

Correlate of Service Quality Dimensions and Customer Loyalty in the Nigerian Telecom Markets: Does Customer Satisfaction Play a Mediating Role?

Maria-Friday, Nkwede¹ & Gazie S. Okpara²

¹*Department of Marketing, Faculty of Management Sciences, Ebonyi State University Abakaliki, Nigeria*

²*Department of Marketing, Faculty of Business Administration, Abia State University Uturu, Nigeria*

Abstract: *This study investigated the relationship between service quality dimensions and customer loyalty in the Nigerian Telecom market with particular interest in identifying if customer satisfaction plays a mediating role. Hypotheses were formulated vis-a-vis theoretical background and conceptual models. A survey data generated from 183 experienced telecom customers were used as the research database. The study utilized SERVPERF measuring scale for adaptability and Correlation techniques in analyzing the data. Basically, it was discovered that the empathy dimension of service quality has a strong and positive relationship with customer loyalty and customer satisfaction. The implication is that people crave contacts and are highly likely to be loyal to that service provider that gives them individualized attention in a service that is characterize by low contact between service provider and customers.*

Keywords: *High-Touch services, Servperf, Loyalty, Satisfaction, Telecom*

I. Introduction

In marketing literature, only a handful of concepts have received huge scholarship attention as service quality. The study of service quality is expedient because of its contribution to firm's profitability (Lévesque & Mc Dougall, 1996[1]; Kish, 2000[2]; Duncan & Elliot, 2002[3]) and its positive impact on word of mouth communication (Fisher, 2001[4]), repurchase intentions (Nimako et al, 2010[5]; Fen and Lian, 2002[6]), and customer satisfaction (Sachdev, 2002[7]) amongst others. More so, scholars have identified the link between service quality, customer satisfaction and loyalty in industries such as banking (Kheng, et al., 2010[8]; Ehigie, 2006[9]; Bellini, 2005[10]; Al-Azzan, 2015[11]), telecommunication (Rahhal, 2015[12]; Izogo, 2012[13]; Wang and Hmg-Po, 2012[14]), car repair (Izogo and Ogba, 2012[15]), beauty therapy (Sachdev, 2002[7]), fast food (Sachdev, 2002[7]; Abdullahi and Rozario, 2009[16]) and hospitality (Siddique, Akter and Masum, 2013[17]). Similarly, decision concerning service quality is fast becomingly an important subject matter among chief executives of service firms. Customer experience, an important construct of service quality which positively influences overall customer satisfaction (Lau et al, 2005[18]) is gradually becoming an essential factor in service firms and customer encounters. Likewise, (Hafeez and Mohammed, 2012[19]) argued that if the different aspects of service quality are managed adequately, then customer loyalty would be fully optimized.

Service quality management is most often the basis on which customers judge their product-consumer encounters (Kotler & Keller, 2014[20]) and as such, decisions concerning service quality are vital to the growth, development and profitability of an organization. The key to managing customers effectively lies in improving the service product selectively and paying detailed attention to critical service dimensions (Sachdev & Verma, 2004[21]). Identifying these specific dimensions of service quality that lead to satisfaction and ultimately loyalty would increase a business market share and obtain a competitive edge for such business, these dimensions have been identified to include reliability, empathy and assurance (Kheng, et al, 2010[8]). This is in consonant with the findings of an earlier study (Ehigie, 2006[9]) who argued for a positive relationship between customer satisfaction and loyalty with satisfaction acting as a mediator between service quality and customer loyalty. According to him, reliability, empathy and assurance dimensions of service quality have a high positive relationship with customer loyalty. Abdullah & Rozario (2009[16]) however argued that service quality is subjective and its application varies across different industries. This assertion calls for a need to develop a multiple-scale item which could be adequate to measure service quality (Bolton & Drew, 1994[22]). There is also a research need to evaluate service quality from a customer perspective (Anderson & Sullivan[23]).

The service industry in Nigeria recently experienced a significant growth and development. (Oruruo, 2014[24]) predicts that in 2020, the service industry in Nigeria would be the highest employer of labour. Service industries such as banking, transport, education, telecommunications, healthcare and hotels etc play significant roles in the economic development of emerging economies like Nigeria. The Nigerian information technology market is highly competitive: this is because the industry is driven by network effects, social networks and personal interactions which are key criteria for adopting a service provider. (Maicas & Sese, 2011[25]; Birke & Swann,

2006[26]). The Nigeria telecommunications industry is adjudged one of the most lucrative in Africa (Pyramid Research 2010, 2014[27]; NCC, 2015[28]) with a teledensity of over 106 million subscribers. The industry has witnessed tremendous growth since its deregulation during the Olusegun Obasanjo's led administration (1999-2007) and subsequent opening of the industry to private investors. Currently, among the players in the industry they exist both players in the fixed line (CDMA) category and mobile (cellular) category respectively; these players include Zoom, Starcomms, MTN, Glo, Aritel and Etisalat Nigeria. A market share report released by NCC (2015) showed that MTN is the market leader with 46% of the market, followed by Airtel 21%, Etisalat 19% and Glo 15%. The intense competition witnessed in the Nigeria mobile telecommunication industry has put much pressure on operators to develop service quality, enhance market share accumulation and maintain loyalty of customers.

Despite the enormous scholarly output on service quality, there are noticeable gaps in extant literature. First, most of the recent works on service quality, customer satisfaction and customer loyalty has centered more on service industries of a high-touch nature. A high-touch service is a service in which relationship between a salesperson and a customer play a major role in the sale and retention of a customer, that is, it is a person-centric" model (Stark & Stewart, 2013[29]). Studies so far conducted on the effect of service quality dimensions on customer satisfaction and loyalty abound in service industries such as banking (Kheng, et al, 2010[8]; Ehigie, 2006[9]; Bellini, 2015[10]; Al Azzan, 2015[11]) automotive repair (Izogo and Ogba, 2012[15]), beauty therapy (Suchdev, 2002[7]), fast food (Abdullahi & Rozario 2009[16]; Sachdev, 2002[7]). Could the findings of these previous studies be generalized to predict the outcome of service encounters in a "low-touch" service sector such as telecommunications? Second, admitted that there is a substantial research work on the effect of service quality in the telecommunication industry, albeit, most of them are centred on the effect of service quality on customer satisfaction, where only a handful has been interested in the positive relationship between service quality dimensions and customers loyalty. Customers' retention is a crucial aspect of a firm's survival and as such the need to find out if satisfied customers turn out to be loyal customers is vital. If not so, could the discrepancy arising from such relation be traced to the service quality dimension? Third, most of the internal works on service quality, customer satisfaction and loyalty were conducted in a 'western-setting' (Izogo, 2012[13]) such as Canada, United Kingdom, and United States of America. The findings of such works may not be generalized to developing countries such as Nigeria. In addition, the attitude of customers in Abakaliki (the study area) is unique, being that telecommunication reached full diffusion in the Abakaliki market in 2008, seven years after the inception of telecom in Nigeria. This paper aims at contributing the vast literature on service quality and offering new insights into the management of telecommunication consumers.

II. Literature Review

2.1 Service Quality

The definition of service quality amongst scholars is quite an exigent task since its emergence in services marketing literature. Striking phenomenons of these definitions are the variation in line with perception of various scholars. Parasuraman, et al (1988 [29]) defines service quality as a form of attitude, related but not equivalent to satisfaction that results from a comparison of expectation and perception of performance. In Zeithaml (1988 [30])'s view, service quality is described as the overall excellence or superiority that consumers perceive from a product. In an earlier study (Gronroos, 1982[31]) observed that service quality is the confirmation or disconfirmation of consumers' expectation of service compared with the customers' perception of the service actually received. Bitner et al (1994[32]) argued that service quality is the customers' overall impression of the relative superiority or inferiority of the organization and its services. It is an assessment of the customers from the overall excellence of the service, that is, service quality has an indirect effect on company's performance. Two basic constructs can be discerned from these definitions. They are; customers' expectation of the service and consumers' perception of actual performance. These two constructs which ultimately lies on the problem of the service product and process of service delivery affect the scale for measuring service quality. They can be identified under two broad dimensions namely:

- (1) Functional which measures the (how) service delivery process and
- (2) Technical which measures (what) the service product.

2.2 Servqual

SERVQUAL, an instrument developed by Parasuraman, et al, (1988[29]) have been widely used for measuring service quality in industries that included\ healthcare, banking, insurance, as well as education (Nyneck, et al, 2002[33]). The SERVQUAL model is based on a gap theory which seeks to address the perceived differences between customers' expectation and actual performance (Kotler and Keller, 2014[20]). It is a 22-item scale that measures service quality along ten initial components. Through this scale, service quality is divided by subtracting expectation scores from perception scores. The weight of the scores (result) subsequently tells the producer/service provider if customers' expectation were exceeded or not. Scholars argue that

SERVQUAL appears to be one of the most complete attempts at conceptualizing and measuring service quality. It is universally accepted and described as 'generic' by its originators and scholars alike. This stems from the numerous benefit of its applicability which include; usefulness in monitoring service quality over a period of time, as well as in comparing company's performance with that of competitors.

The major argument against SERVQUAL however, is the fact that it was formulated to highlight the main requirements for delivering high service quality (Devlin & Dong, 1994[34]; Brady & Cronin, 2001[35]; Gi-Du & James, 2004[36]; Nimako et al, 2012[5]). Although, it did set out to incorporate the two constructs as earlier identified, this feature limits the instrument to measure only the functional dimension of service quality (Baker & Lamb, 1993[37]). Also, service quality is multi-dimensional (Carman, 1990[38]; Dabholkan et al, 1996[39]; Mc Dougall & Levesque, 1992[40]; Cronin & Taylor, 1992[41]; Gronroos, 1982[31]; Parasuraman et al, 1985[42], 1988[29]) and as such, a measuring scale must incorporate this dimensionality. Attempts at identifying other dimensions of service quality include (Swartz & Brown 1989[43]) proposal of measuring the perception of the service after performance and during performance with the aid of two dimensions namely; the functional and technical dimensions respectively. Oliver (1999[44]) proposed a three-component model where evaluation of the overall service quality is based on;

- (1) Functional quality (customer-employee interaction)
- (2) Service environment and
- (3) Technical quality (the outcome of the service)

Cronin & Taylor (1992[41]) advocates that service quality be measured using only performance (SERVPERF) measures alone since performance is a better predictor of service quality than expectation. They also advocated the scrapping of the expectation components from the scale and the incorporation of the service delivery process as well as the technical aspect. Jain & Gupta (2004[45]) opined that the scale could be able to measure a variety of service if it utilizes a single-item scale. Although, SERVQUAL is widely accepted its applicability is often times industry specific (Abdullallic & Rozario, 2009[16]) and country specific (Anderson & Sullivan, 1994[23]) and its dimensionality is not as generic as its originator projected (Izogo and Ogba, 2012[15]).

2.3 Customer Satisfaction

Customer satisfaction has occupied a large body of literature in the marketing scholarship space, just like service quality. Its central position in marketing literature is affirmed by scholars and practitioners alike. This is due in part to the ever-changing business environment and the high rate of competition witnessed in the marketplace. Kotler & Keller (2014[20]) defines satisfaction as a person's feeling of pleasure or disappointment resulting from comparing a product performance (outcome) in relation to his/her expectation. Satisfaction is of two distinct perspectives: namely; attribute specific and overall performance (Nimako, 2012[46]). It is attribute specific where it relates to a specific product or service. From the overall performance perspective, satisfaction can either be transactional or cumulative. It is transactional where customer satisfaction is based on a one-time specific post-purchase evaluative judgment of a service encounter, but cumulative where the overall evaluation of a product or service is based on purchase and consumption experiences over a period of time (Anderson & Sullivan, 1994[23]; 2013; Fornell, 1992[47]; Wang & Hing Polo, 2002[14]; Cronin & Taylor, 1992[41]; Nimako, 2012[46]). In this study, customer satisfaction is treated as cumulative and measured for the past three years in order to predict customer loyalty.

Emergent literature suggest a relative agreement amongst scholars that service quality and customer satisfaction are two distinct construct that share a unique and close relationship (Sachdev & Verma, 2002[21]). In most service quality literature, customer perception which is argued to be a better predictor of customer evaluation and satisfaction have been defined uniformly as belief about experienced service. Sureshachander, et al (2002[48]) observed that service quality and customer satisfaction are highly related and as such claims that service quality is an important antecedents of customer satisfaction. The link between service quality dimensions and customer satisfaction has also been a subject of research amongst scholars. In a study of the usage of bank technology in the U.K, Joseph (2005[49]) discovered that responsiveness dimension of service quality is positively related to customer satisfaction. Similarly, an exploration of service quality levels within banks in the Balkan countries by Glavelli (2006[50]) revealed that responsiveness share a positive relationship to customer satisfaction. In contrast, Kheng, et al (2010[8]) identified that reliability is not positively significant to customer satisfaction within the Banking system of Malaysia. Rahhal (2015[12]) identifies responsibility and network quality as the dimensions of service quality that share a direct positive significant impact on customer satisfaction within the Syrian mobile telecom markets. In a field study within Arab Banks in Jordan, Al-Azzan (2015[11]) identifies tangibles, responsiveness, reliability, empathy and security as service quality dimensions that have positive impact on customer satisfaction. Negi (2009[51]) identifies reliability, empathy and assurance as having direct link to customer satisfaction. Herein necessitate the need to identify the specific service attributes that has greater impact on customer satisfaction in specific service setting in order to inform management on area for improvement.

H1: The dimensions of service quality are positively related to customers' satisfaction in the Nigerian telecom market.

2.4 Customer Loyalty

Customer loyalty is the degree to which customers exhibits repeat purchasing behaviour from a service provider, possess a positive attitudinal disposition towards the provider and consider using only the provider when a need for the service arises (Gremles & Brown, 1996[52]). Kheng et al, (2010[8]) suggests that the success of any service organization depends solely on customer satisfaction and loyalty as well as quality relationship built by service provider with customers. In their study of Banks in Malaysia, they discovered that service quality dimensions such as reliability, empathy and assurance enhances customer loyalty. In his view Caruana (2002 [53]) opines that satisfaction will significantly lead to customer loyalty. However Oliver (1999[44]) argued that satisfaction and loyalty can not be surrogate for each other. According to him, a customer can be highly satisfied and yet not become loyal. Kotler (1999[54]) advocates the need for company's to keep their existing customers as it cost five times more to attract a new one. Studies have proven the relationship between service quality dimensions and customer loyalty. Ehigie (2006[9]) suggested a positive relationship between service quality and customer loyalty with customer satisfaction acting as a mediator. In his study of Banks in Nigeria, (Ehigie 2006[9]) identified that the reliability dimension of service quality enjoys a positive relationship with customer loyalty. This finding is supported by (Ngugen & Leblanc, 2001[55]; Bellini, 2005[10]). Empathy and assurance were also found to have positive relationship to customer loyalty. This is in consonant with the findings of Butcher, 2001[56]; Ndubuisi, 2006[57]; Lymperoporulous et al, 2006[58]). In the same vein, there are specific dimensions of service quality that are closely related to customer satisfaction and customer loyalty. In Glavali (2006[50]) and Joseph (2005[49]) responsiveness is seen as having positive relationship with customer satisfaction and also leads to customer loyalty (Diaz & Ruiz, 2002[59]). Rahhal (2015[12]) identified network quality, responsiveness and reliability has having direct positive effect on customer satisfaction which in turn increases customer retention rate (Anderson & Sullivan, 2004[23]).

H2: The dimensions of service quality are positively related to customers' loyalty in the Nigerian telecom market.

H3: There is a strong positive relationship between customer satisfaction and customer loyalty in the Nigerian telecom market.

The study proposes a relationship between service quality, customer satisfaction and loyalty as shown in Fig. 1. The adapted research framework for this study is that of Agus et al (2007[60]) and Caruana (2002[53]) with a slight modification to accommodate the industry under study.

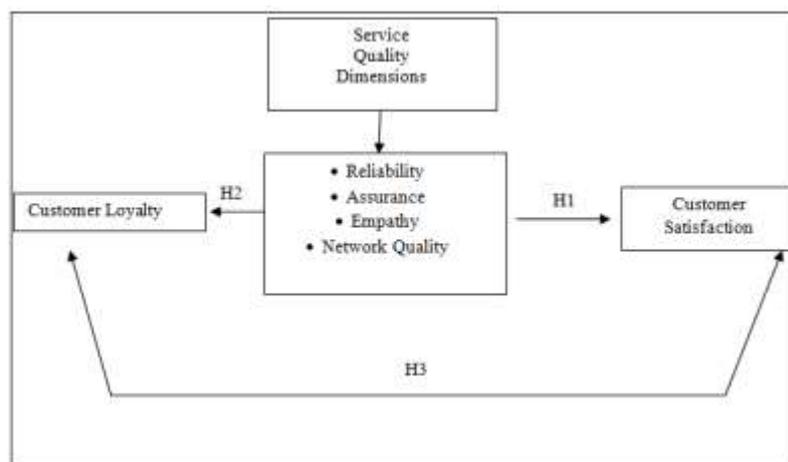


Figure 1: research framework

III. Research Methodology

3.1 Sample

The proposed research framework was examined in the telecommunication services market in Abakaliki urban; a city in the South-eastern part of Nigeria. Respondents were mobile phone users. Participants to the study were drawn through a mall-intercept procedure. This procedure is beneficial in its ability to generate a large pool of respondents within a short time frame (Hair, et al, 2006[61]). Efforts were made to eliminate the shortfall of this procedure by ensuring that the respondents selected were capable of filling the questionnaire. This is in line with the argument of Asika (1999[62]) who asserts that a researcher must be guided appropriately by scenarios he considers as typical cases which are likely to provide him with much needed data or information.

3.2 Measuring Instruments and Measures

The questionnaire is the instrument used in collecting data for the study. Three constructs namely; service quality; customer satisfaction and customer loyalty were operationalized in order to test the proposed research framework. A total of 23 scale items were used to evaluate the construct. 16 items measured service quality; a recent modification of the SERVQUAL instrument in the form of SERVPERF (measuring only performance with slight modifications) was used. Service quality measurement was based on the findings of Negi (2009[51]), Rahhal (2015[12]), Agus(2007[60]) and Caruana (2002[53]). Due to the argument of scholars that the SERVQUAL instrument measures only the functional dimension of service which is service delivery process, there was a need to incorporate the technical aspect comprising the service product. Out of the four dimensions that were used to measure service quality, three (empathy, reliability and assurance) represents the functional dimension while network quality represents the technical dimension. 3 items measured customer satisfaction while 4 items measured customer loyalty. All measures were modified from existing scales (Parasuraman et al, 1988[29]; Rahhal 2015[12]; Agus et al, 2007[60]; Caruana, 2002[53]) and wordings adapted to fit the industry as well as cultural setting. The items in the questionnaire were presented using a 5 point Likert scale with 5 (strongly agree) and 1 (strongly disagree) being at the two extremes. This scale has the ability of providing participants with numerous options and is well suited for a self-administered questionnaire (Hair et al, 2006[61]) More so, there is a positive correlation between the number of scale of points and scale reliability (Malhorta, 1996[63]).

3.3 Assessing Scale Reliability/ Internal Consistency Test

Internal consistency test were performed on the data with the intention of extracting the components that exhibits the ability to be consistent in repeated application (Hong & Cho, 2011). The Cronbach alpha test was conducted due to its conservativeness (Hair et al, 2006[61]). The minimum threshold that must be accomplished to establish reliability with Cronbach alpha is 50% (Devallis, 2003[64]). Table 1, shows the individual reliability assessment of the 23 reflective indicators used in this study. The Cronbach alpha value ranges from 0.815 to 0.584, this shows that the data displayed a high level of internal consistency and is reliable to provide the needed information.

Table 1: Reliability and Internal Consistency test

Construct	No. of items	Sources	Variables	Cronbach α	SM if item deleted	SV if Item deleted	Corrected if item deleted	Cronbach α If item deleted
Network Quality	4	Rahhal, 2015[12]	NQ1	0.812	10.2022	10.492	0.502	0.799
			NQ2		10.5738	9.158	0.707	0.728
			NQ3		10.5137	9.339	0.648	0.758
			NQ4		10.3415	8.607	0.630	0.769
Service Reliability	4	Agus et al, 2007[60]	SR1	0.815	10.8634	10.152	0.532	0.812
			SR2		11.2022	8.503	0.687	0.742
			SR3		11.2186	8.479	0.655	0.757
			SR4		11.5191	7.537	0.683	0.746
Service Assurance	4	Caruana 2002[53]	SA1	0.769	11.3770	7.192	0.492	0.756
			SA2		11.4317	7.104	0.604	0.699
			SA3		11.4918	5.856	0.600	0.699
			SA4		11.6995	6.574	0.593	0.702
Service Empathy	4	Bellini et al, 2005[10]	SE1	0.676	11.7049	5.890	0.437	0.624
			SE2		11.7596	5.634	0.481	0.594
			SE3		11.7869	5.311	0.577	0.551
			SE4		11.9617	5.510	0.382	0.668
Customer Satisfaction	3	Gi-Du & James, 2004[36]	CS1	0.584	8.8525	1.401	0.359	0.532
			CS2		8.7596	1.458	0.423	0.457
			CS3		8.9781	1.087	0.418	0.457
Customer Loyalty	4	Ehigie, 2006[9]	CL1	0.753	12.5956	5.638	0.541	0.700
			CL2		12.4426	5.940	0.549	0.681
			CL3		12.4699	5.921	0.561	0.689
			CL4		12.6393	5.562	0.523	0.712

Source: Extraction by the researchers from SPSS 20.0. Note: SM= scale mean, SV= scale variance, α = alpha

3.4 Assessing Scale Suitability: Scale items reduction and factor extraction

Exploratory factor analysis in the form of PCA (Principal Component Analysis) with varimax rotation was used for the extraction and reduction of items to a smaller number of representative components. The intention was to generate or identify smaller sets of factors with eigenvalue > 1.0 for easy analysis (Costello & Osborne, 2005[65]; DeCoster, 1998[66]). Prior to this, the sampling adequacy of the data was confirmed via the Kaiser-Meyer-Olkin (KMO) measure. The acceptable threshold limit for KMO is 0.5 (Hair et al, 2006[61]), our KMO value of 0.747 is far above the limit and shows that the data is adequate to explain the study’s objectives. The correlation matrix also shows the presence of many coefficients of 0.3 and above (Pallant, 2005[67]) with high communality displayed between the variables. The factorability of the correlation matrix was conducted using Bartlett test of sphericity, Bartlett test showed that the extracted components were statistically significant

at (P=0.000). Factor loading of 23 usable items with the varimax rotation based on the convergence from the Kaiser criterion shows the loading of the 23 items into 5 components (network quality, service reliability and assurance, service empathy, customer loyalty and customer satisfaction). Two variables namely service reliability and assurance loaded as a single component. The total variance accounted for by the five components was 62.33%, the initial eigenvalues of the five factors/components are 7.334, 2.525, 1.731, 1.512 and 1.233 respectively (see Table 2). The rotated component matrix also showed evidence on the connection of the 23 items to the five factors extracted which confirmed that six items were used to measure network quality, seven items were used to measure service assurance and reliability, three items measured service empathy, four items measured customer loyalty and three items measured customer satisfaction (see Table 3). Furthermore, Pearson correlation was performed on the transformed data to find out the relationship existing between the components. The correlation coefficient ranges from -1 to +1 that is $(-1 < r < +1)$ where +1 indicates a perfect positive relationship between the variables while -1 indicates a perfect negative relationship between the two variables (see Table 4).

Table 2 Total Variance Explained

Component	Initial Eigenvalue			Extraction Sum of Squared Loading			Rotated Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of Variance	Cumulative %
	1	7.334	31.889	31.889	7.334	31.889	31.889	3.832	16.661
2	2.525	10.977	42.866	2.525	10.977	42.866	3.155	13.791	30.380
3	1.731	7.527	50.393	1.731	7.527	50.393	2.891	12.568	42.948
4	1.512	6.573	56.966	1.512	6.573	56.966	2.499	10.866	53.814
5	1.233	5.362	62.328	1.233	5.362	62.328	1.958	8.514	62.328

Note: Extraction method :principal component analysis

Source: SPSS 20.0

Table 3 Rotated Component Matrix

	Component				
	1	2	3	4	5
I do not experience background noise when I make calls	.807				
I do not suffer delays when I try to connect using my primary mobile service provider	.771				
The billings of my primary mobile service provider is moderate	.747				
My primary mobile service provider is capable of providing telecom services	.738				
There are no interruptions when I make calls	.652				
My primary mobile service provider has never given me inaccurate information	.623				
My primary mobile service provider handles complains promptly		.758			
I have confidence in my primary mobile service provider		.686			
My Primary mobile service provider has my best interest at heart		.677			
My primary mobile service provider is sympathetic to me whenever I have a problem		.566			
I feel safe using my primary mobile service provider to transact business		.559			
My primary mobile service usually operates convenient business hours		.542			
The employees of my primary mobile service provider attend to me in a caring fashion		.459			
I can make calls when I am far from the mast of my primary service provider			.798		
I can depend on my primary mobile service provider			.741		
My primary mobile service provider always give me individualized attention			.701		
I recommend my primary mobile service				.741	

provider to people who seek my advice					
I intend to continue to patronizing my primary mobile service provider even if charges increases				.728	
I intend to continue patronizing my primary mobile service provider				.680	
I encourage friends and relatives to patronize my primary mobile service provider				.673	
Overall, I am pleased with my primary mobile service provider					.700
Overall, I am satisfied with my primary mobile service provider					.634
Overall, the monetary benefits provided by my primary mobile service provider is favourable					.586
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 10 iterations.					

Source: SPSS 20.0

IV. Analysis

4.1 Response Rate and Demographic Outcomes

The questionnaire used for the study resulted into 250 completed surveys out of which 67 questionnaires were rejected due to multiple ticking. In total, 183 valid responses were recorded representing 73% of the total database. Response rate above 30% is good and acceptable when a research uses survey questionnaire (Crimp & Wright, 1995[68]). Male respondents have the highest frequency at 51.4% while the female respondents represent 48.6% of the population. In terms of age distribution, a large percentage of the respondents fall between the ages of less than 25 which amounted to 103 representing 56.3% of the respondents. Slightly behind them are respondents between the ages of 25-36 who were 60 representing 32.8% of the population. 4.9% and 5.5% are the portion shared by respondents between the ages of 46-55 and 56-65 respectively. Only 0.5% of the respondents are above 60 years. The implication of this information is that a large percentage of phone users are young and likely to be sophisticated. 77.6% of respondents are married while 22.4% are single. In terms of educational qualification, 39.2% are B.Sc holders, 37.7% are SSCE holders, Diploma certificate holders are 4.4% while postgraduates has 12.6% for Masters and 2.2% for PhD holders respectively. A margin of 3.8% belongs to FSLC holders. In real terms, these figures show that the average telecommunication consumer has a little bit of formal education. A large portion of the respondents (66.7%) earn less than #50,000. This goes to show that the consumer ranges from middle to low income earners. In terms of the choice of mobile operators of respondents; 74.3 makes use of the MTN service provider; 11.5% patronizes Airtel while Etisalat and Glo has 10.4% and 3.8% respectively. MTN still maintains her position as market leader as more than half of the respondents makes use of MTN.

Table 4 Correlation Between Customer Loyalty, Satisfaction and Service Quality Dimensions

		SUM_NE	SUM_SRSA	SUM_SE	SUM_CS	SUM_CL
SUM_NE	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	183				
SUM_SRSA	Pearson Correlation	.607**	1			
	Sig. (2-tailed)	.000				
	N	183	183			
SUM_SE	Pearson Correlation	.774**	.633**	1		
	Sig. (2-tailed)	.000	.000			
	N	183	183	183		
SUM_CS	Pearson Correlation	.184*	.254**	.220**	1	
	Sig. (2-tailed)	.013	.001	.003		
	N	183	183	183	183	
SUM_CL	Pearson Correlation	.281**	.330**	.337**	.435**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	183	183	183	183	183
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						
Source: SPSS 20.0						
Note: Sum=summation, cs= customer satisfaction, cl= customer loyalty, ne= network quality, srsa= service reliability/assurance, se= service empathy						

4.2 Service Quality Dimension and Customers Satisfaction

Table 4 reveals a weak albeit positive relationship between network quality and customers satisfaction with an aggregate value of 0.184 at $P < 0.013$. This significance level indicates that network quality is not an important variable in determining customer satisfaction. In other words, even if network quality dimension is to increase by 18%, customer satisfaction will increase by a mere 18%. Unlike network quality, service reliability and assurance that loaded together shows evidence of strong positive relationship with customer satisfaction with an aggregate of 0.254 at $P < 0.01$ (see table 4). Literally, this means that an increase in the perception of the reliability and assurance dimensions increase customer satisfaction. That is, if the service reliability and assurance dimensions are increased by 25%, satisfaction will increase by 25%. The empathy dimension also indicates a strong positive relationship between the construct and customer satisfaction with an aggregate value of 0.220 at $P < 0.003$. This means that this construct is statistically significance at 0.003 level, in other words, an increase in the empathy dimension would lead to an increase of satisfaction up to 22%.

4.3 Service Dimensions and Customer Loyalty

Table 4 shows the result of the relationship between service quality and customer loyalty. Contrary to the output of the service quality construct with customer satisfaction, network quality displayed a strong and positive relationship to customer loyalty. It pulled an aggregate of 0.281 at a significant level of 0.000. The significance level indicates that network quality is an important variable in determining customer loyalty. That is, if service quality is increased by 28%, loyalty will increase by 28%. On the other hand, service empathy showed a strong positive relationship with customer loyalty. It pulled an aggregate of 0.337 at a significant level of 0.00. This means that customer loyalty will increase by 34% if the perception of the service empathy variable is increased by 34%. It also portrays the fact that service empathy is important in determining customer loyalty. Assurance and reliability also showed a positive relationship with customer loyalty with an aggregate of 0.330 with significance level of 0.00. This means that if the assurance and reliability dimension of service quality are increased by 33% then, customer loyalty will also increase by the same value. The statistical significance of the values shows that these variables are important in determining customer loyalty.

4.4 Customer Satisfaction and Customer Loyalty

All the construct of service quality except for network quality dimension measured against customer satisfaction and loyalty displayed almost similar pattern. That is, network quality variable correlated positively to loyalty but not to satisfaction. Network quality had a weak positive relationship with customer satisfaction but displayed a strong positive relationship to customer loyalty. In this case, customer satisfaction did not play a mediating role. All the dimensions tested showed that they are statistically significant in determining customer loyalty. So, customer satisfaction mediates between loyalty and service dimensions through the dimensions such as empathy, assurance and reliability. There is a strong positive correlate between customer satisfaction and loyalty with an aggregate of 0.435 and a significant level of 0.000. This value shows that the customer satisfaction is important in determining customer loyalty in the telecom markets. In real terms, when customer satisfaction increases by 44%, customer loyalty is likely to increase by 44%.

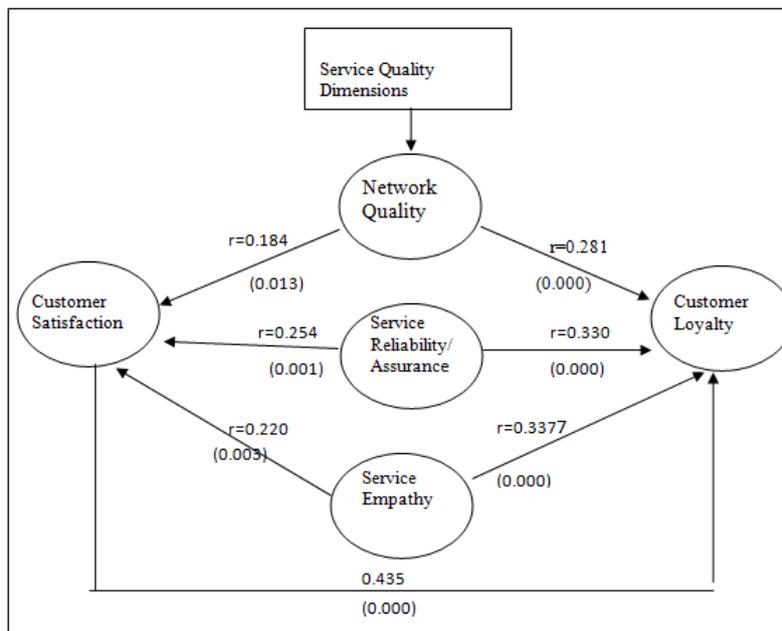


Figure 2 research model, hypotheses and significance level

V. Robustness Check

To validate our results and model, further robustness check was carried out with the intention of ensuring that there are no existences of multi-collinearity given the fact that the research variables were closely related. In order to give justifications to the empirical findings, the collinearity diagnostics test was conducted. The non existence of the problem of multi-co linearity is established when the tolerance value is substantially above 0.10 and the corresponding values of variance of inflation factor (VIF) is less than 5 (Hair et al, 2006[61]). For the constructs used for this study, results show a tolerance value of between 0.458 and 0.380 likewise; VIF values also ranges from 2.078 to 2.631 respectively. These results meet with the above minimum limit of tolerance value and also for that of VIF. Further check shows that Durbin Watson value as 1.750. Durbin Watson checks for auto correlation within data. The acceptable threshold for it is that the value should be close to 2; our value of 1.750 shows that there are no fears of auto correlation within the data. This is shown on table 5

Table 5 Collinearity Diagnostics

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.615	.207		17.461	.000		
	SUM_NE	-.053	.055	-.101	-.964	.336	.458	2.184
	SUM_SR	.102	.063	.185	1.604	.110	.380	2.631
	SUM_SA	-.038	.067	-.061	-.562	.575	.424	2.358
	SUM_SE	.196	.072	.281	2.736	.007	.481	2.078
a. Dependent Variable: SUM_CS Source: SPSS 20.0								

VI. Discussion And Implications Of Findings

This study set out to investigate the relationship between service quality dimension and customer loyalty where customer satisfaction plays a mediating role. The dimensional structure of the SERVQUAL scale was employed to this end. Three hypotheses were generated after an extensive review of literature and conceptual frame works. In developing the research framework the study took into consideration the fact that most studies conducted on the subject was all in a “high touch service” environment. The outcome of this study suggest that the dimensions of service quality that leads to customer loyalty in the banking sector (Kheng et al, 2010[8]) is also obtainable in the telecommunication industry in Abakaliki, this is line with previous study on customer loyalty Ehigie, (2006[9]) Ngugen & Leblanc (2001[55], Bellini et al (2005[10]) In this case, dimensions such as reliability, assurance and empathy have a high positive effect on customer loyalty with the empathy dimension displaying a very high and positive relationship to customer loyalty. In other words, the “customer relation” dimension of service quality is of great importance in determining customer loyalty and satisfaction in the telecom market of Abakaliki. The empathy dimension addresses contacts between service providers and customers. Since telecom service is a low-touch service, the service provider is heard rather than felt. In this case, customers are usually loyal to that service provider that makes it possible for the customer to ‘feel’ or perceive the service. This is in contrast to the findings of Izogo & Ogba (2014) who discovered that empathy is of little or no relevance to customer loyalty. It is pertinent to note that their research was conducted in a “high-touch” service environment.

More so, network quality dimension displayed a weak positive relationship to customer satisfaction as well as been statistically insignificant to customer satisfaction. The network quality dimension of service quality that was incorporated to address the technical dimension had little or no relevance to customer satisfaction, people crave contacts and as such if the service provider gives them individualized attention then, network quality is not important to their satisfaction. It is imperative that service providers improve on network quality. On the contrary, network quality has a great effect on customer loyalty. It should be noted that if network quality is improved, customers would be satisfied and retain which is the bottom line of engaging in business. However, past research outcomes revealed some interesting findings which contrast this result. Rahhal (2015[12]) identified that the network quality dimension has a direct significant impact on customer satisfaction whereas, the result of our study shows that the relationship between network quality and customer satisfaction is weak and is not significant in determining customer satisfaction. With slight modification, the SERVQUAL instrument is an adequate scale for measuring service quality, customer loyalty and satisfaction in the Nigerian telecommunications industry.

VII. Conclusion, Limitation And Area For Further Study

Telecommunication is a low touch services that encourages the meeting of the service provider and customer through a platform. This is because the provider is not seen but rather felt unlike high touch service like banking, automobile repair services or beauty therapy. Ordinarily, people crave contacts; customers want to be heard and identified as individual with amazing personalities. The service provider that is able to break this barrier and try to reach out to customer ends up satisfying the customer and retaining their loyalty as well. Service providers also need to improve on the assurance dimension of service quality to build trust and confidence in their service offerings. The sample size for this study is small and as such, conclusion from the study was made with the greatest degree of caution, further studies that would increase the database of respondents and identify specific variables that are related to customer loyalty are needed. Also, relating customer satisfaction and loyalty to demographic variables which is open to possible variation is a potential area for further research.

References

- [1]. Abdullah, D.N.M.A & Rozario F. (2009), "Influence of Service and Product Quality towards Customer Satisfaction: A Case Study at the Staff Cafeteria in the Hotel Industry", World Academy of Science Engineering and Technology
- [2]. Agus, A., Barker, S., and Kanadampully, J. (2007), "An Exploratory Study of Service Quality in the Malaysian Public Service Sector", International Journal of Quality & Reliability Management 24 (2), 171-190
- [3]. Ahmed, I., Nawaz, M.M, Usman, A., Shankat, Z.M., Ahmad, N & Iqbal, H (2010), "Impact of Service Quality on Customer Satisfaction: Empirical Evidence from Telecom Sector of Pakistan," Interdisciplinary Journal of Contemporary Research on Business 1(12) 98-113
- [4]. Al-Azzan, M.F.A (2015), "The Impact of Service Quality Dimensions on Customer Satisfaction: A Field Study of Arab Bank in Irbid city Jordan," *European Journal of Business and Management*, 7 (15)
- [5]. Anderson, E. W. and Sullivan, M.W (1993), "The Antecedents and Consequences of Customer Satisfaction for Firms, Marketing Science vol. 12 (2) 125-143
- [6]. Asika, N. (1990), "Research Methodology in the Behavioural Sciences"; Longman Nigeria Plc Ikeja.
- [7]. Baker, J.A and Lamb, C.W Jr. (1993), "Measuring Architectural Design Service Quality," Journal of Professional Services Marketing, 10(1) 89-106
- [8]. Barlett, M.S (1954), A Note in the Multiplying Factors for Chi Square Approximations: *Journal of the Royal Statistical Society*, 16. (2) 296-298.
- [9]. Bellini, C.G.P, Linardi, G. L and Hennique, J.L (2005), "Service Quality of Banks: Insight from the Brazilian Experience, Journal of Internet Banking and Commerce 10 (3)
- [10]. Birke, D and Swamm, P.G.M. (2006), "Network Effects in Mobile Telecommunication: An Empirical Analysis, *Information Economics and Policy*, 14 (3), Retrieved online from www.citeseerv.ist.psu.edu on 25th June 2015.
- [11]. Bitner, J.Mary, Booms, B.H and Mohr, L. A (1994), "Critical Service Encounters: The Employee Viewpoint, *Journal of Marketing*, 58 (4) 95-106
- [12]. Bolton, R. and Drew, J. (1994), "Linking Customer Satisfaction to Service Operations and Outcomes" in Rust, R.T & Oliver, R.L (Eds.) "Service Quality New Directions in Theory and Practice" 173-200.
- [13]. Brady, M. K and Cronin, J.J Jr. (2001), "Some New Thoughts on Conceptualizing Perceived Service Quality: A Hierarchical Approach," *Journal of Marketing*, 65
- [14]. Brown, S.W and Swartz, T.A (1989), "A Gap Analysis of Professional Service Quality", *Journal of Marketing*, 53, 93-98.
- [15]. Butcher, K. (2001), "Evaluative and Relational Influences on Service Loyalty", *International Journal of Service Industry Management*, 12 (4) 310-327
- [16]. Carman, L. (1990). Consumer Perception of Service Quality: An Assessment of the SERVQUAL Dimensions. *Journal of Retailing*, 33-55
- [17]. Caruana, A. (2002), "Service Loyalty: The Effects of Service Quality and the Mediating Role of Customer Satisfaction, *European Journal of Marketing*, 36 (718) 811-828.
- [18]. Carvalho de, F.A and Leite, V.A (1999), "Attribute Importance in Service Quality: An Empirical Test of the PBZ Conjecture in Brazil," *International Journal of Service Industry Management*, 10 (5) 487-504.
- [19]. Crimp, M. and Wright, L.T (1995), "The Marketing Research Process", Prentice Hall Inc Eaglewood.
- [20]. Cronin, J.J and Taylor, S.A (1992), Measuring Service Quality: A Re Examination and Extension, *Journal of Marketing*, 55-68.
- [21]. Dabholkar, P.A. Thorpe, S.A. and Rentz, J. O (1996), "A Measure of Service Quality for Retail Stores: Scale Development and Validation; *Journal of Academy of Marketing Science*, 24 (1) 3-16
- [22]. De Vallis, R.F. (2003), "Scale Development Theory and Application" (2nd Ed) Newbury Park, CA; SAGE.
- [23]. Diaz, A.B.C and Ruiz, F.J.M (2002), "The Customers' Reaction to Delays in Service, *International Journal of Service Industry Management*, 13 (2) 118-140
- [24]. Duncan, E. and Elliot, G. (2002), Customer Service Quality and Financial Performance among Australian Retail Financial Institution, *Journal of Financial Services Marketing*, 7 (1) 25-41
- [25]. Ehigie O. Ndubuisi (2006), "Correlates of Customer Loyalty to their Banks: A Case Study on Nigeria, *International Journal of Bank Marketing*, 24 (7) 494-508
- [26]. Fen, Y.S and Lian, K.M (2002), "Service Quality and Customer Satisfaction: Antecedents of Customers Re-Patronage Intentions, *Sunway Academic Journal* 4
- [27]. Fisher, A. (2001), Winning the Battle for Customer loyalty, *Journal of Financial Services Marketing*, 6 (2) 77-83
- [28]. Fornell, C. (1992), "A National Customer Satisfaction Barometer: The Swedish Experience", *Journal of Marketing*, 56 (1) 6-21
- [29]. Gagliano, K and Hathcote, J. (1994) Customers Expectation and Perception of Service Quality in Apparel Retailing, *Journal of Service Marketing*, 60-69.
- [30]. Gi-Du, K. and James, I. (2004), Service quality dimensions: An examination of Gronroos' service quality model, *Managing Service Quality*, 4 (14) 266-277.
- [31]. Glaveli, N., Petridou, E., Liassides, C. and Spathis, C. (2006), "Bank Service Quality: Evidence from five Balkan Countries", *Managing Service Quality*, 16 (4) 380-391

- [32]. Gremler, D.D., and Brown, S.W.(1996), "Service Loyalty: Its Nature, Importance and Implications: Proceeding American Marketing Association, 171-180
- [33]. Gronroos, C.A (1982), "Strategic Management and Marketing in the Service Sector, Swedish School of Economics and Business Administration, Helsinki.
- [34]. Gronroos, C.A (1984), "Service Model and its Marketing Implications", *European Journal of Marketing*, 18 (4) 36-44.
- [35]. Hafeez, S and Mohammad, B (2012), "The Impact of Service Quality, Customer Satisfaction and Loyalty Programmes on Customer Loyalty: Evidence from Banking Sector of Pakistan", *International Journal of Business and Social Science*, 3 (16)
- [36]. Hair, J.F., Bush, R.P., and Ortinau, D. J (2006), "Marketing Research Within a Changing Environment", 3rd Edition, McGraw Hill, New York NY.
- [37]. Izogo, E. E & Ogba I. (2014), Service Quality, Customer Satisfaction Loyalty in Automobile Repair Services Sector, *IJQRM*, Available www.emeraldinsight.com.
- [38]. Jain, R. S and Gnpta, D.S (2004), "Service Quality in Higher Education: An Exploratory Study", *Asian J. Market*, 144-154.
- [39]. Jones, H & Farquhar, J.D (2003), "Contact Management and Customer Loyalty *Journal of Financial Service Marketing* 8 (1) 71-78
- [40]. Joseph, M., Sikhon, Y., and Tinson, J. (2005), "An Exploratory Study in the Use of Banking Technology in the UK: A Ranking of Importance of Selected Technology on Consumer Perception of Service Delivery Performance", *International Journal of Bank Marketing*, 25 (5) 397
- [41]. Kheng, L.L., Mahamad, O., Ramayat, T., and Rahim, Mosahab, R (2010), "The Impact of Service Quality on Customer Loyalty: A Study of Banks in Penang Malaysia," *International Journal of Marketing Studies*, 2 (2) 57-66
- [42]. Kish, J. (2000), "Before Your Customers Leave", *Bank Marketing*, 32(2) 30-47
- [43]. Kotler, P., Ang, S.H., Leong, S.M and Tan, C.T (1999), "Marketing Management: An Asian Perspective", New Jersey: Prentice Hall Inc
- [44]. Kotler, P. and Keller, K. Lane (2014), "Marketing Management", 14th Edition, New Delhi: India, Prentice Hall Inc
- [45]. Lau, P.M., Khahbi, A.A and Fie, D.Y.C (2005), "Service Quality: A Study of the Luxury Hotels in Malaysia, *Journal of America Academy of Business*, Cambridge, 7 (2) 46-55
- [46]. Lymperopoulos, C., Chanwtakis, I.E, and Sourelli, M. (2006), "The Importance of Service Quality in Bank Selection for Mortgage Loans, *Managing Service Quality* 16 (4) 365-379.
- [47]. Levesque, T.I, and McDougall, G.H.G (1996), "Determinants of Customer Satisfaction in Retail Banking", *International Journal of Bank Marketing*, 14 (7) 12-20
- [48]. Maicas, J.P. and Sese, J.F (2011), "Network Effects in the Mobile Communication Industry: An Overview," in "Recent Development in Mobile Communication. A multidisciplinary Approach", Shanghai: In Tech Publishers www.interhopen.com. Retrieved 23rd August, 2015
- [49]. Malhorta, N.K (1996), "Marketing Research: An Applied Orientation", Prentice Hall, Upper Saddle River, New Jersey
- [50]. McDougall, G and Lévesque, T. (2000), "Customer Satisfaction with Services: Putting Perceived Value into the Equation, *Journal of Services Marketing*, 14 (415) 392-410
- [51]. McQuilty, S., Finn, A & Wiley, J.B. (2000), "Systematically Varying Consumer Satisfaction and its Implication for Product Choice", *Academy Marketing Science Review*
- [52]. Menji, P. (2009), "Customer Satisfaction with Service Quality: An Empirical Story of Public and Private Sector Banks", *ICP Journal of Management Research*, 8 (9) 7-17
- [53]. NCC. (2015). www.ncc.gov.ng. Retrieved 1st July, 2015.
- [54]. Ndubuisi, N.O. (2006), "A Structural Equation Modeling of the Antecedents of Relationship Quality in the Malaysia Banking Sector", *Journal of Financial Services Marketing*, 11(2) 131-141
- [55]. Negi, R. (2009), "Determining Customer Satisfaction Through Perceived Service Quality: A Study of Ethiopian Mobile Users", *International Journal of Mobile Marketing*, 4 (1) 31-38.
- [56]. Ngugen, N and Leblanc, G. (2001), "Corporate Image and Corporate Reputation in Customer's Retention Decisions in Services", *Journal of Retailing and Consumer Services*, 8 (4) 227-236
- [57]. Nimako, S.G, Azumah, A.F, Donkor, F and Adu-Bobbey, V. (2010), Overall Customer Satisfaction in Ghana Mobile Telecommunication Network: Implication for Management and Policy, *ATDF Journal*, 7
- [58]. Nimako, S.G. (2012), Linking Quality Satisfaction and Behavioural Intentions in Ghana's Mobile Telecom Industry, *European Journal of Business and Management*, 4 (7) 1-18
- [59]. Nyeck, S., Morales, M., Ladhari, R., & Poin, F. (2002), 10 years of Service Quality measurement. Reviewing the use of the SERVQUAL instrument, *Cuadernos de Diffusion* 7 (3) 101-107 Retrieved July 8, 2015 from www.EBSCOhost.database
- [60]. Oliver, R.L (1993), "Cognitive, Affective and Attribute Bases of the Satisfaction Response, *Journal of Consumer Research*, 20 418-430
- [61]. Oliver, R.L (1999), "Whence Customer Loyalty?" *Journal of Marketing*, 63 (4), 33-44.
- [62]. Pyramid Research (2010), "The Impact of Mobile Services in Nigeria", [www.pyramidresearch.com/documents/IMPACT of mobile service in Nigeria. Pdf](http://www.pyramidresearch.com/documents/IMPACT%20of%20mobile%20service%20in%20Nigeria.pdf) Modified November 26 2013, Retrieved August 14th 2015.
- [63]. Portela, M.C.A.S and Thanassoulis, E (2005), "Profitability of a Sample of Portuguese Bank Branches and its Decomposition into Technical and Allocative Component, *European Journal of Operational Research* 162(3) 850-886
- [64]. Parasuraman, A. Zeithaml, V. A., and Berry, .L.L (1985); A Conceptual Model of Service Quality and its Implications for Future Research, *Journal of Marketing*, 49 (4) 41-50
- [65]. Parasuraman, A. Zeithaml, V. A and Berry, .L.L (1988), "Alternative Scales for Measuring Service Quality a Comparative Assessment Based on Psychometric and Diagnostic Criteria, *Journal of Retailing*, 27 (4) 424-437
- [66]. Rahhal, W. (2015), "The Effect of Service Quality Dimensions on Customer Satisfaction: An Empirical Investigation in Syrian Mobile Telecom Services, *International Journal of Business and Management Invention* (4) 81-89 www.ijbmi-org.
- [67]. Rust, R.T and Oliver, R.L (1994), "Service Quality: Insight and Managerial Implications from the Frontier Service Quality" in "New Directions in Theory and Practice", Roland T, Rust and R. L. Oliver (eds) Thousand Oaks LA: SAGE Publications, 1-99
- [68]. Sachdev, S.B and Verma, H.V (2002), Customer Expectation and Service Quality Dimensions Consistency: A Study of Selected Industries, *Journal of Management Research*, 43-52.
- [69]. Sachdev, S.B and Verma, H.V (2004), "Relative Importance of Service Quality Dimension: A Multi-Sectoral Study", *Journal of Services Research*, 4 (1)
- [70]. Siddique, M.W. A, Akhter, M. and Abdullah, A.M (2013), "Service Quality of Five Star Hotels in Bangladesh: An Empirical Assessment", *Asian Business Review*, 2 (2) 67-72
- [71]. Stark, K., and Stewart, B. (2013), "Building a High-Touch Business". Retrieved Online from [www.inc.com/karl-and-bill-building on 21st April, 2016](http://www.inc.com/karl-and-bill-building-on-21st-april-2016)

- [72]. Sureshchandar, G.S, Rajendran, C and Anantharaman, R.N (2002), "Determinants of Customer Perceived Service Quality: A Confirmatory Factor Analysis Approach; Journal of Service Marketing, 16 (1) 9-34
- [73]. Wang, Y. and Hing, Po Lo., (2002), "Service Quality, Customer Satisfaction and Behavioural Intentions: Evidence from China Telecom Industry, 4 (6) 50-60
- [74]. Winer, S. Ravi and Dhar, R (2011),"Marketing Mangement," 4th Edition, Upper Saddle River, New Jersey: Prentice Hall
- [75]. Yu, C.J., Wu, L. Chiao, Y and Tai, H. (2005), "Percieved Quality, Customer Satisfaction and Customer Loyalty: the Case of Lexus in Taiwan, Total Quality Management and Business Excellence, 16 (6) 707-719
- [76]. Zeithaml, A. Valarie (1988), "Consumer Perception of Price, Quality and Value: A Means-End Model and Synthesis of Evidence' Journal of Marketing, 52 (3) 2-22

Questionnaire

1. *Network Quality (Rahhal, 2015)*
 - a. *I can make calls when I am far from the mast of my primary service provider*
 - b. *There are no interruptions when I make calls*
 - c. *I do not experience background noise when I make calls*
 - d. *I do not suffer delays when I try to connect using my primary mobile service provider*
2. *Service Reliability (Agus et al, 2007)*
 - a. *The primary mobile service provider I use is dependable*
 - b. *My Primary mobile service provider keeps to their promises*
 - c. *My primary mobile service provider always give me accurate information*
 - d. *My primary mobile service provider's billing (charges) are accurate*
3. *Service Assurance (Caruana 2002)*
 - a. *My primary mobile service provider is capable in providing telecom services*
 - b. *My primary mobile service provider is sympathetic to me whenever I have a problem*
 - c. *I feel safe using my primary mobile service provider to transact business*
 - d. *I have confidence in my primary mobile service provider*
4. *Service Empathy (Bellini et al 2005)*
 - a. *My primary mobile service provider handles complains promptly*
 - b. *My primary mobile service provider always give me individualised attention*
 - c. *My primary mobile service usually operates convenient business hours*
 - d. *My Primary mobile service provider has my best interest at heart*
5. *Customer Satisfaction (Gi-Du and James 2004)*
 - a. *Overall, the monetary benefits provided by my primary mobile service provider is favourable*
 - b. *Overall, I am pleased with my primary mobile service provider*
 - c. *Overall, I am satisfied with my primary mobile service provider*
6. *Customer Loyalty (Ehigie 2006)*
 - a. *I recommend my primary mobile service provider to people who seek my advice*
 - b. *I encourage friends and relatives to patronize my primary mobile service provider*
 - c. *I intend to continue patronizing my primary mobile service provider*
 - d. *I intend to continue to patronizing my primary mobile service provider even if charges increases*