The Effect of Service quality on customer loyalty development: Empirical Evidence from Nigerian Telecommunications Industry

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Abstract

In spite of the substantial growth and expansion recorded in the Nigeria telecommunications industry, "the quality of service is still perceived to be poor. This study examined how service quality can influence customer loyalty development in Nigerian Telecommunications Industry. The study used cross sectional survey method. Primary data were collected using questionnaire. Multistage sampling technique was used to survey 100 subscribers across the four major mobile telecom operators. Descriptive statistics like mean and standard deviation was employed in analyzing the data and hypotheses were tested using Chi-Square-test for independence. The result of the analysis revealed that the perception of service quality of telecom operators is not significantly poor. Loyalty status of postpaid subscribers is slight above average. Results of data analysis shows that perceptions of service quality of males and females subscribers are statistically significant. In addition, the study found out that male subscribers may not be expected to present more loyalty inclination to GSM operators than their female counterparts. Correspondingly, the study discovered statistically significant difference in service quality perception across the 6 age groups of such subscribers. The findings of this study concluded that the perception of post-paid subscribers about GSM telecommunication in Nigeria in terms of service quality offered by the operators is not significantly poor, and it has significant effect on customer loyalty. The study recommends therefore, that GSM operators should intensify effort to improve service quality in the areas they are performing poorly so as to improve attributes of service delivery in the entire service process and by extension fosters customer loyalty.

Keywords: Telecommunications, service quality, customer loyalty, GSM operators, Nigeria

1.1   Background to the Study

Nowadays, markets across all sectors are too congested than ever before with businesses competing with comparable products and services. Consequently, business organizations should strive to protect customers interest in the long-term interest to ensure enduring relationships in order to achieve enhanced profitability and competitiveness (Dick & Basu, 1994; Tripathi, 2009). No doubt, long-lasting customer relationships are valuable to firms because of improved sales and unceasing profits, lesser costs among other benefits (Choi & Chu, 2001; Pleshko & Helens, 1996). This scenario propels the call for companies to contemplate loyalty development of customers as an avenue for competitive advantage (Choi & Chu, 2001). As observed by Gambo (2013), research interest on service quality and customers loyalty in the telecom industry is growing because the delivery of high service quality is a prerequisite for the continued existence and competitiveness of telecom operators'. The deregulation and liberalization of the sector have remarkably changed and steered the appearance of foreign entrants into the telecommunications industry in Nigeria (Adebisi, 2011).

Service quality is the utmost significant factor and a vital differentiator between the competing operators (Ann, Itanyi & Wilfred, 2011). Also, delivering high quality services to subscribers can assist in meeting several requirements such as customer satisfaction, and loyalty among other numerous benefits associated with service quality (Nadiri & Hussain, 2005). Study has shown that companies are able to charge 8 per cent price differential for their product if they able to offers superior service (Gale, 1992), higher share of the market and profitability (Buzzell & Gale, 1987). Service quality is a concept that has inspired major debate among scholars due to problems arising from both its definition and measurement without any agreement (Parasuraman, Zeithmal, & Berry, 1991). One commonly used description of it is the degree to which a service meets customers' needs or expectations (Lewis, 2010). Service quality can be viewed as the difference between customers' expectations of service and perceived service. Thus, if expectations are higher than performance,it means that supposed quality is less than satisfactory which may prompt customer defection (Parasuraman, Zeithaml, & Berry, 1985.). On the other hand, if performance is higher than expected ,then service quality will be perceived as higher; leading to customer satisfaction (Parasuraman *et al*., 1991).

Sigala (2005) observes that service industries are experiencing significant developments, propelling a shift to customer loyalty than from customer acquisition. There is need for firms to satisfy customers needs so as to retain them for profitable growth (Choi & Chu, 2001). Hoffman, Kelly and Chung (2003) posit that organizations that successfully offer superior service quality on a sustainable basis will be able to build loyal customers base because there is connection linking service quality and customer loyalty. The significance of relationship building with customers is that it will result in repeat business

will encourages profitability and can also be a means of support to the organization (Zineldin & Philipson, 2007). Too, Souchon, and Thirkell (2001) averts that loyalty signifies customer commitment to repurchase or repatronise the preferred product, and service, notwithstanding those factors that can change the behavior such as situational and marketing efforts. However, considering the role of telecommunications sector to Nigeria's Gross Domestic Product (GDP), effort should be intensified to ensure how best to enlarge and include telecom as an essential component of the economic development agenda (Wojuade, 2006). No doubt, enhancement of service quality offered by the telecom operators is key to sustenance of customer loyalty.

1.2   Statement of the problem

Currently, the business terrains of virtually all forms of businesses are getting tougher. Businesses especially in the service industry have come to understand that new techniques must be explored in approaching customers to retain them for mutual benefits. It is therefore, important that companies foster customer's loyalty. The Nigerian telecommunication industry has experienced growing competition due to the deregulation policy of government (Wojuade, 2006; Adebisi 2011). The explosion of diverse telecommunication firm's brands in the country has led to aggressive competition and jostle for market-share. Of all the challenges faced by business organization, the process of formulating and implementing strategy and management of technological innovation (MTI) have been identified as one of the most demanding challenges (Al-Debi, Ramzi, & David, 2011; Ann, Itanyi, & Wilfred, 2012; Olamitunji, 2015).

Remarkably, GSM operators that failed to address the aforementioned problem will have difficulty in improving quality of service offered to subscribers. Thus, when competition is keen and the consumers are faced with numerous telecom service offering in the market, it becomes crucial for the manufacturers to appreciate the major factors that can draw the interest of buyers to his own service. These will form the foundation for improved service quality to retain customers' patronage. Another multifaceted aspect to the competitive tendency in the Nigerian telecommunication industry has to do with the effortlessness and frequency at which duplication of products and services takes place in the industry, multi-dimension nature of communication services, and similar or identical value added services. Notwithstanding the recognition of service quality in building loyal customer base; every business still at one point or the other experience challenges that inhibit them to deliver service satisfactorily (Oliver, 1997).

According to Bitner (1990), it has become practically unmanageable to guarantee 100% error-free service owing to the unique features of services. Consequently, service delivery failure constitutes a momentous difficult task

for all service oriented organizations. Extant studies have established that failures of products and services can result to countless detrimental cost for organizations. Service failure in telecom industry manifest in drop calls, poor network quality, interconnectivity problem, overbilling among others. Folkes *et al* (1987) aver that in the midst of these adverse outcomes are customer rage, displeasure (Tsiros, Mittal, & Ross, 2004), complaint behaviours (Folkes, Susan, & John, 1987). Nonetheless, customer loyalty is not only a complex phenomenon but very dynamic and does not materialize on its own, hence, there are numerous variables that could upset customer loyalty status. Although a number of researchers have examined topical issue related Nigeria's telecommunication industry (Oyeniyi, & Abiodun, 2008; Adebisi, 2011; Olatokun, & Nwonne, 2012;   Ojenike, 2012; Emmanuel, Sulaimon, & Bilqis, 2013; David, Abina, & Oyeniran, 2015) but little research attention was paid to service quality.

A review of extant studies exposed that in Nigeria, substantial figure of extant studies on service quality are fairly focused on banks health services, and airline industry (Clemes, Ozanne & Lawrenson, 2001; Oyewole, 2001; Michael, Christopher, Tzu-Hui, & Michelle, 2008; Gambo, 2013; Moguluwa & Ode, 2013). In other words researchers have not paid adequate attention to service quality perceptions in the Nigeria telecommunications industry. Correspondingly, researchers have paid limited attention on how socio-demographic variables like gender and age groups influence perception of service quality in the context of telecommunications industry in Nigeria. No doubt key socio-demographic variables like gender and age group among others are the major basis for the segmentation of market and clients profiling (Skogland & Siquaw 2004; Armstrong & Kotler 2005; Robin & Rhea 2007). Indeed, understanding the effect of key socio-demographics variables affecting service quality of the customer perceptions is important and performs a crucial role in service delivery (Lazer, 1994).

1.3   Objectives of the Study
The major objective of this resaerch is to critically examine the influence of service quality on loyalty formation of clients in Nigerian Telecommunication sector. Particular objectives of the study are :
   1. To evaluate subscribers perception of service quality displayed by GSM telecommunication operators in Nigeria.
   2. To study if male and female subscribers vary in regards to perceptions of the quality of service offered by GSM telecommunication providers in Nigeria.
   3. Examine whether males subscribers are more likely to display loyalty tendency to GSM telecommunication operators in Nigeria than their female counterparts.

4. Evaluate whether the perception of service quality offered by GSM telecommunication operators in Nigeria varies across the age group of subscribers.

1.4   Research Questions
1. How subscribers do perceive the service quality offered by GSM telecommunication operators in Nigeria?
2. What differences exist in perception of quality of service between male or female subscriber?
3. How can male subscribers more likely to display loyalty tendency to GSM telecommunication operators in Nigeria than their female counterparts?
4. What differences exist in the perception of service quality delivered by GSM telecommunication operators in Nigeria across subscribers' age groups?

1.5   Research Hypotheses
1. Service quality perception offered by GSM telecommunication operators in Nigeria is significantly poor.
2. Males and females subscribers do not significantly differ in regards to perceptions of the quality of service offered by GSM telecommunication operators in Nigeria.
3. Male subscribers will not significantly display more loyalty tendency to GSM telecommunication operators in Nigeria than their female counterparts.
4. There is no significance difference in the perception of service quality of GSM telecommunication operators in Nigeria across subscribers' age groups.

2.0   Theoretical and Literature Review
2.1   SERVQUAL Theory
This study is underpinned by SEVQUAL . The gap-model of the SERVQUAL was conceived by Parasuraman *et al*., (1985) and thereafter modified by Parasuraman, Zeithaml, and Berry (1988). SERVQUAL model compares the perception of performance (P) to expectation (E). The SERVQUAL model (performance minus expectation) focuses on the five 'gaps' (depicted in figure 1) affecting the delivery of quality of service. The above mentioned writers asserted that the entire perception of quality were in contradiction of the expectation of the customer and their assessment of a service. The SERVQUAL theory is depicted in figure 1 below. SERVQUAL model indicates that service quality is the measure of the gaps identified between customers' anticipation of the services and the actual perception of its performance (Parasuraman *et al*., 1988). SERVQUAL is predicated on five models of service quality that is, 'reliability' which connotes the service

supplier's capability to perform the promised service both consistently and precisely; 'responsiveness' as the willingness of the service provider's to assist customers and to offer timely service; 'tangibles' implies the physical area of service delivery such as physical facilities, equipment, personnel, among others; 'assurance' discusses the understanding and courteousness of employees including their capability to express trust, self-confidence, and 'empathy' which can be referred to as considerate and customized attention which the customer gets during the service delivery (Parasuraman *et al*., 1988).

Fig. 1: SERVQUAL - GAP Model
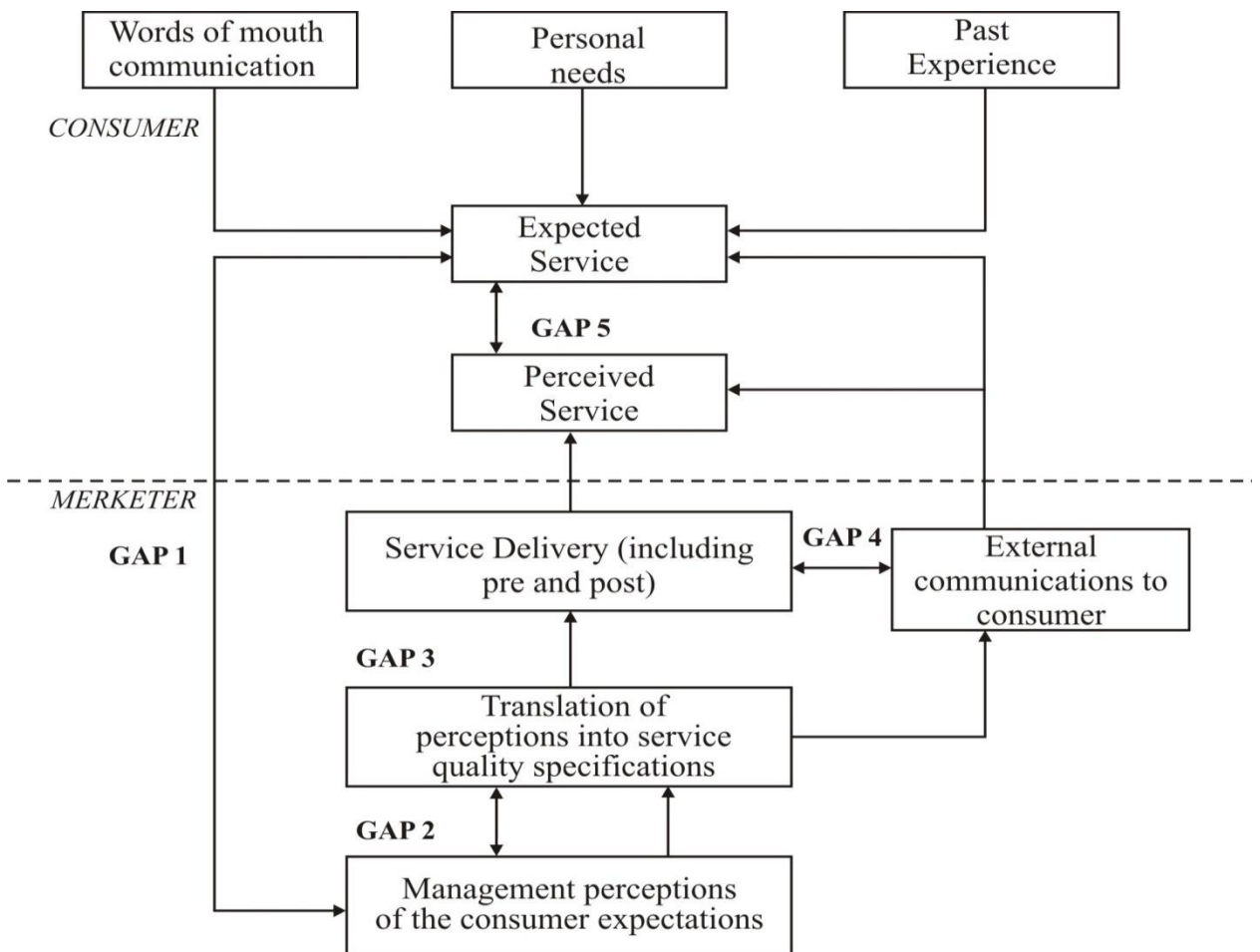
Source: Parasuraman et al., 1988

The focus of the five service quality gaps are discussed as follows:

Gap 1: this demonstrates the gap that occurs between the expectations of the customer and how management observed the expectations of the customer.

Gap 2: this indicates the gap between the perception of management towards the expectations of customer and the service quality stipulation of the organization.

Gap 3: this signifies the gap that exists between service delivery and quality service specification.

Gap 4: this represents external communication gap and service delivery.

Gap 5: this illustrates the gap that exists between perceived and expected services quality.

2.2   Defining and Measuring Service Quality

Literature is replete with numerous definitions of service quality. It is conceptualized as customer's feelings or view about the inferiority-superiority of services offered by service providers (Bitner, 1990). Service quality in marketing literature is assumed as customer's overall approach towards firm's product service and or the company (Parasuraman *et al.*, 1988). From the above definition, one of theme highlighted in service quality is an attitude established from earlier experience with a service firm (Bitner, 1990; Parasuraman *et al.*, 1985, 1988). According to Groonroos (1990), a number of literatures have labeled the outcome of quality as what is received by the customer and the quality process involved in the delivery of service. However, quality outcome is usually problematic for service receiver to appraise due to the tendency for services to have more experience and credence tenets (Rushton, & Carson, 1989). Therefore, quality of service assessment is not contingent exclusively on the service quality outcome which involves appraisal of the service delivery process. The conceptualization of quality of service varies, but the definitions are all expressed from the perception of the customers thus, what is perceived by the customers is vital to service quality evaluation (Lewis, 2010).

2.3   An overview of Customer loyalty

The notion "customer loyalty" is a multifaceted phenomenon (Chegini, 2010). Marketing literature has studied customer loyalty extensively with the central objective of understanding customers' needs and wants to foster repeat patronage (Sheth & Desmukh, 2004). In service marketing, loyalty has been viewed as a form of "observed behaviors" (Bloemer, Ruyter, & Pascal, 1999). Loyalty narrates the degree of choice and repeat patronage of a products or services in the same category (Bloemer, 1999; Ostrowski, O'Brien & Gordon, 1993). Consumers' loyalty is an intention or behavior to frequently acquire particular services or products (Hawkins, Best & Coney, 2004). Loyalty is viewed as those groups of customers who passionately desire to re-buy a product/service repeatedly (Oliver, 1997).

Reichheld's (2006) definition used different approach in defining loyalty. He defined customer loyalty as the inclination to make a personal sacrifice or other commitment to strengthen business relationship. Chegini (2010) describes loyalty as a form of positive behaviour such as re-purchase, sustenance including purchase decision that can encourage prospective customers. The customer loyalty can be viewed as a condition whereby consumer usually patronizes firm's products or consumes its services recurrently above competing producers or service providers. Loyalty is described as the viewpoint of customers in terms of retention (Gustafsson *et al*., 2005). Soderlund (2006) explicates some of the forms of customer loyalty such as: repeat patronage, intents to have business relationship with the similar salesperson continuously, inclination for a particular vendor and word-of-mouth communication that is positive. Reichheld (2006) reviews the benefits deriving from a loyal customer base as follows: lesser costs of acquiring customers through exchange of smaller customer, frequent purchase at a premium price, optimistic word-of-mouth concerning the organization, loyal customer has capability to defend against marketing efforts of competitors, and reducing serving costs.

2.4   Dimensions of Customer Loyalty

Customer's loyalty is multidimensional (Keiningham, Cooil, Aksoy, Andreassen & Weiner, 2007). Loyalty measurements are classified into behavioral, attitudinal and the composite approach (Jacoby & Chestnut, 1978). The action taken by customers is founded on their final purchase decision, and this has been classssified as purchase structure, quantity purchased, and likelihood of purchase (Chegini, 2010). Consequently, Park and Kim (2000) as cited in Mascarenhas, Kesavan and Bernacchi, (2006), loyalty behavior is the extent to which a consumer consumes a service or buys a program frequently and is reflected through purchase and behavior in usage. Reviewing loyalty from this perspective, behavior is regarded as an absolute expression of brand loyalty and not mere thoughts (Caruana, 2002). In the opinion of Fournier and Yao (1997), the attitude approach, however, views the loyslty of customer as an attitude. In a simple words as maintained by Park and Kim (2000) and Mascarenhas, Kesavan and Bernacchi (2006), attitudinal loyalty refers to the level of customer's psychological attachment to some key firm or brand, and is often conveyed as a continous long-standing relationship to a brand.

However, repeat purchase only is not enough pointer to loyalty because an unsatisfied customer may constantly switch brands and denoted as brand inertia (Jacoby & Kyner, 1973; Kuusik, 2007; Reichheld, 2006). In th opinion of Kuusik (2007), one of the explanations to this is that customers may feel the substitutes are bad as the brand being consumed or as a result of paucity of information about eye-catching features of the alternative brands. By the 1990's, the academic community welcome the integration of both behavioural

and attitudinal loyalty (Baker & Crompton, 2000). One of the first seminal studies to consider a composite view of loyalty was conducted by Jacoby and Kyner (1973). Composite loyalty promotes the combination of behavioural measures to handle and attend to some of the inadequacies related with adopting behavioural measures alone (Dick & Basu, 1994). As expressed by Olson and Jacoby (1971), customer loyalty is a process in which numerous substitute brands are expressively compared and appraised using some criteria as a basis of selection.

2.5   Antecedents of Customer Loyalty

Consumer loyalty is an important and valuable asset to every organization in the face of competition (Dick & Basu, 1994). Consequently, loyalty is considered as a key driving force in a market that is highly competitive (Oliver, 1997). Understanding the factors that propel customer loyalty is very important and will permit managers to draw attention to the major motivating factors that can enhance customer retention and post-purchase. Antecedents or causes of customer loyalty have been examined by some scholars (Oliver, 1997; Cronin, Brady, & Hult, 2000). Findings from this research group have demonstrated that satisfaction (Cronin *et al*., 2000), quality/performance (Baker & Crompton, 2000), and a host of numerous other variables such as firm image, financial performance among others are good predictors of customer loyalty.

2.6   Linking Service Quality to Customer Loyalty

Literature has shown that the association between service quality and customer loyalty is significant . Service quality has a direct effect on how customers assess firm's product or service and his/her intentions to patronise the company in subsequent transactions (Kuo, Wu & Deng, 2009). According to Lai (2004), there is an affirmative connection between the quality of the service and future purchase intentions of customer. Bitner (1990) also suggested that positive word-of-mouth becomes more prevalent with improved service quality. Thus, to some degree, one can assert that the major determinant for survival and long existence of firms is the readiness of customer to retain and increase their customership and loyalty, though there are situations where loyalty may not translate to improved profitability (Reichheld, 2006; Tim, Lerzan, Alexander, & Luke, 2009)

2.7   An overview of Nigeria Telecommunications Industry

The telecom sector in Nigeria presents countless opportunities in terms its contribution to nations' Gross Domestic Product (GDP), and the significant growth of the telecom sector has encourage chains of reform and policy intervention to further promote and develop the sector (Al-Debi *et al*., 2011). Likewise, telecommunication sector has advanced into diversified functions to sustain the growth of technological expansion for enhanced services owing to

the pace of industrialization and information age (Al-Debi *et al*., 2011). As stated by Aigbinode (2008), Nigeria Communication Commission- NCC in March 2008 gave license to Etisalat another GSM operator. Consequently, the opening up of the telecom sector has brought about new vistas of business opportunities as well as challenges for the telecom operators to remain competitive (Aigbinode, 2008). According to National Bureau of Statistics (2016), the number of subscribers has increased swiftly over the past years, and between December 2014 and December 2015, the figure had been improved by 11.97 million, or 8.61%; a little lower growth rate than in previous years, perhaps as market penetration is considerably high which gives less opportunity for large expansion. The growth in the number of subscribers could be linked to growing teledensity in Nigeria (National Bureau of Statistics, 2016). The yearly increase in GSM subscriptions from December 2014 to December 2015 was 8.78% slightly higher than the growth in the overall number of subscriptions, outside the CDMA and Fixed Wireless Line (National Bureau of Statistics, 2016). However, even with the growth of the telecommunication industry and enhanced services, more is still expected in telephone service delivery to rural areas and small towns in Nigeria, and the high cost of voice and data service compared to other African counterparts still needs serious attention (Lagos Business School, 2016).

3.0   Research Methods
3.1   Research design
A cross sectional survey research design was adopted in this study using quantitative approach because it is suitable for prevalent issue like assessing the perception of post-paid subscribers of telecommunication (GSM) and how the quality service of this industry in Nigeria has effect on customer loyalty. This type of research design tends to have well representation of the respondents rather than small group; it does not have validation issue, and is good for descriptive analysis (Cooper & Schindler, 2003).

3.2   Population, Sample size and Sampling technique
The population of this study consists of all post paid subscribers on the network of the four selected GSM operators in Nigeria (MTN Telecommunications Limited, Airtel Nigeria, Glo Mobile Telecommunication and Etisalat Nigeria). A targeted sample size of one hundred post paid subscribers (25 from each GSM operators) was selected for the purpose of this study. The sampling technique employed in this study was multi-stage in nature using non-probability sampling techniques. The choice of non-probability approach was due to the fact that none of the GSM operators is willing to release the lists of subscribers on their platform. However, since post-paid subscribers of GSM service in Nigeria are hard to reach, the copies of questionnaire were distributed to the respondents through referral from the existing and identified postpaid subscribers.

Accordingly, the first stage was to use purposive sampling technique in selecting the respondents this is so because the study is interested in loyalty which can be more discerns and investigated from the perspective of postpaid GSM subscribers (because being on postpaid imply that the subscribers make financial commitment for a service they have not been used or enjoyed). Therefore their selection was based on the researcher conviction that postpaid subscribers are more likely to display loyalty tendencies than pay as you go subscribers. Secondly, quota sampling technique was used to survey 25 postpaid GSM subscribers on the network of the four GSM operators. Thirdly, convenience sampling was used to administer questionnaire on those available respondents and willing to participate in the survey. The surveyed respondents cut across male, female and different age brackets among others socio-demographic factors.

3.3   Data Collection Instrument and Procedure for Administration
The data collection instrument used in this research study was questionnaire. The questionnaire was developed, using close-scaled response structure. This study adapted the questionnaire items that were previously validated by empirical research. Given that most of the items in the questionnaire are targeted to measure respondents perceptions and assessments of the study variables, hence, five point Likert scales were used ranging from 'strongly agree' 'Agree', Undecided, 'Disagree' and 'Strongly Disagree'. According to Glenn (2007), Likert scale is probably the most widely used response scale in survey research.

3.4   Validity and Reliability of the Survey Instrument
Content validity testing was used for the questionnaire of this study by seeking the opinion of experts and scholars in the University of Lagos, while the reliability testing was carried out through Cronbach's Alpha as illustrated in Table 1.

Table 1:   Test of reliability of the Study Variables

Variable/Sub-constructs	No of items	Coefficient (Cronbach's Alpha)
Service quality	5	.757
Customer loyalty	5	.728

Source: Field Survey, 2016

The reliability of a 4 item-scale was examined using the cronbach's alpha to show the coefficient of internal consistency as shown in the Table 1. Burns and Burns (2008) infers that a cronbach alpha of 0.8 or above reflects as highly acceptable for assuming homogeneity of items, and acceptability limit of 0.7. Therefore, all scales used were internally consistent.

4.2:   Data Presentation and Analysis

Table 2: *Demographic Characteristics of Respondents (n = 76)*

Variables	Frequency	Percentage (%)
Gender		
Male	52	68.4
Female	24	31.6
Age Group (years)		
18 – 25	2	2.6
26 – 25	7	9.2
36 – 45	23	30.3
46 – 55	27	35.5
56 – 65	11	14.5
66 and above	6	7.9
Marital status		
Single	10	13.2
Married	66	86.8
Educational Qualification		
Diploma or equivqlent	14	18.4
Bachelor Degree or equivalent	45	59.2
Msc/MBA or equivalent	16	21.1
Doctorate Degree	1	1.3
Occupation		
Government employee	6	7.9
Self employed	36	47.4
Employees (Private Firms)	20	26.3
Professional/Related	9	11.8
Retired	5	6.6
Monthly Income		
< N 500,000	3	3.9
N 501, 000 to N 1,000,000	26	34.2
N 1,001, 000 to N 2,000,000	38	50.0
N 2, 001,000 & above	9	11.8

Source: Field Survey, 2016

As shown in Table 2, the sample of 76 telecom subscribers constitute 52 male respondents (68.42%) and 24(31.6) females. Respondents between the age of 18 and 25 years had 2.6%, while 7 respondents represent (9.2%) were between the age of 26 to 35 years, 23 respondents represent (30.3%) were between the age of 36-45 years, 27 respondents represent (35.5%) were between 46-55 years, 11 respondents represent (14.5%) were between 56-65 years, and 6 respondents represent (7.9%) were between 66 years and above. Distribution of response of respondents based on marital status showed that 86.8% of the respondents that represent majority have married while the remaining 13.2% were still single. Regarding the level of education, Table 2 signifies that 14 respondents represent (18.4%) were diploma holders or equivalent, 45 respondents represent (59.2%) have attained B.Sc. or equivalent, 16 respondents represent (21.1%) have acquired M.Sc./MBA Degree or equivalent, as 1 respondent represents (1.32%) was a holder of a Doctorate Degree.

As for occupation, 47.4% of the respondents which represent the highest were self-employed, 26.32% were employees of private companies, and the remaining respondents represent those that were professional (11.8%) and retirees (6.6%). The distribution of respondents based on level of income showed average income of less than N500,000 (3.9%) monthly between N501, 000 and N 1,000,000 monthly (34.2%), 38(50.0%) earn between N1,001,000 and N2,000,000 while the remaining 9 respondents represent 11.8% receive between N2,001,000 and above.

Table 3:   Respondents Mobile Usage (n = 76)

Variables	Frequency	Percentage (%)
No of Telecom Services		
One	30	39.5
Two	36	47.4
Three	10	13.2
Main Telecom Services		
MTN	30	39.5
Airtel	24	31.6
Glo	14	18.4
Etisalat	8	10.5
Duration of patronage		
Less than 1 year	4	5.3
2 – 4 years	15	19.7
5 – 6 years	23	30.3
More than 7 years	24	44.7
Duration on postpaid		
Less than 1 year	6	7.9
2 – 4 years	14	18.4
5 – 6 years	20	26.3
More than 7 years	38	47.4

Source: Field Survey, 2016

Table 3 shows that among the 76 telecom subscribers 39.5% are using only one telecom operator, 36 respondents represent (47.4%) were using two telecom operators while 10 respondents represent (13.2%) were using three operators. The largest percentage of the respondents (39.5%) were on MTN line, follow by Airtel (31.6%) and (18.4%) and (10.5%) on Glo and Etisalat lines respectively. The large majority of the respondents have been using their major line for more than 7 years (44.7%), follow by those between 5 - 6 years (30.3%). 19.7% have been using the line between 2 – 4 years, while the remaining respondents surveyed (5.3%) have been using the line in less than 1 year. As regard the number of years respondents have been on postpaid tariff plan, a large percentage of the respondents (47.4%) have been on the plan for more than 7 years, follow by those between 5 – 6 years (26.3%). 18.4% and 7.9% have been on the tariff plan between 2 – 4 years and less than one year respectively.

Table 4: Descriptive Statistics of Service quality Constructs/service quality and Customer Loyalty

Variables	Minimum	Maximum	Mean	Standard Deviation
Reliability	1	3	2.86	.585
Responsiveness	1	4	2.97	.678
Assurance	2	4	3.12	.524
Tangible	1	4	2.67	.610
Empathy	1	4	2.75	.661
Service Quality	3	5	3.58	.382
Customer loyalty	2	3	2.53	.308

5-Point Likert Scale
Source: Field Survey, 2016.

The Table 4 showed the mean scores for the service quality constructs from 2.67 to 3.12 and standard deviations varied between 0.524 and 0.678. The mean and standard deviation values of service quality are 3.58 and 0.382, while the mean and standard deviation of customer loyalty is 2.53 and 0.308. The above result indicates that service quality has a moderate effect on the perception of post-paid subscribers of GSM in terms of their loyalty in Nigeria. From the above finding, the hypothesis which state that perceived service quality of GSM Telecommunications operators is significantly did not

support the study findings.

4.1   Testing of Hypotheses

Hypothesis One

Perceptions of quality service delivered by GSM telecommunication operators in Nigeria are significantly poor.

Table 5: NPar Tests-Chi-Square Test

	Observed N	Expected N	Residual
Strongly Disagree	7	19.0	-12.0
Disagree	6	19.0	-13.0
Neutral	60	19.0	41.0
Agree	3	19.0	-16.0
Total	76		
Test Statistics			
Chi-Square			118.421[a]
Df			3
Asymp. Sig.			.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 19.0.
Source: Author's Computation

Table 5 shows that *chi-square* test of independence was employed to examine if there exist a statistical significant connection among two variables (service quality and the perception of GSM post-paid subscribers). Thus, the chi-square (χ^2) test value (significance) here is 118.421 and the tab value (significance) is 7.815. Since calculated value (Cal value) is greater than the tabulated value (Tab value) at 0.05 (representing the level of significance) it shows that H_1 ought to be accepted. Accepting H_1 indicates that perception of quality delivered by GSM telecommunication operators in Nigeria is significantly not poor that is, reliable based on the finding of this study.

Hypotheses Two
Male and female subscribers do not significantly differ in terms of service quality perceptions offered by GSM telecommunication operators in Nigeria.

Table 6: NPar Tests-Chi-Square Test

	Observed N	Expected N	Residual
Neutral	36	25.3	10.7
Agree	35	25.3	9.7
Strongly Agree	5	25.3	-20.3
Total	76		
Test Statistics			
Chi-Square			24.500[a]
Df			2
Asymp. Sig.			.000

a. 0 cells (0.0%) have expected frequencies below 5, while the least expected
cell frequency shows 25.3.
Source: Author's Computation

Table 6 reveals the chi-square (χ^2) test value (significance) which is 24.500, while the tab value is 5.991 which shows that is significant. Since cal value is higher than the tab value at 0.05 which indicates the level of significance. This reveals that Ho should be rejected and H_1 should be accepted. Accepting alternative hypothesis means that male and female subscribers significantly differ in their perceptions of the quality of service offered by GSM telecommunication operators in Nigeria.

Hypothesis Three
Males' subscribers will not significantly display more loyalty tendency to GSM telecommunication operators in Nigeria than their female counterparts.

Table 7: NPar Tests-Chi-Square Test

	Observed N	Expected N	Residual
Strongly Disagree	2	25.3	-23.3
Disagree	7	25.3	-18.3
Neutral	67	25.3	41.7
Total	76		
Test Statistics			
Chi-Square			103.289[a]
Df			2
Asymp. Sig.			.000

a. 0 cells (0.0%) have expected frequencies is below 5, while the least expected cell
frequency is 25.3.
Source: Author's Computation

The chi-square (χ^2) test value (significance) in Table 7 is 103.289, while the tab value (significance) is 5.991. Since cal value is above the tab value at 0.05 (representing the level of significance) showing the rejection of Ho and H_1 to be accepted. Accepting H_1 means that males' subscribers will significantly

display more loyalty tendency to GSM telecommunication operators in Nigeria than their females' counterparts. This implies that male subscribers are likely to display more loyalty tendency to GSM operators than their female counterparts.

Hypothesis Four

There is no significance difference in the perception of service quality GSM telecommunication operators in Nigeria across the age.

Table 8: NPar Tests - Chi-Square Test

	Observed N	Expected N	Residual
18 to25 years	2	12.7	-10.7
26 to35 years	7	12.7	-5.7
36 to 45 years	23	12.7	10.3
46 to 55 years	27	12.7	14.3
56 to 65 years	11	12.7	-1.7
66 years & above	6	12.7	-6.7
Total	76		
Test Statistics			
Chi-Square			39.895[a]
Df			5
Asymp. Sig.			.000

a. 0 cells (0.0%) have expected frequencies below 5, while the least expected cell frequency is 12.7.

Source: Author's Computation

The statistical result from Chi-square test revealed that the difference in the perceptions of service quality across the 6 age groups (Gp1 n= 2; 18 to 25 years Gp2 n=7; 26 to35 years Gp3 n=23 36 to 45 years Gp 4 n=27 46 to 55 years Gp 5 n=11 56 to 65 years and Gp6 n=6 66 years and above is not significant. The chi-square (χ^2) test value (significance) is 39.895, while the tab value is 11.070. Since cal value is higher than the tab value at 0.05 which shows that Ho should be rejected and H_1 should be accepted. Accepting alternative hypothesis (H_1) reveals a significant difference in the perception of service quality GSM telecommunication operators in Nigeria across the age.

Table 9:   Summary of Hypotheses Testing

Hypotheses	Description of Hypotheses	Remarks
Ho_1	Perception of service quality of GSM operators is significantly poor.	**Not supported {Rejected}**
Ho_2	Male and female subscribers significantly differ in terms of perceptions of service quality offered by GSM Telecommunications operators in Nigeria.	**Not supported {Rejected}**
Ho_3	Male subscribers are more likely to display loyalty tendency to GSM Telecommunications operators in Nigeria than their female counterparts.	**Not supported {Rejected}**
Ho_4	Perception of service quality of GSM Telecommunications operators in Nigeria is not significantly different across subscribers' age groups.	**Not supported {Rejected}**

Source: Field survey 2016

4.2   Discussions of Findings
The finding of this study showed that the perception of service offered by GSM telecommunication operators in Nigeria is not poor as a result of post-paid subscribing in the sector that has started gaining ground in the market. The result of the study also revealed that the difference between male and female subscribers indicates no significant difference regarding regarding perceptions of the quality of service offered by GSM telecommunication operators in Nigeria since the products are not segmented by gender. In addition, male subscribers were found as not significantly displaying more loyalty tendency to GSM telecommunication operators in Nigeria than their female counterparts. However, it was discovered that no significant difference exist in the perception of service quality GSM telecommunication operators in Nigeria across the age in view of the fact that the market has not been segmented to satisfy certain age limit.

4.3   Conclusions
This study examined service quality influence on the loyalty formation of customer in Nigerian telecommunication sector. From the findings of this study, it was revealed that post-paid service subscribers do not have poor perception about the service offered by GSM telecommunication operators in Nigeria. Consequently, the perception of male subscribers and female subscribers did not show any difference that is significant in terms of the service offered by the GSM telecommunication as this indicates that gender based product/service has not been adequately addressed in the Nigeria telecommunication industry. Therefore, the male subscribers are not likely to display more loyalty to the providers of product/service in the GSM telecommunication than their female counterparts; and the perception of post-paid subscribers towards the service quality showed that the difference is not

significant. The findings of this study informed the conclusion that the perception of post-paid subscribers of GSM telecommunication in Nigeria in terms of service quality offered by the operators is not significantly poor, and it has effect on customer loyalty.

4.3   Recommendations

1. Environmental analysis about customers of telecommunication sector and competitors should be constantly carried out by the GSM operators for the purpose of recognising the various service attributes vital to the success and survival of the businesses. Though, this may be difficult for GSM telecoms operators in terms of having prior knowledge about the service excellence customers may want to enjoy
2. Findings of this study suggested that GSM operators performed slightly above average in some service quality dimensions. Areas that are perceived to be weak should be given special attention by the GSM operators as this could improve the attributes of service delivery in the entire process of services.
3. As observed from the findings of this study that perceptions of service quality among male and female subscribers is significantly different, telecom operators should develop effective strategies that will enable them spot areas of differences in the expectations of subscribers and develop capabilities along those service attributes.

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