

Effect of quality of service over customer satisfaction to enhance sustainability: A case of Indian Telecom Industry

Dr. Prachi Maheshwari

Associate Professor, Oriental School of Business Management and Commerce, Oriental University, Indore, India.

Dr. Bharat Singh Kushwah

Assistant Professor, Oriental School of Business management and Commerce, Oriental University, Indore, India.

Abstract

The telecom industry is considered as one of the most competitive sectors in the World. Telecom industry is one of the largest industries in India and several big companies dominate for even the smallest market share. Companies spend huge amount of money to study customer behavior. In addition to this, numerous scholars have conducted studies to understand the various behavioral traits of the consumers. The factor which is considered as most important by almost all leading industry experts is service quality. This paper is aimed at analyzing the impact that service quality has on customer satisfaction which could enhance the sustainability of telecom companies.

A survey with 520 respondents was conducted by the researcher to collect primary data.

The primary data was analyzed using SPSS to provide the findings to the paper.

Keywords: *Customer Satisfaction, Telecom Industry, Service Quality, Service Attributes, Mobile Tower.*

Introduction

The objective of this study is to test a model that reflects the linkage among customer satisfaction and quality of service attribute in telecom industry. In this international business era, especially in service industry & for improving performance, service quality has become an important tool for last twenty years. For getting success in this global world everyone has to provide high standard of services. In the marketing literature customer-centric marketing philosophies has

obtained significant awareness by scholar. According to (Kotler,2006; Gronroos,1994) researchers are finding out the way to appreciate, attract, retain and make long term relationship with consumers. Stated that for achieving effectiveness in operations and enhanced business performance quality has turn out to be a tactical tool. A company can enhance revenue to give better quality of service than their rivals and make them satisfy. Furthermore, for improving the overall performance of organizations the linkage of customer satisfaction and service quality was proved as an appropriate concept (Magi and Julander, 1996).

Though an extremely satisfied consumer is almost six times more expected to be reliable, loyal and recommend a product/service to others in comparison of a consumer who is just satisfied. It is also assumed that satisfied consumers share their experience with 5 other people and that 5% rise in loyalty can enhance profits up to 25% - 85% (Gummesson, 2008).

Marketing literature is dominated from much research to identify the effect of customer response on output of business. But only few empirical research available that show linkage among three factors used in this study (Han, and Wang, 2003). Recommend the thought of service profit chain (SPC) which relates SQ, consumer response and productivity. This model show that SQ influence CS which influences the consumer behavior. As a result, productivity is enhanced through customer retention and loyalty. Service quality will be a recognized aspect in the literature of marketing and a number of aspects have been explained (Gupta et al., 2004).

Service quality attributes are strongly linked with customer satisfaction. There is a lack of similar views among practitioners to describe the association among these variables. For attaining long-term cut-throat advantage it is necessary for organization to identify the service attribute which excite consumers and improve the performance of these attribute through resource allocation. Furthermore, customer satisfaction works as a mediator among service quality attributes and customer behaviors (Keiningham et al., 2008).

The past studies based on consumer behavior summarize possible benefits offered to consumers and dealer for bringing good business results (Mary, and Gilly, 2001). There is a need to establish the said linkage to create loyalty, for making long-term planning and fulfilment of consumer requirements. Few of the empirical research found to lack the basic academic and

analytical rigidity, and there is a great prerequisite to evaluate the consumer behavior (Matzler and Sauerwein, 2002).

There is also a lot of evidence available to the fact that satisfaction is primarily determined through service quality of companies and from the perception of their consumers. The researchers have also described about the need of developing, communicating, distributing and enhancing the quality of the service to consumers (Matzler et al., 2004). The aim of this research is to recognize a link among service quality attribute performance, customer satisfaction, retention as well as loyalty. This study is carried out in telecom industry. SQ is an essential concept for every service provider to survive in this competitive scenario because quality of services affect customer satisfaction.

Customer Satisfaction

Customer satisfaction is a concept which has significant awareness and attention among researchers and academicians because of its importance for making business plans in this competitive environment. According to (Kotler and Keller, 2006) Satisfaction means an individual sentiment for enjoyment or displeasure consequential from judging performance of product with expectation. This is a customer's post-purchase assessment as well as emotional reply about their experience. CS is just the outcome of their experience; satisfying the requirements and needs of customers. As per Gyasi and Azumah (2009) this is a procedure of overall assessment by a consumer about the quality of product/service in opposition to their anticipation or needs by a long time (Rahman et al., 2011).

Statement of the Problem

Tele communication is one of the necessary services for the fast growth and socio-economic development of any country. The first landline in India was set down by British government in Calcutta in 1851. Currently Airtel, Vodafone-Idea, Reliance Jio, BSNL etc. are the main mobile phone service provider in India. India has world 2nd largest market of mobile phone user. International players are creating a lot of competition in the Indian telecom sector since the liberalization policy (Olatokun and Nwonne, 2012). It is necessary for telecom companies to plan and organize consumer oriented approach not only to clutch a market share but also to stay in the market for long-time. The service providers have recognized the value of steady service-

quality delivery to the consumers for getting sustainability in the market. Customer relationship management recognizes the wants of the consumers and drawing out approach and make them delighted. To be specific, it means to earn profit it is necessary to meet the customer expectations with customer satisfaction. Today every business organization understands the value of retaining customers for long term sustainability. From the review of literature it was found that cost of attracting a new customers is six times more in comparison to retain them. Satisfied customers convert into retained customers and the retained customers becoming loyal customers (Zeithaml et al., 2006). Many scholars taking interest to find out the effect of service quality on customer satisfaction, retention and loyalty in the Indian telecom sector. This research will help the mobile service providers in determining the service quality attribute that excite the customers and create customer loyalty. The outcome of this research work will be helpful for telecom companies in allotment of resources and making plans. The evaluation of the most important attributes in this sector can provide important indication to make customer excite and delighted. The findings of study lead to customized services and efficient resource allocation. However some of these concepts have been investigated by previous researchers to an immense point, it is felt that not much attention has been drawn into measuring the effectiveness of service quality attribute and their association with customer satisfaction and future intentions in telecom sector. Hence it is felt that a closer study on this aspect would be worthwhile. The studies further present positive information and unlock up new opportunity for future research. Finally, this research contribute to the marketing literature with applying concept of service quality, customer satisfaction, retentions and loyalty in telecom sector in India, as one of developing country in Asia.

Objectives of the Study

- To identify the impact of service quality attributes on telecom sector
- To examine the relationship between service quality and customer satisfaction.

Hypothesis

H₀: There is no relation between quality of service and customer satisfaction

H₁: There is an asymmetric relationship between service quality attributes and overall customer satisfaction.

Literature Review

Michael K. Brady and J. Joseph Cronin conduct a research on “Some New Thoughts on Conceptualizing Perceived Service Quality” (2001). Qualitative data was gathered through open ended questionnaire from 391 respondents. The findings of the study is that SQ is the result of an assessment method, where the customer judge their expectation with the perceive services. The authors said that consumer perception about service quality is dependent on outcome, interaction, and environmental quality dimensions.

According to Turel et al. (2007) customers select service provider on the basis of quality they get and price they paid for services. Chau and Kao (2009) discover that all attribute of service quality directly affect customer satisfaction and value the service offers to them. According to Telecom Authority of India (2007), network performance and the level to which the network matches with fixed standard is indicated by service quality.

According to Bruhn (2003) CS is consumer experience based on difference between his own expectations and actual or overall performance of services which he gets from service provider. Gyasi and Azumah (2009) describe CS that it is a procedure of customer overall personal assessment related to the quality of product and services in comparison to his own expectation in a particular time period.

Some researchers define satisfaction as a cognitive judgment in comparing of product and services of a service provider with expectations of customer. Some other researchers stated satisfaction as a personal feeling that arises from the service delivery method where consumers meet with their experience that influences their feelings. But according to it is both cognitive and affective. Stated that CS is logically joined to cognitive opinion and to affective response obtained in consumption.

Festus Olorunniwo (2006) conducts a research to explore the effect of service quality on customer satisfaction and behavioral intentions. Data was collected through a structured questionnaire. They collected data from marketing students. EFA, Mean and other statistical

technique has been applied for analysis of data. The results of the research indicate that Tangibles, Recovery, Responsiveness, and Knowledge were most important service quality attribute. Moreover service quality affect behavioral intentions significantly and directly and through customer satisfaction as a mediating role service quality affect indirectly to behavioral intentions.

Aydin and Ozer (2005) administrated the influence of service quality, supposed value, client hope and grievance handling on consumer satisfaction. They carried out this study in Turkey and collected primary data from mobile phone service users. Through the use of SEM the results come out that service quality, customer hope and grievance handling have a considerable and positive influence on consumer satisfaction. Finally they find out that service quality attribute had the significant impact in comparison to others attributes.

Ishfaq Ahmed (2010) explores the relation among service quality, customer satisfaction and repurchases intentions. The study was conducted on telecom sector in Pakistan. Data was collected from 331 mobile phone users. Correlation and regression analysis were applied for data analysis. From the research it was found that Satisfaction is a variable which is an outcome of better service quality and grant consumers the enthusiasm to continue with the service provider and generate larger repurchase behavior for the customers. This means that better service first satisfies consumers and then it formulate them repurchase in the future. Customer satisfaction play as a mediator role in the relationship among service quality and customer repurchase intentions.

Kheng et al. (2010) conduct a study in Penang, Malaysia to inspect the effect of service quality on customer loyalty among bank customers. They used model identified by Parasuraman et al., 1988. The result of the research explains that progress in service quality can increase customer loyalty. Reliability, empathy, and assurance are most important attribute. They conclude that respondents appraise the bank positively, but there is scope for further improvement.

Research Methodology

Research design is an abstract structure within which research is carried out. It comprises the outline for the gathering, measurement and analysis of data. In other words design includes an outline of what the researcher will do from writing the hypothesis and its operational

implications to the final analysis of data. According to Caruana (2002) it is a design for performing a research having utmost control over the aspects that may obstruct with the validity of the outcomes. Research design is prepared keeping in view some basic question like “what would be scope of my study”? What type of data will be needed? What methods will be utilized to collect and analyze the data and how they will be justified? Balaji (2009) defined research design is an outline that explains how, when and where data are to be gathered and analyzed. Balaji (2009) describe the research design as the researcher’s overall for answering the research question or testing the research hypothesis. According to Green and Tull, “A research design is the specification of methods and procedures for acquiring the information needed. It is the overall operation pattern or framework of the project that stipulates what information is to be collected from which source and by what procedures”. The primary aim of the thesis is to investigate the linkage of service quality with customer satisfaction, retention and loyalty. The study’s first objective is to identify the service quality attributes in telecom sector. Secondly to investigate the link among service attributes importance and performance and their effect on resource allocation. Thirdly to examine the linkage among service quality attribute and customer satisfaction. Forth To suggest a model that create links between service attribute performance to customer satisfaction and then to customer behavior. At last to examine the impact of length of relationship on customer’s future intentions. First the present research is descriptive because it describe about SQ, CS, retention and CL in telecom sector. Second the research is explanatory because in this research we recognize the effect of performance of service quality attribute on overall satisfaction.

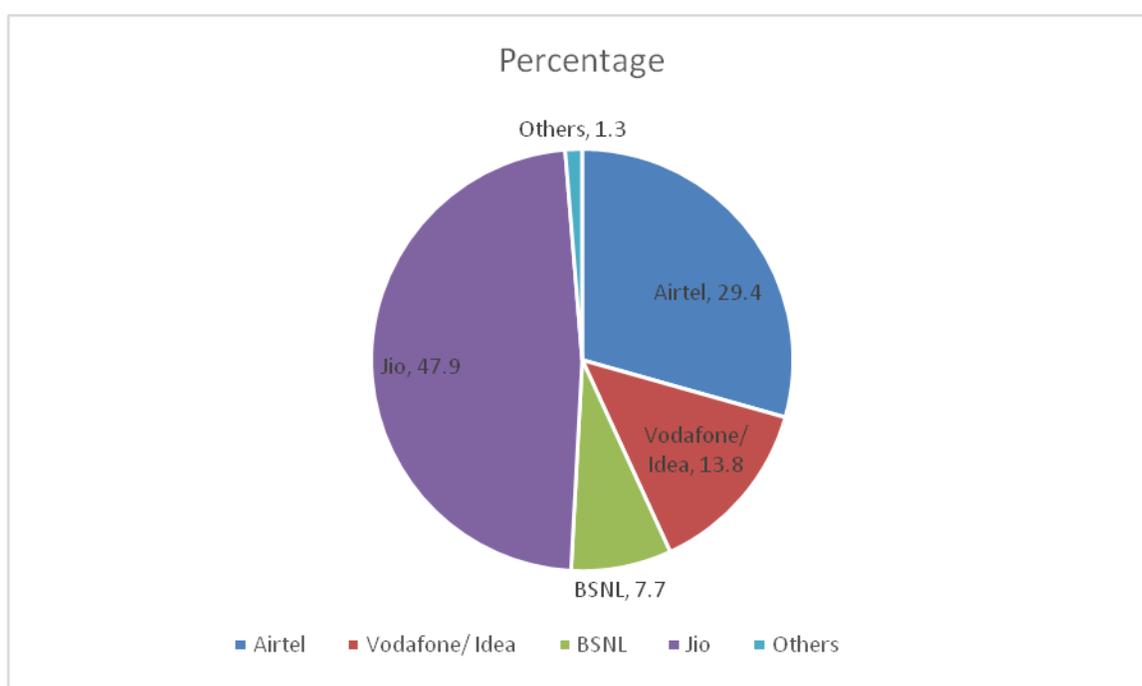
For the purpose of data analysis we have collected the primary sample of 520 respondents and a structured questionnaire has been used for the same, also we have used non probability convenient sampling technique.

Findings and Analysis

Findings

Which of the following service providers do you use?

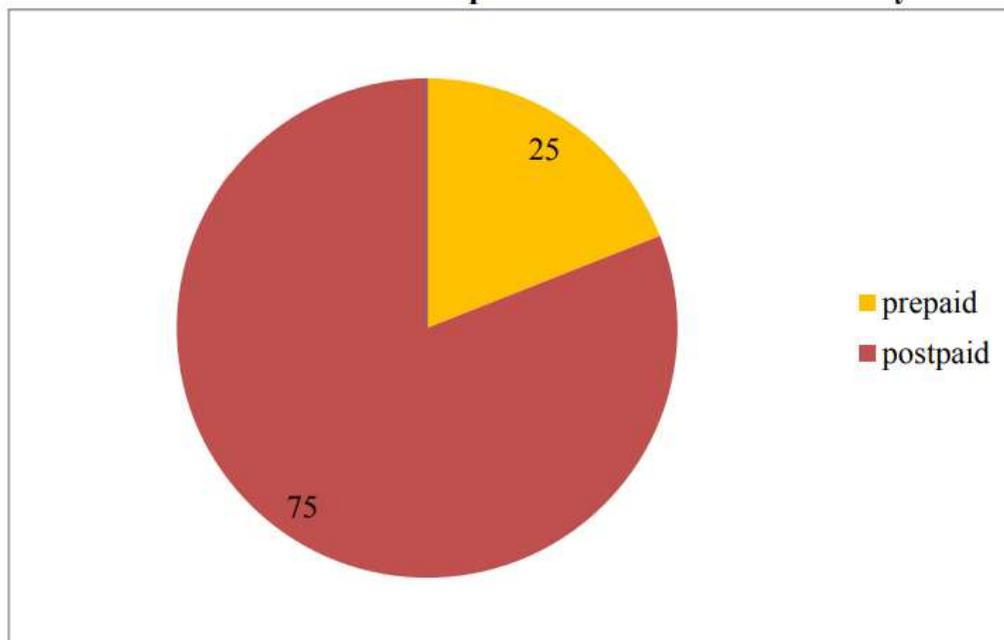
Name	Frequency	Percentage
Airtel	152	29.4
Vodafone/ Idea	249	13.8
BSNL	72	7.7
Jio	40	47.9
Others	7	1.3
Total	520	100.0



From the table and chart above, it is identified that out of the 520 respondents 47.9% respondents are using Jio, 29.4% are using Airtel, 13.8% are using Idea/Vodafone, 7.7% are using BSNL, and 1.3% are using other service.

What type of plan do you use?

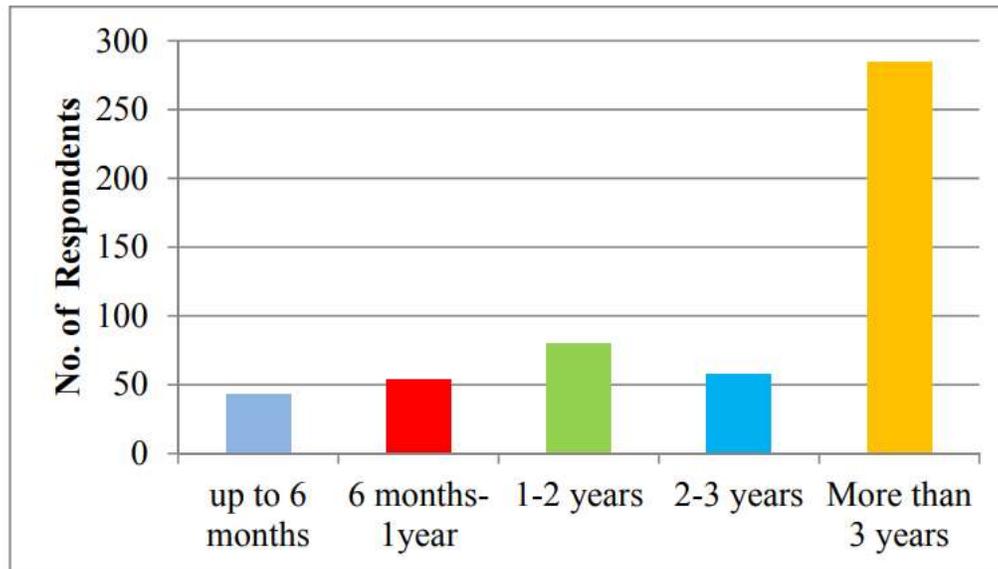
No.	Type	Frequency	Percentage
1	Prepaid	390	75%
2	Post paid	130	25%



From the table and chart above, it is identified that out of the total sample of 520 majority of the user are using prepaid plan. 75% are using the prepaid plan and only 25% are using the post-paid plan.

Since when have you been using the current Telecom services?

No.	Type	Frequency	Percentage
1	Up to 6 months	43	8.3
2	6 months - 1year	54	10.4
3	1- 2years	80	14.4
4	2- 3years	58	11.2
5	More than 3 years	285	54.8



Length of the use of service implies the period for which he/she has used the services of a particular service provider. This factor is an indication of his/her satisfaction with the service provider. The above table and graph show that out of the total sample of 520 respondents 8.3% respondents are using their current service provider for less than 6 months, 10.4 % respondents are using their current service provider for 6 months -1 year, 14.4 % respondents are using their current service provider for 1 year -2 year, 11.2% respondents using their current service provider for 2- 3 years and 54.8% respondents are using their current service provider for more than 3 years.

Select any one of the following attributes which affect service quality the most according to you?

Construct	Mean	Std. deviation
Network Performance	4.30	1.41
Customer service quality	4.07	1.25
Brand image	4.42	1.27
ROS	4.33	1.30
Service plan	4.09	1.27
Accuracy of billing	4.29	1.17

and payment		
Value for money	4.13	1.22
Entertainment features	4.10	1.38
Overall performance	4.23	1.07

Above Table displays mean and standard deviation for each construct of service quality attribute. Mean score of brand image is 4.42 and std. deviation 1.27 which is highest among others attribute. This shows brand image is important attribute to explain service quality attribute. Next is range of services having mean score 4.33 and std. deviation 1.30 which show that this is 2nd important to measure Service quality. Network performance exhibit mean score of 4.30 and std. deviation 1.41 that mean network performance is 3rd important attribute to explain service quality. Mean score of customer service quality is 4.07 so we may conclude that this least important attribute to explain service quality attribute.

What was your experience regarding quality of Network Performance?

Response from customer	Frequency	Percentage
Poor	14	2.7
Very bad	28	2.7
Bad	21	4.0
Reasonable	65	12.5
Good	157	30.3
Very good	135	26
Excellent	114	21.8
Total	520	100

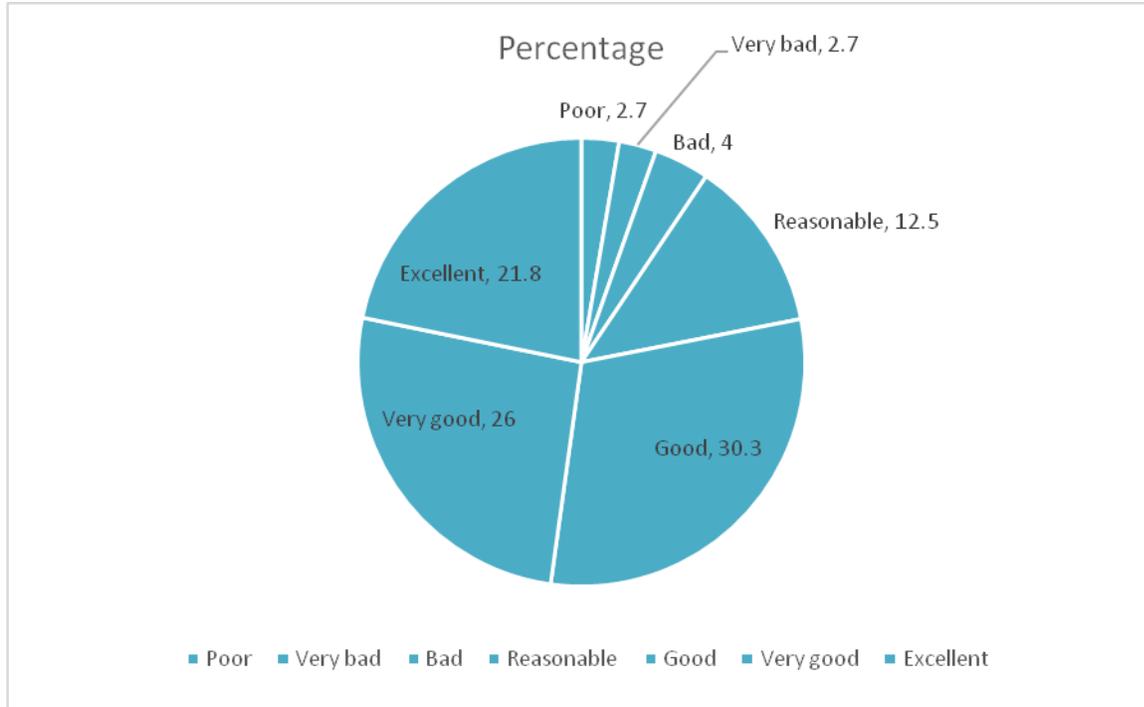


Table and chart above shows that 78% are feeling satisfied so we may conclude that most of the respondents are satisfied with network performance of their service provider. Only 2.7% respondents are feeling that network performance of their service provider are poor and very bad and 4% feel bad with network performance of their service provider.

What was your experience regarding quality of Service?

Response from customer	Frequency	Percentage
Poor	7	1.3
Very bad	15	2.9
Bad	33	6.3
Reasonable	83	16.0
Good	174	33.5
Very good	157	30.2
Excellent	51	9.8
Total	520	100

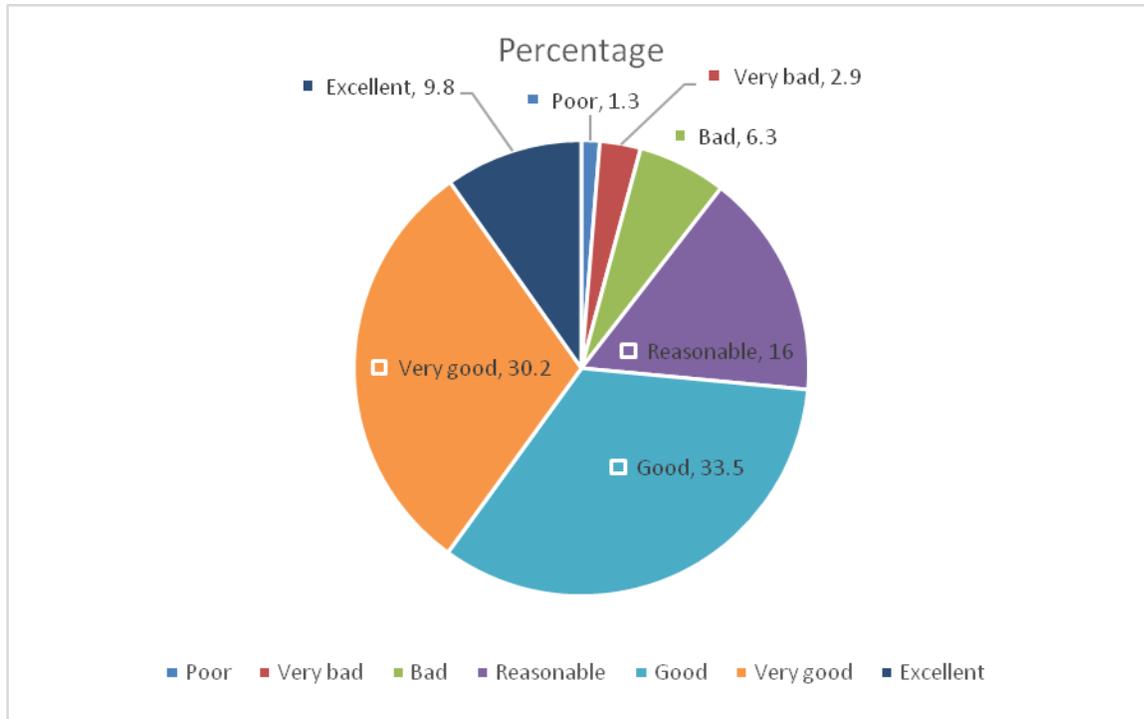
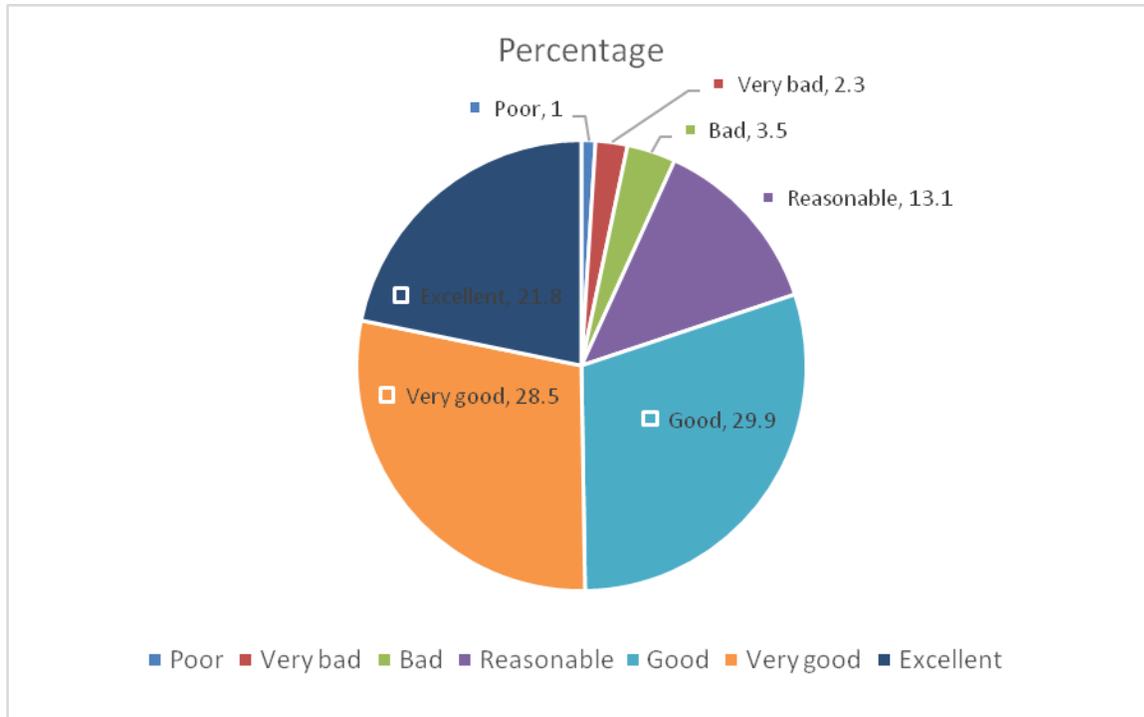


Table and chart above shows that respondents are largely voted on good and very good to service quality of their provider. 73.5% of the respondents are satisfied with service quality. Only 2.9 % respondents feels that service quality of their service providers are poor and 1.3 % feels very bad.

What was your experience regarding quality of Brand Image?

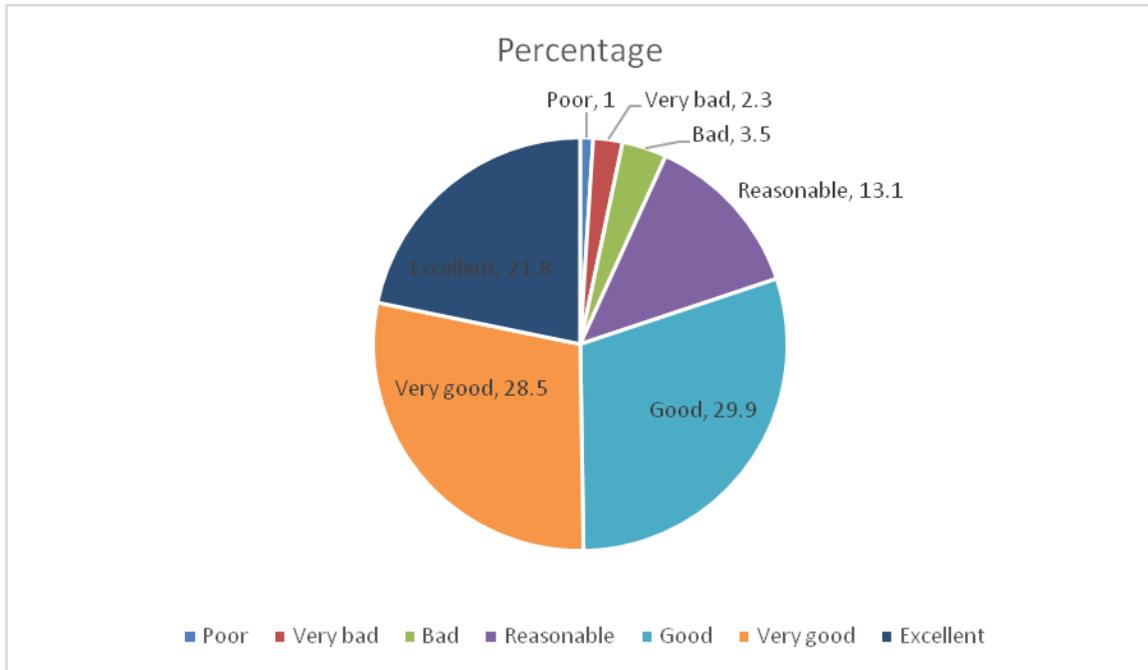
Response from customer	Frequency	Percentage
Poor	5	1.0
Very bad	12	2.3
Bad	18	3.5
Reasonable	68	13.1
Good	155	29.9
Very good	148	28.5
Excellent	113	21.8
Total	520	100



From the table and chart above it is inferred that majority of the respondents are happy with the brand image of their provider. 29.8% feel that brand image of their service provider are good and 28.5 % feels that their service provider brand image is very good. Only 6.8% are not happy with the brand image of service providers.

What was your experience regarding quality of Range of Services?

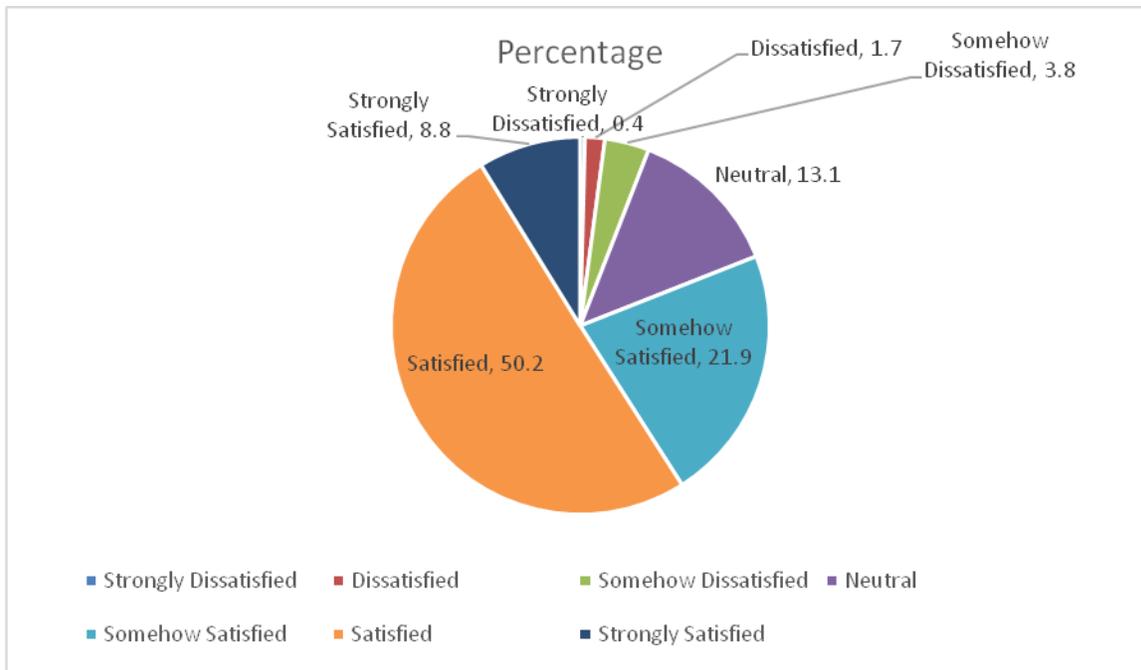
Response from customer	Frequency	Percentage
Poor	5	1.0
Very bad	12	2.3
Bad	18	3.5
Reasonable	68	13.1
Good	155	29.9
Very good	148	28.5
Excellent	113	21.8
Total	520	100



From the collected data we can conclude that respondents are feeling good with the range of services provided from their service provider. 77.3% respondents are satisfied with range of service provided by their service providers. Only 6.4% are not happy with the range of services provided from their service provider.

How satisfied are you with the quality of your telecom service?

Response from customer	Frequency	Percentage
Strongly Dissatisfied	2	0.4
Dissatisfied	9	1.7
Somehow Dissatisfied	20	3.8
Neutral	68	13.1
Somehow Satisfied	114	21.9
Satisfied	261	50.2
Strongly Satisfied	46	8.8
Total	520	100



The above table and chart is related to overall customer satisfaction based on different service attribute. 60% customers are overall satisfied and 21.9% are somehow satisfied. We can say that majority of the customer is satisfied with their service provider. Only 1.7% respondents are dissatisfied with services provided by their service provider and 3.8 are somehow dissatisfied.

Examination of the link among quality of Service and Customer Satisfaction

With the help of SPSS we investigate the link among independent variables and customer satisfaction which is a dependent variable. We used multiple regression analysis to find out the relationship among independent variables and dependent variables. Value of r^2 has also been calculated to predict the relationship.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.349 ^a	0.237	0.246	0.52865

a. Predictors:(Constant), Rangeofservice, Brandimage, Networkperformance, Servicequality

The above table represent the value of R Square which is 0.237 and adjusted R Square is .246. On the basis of this result it can be predicted that independent variables predict dependent variable 24.6% .

Model Summary						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	125.282	3	18.159	21.281	.000 ^b
	Residual	347.129	373	0.554		
	Total	473.825	392			
a. Dependent Variable: Overall Satisfaction						
b. Predictors:(Constant), Rangeofservice, Brandimage, Networkperformance, Servicequality						

Table above shows the results of ANOVA analysis which recognize that predictors are significant to calculate CS. In this table F value is 21.281 and p value is equal to .000 which is significant, hence the null hypothesis is rejected.

In this research no one dimensional service attribute is recognized. Attributes performance effect customer satisfaction differently from industry to industry so the results of this study are particular to telecom sector. We can also conclude that association among service attribute performance and overall satisfaction in telecom sector is non-linear and asymmetric. At last findings of this analysis prove that service attribute has non-linear and asymmetric attribute feature. So H1 can be proved that (there is an asymmetric and non-linear relationship between service attribute performance and overall customer satisfaction). This technique is important method for improvement of product/service regarding assessment of service quality via the consumers. This mode of service attribute classification will be helpful to concentrate on important attribute to enhance satisfaction of customer.

Conclusion

The research recommends a framework for customer centric service quality behavior for telecom sector. The evidence of linkage among service quality attributes, CS, CR and CL emphasize the importance of consumers in forming the plan and designing of attribute performance. If service attribute performance is not as per customer expectations, the real worth of company will perhaps turn down. In other words, the usual future revenue from that consumer might decrease. Many researchers have argued that a business growth cannot be evaluated only on the basis of their current profit and sales. It is expected that a consumer will continue buying the services and also give positive feedback to others if he receives good quality services. On the other side, an unsatisfied consumer could move to another service provider and on the bases of this experience his friend and family also will not subscribe the service from the same service provider.

Recommendation

The service providers should consider the categorization of quality of service for offering value for money for their services. Many researchers have predicted the linear and symmetric linkage among performance of attributes and customer satisfaction. But on the basis of this liner linkage, service providers may not be able to improve performance according to consumer's desire and liking. The results of this study prove non- linear and asymmetric link among performance of attributes and customer satisfaction. So service providers should focus on enhancing the performance of exciting attributes. As a matter of fact the presence of exciting attribute creates value addition and satisfaction but their absence does not lead to dissatisfaction. In this study network performance, customer service quality and value for money are categorized as exciting attributes. So it is recommended that telecom companies should give importance to these attributes for improving consumer satisfaction.

References

- Abdul, I., Azmi, G., and Ahmad, Z. A. (2009). The Effects of Competency Based Career Development and Performance Management Practices on Service Quality : Some Evidence From Malaysian Public Organizations. *International Review of Business Research Papers*, 5(1), 97–112.
- Abalo, J., Varela, J., and Manzano, V. (2007). Importance values for Importance-Performance Analysis: A formula for spreading out values derived from preference rankings. *Journal of Business Research*, 60(2), 115– 121.
- Ahmed, I., Shaukat, M. Z., Nawaz, M. M., Ahmed, N., and Usman, A. (2011). Determinants of the Satisfaction and Repurchase Intentions of Users of Short Messenger Services (SMAS): A Study in the Telecom Sector of Pakistan. *International Journal of Management*, 28(3), 763–772.
- Alberty, S., and Mihalik, B. J. (1989). Evaluation of microcomputer learning experiences. *Computers and Education*, 13(1), 9–15.
- Anderson, E. W., Fornell, C., and Lehmann, D. R. (1994). Customer Satisfaction, Market Share, and Profitability: Findings from Sweden. *Journal of Marketing*, 58(3), 53–66.
- Babakus, E., Boller, G. W. (1992). An empirical assessment of the SERVQUAL scale. *J Bus Res.* 1992;24(3):253-268.
- Balaji, M. S. (2009). Customer Satisfaction with Indian Mobile Services. *IUP Journal of Management Research*, 8(October), 52–62.
- Ben-Amor, K. (2002). Switching Costs Emotional effects on dissatisfied customer's behaviour. *Journal of Financial Transformation*, 114-115.
- Berry, L.L. (1983). *Relationship marketing :Emerging Perspectives in Services Marketing*. AMA, Chicago, IL.
- Carmines, E. G., and Zeller, R. A. (1979). Reliability and validity assessment. *Quantitative Applications in the Social Sciences*.

Caruana, Albert. (2002). Service Loyalty, the effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36 (7/8), 811-828.

Gummesson, E (2008). *Total relationship marketing*, Elsevier, 3rd edition, Oxford.

Gupta, S., Hanssens, D., Kahn, W., Kumar, V., Lin, N., Ravishanker, N., and Sriram, S. (2004). Modelling Customer Lifetime Value. *Journal of Service Research*, 9,(2), 139-155.

Han , X., and Wang, C. (2003). *The relationship between customer satisfaction and loyalty of service enterprises*. Tsinghua University Press.

Keiningham, T. L., Aksoy, L.,Coolil, B., and Andreassen, T. W. (2008). Linking Customer Loyalty to Growth, *MIT Sloan Management Review*,49(4), 50-57.

Mary,W., and Gilly, M.C.(2001).Shopping Online for Freedom, Control, and Fun. *California Management Review*, 43, 34-55.

Matzler, K., Bailom, F., Hinterhuber, H. H., Renzl, B., and Pichler, J. (2004). The asymmetric relationship between attribute-level performance and overall customer satisfaction: A reconsideration of the importance-performance analysis. *Industrial Marketing Management*, 33(4), 271–277.

Rahman, S., Haque, A., and Ahmad, M. I. S. (2011). Choice Criteria for Mobile Telecom Operator: Empirical Investigation among Malaysian Customers. *International Management Review*, 7(1), 50–57.

W. Olatokun and S. Nwonne (2012). Determinants of Users' Choice of Mobile Service Providers in the Nigerian Telecommunications Market. *African Journal of Computing and ICT* ,Vol 5. No. 4,(6) 2012 ISSN 2006-1781.

Zeithaml V. A., Bitner M. J., Gremler D. D. (2006).*Services marketing*, 4th edition, McGraw-Hill.