for switching especially in the prepaid segment. The issue has been focused by the mobile service operator as tariff plans, value added service and network coverage and try to focus attractive opportunities that has been offered by the user and retained workout the strategies to manage the challenges. Anand (2013) in his study entitled on "A study on customer satisfaction towards BSNL with special reference to the city of Coimbatore" focuses to know whether customer receive the service in time and is it fulfilling their needs to desired levels. The study is highly intensified on primary data only. The required information

was collected through the interview schedule from the consumers directly by interviewing them. A simple statistical tool has been employed for the purpose of analysis of data. The study concludes that most of the customers are satisfied by the service provided by the BSNL. The level of dissatisfaction is mainly due to poor signal and low network coverage. The present scenario of the service provider must be focused with to resolve the problem of customer retention and satisfy the customers. Quality of Service: Qos of service has been proved successful to create competitive advantage to increase sales of product and services. Telecommunication has been successful to win profitable and loyal customer by improving Quality of services (Leisen and Vance, 2001) By increasing service quality and getting feedback from satisfied customer is helpful for telecommunication service manager to enhance company sales through better service delivery system (Sirikit & Johson, 2002) Product attributes plays a substantial role for economics and marketing especially in field of telecommunication which is considered to two very important pillars in operational management (Wang & Lo, 2002). Consumer will not prefer low price product or service at the cost of QoS (Boyer & Hult, 2005). Consumer expectation must meet or exceed customer expectation shows the extent of telecom service quality (Wal et al, 2002). China telecommunication sector gain a great boom due to better service quality, customer satisfaction and consumer value (Wang & Lo, 2002). Rahman et al (2012), in his study "Service quality, corporate image and customers satisfaction towards customers perception: An exploratory study on telecom customers in Bangladesh" aimed at the determinants that are significantly influencing telecom customers perception in Bangladesh. The results of the statistical analysis reflected that most of the telecom customers are highly concerned about service quality followed by corporate image. Richa and Devina (2012), in their study "Consumer perception towards 3G mobile technology gives some positive and some negative influences Attitude towards Using (ATU) 3G services" tried to find out consumer perception towards the usage of 3g mobile technologies and to study the consumer's usage pattern of3G mobile Technologies in Ahmedabad. The study revealed that speed of 3G mobile technology is higher than other generations of technologies in India; Smartphones are more suitable for using 3G technologies than mobile phones in India. There are no differences in the consumers' usage pattern of 3G mobile technologies in Ahmedabad. Consumers' perception towards 3G mobile technologies does not change as per their age, income and occupation in India.

V. LITERATURE GAP

Studies are found covering SERVQUAL model to measure satisfaction and retention but there is no evidence of causal comparative approach using service quality model. This approach has been applied is this study to identify the significant dimensions of SERVQUAL Model so that they can be compared in the case of BSNL viz-a-viz Private Telcom Services. This approach shows the novelty ofthe work.

Conceptual Framework of the Study

Tangibility, Reliability, Responsiveness, Assurance and Empathy are taken to be the independent variables against Customers' Satisfaction as the Dependent Variable while, in turn, Customers' Satisfaction is taken to be the independent variable against Customers' Retention as the dependent Variable. The study is based on Causal Comparative Method in which the impact of Tangibility, Reliability, Responsiveness, Assurance and Empathy has been determined on Customer Satisfaction and that of Satisfaction has been determined on Retention in both Public i.e., BSNL and Private Telecom Companies. Further, the independent and dependent variables have been compared towards BSNL and mix average of private telecom companies. Moreover, association of demographics viz., Age, Gender, Income and Occupation with Customer Satisfaction has been determined.

H1: Customer satisfaction is significantly different for Public and Private telecom services

Research Methodology

Target Population: The target population of the study includes the telecom customers of Chhattisgarh. The customers are of either BSNL or selected private telecom companies**.**

Sampling Frame: The sampling frame consists of some selected areas based on simple random sampling technique.

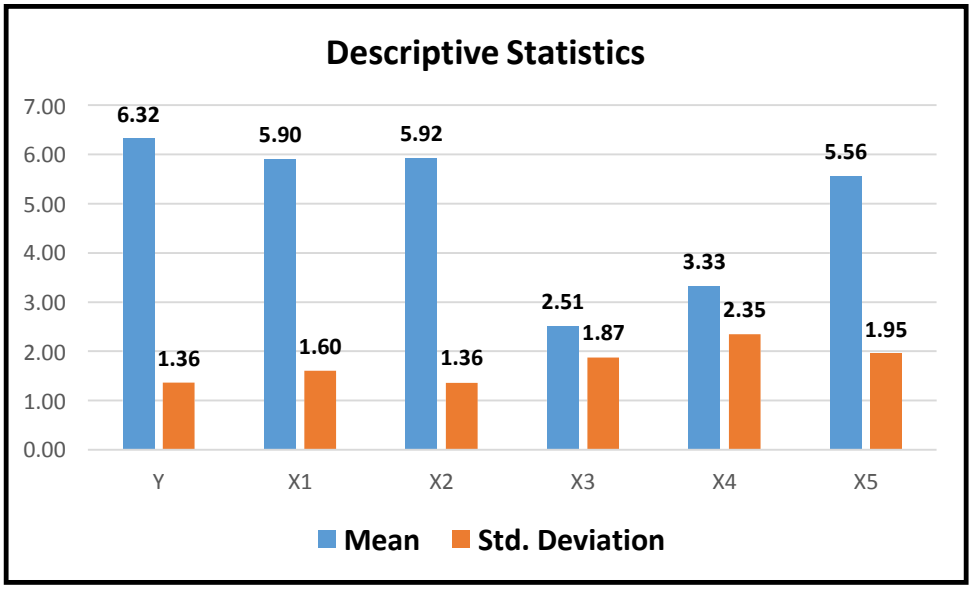
Research Design: The study has been focused on measuring the impact of manifest variables on customer satisfaction and, in turn, retention. It means there would be a cause- and-effect relation. So, Causal Research Design has been applied to accomplish the study.

Data Source and Type: The data has been collected from primary source. The customers of telecom services in Chhattisgarh are the respondents. Since the study has included psychographics as well as demographics, the data type is the combinations of both qualitative and quantitative.

Collection Method: The data has been collected through Direct Survey Method.

Descriptive Analysis

	X1	*X2*	*X3*	*X4*	*X5*	*Z*	*Y*
Mean	5.90	5.92	2.51	3.33	5.56	2.52	6.32
Standard Error	0.08	0.07	0.10	0.12	0.10	0.10	0.07
Median	6.67	6.33	1.67	3.00	6.50	2.00	7.00
Mode	7	7	1	1	7	1	7
Standard Deviation	1.60	1.36	1.87	2.35	1.95	1.87	1.36
Sample Variance	2.57	1.85	3.51	5.52	3.82	3.50	1.86
Kurtosis	1.39	4.90	0.51	-1.46	0.66	0.49	7.45
Skewness	-1.56	-2.22	1.29	0.42	-1.41	1.27	-2.74



Interpretation

The small Standard Deviation suggests the consistency of data. Therefore,the data can be used for decision making.

The independent variable is Customer Satisfaction while the dependent variable is Customer Retention. Therefore, Simple Regression has been applied to determine the impact of Satisfaction on Retention. Level of significance has been taken to be 5%.

Simple Regression Analysis

Table 5.3.2.2.1: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.356	0.127	0.124	1.751

Table 5.3.2.2.2: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	170.045	1	170.045	55.483	0.000
Residual	1173.823	383	3.065		
Total	1343.868	384			

Table 5.3.2.2.3: Coefficients

	nstandardizedCoefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	5.605	0.424		13.231	0.000
Y	-0.488	0.066	-0.356	-7.449	0.000

Interpretation

It is evident from Table 5.3.2.2.1 that the coefficient of determination is around 12.7 %. It suggests that the model includes 12.7 % of explained variance. The difference between R Square and Adjusted R Square is less than 0.025 which suggests that there is no redundancy in the data. The regression ANOVA (Table 5.3.2.2.2) shows significance value less than 0.05. Therefore, it is the sign of model fitness. It is evident from Table 5.3.2.1.3 that Y is found to have significant impact on Z. Therefore, H_6 is accepted. It can be generalized that Customer Satisfaction has a significant impact on Customer Retention.

Findings from the Descriptive Analysis

The descriptive analysis of the data suggests about central tendency, variation and symmetry of the data. The findings from descriptive analysis are as follows:

- Small Standard Deviation, Kurtosis and Skewness against Mean of all variables are the signs that there are no chances of data polarisation and the findings are to be consistent.
- Highest value of Mean of Y that is 6.32 at a Likert's scale of 7 suggests that there is extremely high probability of customers' satisfaction.
- Mean of X2 is largest i.e., 5.92 among independent variable. It indicates that customers have high perception of reliability towards telecom services.
- Mean of X1 is around 6 on 7-point Likert's scale. It indicates that customers have high perception of tangible items such as devicesand peripherals.
- Mean of X5 is also high which indicates that customers have high perception of Empathy such as Personal Support to Customers, Customised Customer Care and Service to Customer's Personal Convenience.
- Mean of X4 i.e., Assurance is around average but it has not been considered as a tool for strategy development as it has been found insignificant in inferential statistics.
- X3 has been found significant in inferential statistics however its mean is little. It indicates that customers have low perception of responsiveness in terms of Service Readiness, Call Responses and Service Person Visits.
- The little mean of Z shows that customers have low intention of retention.

Suggestion

Telecom service providers are advised to develop strategies in order to develop the mechanism for improving responsiveness in terms of Service Readiness, Call Responses, Service Person Visits etc.

6.2. Findings from the Inferential Analysis

The inferential analysis of the data has been applied in the study to test sampling adequacy, model fitness, variance description, rotation, reliability, and validity, coefficient of determination, model fitness, autocorrelation, collinearity and hypotheses. The findings from inferential analysis are as follows:

- It is evident from the analysis that the sampling is adequate
- All the factors are valid and components are reliable except X_{53} that is Service to Customer's Personal Convenience
- The coefficient of determination is around 51% which indicates that the model includes 51% of explained variance
- The difference between R Square and Adjusted R Square is less than 0.025 which suggests that there is no redundancy in the data.
- Durbin-Watson Statistics shows 1.772 which is close to 2 and indicates thatthere are no chances of auto correlation, therefore, there is no degeneracy.
- The coefficient of determination is around 12.7 %. It suggests that the model includes 12.7 % of explained variance in case of measuring the impact of satisfaction on retention.
- The regression ANOVA shows significance value less than 0.05. Therefore, it is the sign of model fitness for satisfaction on retention.
- There is no significant difference between the customers of BSNL and Private Service Providers regarding Tangibility, Reliability, Responsiveness, Assurance,

Empathy, Satisfaction and Retention.

VI. CONCLUSION

The study has been conducted comparatively on Public and Private Telecom Service Providers through SERVQUAL Model in order to determine the impact of Tangibility, Reliability, Responsiveness, Assurance and Empathy on customers' satisfaction and that of customers' satisfaction on customers' retention. This study is significant in terms of developing strategies to address the challenges of sustainability. It has been found in the study that Tangibility, Reliability, Responsiveness and Empathy have significant impact on satisfaction. It means on the basis of the respondents' opinion these variables play significant roles in establishing customers' satisfaction which, in turn, establish customer retention.

VII. REFERENCES

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