
DETERMINANTS OF CUSTOMER PREFERENCE AND SATISFACTION WITH NIGERIAN MOBILE TELECOMMUNICATION SERVICES

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Abstract

Mobile telecommunication industry in Nigeria had grown over a decade in Nigeria and one of the main concerns of the service providers is to increase the number of customers, retaining the existing ones and preventing some from leaving. This study assessed of customer preference and satisfaction in mobile telecommunication industry in Nigeria, using descriptive statistics, correlation and regression analysis. Primary data were collected using a set of well-structured questionnaire from two hundred mobile network subscribers who were students of tertiary institutions of learning in Osun state. The findings revealed that majority of the respondents are influenced by service quality, promotional activities, price/billing, customer care service and satisfaction derived from the various mobile service providers. The regression analysis proved that the telecommunication services have on customer satisfaction thereby lead to their preference and continues patronage of telecom service providers. The coefficient value of the service attributes shows that there is a positive influence on customer satisfaction. The correlation coefficient values of service quality, customer care service, promotions and price/billing were positively related to subscribers buying decision improves customer satisfaction. It there concludes that GSM service provider should improve on their services/products and charge competitive price in order to attract more customers and retain the existing one to gain higher market share.

Keywords : Service quality, pricing, promotion, customer care, customer satisfaction.

Introduction

The inability of the Nigeria Telecommunication Limited (NITEL) to meet the communication needs of the people before 2001, lead the Nation among other things move from a monopolistic telecommunication market to a fully liberalized telecommunication market where there is competition or what can be called revolution in the communication subsector of the economy through the introduction of Global System for Mobile (GSM) communication service providers whom were licensed to operate in 2001. This introduction in a growing population of about 120 million people, the industry has become highly competitive market with market share spread of 43.93% (MTN), 22.36% (Glabacom), 20.16% (Airtel) and 13.29% (Etisalat) and 0.26%, Mtel (NCC Report, 2015) and it has contributed significant increase of 6.73% to the Gross Domestic Product (GDP) (National Bureau of Statistics, 2014), to technology transfer, and employment in Nigeria (Gabriela and Badii, 2010). It has also contributed indirectly to the correction of market inefficiency, transport substitution, risk aversion and

social cohesion (Asheeta, Rowena, Subramanian & Peter, 2008).

Despite the increase in the numbers of GSM service providers, the competitions among these service providers as well as the introduction of varieties of service packages that are used to attract customers to join their company, customers' preference and satisfaction still differs from customers to customers based on certain attributes, the telecommunication needs and wants of subscribers which firms' must anticipate its changes from time to time. It has equally been observed that many mobile connection users subscribe for specific GSM connections and switch to others when they find that their current services do not fulfil their specific communication needs and other networks are providing better services most especially with the introduction mobile number portability (MNP) in April 2013 in Nigeria.

Since customer preferences are the subjective (individual) tastes, as measured by utility of various bundles of goods. It permits the consumer to rank these bundles of goods or

services according to the level of utility they give the consumer. Consumers of telecommunication products and services in Nigeria are varied and their needs, tastes and expectations are also varied (NCC Press Release, 2015). Customer satisfaction on the other hand is the extent to which a firm fulfils a customer needs, desires and expectation better than the competitors. According to Ndukwe (2008), in the Nigeria mobile phone industry, every service providers competes with each other for the same consumers, that a single bad contact experience can have an exponential triple effect, which may occur through referral or badmouth company and its products. He also said that the key factor determining customer satisfaction is call resolution which remains a sour point for most subscribers.

Although, studies have been conducted on factors that influence customers decision to choose a particular network service provider, notable among them are: Muminu, Anuoluwapo and Aderemi (2002), considered network attributes; Aminu and Hartini (2008), looked into marketing mix value added service, price and promotion; Oyeniyi and Abiodun (2011), considered plan providers such as private/personal calling plan (PPP) and business/commercial calling plan (BCP); also, Ogwo and Igwe (2012), considered service quality, customer value, brand image/reputation; Asiegbu, Igwe and Iruka (2012), observed social affinity, switching cost, and customer service; Olatokun and Nwaonne (2012) looked at call rate (price), service quality, service availability, promotion, and brand image; and Oyeniyi and Abiodun (2008), studied customer service, satisfaction value and behavioural intention. In addition, Oyatoye, Adebisi and Amole, (2013), use conjoint analysis to analyse subscribers' preferences for telecommunication attributes in Nigeria. None of these studies assessed customer preference and satisfaction among students of higher institutions of learning and a better understanding of telecommunication needs and wants students as market will be a good proxies for meeting and satisfying the needs customers of their age and status.

The various mobile phone service providers in Nigeria play essential role in fulfilling the needs of the consumers, they also provides varieties of mobile phone services for the Nigerian consumers to make their choice, however, there are complaints from customers about the service delivery of networks which could not be accredited to

customer satisfaction. Some stakeholders are challenged on how to sustain this growing and influential role of telecommunication as there are no clear cut and consensus of factors influencing GSM consumer usage and patronage. Therefore, there is need for the operators in the communication industry to seek for ways to improve upon the quality of their service, increase their customer base and retain customers, which has made competition among them. Thus, there is need to ascertain the criteria upon which consumers makes their choices of GSM service and how they decide which services or service providers is better for them given the array of conflicting attributes associated with different service options available to the consumers, and consumer satisfaction or dissatisfaction is the feeling derived by the consumer when he/she compares the products actual performance with the performance that he/she expects out of the products or services.

In spite above, there is dearth of extant literature that assesses the influence of the attributes of the mobile networks operators on subscribers' choice of mobile service operators in the life of the Nigerian mobile users. The focal point of this study was to understand the factors that influence mobile phone users in their choice of a mobile phone service provider in the Nigerian mobile telecom market. It examined the influence of price/billing, service quality, customer service, and promotion on mobile phone users' perception in selecting a service provider in Osogbo, Osun state, Nigeria.

The purpose of this study is to assess customer preference and satisfaction for GSM service providers among students in Osogbo, Osun state using MTN, GLO, Airtel and Etisalat as a case study while, the specific objectives are to:

- (i) identify the attributes which influenced the customers in selecting a particular mobile phone service provider in the study area.
- (ii) examine the effect of customer service on the customers' choice of GSM service providers
- (iii) examine the effect of price/billing on the customer's choice of their GSM service provider.
- (iv) assess the customers' satisfaction level towards various services offered by GSM service provider.

The hypotheses of the study were formulated in null form as follows:

H₀₁: There is no significant relationship between service quality and selection of mobile network service provider.

H₀₂: There is no significant relationship between customer care service and the selection of mobile network service provider.

H₀₃: There is no significant relationship between pricing system and selection of mobile network service provider.

Literature Review

In recent years, mobile telecom operators play an important role which enhance social interactions between and among individuals, groups, organizations, and the government alike and which ultimately create a strong network of global environment. However, meeting and exceeding expectations of clients and customers is a perspective that must gain significant efforts of service providers in order to retain the subscribers and their business survival. This concept is all inclusive and cuts across service domains, but expectations change and experiences with alternate service providers could shape the customers' expectations. The important research gap here is how telecom firms' meets customers' expectation towards a particular service provider.

According to Melody (2001), where the demand for a good or service is considered a common necessity for the public at large and the supply conditions are such that the public may not be provided with reasonable service at reasonable prices. Telecommunication in Nigeria has moved beyond providing just voice calls/text as they started with in 2001. The mobile subscribers are expecting more services from their service providers apart from just making or receiving calls from their mobile phones. Experience and research indicates that defining and measuring intention and ability of consumer to choose is extremely difficult. Dick and Basu (1994) suggested that favourable attitude and repeat purchase were required to define patronage or intention-to use. The intention-to-use/buy is defined as a specific desire to continue relationship with a service provider (Czepiel & Culmore, 1987). However, in service industries such as GSM, the ability of a service provider to use responsiveness, assurance and empathy in defining, developing, and delivering services will most likely

increase customers perceptions of values; which may lead to higher customer satisfaction (Sureshchander, 1995; Sureshchander, Rajendran, & Ananthanaman, 2002). In the work of Barnhoorn (2006), carried out a study in South Africa indicated the ever increasing expectations of customers with regard to the services of mobile phone operators. The salient dimensions of quality of service accorded priority by mobile phone users included courteous and facilitating role of front-line personnel, ease of availability for cards and recharge services, availability of products and services at the company outlets, accurate information and facts about services, affordable prices of the packages, and customized services. A study by Sukumar (2007), using a sample of 104 mobile phone subscribers, measured the mobile phone users' preferences for selection of an operator. The result of the study found important dimensions as brand image, customer care, services availability, credit facility for connection, deposit amount, and prices in that order of priority. This research framework consists of four major factors which are influencing mobile users such as call rate, customer service, quality of service, and promotional strategies among all as observed from the literature.

Service quality

The success of every telecommunication industry depends on prudent efforts and feasible investments. In a competitive market such Nigeria telecommunication, service providers are expected to compete on both price and quality of services and also it is necessary for the service providers to meet the consumers' requirements and expectations in price and service quality (Melody, 2001). The positive relationship of service quality with customer satisfaction (Danaher and Mattsson, 1994; Kim, Park, and Jeong, 2004), customer preference (Ranaweera and Neely, 2003), profitability (Fornell, 1992; Danaher and Rust, 1996), competitiveness (Rapert and Wren, 1998), is well proven in the academic literature. From these studies, it can be deduced that service is a form of attitude which is related to satisfaction and also leads to consumer preference and future purchase. In particular consumers prefer service quality when the price and other cost elements are held constant. It has become a distinct and important aspect of the product and service offering.

According to Leisen and Vance (2001) service quality

helps to create the necessary competitive advantage by being an effective differentiating factor. Service quality was initiated in the 1980s as the worldwide trend when marketers realized that only a quality product could not be guaranteed to maintain competitive advantage (Wal, Van der & Bond, 2002). In the work of Zeithaml, Berry, and Parasuraman (1996), they offered a conceptual model of service quality and explained that service quality affects particular behaviours that indicate whether customers will remain loyal to or leave an organization. However, service quality is measured in five dimensions; they are tangibility, reliability, responsiveness, assurance and empathy.

Parasuraman, Zeithaml and Berry (1988) thus defines service quality as the consumers' judgment about a firm's overall excellence or superiority. It expresses the degree to which a bunch of inbuilt features (relating to a product, a process or a system) meet requirements. The inbuilt features can be physical, sensory, behavioural, temporal, ergonomic or functional whilst requirements are the stated need or expectation be it implied or obligatory, (ISO 9000, 2005). Studies have shown that quality reflects the customers' expectations about a product or service (Zeithaml, 2000; Leisen & Vance, 2001). It sounds as a major problem for the telecommunication service providers, especially for the mobile telecommunication service providers to deliver quality service consistently as changes in market compositions. Rust and Oliver (1994) pointed out that service and product quality always lies in the minds of the consumers depending on individual buying capacity, buying behaviour, demand, taste, and fashion criteria and obviously the competitive markets that provide significant differentiation strategies. Therefore, it seems a downright necessity for the mobile telecommunication service provider to communicate directly with the subscribers/ potential consumers for measuring possible quality attributes and competing characteristics.

Customer Care Service

Customer service is a process that takes place between a buyer, seller, and third party and can influence demand in the market (Innis & La londe, 1994). The third party may include companies that have been licensed by a marketing company to provide customer service. Customer care is used in a wider sense and goes far

beyond the traditional role of customer service and support; it encompasses all the functions along the entire service delivery value chain (Katz, Zerbib & Gurumurthy, 1998). Customer service can also be viewed as a system of activities that comprises customer support systems, complaint processing, speed of complaint processing, ease of reporting complaint and friendliness when reporting complaint (Kim, Park & Jeong, 2004). Customer service is a series of packages designed to enhance the level of customer satisfaction; that is, the feeling that a product or service has met the customer expectation (Turban, 2002). Customer service is the series provided in support of a company's core products (Zeithaml & Bitner, 2000). Moreso, customer service can occur on-site or it can occur over the phone or via the internet.

Some organisation such as telecommunication companies operate customer service call centres, often staffed around the clock. Gerpott, Rams and Schindler (2008), describes it in terms of GSM as quality of the exchange of information between customer and supplier in response to customer telephone enquiries and in the course of interactive activities initiated by the network operator. Customer service is the service provided to customers before, during, and after a purchase. Oyeniya and Abiodun (2008), studies found that customer service encounter increases customer intention and satisfaction. They also iterated that quality customer service is essential to building customer relationship which in turns will lead to customer loyalty, retention and preference. It should not however, be confused with the services provided for sale by the company. A customer service experience can change the entries perception of a customer about an organization. Of course, when the cost is becoming higher than the value derived from a particular network provider, this will definitely lead the negative reaction of subscribers to such GSM provider.

Promotional Strategies

Promotion is one of the medium which is used by organization to communicate with consumers with respect to their product offerings (Rowley, 1998). He considers promotion as one of the media which is used by organizations to communicate with consumers with respect to their product offerings. Promotion is concerned with ensuring that consumers are aware about the

company/firm and its products that the organization makes available to them (Root, 1994). Kotler and Armstrong (2010) stated that promotion is when companies inform, persuade, or remind customers and the general public of its products. Promotion is an important part for all companies, especially when penetrating new markets and making more or new customers. They also describe it as the activities that communicate about the products or services and its potential merits to the target customers and eventually persuades them to buy. The mobile service providers gives different promotional offers like prepaid offers on top-up recharge, E-recharge mobile top up vouchers for prepaid connection, recharge top-up, bonus cards, phone alert, call management services, caller tunes, free mobile calls, short message services (SMS) offers, limited time free internet usage, various kinds of ring tone services, dialler tone services and other promotional offers to attract the mobile subscriber.

Chinnadurai (2006) analysed the increasing competition in mobile phone services, changing mobile subscriber taste and changing preferences of the customer's all over the world. These circumstances are forcing companies to change their customer promotional strategies. It is analyzed that advertisement play a dominant role in influencing the customers but most of the customers are of opinion that promotional strategies of cellular companies are more sale oriented rather than customer oriented. More specifically, the objectives of any promotional strategy are: increase sales; maintain or improve market share; create or improve brand recognition; create a favourable climate for future sales; inform and educate the market; create a competitive advantage, relative to competitor's products or market position; improve promotional efficiency (Rowley, 1998).

Promotion goes beyond mere communication of product awareness but involves inducing the consumer to make a purchase. Promotions impact consumers' purchasing behaviour and decisions towards that particular brand, especially during sales promotion period (Freo, 2005). This is in line with the submission of Kotler and Armstrong (2010) that, promotion is when companies inform, persuade, or remind customers and the general public of its products.

Price/billing

Price in this context is the amount of money charged for a product or service, or the sum of values that customers exchange for the benefits of having or using the product or service (Kotler and Armstrong, 2010). In a competitive market, service providers are expected to compete on both price and quality of services, it is also necessary for the service providers to meet the consumers' requirements in terms of price and service quality (Melody, 2001). However, due to breathtaking competition occurring in the telecommunication service providers lately, they tend to offer innovative services as well as competitive prices just to attract handful magnitude of customers (Haque, Rahmanb & Rahmanc, 2010). Moreover, the MNP implementation in Nigeria raised the competition among service provides, due to the fact that, they offered similar products/services to the same market (Oyatoye, Adebisi & Amole, 2015).

Price plays a crucial role in telecommunication market especially for the mobile telecommunication service providers (Kollmann, 2000). Here price is not limited to the price of a SIM card, but also covers the price of recharge voucher, call rate, SMS charge, the internet charge, and price of phones and so on. It includes not only the buying price but also the costs of maintaining their relationship with the service provider. Generally, a price-dominated mass market leads to customers having more choices and opportunities to compare the pricing structures of diverse service providers. A company that offers lower charges would be able to attract more customers committing themselves to the telephone networks, and hence, significant number of "call minutes" might be achieved.

Draganska and Jain (2003), stated that a common strategy for a company extending their product or service is to differentiate their offerings vertically. In this era of information age, price competition has become cut-throat in mobile telecommunication industry. From the viewpoint of pricing policy in telecommunications markets, a small variation of charge or cost, that is, reducing per-minute call/text/internet charges which could increase the amount of use and positively affect the decision to purchase (Kollmann, 2000). Price is often used by consumers as an extrinsic product-quality cue where the price or customer value is a subjective

perception of trade-off between what a customer gives up (price, sacrifice) and what the consumer received (utility, quality, benefits). In the telecom service industry, there are two price factors users consider before deciding to purchase a GSM product – the initial purchase price and usage or retaining charges (tariff).

Customers in telecommunication industry have preconceived notions about the price and value of telecommunications services. Customers have historically complained about the level of local charges, more than they have about long distance; although, local service is frequently offered at a price lower than actual cost. When long-distance service is priced well over cost, and local service is generally priced well under cost, customers expect to pay very low prices for local services and apparently do not mind that long distance could be less expensive but is not (Strouse, 1999). Many have used price as a measure of wealth, value and quality. Because of the nature of the contractual agreement to use a product in the future in the telecommunication service, consumers are more conscious of cost of keeping or using the network and not price of initial buying. In the Nigeria GSM market specifically, price has been used as strategic tool both to attract new subscribers and more importantly to retain current ones in the market where it is difficult to perceive any significant difference in the service quality of most of the GSM firms, price competition has become widespread and an important competitive tool.

Service Quality and Customer preference

Some studies established a positive relationship with varying influence levels between transmission / network qualities; network coverage; pricing/billing; data services; and customer service on clients' satisfaction/intention to use, largely in the developed and developing nations (Bolton & Drew, 1991; Lim, Widdows & Park, 2006; Varki & Colgate, 2001). Similarly, Boulding, Kalra, Staclin and Zeithaml (1993) found a positive relationship between service qualities and repurchase intention and willingness to recommend. This study tend to validate or refute their based on student perception of telecommunication services attributes in Nigeria.

Providing value to customers is still critical to most profit making organisation and price has been observed as an important variable affecting the acceptance, usage, and even future patronage of GSM service. In supporting this,

Woodruff (1997), Kollman (2000); Varki and Colgate (2001) and Mohammed (2008) studies found that the lower the charges, the more customer consumed and the more customers will commit themselves to the telephone network. Chang and Width (1994), reported that price (customer-perceived value) has been found to be a major contributor to and behavioural usage. From the extant literature, few empirical studies have been conducted in the telecommunication sector of Nigeria since the privatization of the sector in 2001 which allows private investors to compete favourably thus necessitated this study among other things.

Research methods

The research design used for this study is descriptive and correlational, which employed a well self-administered questionnaire for data collection from respondents. The sample design adopted for the research problem was purposive random sample since the respondents cut across the students two higher institutions of leaning in Osogbo, Osun state. Nigeria. The choice of the students was based on judgmental since majority of the students are not indigene of Osogbo (came from different states in Nigeria) and use GSM services. Students are majorly affected by the operations of GSM service provider and sensitive to changes in telecommunication service attributes. Both the primary and secondary data is collected. The primary data for the study is collected directly from target respondents through structured questionnaire. The secondary data for the study is collected from different sources such as technical and journals, articles, newspapers, magazines, internet, periodicals, books, reports, publications of associations related to mobile phone service providers. The sample size for the study is 250. The research instrument was a structured questionnaire, which had two sections, the first section of the questionnaire was based on the personal data of the respondents, while the second section asked questions related to the subject on the basis of the research objectives using constructs, namely customer satisfaction and preferred network (dependent variable), service quality, price/billing, promotional strategies and customer service/care , each had between 4 to 6 related questions on a 5-point Likert scales with 5 point allocated to strongly agree and 1 point to strongly disagree. The questionnaire was personally administered by the researcher to ensure timely filling and return. This led to

majority of the questionnaire being returned. 200 of the questionnaires were correctly filled and returned, translating into 80 per cent response rate. The data for the study was analysed using the SPSS computer software. The hypotheses were tested with Pearson Product Moment Correlations.

The validity of the instrument was achieved through content validity and reliability assessment was performed on the copies used for pilot study. Cronbach's alpha was used to assess the internal consistency of the entire scale. According to Pallant (2004), reliability scores greater than 0.70 are acceptable. Since all the items had an alpha above the standard guideline of 0.70, the scales are suitable for analysis with acceptable reliability. Cronbach's alpha was used to assess the internal consistency of the entire scale. According to Pallant (2004), reliability scores greater than 0.70 are acceptable. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient.

Table 1: Reliability of research Instrument

Variables	No of items	Cronbach's alpha
Service attributes that influences customers in selecting a particular service provider	4	0.754
The effect of customer care service of the GSM service providers on the choice of selecting a service provider	4	0.890
The effect of price/billing on the customer's choice of selecting a particular service provider	6	0.798
Promotional activities that influence customer preference and satisfaction	5	0.784
The customers' satisfaction level towards various services offered by GSM service provider	4	0.825

The Table 1 shows different Cronbach's alpha for the 4 constructs of the questionnaire (one dependent variable and four independent variables). The attributes that influences customers in selecting a particular service provider has the lowest alpha value of 0.754, followed by

the promotional activities with alpha value of 0.784. The effect of price/billing on customer preferences revealed an alpha value of 0.798, the effect of customer care service of the GSM service providers on the choice of selecting a service provider with 0.890, the customers' satisfaction level towards various services offered by GSM service provider with 0.825. Overall, all the items in each variable in the questionnaire have a good reliability. This is because all Cronbach alpha values are in excess of minimum value of the 0.70 recommended by Pallant Cronbach (2004); Nunnally, & Bernstein (1994)

Results and Discussion

The data collected from the research respondents was analyzed to determine how the respondents' perception to the different research variables investigated. Descriptive statistics, Pearson Product Moment Correlations and regression methods were employed to analyse the data collected.

Table 2: Frequency distribution of respondents by demographic status

Variables	Frequency	Percentage (%)
Gender		
Male	126	63.0
Female	74	37.0
Total	200	100.0
Age		
below 21yrs	72	36.0
21-30yrs	128	64.0
31-40yrs	-	-
41-50yrs	-	-
51 and above	-	-
Total	200	100.0
Marital status		
Single	193	96.5
Married	7	3.5
Divorced	-	-
Total	200	100.0
Educational status		
100L	20	10.0
200L	7	3.5
300L	86	43.0
400L	67	33.5
500 L	20	10.0
Total	200	100.0
Subscription preferred		
Prepaid	187	93.5
Postpaid	13	6.5
Total	200	100
Numbers of network		
One	137	68.5
Two	56	28.0
Three	7	3.5
Four	-	-
Five	-	-
Total	200	100.0

Table 2 describes the frequency distribution of respondents by demographic status. It was observed from the result that 63% of the respondents of the questionnaires were male while 37% were female in this category. The age category of respondents was grouped into five classes, respondents between the ages of 21-30 years were observed to be more than other groups as they constituted 64% and remaining of the respondents of the ages below 21years were with 36% among others. The marital status showed that majority of the respondents who are with 96.5% are single while 3.5% were married among others. For educational level of the questionnaire shows that respondents with 43.5% were 400L, followed by 300L with 43%, while 10% and 3.5% of the respondents were 100L and 200L respectively. Majority of the respondents observed shows that 93.5% uses mobile phone and 6.5% do not make use of it. The type of billing subscription preferred by majority of the students were the prepaid users with 93.5% and 6.5% prefer the postpaid. Majority of the respondents uses one line with 68.5%. With 28% and 3.5% shared among respondents with two and three lines respectively

Pearson Product Moment correlation test and multiple regression analysis

Pearson Product Moment correlation test and multiple regression analysis were conducted to determine the explanatory and predictive strengths the customer preference and satisfaction on GSM mobile phone network services.

The results are shown in the table below, the coefficient shows that the service quality co-efficient r on customer care service is .655** while p-value is 0.000. Since the p-value is less than 0.05 (0.000<0.05), we accept that the service quality has significant positive relationship with customers care services. The service quality co-efficient r on price/billing is .560** with p-value is 0.000. Since our p-value is less than 0.05 (0.000<0.05), we accept that the service quality has a significant positive relationship with price/billing. The relationship between service quality and customers satisfaction shows an r value of .626** with p-value of 0.000. Since p-value is less than 0.05 Alpha (0.000<0.05), we accept that the service quality has a significant positive relationship on customers satisfaction. Only price/billing and customer care are not related as it does not significant at 5% or 10%. The coefficient shows a very low, positive but not significant relationship between customer care service and price/billing, with r value of .104 while p-value is greater 10%. Since the p-value is greater than 0.05 (0.000<0.05), we reject that customer care service has significant relationship with price/billing of network providers. But the customer care service co-efficient r on customer satisfaction is .342** with p-value is 0.000. Since our p-value is less than 0.05 (0.000<0.05), we accept that the customer care service has a significant positive relationship with customers satisfaction. The coefficient shows that price/billing co-efficient r on

Table 3: Correlations matrix for service quality, customer care service, price / billing, promotion and customer satisfaction.

		Service quality	Customer Care	Price / Billing	Customer Satisfaction
Service quality	Pearson Correlation	1	.655**	.560**	.626**
	Sig. (2-tailed)		.000	.000	.000
	N	200	200	200	200
Customer Care	Pearson Correlation	.655**	1	.104	.342**
	Sig. (2-tailed)	.000		.143	.000
	N	200	200	200	200
Price/Billing	Pearson Correlation	.560**	.104	1	.678**
	Sig. (2-tailed)	.000	.143		.000
	N	200	200	200	200
Promotion	Pearson Correlation	.623**	.114	1	.534**
	Sig. (2-tailed)	.000	.003		.000
	N	200	200	200	200
Customer Satisfaction	Pearson Correlation	.626**	.342**	.678**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	200	200	200	200

** . Correlation is significant at the 0.01 level (2-tailed).

customers satisfaction is .678** while ρ -value is 0.000. Since the ρ -value is less than 0.05 ($0.000 < 0.05$), we accept that price/billing has significant positive relationship with customers satisfaction.

Table 4: Multiple Regression results for testing direct effect service quality, customer care, price/billing, promotion on customer satisfaction

Variables	Coefficients	t-values	Sig.
Constant	-	-1.383	.168
Service quality	0.253	3.031	0.003
Customer care	0.122	3.031	0.080
Price/billing	0.524	8.265	0.000
Promotion	0.456	5.863	0.023
F-statistic = 81.407 **			
Adjusted R ² = 0.555			
DW = 1.301			

****Significant at $p < 0.01, N = 200$**

Furthermore, the regression analysis results as shown in Tables 4 indicates that 55.5 percent of the observed variations in GSM customer satisfaction ($R^2 = 0.555$) as explained by service quality, customer care, promotions and price/billing. Thus, attributes such as customer care, service quality, promotions activities and price/billing positively influenced customer preference and satisfaction for a particular GSM service provider in Nigeria. The overall significance of the model is shown in the table (F-statistics = 81.407) must be less than 0.01 at 1%, 0.05 at 5%, and 0.1 at 10%.

Hypothesis Testing

In order to ascertain this acceptance of the positive relationship or correlation between customer satisfaction and service quality, customer care promotions and price/billing, a student-test of the customer preference/satisfaction on GSM service attributes was conducted.

Hypothesis One:

The hypotheses of the study were formulated in null form as follows:

H₀₁: There is no significant relationship between service quality and selection of mobile network service provider.

One-Sample Test on the hypothesis						
	Test Value = 0					
						95% Confidence Interval of the Difference
	T	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Service quality	73.237	199	.000	3.80375	3.7013	3.9062
Customer Care	48.723	199	.000	3.21125	3.0813	3.3412
Price/Billing	96.589	199	.000	4.29000	4.2024	4.3776

The result reveals that the calculated t-statistics for the parameters estimates is $t = 3.80375$, the “t” value from the table at 95% confidence limit and “ μ ” is expected to fall within the range of < 3.7013 to > 3.9062 which is found to be correct under this circumstance with degree of freedom of 199 shows significant at .001 or 99%. Therefore, there is significant positive relationship between service quality and selection of mobile service provider by the mobile users/students in Osun state, Nigeria. The result corroborated the work Corrocher and Zirulia (2008) who also found a positive correlation between reporting service quality and their preferred network. Since the t-value (.000), this significant at 1%, the null hypothesis is rejected thereby leading to the acceptance of the alternative hypothesis which states that there is significant relationship between service quality and selection of mobile service provider by the mobile provider among students.

Hypothesis Two:

H₀₂: There is no significant relationship between customer care service and the selection of mobile network service provider.

The result reveals that the calculated t-statistics for the parameters estimates is $t = 3.21125$, the “t” value from the table at 95% confidence limit and “ μ ” is expected to fall within the range of <3.0813 to >3.3412 which is found to be correct under this circumstance with degree of freedom of 199 shows significant at .001 or 99%. Therefore, there is no significant positive relationship between customer care service and selection of mobile service provider by the mobile network users. The result is against an earlier work of Sukumar (2007) who also found a positive correlation between reporting customer care service and their preferred network. Since the t-value (.000), this significant at 1%, the null hypothesis is accepted thereby leading to the rejection of the alternative hypothesis.

Hypothesis Three:

H₀₃: There is no significant relationship between pricing system and selection of mobile network service provider.

The result reveals that the calculated t-statistics for the parameters estimates is $t = 4.29000$, the “t” value from the table at 95% confidence limit and “ μ ” is expected to fall within the range of <4.2024 to >4.3776 which is found to be correct under this circumstance with degree of freedom of 199 shows significant at .001 or 99%. Therefore, there is significant positive relationship between price/billing and selection of mobile phone users by the mobile users (students) in Osun. The result corroborated the work of Sabbir, Ahasanul, and Mohd (2010) where they also found a positive correlation between reporting service quality and their preferred network. Since the t-value 96.589 is significant at (.000), the null hypothesis is rejected thereby leading to the acceptance of the alternative hypothesis which states that there is significant relationship between price/billing and selection of mobile service provider by subscribers.

Conclusion and recommendations

The telecommunication network attributes that mostly influence the customers in their purchase consideration of GSM services in Nigeria were identified and their influences on customer satisfaction were empirically determined by the study. This study will provide Nigeria mobile telecommunication service provider insight into customer preference for network providers. The study has found significant positive relationship between

price/billing and customer selection. This submitted that fairness of price/billing is the biggest influence of customer in selecting their mobile service provider and a competitive advantage to retain consumers for longer period of time which will make them to be loyal without switching/porting to other competitor. Thus, the service providers should ensure they charge competitive price that is affordable over period of time. The study also found significant positive relationship between service quality and customer selection. The service provider should endeavour to continually improve on their quality of service as it attracts and also allow customers to stay with a particular mobile service for a long period of time. In order to motivate customers of mobile telecommunication industry in Nigeria for loyalty, the GSM service provider should continuously satisfy its customers by improving the quality of service and cheap price billing to ensure customers intention to buy is achieved. As long as service providers improve their network quality, competitive price/billing and improve on other promotional activities that can attract customers to patronize them which will also increase the satisfaction level of their customers. The telecommunication services operators tailor their products/services for effective service delivery that maximizing customer satisfaction and retention.

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