Investigating Customer Satisfaction Drive in the Scramble for GSM Brands in the Nigerian Telecommunications Industry

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Abstract
This study investigated factors determining customer satisfaction within the Nigerian telecommunication industry. Printing data were obtained through a cross sectional survey, using a well-structured, self-administered questionnaire to 100 subscribers of the five major GSM providers in Akwa Ibom State, Nigeria. The data were analyzed using descriptive and inferential statistics. Findings revealed that network coverage, call quality, promotional pack and customer service were the most robust predictors of customer satisfaction. Based on these findings, some implications were drawn for future research.

Keywords: GSM Brands, Customer Satisfaction

1. Introduction
The Nigerian telecommunication industry has drastically changed over the years owing to the introduction of mobile handsets, also known as GSM handsets. The rapid proliferation of mobile phones telephone along with technological revolution has created a whole new reformation for the industry. Nigeria’s telecommunication industry is fast expanding, with an estimated industry figure of about 92,006,608 subscribers (Nigerian Communication Commission, 2012). This growth rate has thrown the industry into a total competitive square attracting rivalry among GSM providers. As this industry is continually growing at an enormous rate in Nigeria, there is need to understand what drives customers satisfaction in this fast growing but highly competitive industry. The frequency with which consumers freely enter and leave one network for the other networks or own more than a single network is quite worrisome for industry players as attracting and retaining loyal customers is becoming difficult. Although some earlier studies had reported positive consumer attitude in the industry, most of the recent researchers have found that consumers generally in this industry, particularly in Nigeria are having negative attitude or dissatisfied with the operations of the industry (Coyles and Gokey, 2005; Long and Chun, 2004; Ennew and Binks, 2006; and Pfeifer, 2005).

In the Nigerian telecommunication industry, Adeleke, and Aminu (2012) observed that the resultant intense competition has caused the industry players to reduce tariff, introduce new and innovative products, engage in advertising blitz, increase sales promotional activities and promote improved customer care programmes in an effort to survive. Accordingly, Hanif, et.al (2010) found that consumers generally have formed some perception about the industry. Eshghi, Haughton and Topi (2007) observed that consumers are sceptical about call quality, customer service, network coverage and promotion in their choice of GSM network. Russel – Bennett, McColl-Kenedy and Coole (2007), identified price fairness, and network coverage as significant factors affecting customers satisfaction in this industry. Deng, et.al (2009) confirmed this when they stated that service quality and ability to change appropriate prices are the only factors affecting consumers satisfaction. Recently, Turel, et.al (2006) highlighted that network coverage and call quality are correlated with consumers overall satisfaction in the industry. Also, Gustafson, Johnson and Roos (2005) studied the factors affecting choice and patronage of GSM network brands and concluded that only customer service and service quality had significant impact on consumers attitude towards choice of GSM brands.

However, it must be observed here that so far, there are few empirical research investigating Nigerians attitude towards the telecommunication industry and the factors determining their satisfaction in general. Thus, investigating the basic determinants of customers satisfaction within the telecommunication industry is an extension of ongoing global research in the industry and may provide some useful insights about the future of this industry in Nigeria.

Therefore, the main purpose of this study is two folds namely:
(a) To identify the socio-economic and demographic characteristics of GSM subscribers in the study area.
(b) To investigate those factors that most likely predict customers satisfaction in the context of Nigerian telecommunication industry with a view to providing answers to the following research Questions:
(i) What are the socio-economic and demographic characteristics of GSM subscribers?

(ii) What are the factors that most likely predict customers satisfaction in this industry?

To this end, this study is organized as follows: the first part consist of introduction. In the second part a brief review of the literature is carried out. In part three, the methods of conducting the research is highlighted, while data analysis and findings are in part four of this study. The study closes in section five, with a conclusion and study implications.

2. Conceptual Framework

Satisfaction is a concept that has received very little managerial and scholarly attention in many marketing literature (Oliver, 1997; Westbrook and Oliver, 1991; Bollen, 1989 and Bolten and Drew, 1991).

Oliver (1997) viewed customer satisfaction as a judgment of a pleasurable level of consumption related fulfillment, including levels of under-fulfillment or over fulfillment. Bottenill (1987) defined satisfaction as a cognitive set comprising agency and pathways to reach goals. Thompson et.al (1989) regards satisfaction as an emotion that occurs when what one is expecting is good, signifying all that one longs for. Westbrook and Oliver (1991) equate satisfaction with expectations met. While Tse, and Wilson, (1988) and Oliver, (1999) defined customers satisfaction as an evaluation of the perceived discrepancy between prior expectations and the actual performance of the product. Accordingly, Gustafson, Johnson and Roos, (2005) sees customers satisfaction as actually how customer evaluate the ongoing performance of a product or service.

According to Kim, Park and Jeong, (2004), customer satisfaction is customers reaction to the state of satisfaction and consumer’s judgment of satisfaction level. Hence, Deng et.al (2009) noted that the ability of a firm to create a high level of satisfaction among its customers is critical to a firm’s growth and profitability. Therefore, in the telecommunication industry, customers satisfaction may be seen as a function of many factors, including:

(a) the level of customers service
(b) call rate or tariff charged
(c) promotional packs
(d) call quality
(e) network coverage or availability and
(f) cost of Network acquisition. Or switching cost

This is presented in the proposed framework as follows:

3. Literature Review

Several studies have found evidence that customer service is positively correlated with customer satisfaction (Deng, Lu, Wei and Zhang, 2009; Hennig-Thurau and Klee, 1997; Kim, Park and Jeong, 2004). It is expected that a higher level of customer service in a company or industry should have a positive impact on the demand for any type of product or service. A higher level of customer service increases loyalty, which also leads to satisfaction. Thus, Turel and Serenko (2006) found a positive association between customer service and the level of customer satisfaction. Ahn, Han and Lee (2006) provided evidence that customers get satisfied with a brand if they get all the needed customer services accumulated in the very brand.

The price of a product or service may also affect consumers and thus overall satisfaction. Soderlund and
Rosengren (2008) gave a useful discussion on the role of price in regulating consumption behaviour. Thus, price is a pervasive and very strong correlate of product or service consumption. Accordingly, Stanton, Michael and Bruce (1994) found that outrageous and arbitrary pricing are constraining consumer purchasing power, along a wide range of products or services. Of course, it is a known fact that price can reduce the overall volume of consumption vis-a-vis satisfaction with a product or service. Therefore, scholars like; Oliver (1999), Lommeruda and Sorgani (2003); Martin – Consuegra, Molina and Estebam (2007) had all discussed the relationship between price and firm performance, with customer satisfaction as a mediating factor. There is also considerable debate in the literature as to whether indeed promotion can influence consumers perception and attitude towards a brand. Without denying the possibility that promotion may contribute to higher or lower demand for a brand, most studies on promotion-brand correlate have found differential evidence in current and total product patronage to a firm’s promotional effort (Kotler and Armstrong, 2010).

Among the factors thought to be affecting patronage and satisfaction in the telecommunication industry is the call quality. For instance, multivariate studies of customer satisfaction with telecommunication industry in China have shown a consistently positive relationship between call quality and patronage of any network. This is because patronage is seen as a function of satisfaction with a brand of network. Njoku (2008) found that calls quality are more likely to influence usage and repeat business and that the impact of network patronage rises with the level of call quality experienced by customers.

Thus, Ibok (2008), Adetunji (2006) and Bisong (2006) have all agreed to the fact that strong call quality of any given network do affect customers satisfaction when controlling for such variables like; network availability, price and level of consumer awareness.

The distance to the market is again an important factor where it predicts higher or lower levels of patronage and satisfaction. Anyanwu (2007) had argued that the distance between the customer and the firm can cause serious problem for a large number of service firms.

Network coverage also known as distribution can affect overall customer satisfaction with a network provider. Thus, the proximity to the industry’s service provider appears to complement consumer’s psychological barrier to patronage. Consumers seem to be more satisfied where network coverage is available adequate and proximal to the customers (Ibok, 2008). Thus network coverage has been a growing challenge to a number of communication companies thus affecting their quality of service and consequently customer satisfaction.

In addition to the above, evolutionary changes in this industry have a direct effect on the patronage and satisfaction in this industry. Communication services are provided in response to socio-economic and environmental changes. Hence, the industry exists as a mechanism to alleviate communication barriers affecting individuals, corporate bodies and the society as a whole. Therefore, some studies on customer’s satisfaction have found evidence that a firm’s profitability and growth pattern depends to a large extent on the level of customers satisfaction.

Furthermore, some scholars have maintained that if an acquisition or switching cost of any product is outrageous or unjustifiably high, consumers will be reluctant to pay for it. Thus, scholars like Lovelock (1996; Anderson and Jacobson, 2000; Heskett and Sasser, 2010) have all discussed extensively that to a larger extent, customer satisfaction with a brand is a function of cost or price of the product. Therefore, the need for customer satisfaction has been recognised by many scholars. Eshghi et.al (2007) for instance, found a plethora of products or services whose consumption potential is tied to price. This suggests that consumers are willing to buy when the benefits as compared to the price are meaningful to them. Theoretically, positive relationships between price and the demand for any product vis-a-vis satisfaction with a brand have been well documented in extant
marketing literatures. Price is considered as a major determinant of consumption (Browne et. al, 2002). Thus, Turel and Serenko (2006) have found evidence that perceived price and perceived product value are the key factors affecting customers satisfaction with a brand. Hence, customers are satisfied when they feel that the price they pay corresponds with the quality of service they receive (Kotler and Armstrong, 2010, Kollman, 2000; Melody, 2001 and Varki and Colgate, 2001).

4. Methodology

This study adopted a cross-sectional survey and was restricted to cellular network service providers. In Akwa Ibom State, five mobile network companies – AIRTÉL, MTN, GLOBACOM, ETISALAT and VISAFONE are operating and all of them were used for the study. Data for the study were collected through a well-structured questionnaire carefully drafted for this purpose. The Questionnaire consisted of three parts: The first part was merely an introduction – which explained the purpose of the study. In the second part, some questions were designed to elicit responses on demographic characteristics of respondents. The third section had two parts and consisted of 20 statements to collect data regarding consumers’ attitude towards customer service provided by these companies, call rate, promotional packs, call quality and network coverage, and switching behaviour. The last part had questions bothering a customer satisfaction with the network providers in the industry. Each section was prepared for content validity. The Questionnaire statements were adapted from current marketing literatures and were modified to fit the content of the telecommunication industry. Thus, respondents were asked to indicate on a 5 point Likert scale, their degree of agreement or disagreement with the statements. The Questionnaire was pre-tested on 20 individuals mostly students of the University of Uyo and was revised on the basis of their comments.

The sample consisted of the customers of the 5 major GSM companies in Akwa Ibom State. Thus the sample size of 100 respondents was used, determined by convenience sampling. This sample was observed to have owned mobile phones from different network operators within Uyo metropolis. Pearson Product Moment Correlation and Multiple Regression Analysis were used to test the relationship between customer satisfaction with the various independent variables. Thus customer satisfaction in the telecommunication industry is estimated to be a function of customer service, call rate, promotional pack, call quality and network coverage and switching costs. The implicit function for the regression analysis is presented in equation (i).

\[
Y = f (X_1, X_2, X_3, X_4, X_5, X_6, e) . . . (i)
\]

Where

\[
Y = \text{Customer satisfaction}
\]

\[
X_1 = \text{Customer service}
\]

\[
X_2 = \text{Call Rate}
\]

\[
X_3 = \text{Promotional Packs}
\]

\[
X_4 = \text{Call Quality}
\]

\[
X_5 = \text{Network Coverage}
\]

\[
X_6 = \text{Network Acquisition or Switching costs.}
\]

\[
e = \text{Error term}
\]

The final equation is therefore presented in equation (ii)

\[
Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e.
\]

However, to test the hypotheses, Pearson’s Product Moment Correlation Analysis, Multivariate Analysis and Stepwise regression analysis were used. The statistical computer package SPSS 10.0 version was used in
analyzing the data.

The Cronbach’s Coefficient was used to get the internal consistency of the variables. Cronbach’s alphas were 0.0896 for customer satisfaction, 0.7152 for customer service, 0.8120 for call rate, 0.7247 for promotional packs, 0.8613 for call quality, 0.9132 for network coverage and 0.8765 for network switching or acquisition cost – suggesting that each instrument’s internal consistency was satisfactorily reliable. Moreso, a five point Likert Scale ranging from “least satisfied” to “most satisfied” was used to measure customer satisfaction level. Since the literature portrays that satisfaction determinants vary according to industry. The variables used were supported with literature review and were further modified to form the questionnaire.

4.1 Results and Discussion

This section presents the results and discussion of the study. The first sub-section is devoted to respondent’s socio-economic characteristics, while the other sub-section is devoted to factors influencing or affecting customer satisfaction. The result showed that most of the network subscribers (56.0%) are aged between 30–40 years. This could be regarded as middle or productive age. Only 8.0 percent were young that is between (20 – 29) years, while about 18% of them could be regarded as fairly old. Only about 27% of the respondents did not have any form of formal education. Most of them, 73% have one form of education or the other. Liu (2008) supported this claim when he stated that educational level of customers is one of the isolated variables related to acquisition and adoption of any service network. Moreso, the study revealed that majority of the network subscribers (89%) were males, while 11% were females. Although this result showed that male mostly patronize network providers, it does not suggest that females are not highly involved in telecommunication subscription as customers.

Lastly the result also showed that about three quarters (67.50%) of the respondents were married. Only about 15 percent were single while 89% were divorced or separated. The result of Pearson’s Product Moment Correlation Analysis used in testing the hypothesis is presented in table 1. The level of significance is 0.01 and since this hypothesis is a directional one, a one tailed test was used. Seeing from table 1, Pearson Correlation Coefficient suggests that there is a negative relationship between all the independent variables, except promotional packs and customer satisfaction. Hence, there is statistical evidence suggesting that there is a negative relationship between customer service, call rate, call quality, network coverage, network switching cost and customer satisfaction. Therefore, hypotheses of the above mentioned variables were accepted. The results here presented in table 1.

Insert table 1

The results as presented in table 1 for promotional pack rejects the hypothesis formulated. This means that the data does not supports the postulated negative relationship between customer satisfaction and promotional packs. The relationship between the two variables is positive but not significant.

A multivariate analysis was used to evaluate the joint effects of all the independent variables on the dependent variable. The result of regressing the six independent variables against the dependent variable customer satisfaction are shown in table 2.

Insert table 2

The result of the analysis indicates that the square of the multiple R is 0.378 indicating that the 37% of variances in customer satisfaction is explained by the six independent variables jointly. The F-value is 6.388 that is significant at P= 0.0005 suggesting that the six independent variables have significantly explained the 37 percent of the variance in customer satisfaction. The strength of influence of each of the independent variable was also tested, that is customer satisfaction was determined by the use of multiple regression coefficients of the independent variable. The influence of each independent variable is shown in table 3.

Insert table 3

As can be seen in table 3, network coverage had the strongest significant effect on customer satisfaction
with a standardized beta of -0.389, call rate had significant effect on satisfaction with a standard beta of -0.266. Promotional packs shows a high positive t-value further confirming the Pearson correlation results that there is no negative relationship between promotional packs and customer satisfaction.

A step wise regression analysis was also carried out to find out the extent of contribution of each variable to R square value or the total explanatory power of the regression model. The results of the stepwise regression is presented in table 4. Thus, table 4 shows that there are three prediction variables that could significantly contribute to the R-square value.

Insert table 4

The result of the stepwise multiple regression analysis indicates that network coverage had the highest beta value and contributed 23% to the variable in customer satisfaction. Promotional packs and call rate contributed about 6.3% and 6.4% respectively. While cost of network acquisition, call quality and customer service were not found contributing to the total explanatory power, thus suggesting that network coverage or availability, promotional packs or offers and call rate explained about 36% of the variation in customer satisfaction within the telecommunication industry.

Thus, network coverage or availability was found to be the strongest predictor of customer satisfaction in the industry with respect to various brands available in the market. This findings empirically confirm the theoretical arguments explained in the literature review as earlier conducted by previous scholars (see Long and Chun, 2004; Ennew and Binks, 2006; Adeleke and Amimu, 2012; and Roos, 2005).

5. Conclusion and Recommendations

Based on the findings of this study, we concluded that network coverage, call rate, promotional pack and call quality are the most robust predictors of customers satisfaction in the telecommunication industry. Suggesting that all these factors must be improved if customers satisfaction is to be maximized and loyalty achieved. Network coverage is the most important factor that directly influence customer satisfaction, suggesting that no network coverage, poor service quality or network failure are possible causes of dissatisfaction and therefore must be improved significantly for retention of valued customers.

As an emerging area of interest, telecommunication operators should see the framework as an additional insight and attempt to develop retention strategies through satisfaction programs like guarantee of service, money refund offers in case of network failure as this would enhance trust and commitment and reduce switching attitude among customers in the telecommunication industry. Moreover, the result of this study is instructive and has provided necessary insights to promote operations in the telecommunication industry. However, this study is limited to the fact that, it was based on a cross sectional survey data, with small simple size and few constructs, future research should explore other variables, using a larger data set to enhance generalization.

References


Oliver, R. J. (1997) “Processing of the Satisfaction Response in Consumption: A Suggested Framework and


### Table 1: Pearson correlation for all selected variables and customer satisfaction

<table>
<thead>
<tr>
<th>No.</th>
<th>Independent Variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customer Service</td>
<td>-0.315**</td>
</tr>
<tr>
<td>2</td>
<td>Call Rate</td>
<td>-0.400**</td>
</tr>
<tr>
<td>3</td>
<td>Promotional Racks</td>
<td>0.104</td>
</tr>
<tr>
<td>4</td>
<td>Call Quality</td>
<td>-0.442**</td>
</tr>
<tr>
<td>5</td>
<td>Network Coverage Costs</td>
<td>-0.486**</td>
</tr>
<tr>
<td>6</td>
<td>Network Switching</td>
<td>-0.122</td>
</tr>
</tbody>
</table>

Correlation is significant at the 0.01 level (one tailed test).

### Table 2: Aggregate Impact of all the variables on customer satisfaction.

<table>
<thead>
<tr>
<th>R</th>
<th>R2</th>
<th>Adjusted</th>
<th>Standard error of the estimate</th>
<th>F</th>
<th>Sig. F</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.615</td>
<td>0.378</td>
<td>0.319</td>
<td>2.676</td>
<td>6.388</td>
<td>0.0005</td>
</tr>
</tbody>
</table>
Table 3: Influence of the independent variables on customer satisfaction.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Std. Error</th>
<th>Standard Beta</th>
<th>t</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer service</td>
<td>0.124</td>
<td>-0.068</td>
<td>-0.535</td>
<td>0.595</td>
</tr>
<tr>
<td>Call Rate</td>
<td>0.102</td>
<td>-0.266</td>
<td>-2.218</td>
<td>0.030</td>
</tr>
<tr>
<td>Promotional Pack</td>
<td>0.124</td>
<td>0.330</td>
<td>2.935</td>
<td>0.005</td>
</tr>
<tr>
<td>Call Quality</td>
<td>0.104</td>
<td>-0.023</td>
<td>-0.145</td>
<td>0.886</td>
</tr>
<tr>
<td>Network Coverage</td>
<td>0.051</td>
<td>-0.389</td>
<td>-2.360</td>
<td>0.021</td>
</tr>
<tr>
<td>Network Switching cost</td>
<td>0.079</td>
<td>-0.136</td>
<td>-.1202</td>
<td>0.234</td>
</tr>
</tbody>
</table>

Table 4: stepwise multiple regression analysis: Predictions of customers satisfaction in the industry.

<table>
<thead>
<tr>
<th>Variable</th>
<th>R²</th>
<th>+ R²</th>
<th>Beta</th>
<th>Sig. t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network coverage</td>
<td>0.236</td>
<td></td>
<td>-0.452</td>
<td>.0005</td>
</tr>
<tr>
<td>Promotional Pack</td>
<td>0.299</td>
<td>0.063</td>
<td>0.298</td>
<td>0.005</td>
</tr>
<tr>
<td>Call Rate</td>
<td>0.363</td>
<td>0.064</td>
<td>-0.282</td>
<td>0.012</td>
</tr>
</tbody>
</table>

Figure 1: Schematic Framework of the Research Model.
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