

Study on the Effects of Product and Service Quality on Customer Satisfaction (A Case Study of Mobile Telecommunication Network (MTN) Subscribers in Kaduna State)

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Abstracts

This study focuses on information and communication businesses, multimedia cooperation and cyber café operator Kaduna state. The sample consists of businesses that have been in operation for least five years. The data was collected through administration of questionnaire, the stratified sampling method was used due to the large population of MTN subscribers. The data collected was analyzed using descriptive analysis and correlation analysis. The result was presented with suggestions and comments. The presented validity and reliability of the data collection tool was confirmed after analysis of the data collected with statistical methods. The results were interpreted within the framework of the research problem. As a result of analysis conducted, statistical significant relationship exists between product and service quality and customer satisfaction.

Keywords: Product, Service Quality and Customer Satisfaction.

Background to the Study

There are several arguments sounding the product and service quality and customer satisfaction. One aspect of this argument is focused on the similarities and differences between the concept of product and service quality and satisfaction (Oliver 1993, Parasuraman et al. (1988) Zeithami et al. (1993). Bitner and Hubber (1994) defines satisfaction as the outcome of individual service transactions and the overall service quality is the customer's overall impression of the relative inferiority or superiority of the organization and its products or services.

Berry et al. (1985) present the second aspect of the argument sounding the efficacy of the exception- perception gap view of product and service quality.

The efficacy of the exception-perception gap view of product and service quality is similar to the disconfirmation theory found in the consumer behavior literature. It is believed that there is strong empirical evidence that product or service quality should be measured using performance-based measures (Babakus and Boller 1992). The third argument is centered on the model of how the perception gap arises and how managers and entrepreneurs can minimize or manage its effects (Gummesson and Granulose, 1987).

The fourth argument is on the definition and use of the zone of tolerance. Berry and Parasuraman, (1991) opines that the zone of tolerance is a range of service performance that a customer considered satisfactory. The importance of the zone of tolerance is that customer may accept variation within a may accept variation within a range of performance and any increase in performance within this area will only have a minimal effect on perception (Berry and Parasuraman 1991).

The fifth argument is based on the identification of the effects of product and service quality. The study is centered on the effects of product and service quality and customer satisfaction. The result of the study is of immense benefit to product and service practitioners and managers, since the knowledge of the effects of product and service quality is necessary in order to enable specification, measurement, control and improvement of customer perceived product or service quality.

Problem Statement

The rising use of Telecommunication has contributed to the economic development of Nigeria, despite the limited user satisfaction which affects the effectiveness of the product and service quality of communication. The economic contribution of the Telecommunication companies is enormous. According to Nigerian Communications Commission (NCC) report of February 2014, MTN active subscribers are 57,000,000 which constitute about 45% of mobile telecommunication subscribers in Nigeria that makes MTN the highest subscribers in Nigeria. MTN have the highest subscribers with mobile porting of three million six hundred and twenty nine thousand (3, 629, 000) NCC report February 2014.

Objectives

The main objective of the study is to analyze customer's satisfaction with product and service quality of MTN subscribers.

To achieve this main objective, three specific objectives were pursuit;

1. To access customer satisfaction on product and service quality.
2. To determine the significant effect of product and service quality on customer satisfaction.
3. To determine the significant relationship between customer satisfaction and product and service quality (correlation).

Research Hypothesis

Ho₁: There is no customer satisfaction on product and service delivery.

Ho₂: There is no significance effect on product and service quality on customer satisfaction.

The Significance of the Study

The significance of this research is to analyze customer satisfaction on product service and quality of the Mobile Telecommunication Network (MTN) sector of Nigeria economy. This is important in the present situation as it will provide all insight for service providers, business/marketing practitioners, SMEs, phone users and the society at large. It will further serve as basis of research for further analysis in telecommunication sector in Nigeria.

Literature Review

This section of the study presents the literature review by various researchers on the effects of product and service quality and customer satisfaction. The section is divided into four main sub-sections. The first section covers the important terms and concepts. The second covers the secondary research (theoretical framework) in line with the variables of the study. The third sub-section analyzes the relevant theories on product and service quality and customer satisfaction. The fourth sub-section covers past empirical studies carried in accordance with research model. The theoretical framework and empirical framework are presently separated in a matrix format.

Important Terms

Quality: Quality has been defined as fitness for use, the extent to which a product or service successfully serves the purpose of consumer customer service (Beverly et al. 2002).

Customer Service: Customer Service is one of the organizational processes which companies perform considering the growing competition and for attracting entrepreneurial opportunities; increasing profitably and better access to the mark customer service also increase customer satisfaction (Calif, 1987). Customer service increases product quantity, aid in giving competition advantage, profitability, opportunities and end up increasing sales and income (Goffin and Price 1996).

Product and Service Quality: according to Hanno and Christian (2009) firm are committed to attending leadership through business excellence within the sector of their operation as well as upholding values and integrity to improve the quality standards and customers' need in the society.

Customer Satisfaction: Bastos and gallego (2008) customer satisfaction has been defined in various ways by various school but the conceptualization, which appears to have achieved the widest acceptance, is that satisfy is a post choice evaluative judgment of a specific transaction. Kumar and shah (2004), Black and Parks (2003), Bell et al. (2005) and Dean (2007). On the other hand, customer satisfaction is the result of customer perception of the value received in a transaction or relationship where value equaled perceived service quality relative to price and customer acquisition cost (Hallowell (1996), Hackett et at (1990) and Blanchard and Galloway (1994).

Product and Service offered by MTN

Since inception, in 2004 when licensed was granted to MTN several product and service quality has been provided to its customers in Nigeria. Some of them are as presented in table 1.

Table1. Products and Services offered to the customer by and MTN telecommunication operator

Products	1.	Relations	Objectives 1. Online customer assistance center 2. Walk in customer assistance 3. Planning and customer manager 4. Billing and products operation
	2.	Voice; fixed PRI mobile	1. E1 PRI 2. Value plus, direct onnets, 3. Toll free, messenger 4. SMPP link short massages to peer to peer 5. Conference call 6. HY connect
Service	1.	Information system service	Objectives 1. To provide adequate infrastructure service 2. Availability of enterprise services 3. Provision of efficient JCT services 4. Service delivery channels
	2.	Project management	Effective internet monitory mechanism
	3.	Marketing strategy	1. To provide business intelligence 2. To provide data services 3. To provide consumer marketing technique 4. To provide channels and regional operations 5. To provide media 6. To provide mobile
Network group	1.	Objectives	
	2.	To provide network access	
	3.	Network planning	
	4.	Network implementation	
	5.	Network operations	
	6.	Technical training	
	7.	Network regional operations	
		Financial management and business optimal nation	
Finance	1.	Financial planning	
	2.	Treasury	
	3.	Revenue assurance and fraud prevention	
	4.	Finance operation	
	5.	Special projects.	

Theoretical Framework:

This section analyses the theories of customer satisfaction and product and service quality.

Theories of Customer Satisfaction

(Peter Drucker, 1973), to satisfy the customer is the mission and purpose of every business but for decades the gap between big companies and the customers who bought their products and services has grown only wider. The customer might be king, but his crown slipped. Now, technologies and practices are emerging that give firms an opportunity to rebuild an intimate sense of connection with customers to know them as though they were running a corner stone.

Consistency Theories: suggest that when the expectation and the actual product or service performance do not match, the customer will feel some degree of tension. In order to relieve the tension, the customer will make adjustments either in expectation or in their perception of the product or service actual performance.

Four theoretical approaches have been advanced under the consistency theory namely, Assimilation theory, Contrast theory, Assimilation-Contrast theory and negativity theory.

Author/theory	Theory/model premises	Critique
Consistency theory	Based on the premises that the exception and the actual product and service performance do not match the customer will fee some degree of tension	It is a combination of four theories of customer satisfaction
Assimilation theory E stinger (1957)	It is based on dissonance theory. Those customers make some kind of precognitive comparison between expectation about product and service and the perceived product and service performance.	As argued by payton et al (2003) the assimilation theory bas a number of short coming. A number of researchers have found that controlling for actual product or service performance can lead to positive relationship between expectation and satisfaction.
Contrast theory Hovland, Havey and sheriff (1987)	It is based on the tendency to modify the discrepancy between one own attitudes and the attitudes represented by opinion statements. It present and alternative view point of the consumer post -usage evaluation process than was presented in assimilation theory.	Heaving supported by several studies in the marketing literature It preaches customer reaction instead of reducing dissonance, the customer will magnify the difference between expectation and the performance of product or service
Production for the attests contrition on		

Author/theory	Theory/model premises	Critique
Assimilation-contrast theory Anderson (1973)	The Anderson theory of assimilation contrast theory is based on sheriff and Hovland discussion of assimilation and contrast effect. It suggest that if performance is within a customer latitude range of acceptance, even though it may fall short of expectation the discrepancy will be disregarded assimilation will operate and the performance will be deemed as acceptance. It performance falls within the latitude of rejection, contrast will prevail and the difference will be exaggerated, the product and service deemed un acceptable.	Centered on the bases that any disc repay of performance from expectations will disrupt the individual producing negativity energy. Affective feelings forward product or service will be inversely related to the magnitude of the discrepancy negativity theory It argues that Cardozo (1965) attempted at reconciling the too earlier theories was methodologically flawed
Negativity theory Carlsmith and Arosen(1963)	The theory premise suggest that city discrepancy of performance from expectation will disrupt the individual, producing negative energy. It has it foundation in the disconfirmation process. It state that when expecting sere	The attempted by various researcher to test this theory empirically have brought out mixed result.

ServiceQuality

Nair, Anand (2006), Reeves, Carol A. and David A. Bednar (1994)there are many classifications of services available with each focusing on additional distinctions in order to define strategic or operational guidelines for the service managers. It is difficult however, to build a consistent view of service quality from all the classifications. The determinant of service quality will vary from business to business, however, the limitations and shortcoming of these classifications could be explored through further studies.

Product Quality (Herbert Simon, 1916 2001), settling for what is good enough, rather the best that is possible. This may occur in any situation in which decision makers are trying to pursue more than one goal at a time. Classical economics and neo-classical economies assume that individuals, firms and governments try to achieve the optimum, best possible outcome from their decisions.

Empirical Review

The milestone of the quality movement is commonly related to the activities of some pioneers, known as the founders of the field. In this group one may find Joseph M. Juran (1964), Armand V. Feigenbaum (1956), Phillip B. Crosby (1979) and, specially, William E. Deming (1986; 1993) whose work was of great influence on the establishment and evolution of the quality movement.

As a fundamental element of product and service, Deming (1986) presented a famous 14 Points, a set of principles aimed at changing the American management style. Afterwards, Deming (1993) refined this philosophy with a System of Profound Knowledge, especially in the part called Appreciation for a System, which may be interpreted as an extension of the chain reaction concept throughout the whole organization.

Methodology

The study adopted a combination of quantitative survey and qualitative data analysis. A descriptive research design was applied based on the method of data collected as well as correlation based as speculated by Haranch et al. (2008).

The structured questionnaire contained section in which questions were asked in order to assess

customer satisfaction on product quality, product service quality and customer satisfaction. The questionnaire has four main sections, the section of service quality measured was carried out using Likert four point scale of strongly disagree (SD), disagree 4 (D), 3 agree(A) 2 strongly agree(SA), 1 the first section questions were related to personnel informations of respondents.

A total of 200 questionnaires were administered and 160 were fully completed and returned. The data analysis therefore was carried out based on the returned questionnaires. The data is based on the number of questionnaire that were returned and successfully completed by the respondents.

Results and Discussions

The data collected from the questionnaires are presented in tabular form. The data presented is based on the number of questionnaires that were successfully returned by the respondents.

Two hundred (200) questionnaires were distributed out of which One Hundred and Sixty (160) were duly filled and returned. The analysis is based on the four (4) point Likert scale.

Table 1: Reliability Statistics

Cronbach's Alpha	No. of questions	Remark
0.733	20	Reliable

Table 1 show that all the sections in the instrument (questionnaire) used for this research have Cronbach's Alpha coefficient more than 0.6, this implies that all the sections are reliable and therefore the questionnaire used for the research is reliable.To access customer satisfaction on product and service quality.

Table 2: Descriptive Analysis of Customer Satisfaction on Service Quality

S/N	Items	Valid	Mean	Sum	Remark
1.	Availability and reliability of services	160	2.32	372	Satisfactory
2.	How satisfied are you with MTN	160	2.14	385	Satisfactory
3.	Customer Care	160	10	90	Satisfactory
4.	Courtesy Call	160	2.41	386	Satisfactory
5.	Co st of Products and Services	160	2.32	371	Satisfactory
6.	Ability to provide solution	160	1.93	309	Satisfactory
7.	How do you rate ability to load and check balance	160	2.07	331	Satisfactory
8.	Product satisfaction	160	1.98	317	Satisfactory
9.	Accuracy in Communication	160	2.22	356	Satisfactory
10.	Access to service delivery	160	2.24	358	Satisfactory

Source: Authors' Field Survey

Result on table 2 shows that assessing customer satisfaction on service quality (the sample 160 used for the research are satisfy) with the services since the mean range indicated above are mostly satisfactory options.

Table 3: Mean Descriptive Analysis of Product Quality

S/N	Items	Valid	Mean	Sum	Remark
1.	Services provided by MTN meet your expectation	160	2.75	440	Agree
2.	The service received can be compared with ideal/desired set of services	160	2.51	401	Agree
3.	Service Inconsistency	160	2.28	364	Agree
4.	Do they show concern when you have network problem	160	2.40	384	Agree
5.	Always provide error call	160	2.36	378	Agree
6.	Time taking to respond to a call and time taking to resolve complaints are prompt	160	2.57	411	Agree
7.	When you call customer care service center, does it take time to respond to your call	160	2.54	407	Agree
8.	Accurate message delivery	160	2.20	352	Agree
9.	Ineffective Network Services	160	2.41	385	Agree
10.	MTN understand specific needs of customer as regard to effective services	157	2.55	400	Agree

Source: Author's Field Survey

Generally the respondent Agree on the services provided by MTN services in Nigeria since the most frequent part of the mean is 2 and above which indicates agree there by showing that the services provided are effective.

Research Hypothesis:

H₀₁: There is significant Effect of Product and Services Quality on Customers Satisfaction.

Table 4: ANOVA^b of regression used to determine the significance of the model
 (Y = $\beta_0 + \beta_1 x$)

S/N	Model	Sum of Squares	Df	Mean Squares	F	Sig. (p. value)
1.	Regression	36.035	1	36.035	6.320	0.00239a
2.	Residual	36.764	7	6.109		

a. Predictors: (Constant), Product and Service quality

b. Dependent variable: customer satisfaction

Table 5: Regression coefficients used in determining the significance of the constant and slope

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.279	1.743		1.881	.102
	Product and Service quality	0.401	.709	-.209	-.566	0.0289

a. Dependent Variable: customer satisfaction

Interpretation

The output shows that regression $y = \beta_0 + \beta_1 X_1$ is the results of fitting a linear model which describe customer Satisfaction = $3.279 + 0.4011434 * \text{Product and services quality}$.

Note:

Y = Dependent Variable = customer satisfaction (response variable)

β_0 = Constant

β_1 = Slope

X_1 = independent Variables = product and service quality (predictor variables, cost effect)

The result above shows that the model is fit for use signifying that a change in product and services quality will affect customer satisfaction significantly, since the P value 0.02 is < 0.05 level of significance.

Table 6: Model Summary

Model	R (Correlation)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.699 ^a	.48	.093	.33047

a. Predictors: (Constant), Product and Service quality

H₀₂: There is significant relationship between correlation the product service and quality and customer satisfaction

Interpretation

The R-Squared statistic indicates that the model as fitted explains 48% of the variability in customer Satisfaction. The correlation coefficient equals 0.699, indicating a relatively positive relationship between the variables. The result finally shows that there is significant relationship between customer satisfaction and product and service Quality.

Conclusion

In conclusion, the result of the study shows that some determinants of product and services quality are more predominant over others. It was discovered that the MTN subscribers are satisfied with the products and services quality. There is a significant effect of product and service quality on customer satisfaction, the change in product and service quality will improve customer satisfaction. There is a significant relationship between product and service quality (independent variables) and customer satisfaction (dependent variable).

“The customer's mind is still closed to us; it is black boxes that remain sealed. We can observe input to the box and the decision made by results, but we can never know the act of processing input truly happens”.

Recommendation

The findings of this study revealed that the quality of service and product provided by MTN have an influence on customer satisfaction.

The determinants of customer satisfaction vary from business type to another. Improvement

on product and service quality can engender customer satisfaction. It is therefore recommended that other telecommunication companies can improve through development of their products and services.

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APPENDIX I
(Questionnaire)

The research questionnaire is design to conduct research on customer's satisfaction on product service quality in Nigeria with reference to MTN subscribers.

Instruction:Tick appropriately [v]

SECTION A

General Information

1. Name of Respondent _____ (Optional)
2. Sex Male () Female ()
3. Educational level:
 Tertiary institution ()
 Secondary ()
 Primary ()
 Others ()

SECTION B

Customer Satisfaction

The following are options:

- Very satisfactory (VS) = 1
 Satisfactory (S) = 2
 Dissatisfactory (D) = 3
 Very dissatisfactory (VD) = 4

S/N	ITEMS	VS	S	D	VD
1	Availability and reliability of services				
2	How satisfied are you with MTN				
3	Customer Care				
4	Courtesy				
5	Cost of Product and services				
6	Ability to provide solution				
7	How do you rate Ability to load and check balance				
8	Product satisfaction				
9	Accuracy in communication				
10	Asses to service delivery				

SECTION C

Product and Service Quality

Options were as follows:

- Strongly agree (SA) = 1
 Agree (A) = 2
 Disagree (D) = 3
 Strongly Disagree (SD) = 4

S/N	ITEMS	SA	A	D	SD
1	Service Provided by MTN meet your Expectation				
2	The service received can be compare with ideal/desire set of services				
3	Service inconsistency				
4	Show concern When you have network problem				
5	Always Provide error call				
6	Time taking to respond to a call and the time taking to resolve complaints are prompt				
7	When you call Customer care service centre, does it take time to respond to you r call				
8	Accurate message delivery				
9	Ineffective network services				
10	MTN understand specific needs of customer as regard to effective services				