SERVICE QUALITY IMPACTS ON CUSTOMER BRAND EQUITY IN TELECOMMUNICATION INDUSTRY

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Abstract- Consumers are the hearts of any business. Telecommunication being a service oriented industry always puts priority to find ways of making customers comfortable and fulfilled. Sensing this importance, this study was carried to determine what service quality makes customers attitude towards brand equity of the Telecommunication Industry. The aim of this paper is to analyse the relationship between of service quality and customer brand equity in telecommunication network sector. The samples size for this study was 517. These sample respondents are selected by systematic random sampling technique. Descriptive statistics, ANOVA, multiple regression and correlation statistical tools were used to analysis of variance between determinants, the statistically significant differences and relationship between variables. It is observed that Tangibility and Assurance highly influence the brand equity among other brand equity variables.

Key words: Tangibility, Reliability, Responsiveness, Assurance, Empathy, Brand equity

I. INTRODUCTION

Brand equity is a marketing term that refers to the total value of the brand as a distinct asset. It can be rendered as the aggregate of assets and liabilities that are associated with the brand name and symbol which brings about the relationship customers tend to create with the brand. Brand equity is reflected in a way how consumers think, feel, and act towards a particular brand. Brand Equity can be defined as the premium charged by the company for its particular product or service offered as it has a renowned and recognized name in the market as compared to the similar line of products or services having same features and utility. It is the commercial value that is derived as a result of the positive perception of the consumer about the brand and its offerings. Companies can generate the positive and high level of Brand Equity for their specific line of products or services by making them memorable and recognized in the minds of the consumers creating an emotional connection through various marketing and promotional campaigns. There are positive as well as negative effects of Brand equity. If the effect is positive then most likely your revenue and sales will increase for the company or brand because the value of the company has increased. Whereas if the effect is negative then the sales and revenue will drop.

The purpose of this study is therefore to evaluate the concepts of service quality and its usefulness in the telecom industry in India. The study uses the SERVQUAL method to examine the difference between expectations and perceptions of service purchased through a provider of customer-oriented service provider. This study investigates how service expectations and customer perceptions are supported. The service quality best model has been used extensively to access the quality of retail / banking /hotel and hospitality industry however fewer approaches were reported in telecom industry.

The study has shown that SERVQUAL is an effective and stable measure of service quality throughout the industry (Bebko, 2000) tool. Quality of service based on the services that meet customers' expectations. In the component perceived the quality of service, consumers evaluate the substantially equivalent quality service rules outstanding. SERQUAL proposes that customers review the quality of service in five precise dimensions: tangibles, reliability, responsiveness, assurance and empathy. The SERQUAL tool consists of 22 statements to access consumer perceptions and expectations regarding service provider. The perception of a quality service comparison pleasant resulting from expectations with their perception of service provided (Zeithaml et al., 1990).Parsuraman et al. (1998) recommended that customer expectations are what the customers expect the service to be offered as an alternative then perhaps in the present. Zeithaml et al. (1990) has recognized four causes that affect customer expectations: word-of-mouth, personal needs, past experience, and external communications. A gap gets created when the belief of the services provided is not as per the expectation of the customers. This gap thus addressed with the

selection and implementation of techniques that affect the perceptions, or expectations, or both (Parsuraman et al., 1985; Zeithaml et al., 1990). The purpose of this study is therefore to evaluate the concepts of service quality and its usefulness in the telecom industry in India. The study uses the SERVQUAL method to examine the difference between expectations and perceptions of service obtained through a provider of customer-oriented service provider. This study investigates how service expectations, customer perceptions and brand quity are supported. The service quality best model has been used extensively to access the quality of retail / banking /hotel and hospitality industry however fewer approaches were reported in telecom industry.

II. RESEARCH METHODOLOGY

The aim of this paper is to analyse the relationship between of service quality and customer brand equity in telecommunication network sector.Chengalpattu District, Tamilnad ,India. Parasuraman five dimensions of service quality tool has been adopted for this study. This tool consists of 22 statements which are classified as five dimensions namely, tangibility, reliability, responsiveness, assurance and empathy. For brand equityYoo, B & Donthu, N. (2001) is used a four items scale to measure the customer brand equity. The required samples size for this study is 517. These sample respondents are selected by systematic random sampling technique. The data analysis procedure is conducted through survey questionnaire method. Responses are coded and data entered statistical package for social science (SPSS). Descriptive statistics, ANOVA, multiple regression and correlation statistical tools were used to analysis of variance between determinants, the statistically significant differences and relationship between variables.

III. RESULT AND ANALYSIS

Table-1: Respondents opinion about overall brand equity of brand

Overall brand equity	Mean	SD
Buy this brand instead of other brands	3.81	1.08
Prefer to buy only this brand if others having same features	3.55	1.03
Prefer to buy only this brand if others as good as this brand	3.56	1.17
Purchase only this brand if others not different	3.60	1.11

Source: Primary data computed

Developing and maintaining overall brand equity is one of the major goals of a company for it has special role in customers' decision making, such as, advantages in market share and its impact on firms' value. When consumers are intent to purchase a product the higher level of brand equity helps them to consider the particular brand product instead of other brand product with same features. Table-1 shows the respondent's opinion towards the overall brand equity of branded telecommunication network.

Buy this brand instead of other brand , prefer to buy only this brand if other brand having same features, prefer to buy only this brand if others as good as this brand, purchase only this brand if others not different are the various statements used to measure overall brand equity of branded telecommunication network. Respondent's opinion is collected in five point scale for each statement. Then mean and standard deviation are calculated for each statement.

From the mean score it is noted that, the respondents have given importance to buy this brand instead of other brand (3.81). Purchase only this brand if other not different secured the mean value of 3.60 in the overall brand equity statements. Followed by, prefer to buy only this brand if others as good as this brand (3.56) and prefer to buy only this brand if others having same feature secure the mean value score of (3.55). The corresponding standard deviation value is noted that there is no much deviation within the group of respondents.It is found that customers give preference to buy this brand of telecommunication network instead of any other brand, even if there are the same.

Table-2: Brand of telecommunication used and age group of the customer

Brand name	Age (years)				Total (517)	χ^2- Value	P-Value
	Less than 25	25-35	35-45	Above 45			
Airtel	20	33	29	15	97		
Vodafone	30	52	56	38	176	84.509	0.001*
JIO	10	100	23	111	244		

Source: Primary data computed; * Significant @ 1% level.

Word(s) that identifies a product and also its manufacturer or producer is termed as brand name. In this research, top three brands of telecommunication network such as Airtel, Vodafone and JIO are considered. Age groups of the respondents along with the brands name of telecommunication network are displayed in table-2.

From the frequency analysis, out of 517 respondents, 244 respondents are using JIOtelecommunication network, 176 are using Vodafone and 97 are using Airtel. It is inferred that the most of the respondents are using JIOtelecommunication network when compare to Vodafone and Airtel.

H_o: There is no association between brand of telecommunication network using and age group of the respondents.

In order to test the above mentioned hypothesis chi-square test is applied. From the chi-square result it is noted that chi-square value is 84.509 and the P value is 0.001 which is significant at 1% level. Hence the stated hypothesis H_o gets rejected at 1% level. Hence there is an association between telecommunication network brands and age group of respondent.Most of the above 45 years old customers are using JIO brand, most of 35-45 years old age group are using Vodafone brand and most of the 25-35 age group are using Airtel brand of telecommunication network. Hence, it is found that young age groups use Airtel brand, middle age group use Vodafone brand and old age group use JIO brand.

Table-3: Brand of telecommunication network used and educational qualification

Brand Name	Educational qualification				χ^2- Value	P-Value
	School level	UG	PG	Others		
Airtel	8	51	24	14		
Vodafone	25	42	55	54	78.204	0.001*
JIO	26	24	93	101		
Total (517)	59	107	172	169		

Source: Primary data computed; * Significant @ 1% level.

The telecommunication network brand names and educational qualification of the respondents are displayed in the table-3. Respondent's educational qualification is divided into School level, under graduate, post graduate and others (ITI, diploma, etc...).

Out of 59 in the group of school level educational qualification, 26 respondents use JIO brand of telecommunication network, 25 respondents use the Vodafone brand of telecommunication network and remaining 8 respondents are using the brand of Airtel. In the group of under graduate out of 107, 51 respondents use Airtel brand of telecommunication network, 42 respondents use the brand of Vodafone and remaining 24 respondents use the brand of JIOtelecommunication network. Similarly in the group of post graduate, out of 172, 93 respondents use the brand of JIOtelecommunication network, 55 respondents use the brand of Vodafone and 24 respondents use the brand of Airteltelecommunication network. In others group like ITI Diploma, etc, out of 169 majority of the respondents (101) use the brand of JIOtelecommunication network, 54 respondents use the brand of Vodafone and remaining 14 respondents use the brand of Airteltelecommunication network. From this analysis we come to a conclusion that majority of the respondents are using JIOtelecommunication network.

H_0: There is no association between brand of telecommunication network using and educational qualification of the respondents.

Chi-square test is applied to examine the stated hypothesis. From the chi-square result it is noted that chi-square value is 78.204 and the P value is 0.001 which is significant at 1% level. Hence the stated hypothesis H_0 gets rejected at 1% level. Hence, there is an association between brand of telecommunication network using and educational qualification of respondent. It is found that the most of the PG, ITI and Diploma holders are using JIOtelecommunication network. Most of the UG holders are using Airteltelecommunication network.

Table-4: Brand of telecommunication network used and occupation

Brand Name	Occupation				χ^2- Value	P-Value
	Govt. employee	Private employee	Business	Others		
Airtel	19	42	24	12	47.824	0.001*
Vodafone	42	46	57	31		
JIO	16	116	94	18		
Total (517)	77	204	175	61		

Source: Primary data computed; * Significant @ 1% level.

Three brands of telecommunication networks are selected by researcher such as Airtel, Vodafone and JIO. It is compared with the respondent's occupation which are categorized in four groups namely government employee, private employee, business and others. Table-4 shows the association between telecommunication network brand name and occupation of the respondents. It is inferred that majority (204) of the respondents are working as private employee out of total population of respondents. Among them most of the respondents (116) use the JIO branded telecommunication network followed by 46 respondents use Vodafone and remaining 42 respondents use the brand of Airteltelecommunication network.

Moreover 175 respondents are doing own business, in which most of the respondents (94) use JIO brand telecommunication network followed by 57 respondents use Vodafone and remaining 24 respondents use Airtel brand telecommunication network.The respondents from government employee group, majority of the respondents (42) use Vodafone branded telecommunication network, followed by respondents (19) use Airtel brand of telecommunication network and remaining 16 respondents use JIO brand of telecommunication network.In other categories of occupation out of 61 respondents, 31 respondents use Vodafone brand of telecommunication network, 18 respondents use JIO brand of telecommunication network and very few respondents (12) use Airtel brand of telecommunication network.

H_0: There is no association between brand of telecommunication network using and occupation of the respondents.

To verify the stated hypothesis, chi-square test is performed. From the chi-square result it is noted that chi-square value is 47.824 and the P value is 0.001 which is significant at 1% level. Hence the stated hypothesis H_0 gets rejected at 1% level. Hence, there is an association between brand of telecommunication network using and occupation of respondent. Majority of the private employees and business men are using JIOtelecommunication network. At the same time majority of the government employees and other category occupation respondents are using Vodafonetelecommunication network.

Table-5: Relationship between service quality variables and brand equity

Service quality	Brand Equity	
	r-value	P-value
Tangibility	0.796	0.001*
Reliability	0.712	0.001*
Responsiveness	0.688	0.001*
Assurance	0.742	0.001*

Empathy	0.712	0.001*

Source: Primary data computed; * Significant @ 1% level.

Table-5 shows the relationship between the brand equity variables and brandequity.

H_0: There is no relationship between service quality variables and brand equity

In order to examine the above hypotheses, Pearson correlation is employed. Table-5 explains the relationship among the brand equity variables with brand equity. From the r values, it is inferred that the study variables have relationship with itself, because r values are significant and also positive. Hence the stated hypothesis is rejected. The respondents have expressed that their experienced brand have high level of relationship on Tangibility, Reliability, Responsiveness, Assurance and Empathy with brand equity.

It is observed that the service quality variables, Tangibility has secured the highest r-value of 0.796 with brand equity followed by Assurance (0.742), Empathy (0.712) and also Reliability (0.712) and Responsiveness (0.688). It is observed that Tangibility and Assurance highly influence the brand equity among other brand equity variables. It is inferred that Tangibility, Empathy, Assurance, Responsiveness and Reliability are positively related with brand equity. The brand equity has relationship with all brand equity variables based on cumulative customer opinion from their brand experience. Tangibility, Assurance, Reliability and Empathy are having the higher level of relationship with brand equity. But, Responsiveness is having least level of relationship with brand equity. Customers felt that the brand is most suitable for them and they will continue to use the brand in future and also they are willing to brand equity. This finding is also supported by the earlier researcher. In concurrence, Vetrivel (2016, 2019) indicated the factors influencing successful brand equity.

The effect of factors such as brand reputation, perceived risk, perceived similarity and consumer innovativeness on successful brand equity. Vetrivel et al., (2015) suggest that impacts of equity of the existing brand into a new product category. The results indicated that the brand equity strategy affects consumers' attitudes toward the new product. The Responsiveness and fit perception influenced the attitude towards brand equity directly and indirectly through product brand image after equity (Hassan et al.,2012).

Table-6: Effect of service qualitydeterminants on brand equity

R- value	R-square value	Adjusted R square value	Std error	F-value	P-value
0.852	0.725	0.723	0.41713	270.061	0.001*

Factors	B-value	Std error	Beta	t-value	p-value
(Constant)	0.266	0.088	-	3.027	0.001*
Reliability	0.246	0.036	0.274	6.785	0.001*
Responsiveness	-0.629	0.068	-0.791	-9.242	0.001*
Assurance	0.292	0.077	0.310	3.790	0.001*
Empathy	-0.192	0.082	-0.218	-2.330	0.001*
Tangibility	1.213	0.087	1.236	13.933	0.001*

Source: Primary data computed; * Significant @ 1% level.

Brand equity determined based on the service quality determinants namely Reliability, Responsiveness, Assurance, empathy and Tangibility. Table-6 brings the effect of service quality determinants on brand equity. Here the service quality determinants are considered as independent variable and brand equity is treated as dependent variable.

H_0: service quality determinants do not have influence on brand equity.

To verify the above stated hypothesis multiple regressions is carried out. The purpose of regression analysis is to find the most predictors variables on brand equity. The result is displayed in table-6.The measure of strength of association in the regression analysis is given by the co-efficient of regression determination denoted by R-square as 0.725 and R-value as 0.852. The F-value is 270.061 which is significant at one percent level and ascertain that there is significant relationship between dependent and

independent variable. So, the hypothesis is rejected.Further, R-square value indicates that the independent variables influence at 72.5% on the dependent variable. The standardized co-efficient beta value indicates the relative importance of the predictors on brand equity. It is inferred that brand determinants are significantly and positively as well as negatively influenced the brand equity. Reliability, Assurance and Tangibility are positively predicting variables whereas Responsiveness and empathy are negatively predicting variables on brand equity. The corresponding p-value of these variables is significant at one percent. So, these variables significantly influenced on brand equity. Brand equity is expressed by the following equation.

Brand equity = 0.266(Constant) + 0.246(Reliability) -0.629(Responsiveness) + 0.292(Assurance) - 0.192(Empathy) + 1.213(Tangibility)

The equation is explained that the Reliability, Assurance and Tangibility have the positive impact on brand equity. Whereas Responsiveness and Empathy have negative impact on brand equity. To increase one unit in brand equity, the Reliability is increased by 0.246, while other factors remain constant. Similarly, Assurance increased by 0.292 and Tangibility increased by 1.213, where other factors remain constant. It is found that the Reliability, Assurance and Tangibility are positively influenced the brand equity. Responsiveness and Empathy are negatively influencing the brand equity. This study result is supported by earlier research findings.

Volckner and Sattler (2007) stated that brand equity is also an important factor for brand equity success; however, influence of parent brand equity on the brand equity success is moderated by perceived fit and marketing power of company. Similarly Vetrivel.et.al (2020) suggested that for successful brand equity, values which are associated with the original brand must transfer to new extended product and accessibility of these values are vital in making successful brand equity through high similarity.

IV.   CONCLUSION

This paper concluded that the telecommunication industry has influence by its service quality. It also creates impact on brand equity. The comparison of customer service quality with brand equity and in this study has proved to be reliable in the telecom industry. The quality gap of service providers indicated that the telecom industry has not met the expectations of its customers. The result of this analysis provides evidence that the service provider gap has to be lowered. The most important step to minimize gaps is to measure customer expectations and ensure relationship with management and customer service. If the customer service does not understand what customers want, they cannot hope to meet or exceed those desires.
In fact, the gaps in the quality of service in the telecom industry in India involve a number of constraints, such as inadequate inside process support to customer service staff and inadequate ability for high-quality service deliver. Given these constraints, customer service staffs are not ready or not able to participate in the services on the stage as required by customers. As a way to bridge the gap between satisfactory customer service perceptions in the telecom industry in India, the service provider must give extra coaching to improve their customer service talent. Learning should focus on service provider's customer service staff to help the customer quickly and resolve their queries and problems. As part of the process of solving such problems, they must show a careful and courteous behaviour.

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