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07068297660
Support@gamjiinstitute.org**

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EDITORIAL NOTE

It is with great pride and enthusiasm that we present the maiden edition of the *Gamji Journal of Arts and Humanities*, published by the Gamji Institute for Training and Research. This inaugural publication marks a significant milestone in our commitment to fostering academic excellence and contributing to the scholarly discourse in various fields of study.

The articles featured in this edition represent a diverse range of research topics, each offering valuable insights and advancing our understanding of critical issues. The depth and breadth of the studies reflect the dedication and scholarly rigor of the authors, and we are honored to showcase their work.

We extend our heartfelt gratitude to the authors for their invaluable contributions and to the peer reviewers for their diligent efforts in ensuring the quality and integrity of the research presented. We also express our appreciation to the editorial board and support staff whose dedication and hard work have made this publication possible.

As we embark on this scholarly journey, we invite readers to engage with the research presented in this journal, to reflect on the insights offered, and to contribute to the ongoing dialogue in their respective fields. We look forward to future editions and the continued growth of the *Gamji Journal of Arts and Humanities* as a platform for academic excellence and intellectual exchange.

Sincerely,

Prof. Aminu Ahmad
Chairman, Editorial Board
Gamji Journal of Arts and Humanities
Gamji Institute for Training and Research

CUSTOMER SATISFACTION, LOYALTY, TRUST AND RETENTION ON GSM NETWORK SERVICE QUALITY IN BAUCHI METROPOLIS

By

Barde Kadafur Bashir*, Dr. Muhammad Adamu**

*School of Management Sciences, Federal Polytechnic, Bauchi

E-mail: bardebk@fptb.edu.ng, bkbashir65@gmail.com Phone: 08032847484

** Faculty of Management Sciences. Department of Business Administration, Bauchi State University

Phone; 08035558385

ABSTRACT

The objective of the study is to find out how customer satisfaction, loyalty, trust and retention relate to network service quality delivery of the GSM providers in Nigeria, particularly North-Eastern Nigeria (Bauchi metropolis in focus). Subscribers of GSM network services and staff of the service providers in the study area composed the population of the study, a random sampling method was adopted and a sample of 438 of the subscribers was determined using Krejcie & Morgan table; (1970) plus 10% Alseekh, et-al. (2021). Survey method was adopted in which a questionnaire was designed, tested and administered on 455 respondents to gather the required data. The data were analyzed using the Likert's 5–five points rating scale using PLS SEM statistical tool. Direct relationship hypothesis of the variables were used and tested. Findings revealed that there is significant relationships between the 4 variables and GSM network service quality. However, there is no significant relationship between network service quality and customer trust in the study area, as hypothesis (H_3) was not supported. It was concluded that, it becomes imperative for the network owners to vigorously improve their commitments, most particularly provision and delivery of satisfactory network quality. Recommendations were made to the service providers, government and the regulators of the GSM network services provision in Nigeria.

Keywords: call-drop, shortchange, network failure, Service Quality,

1.0 INTRODUCTION

The telecommunication services have been recognized worldwide as an important tool indicating the socio-economic development of a nation and the telecom infrastructure is treated as a crucial factor to realize and accomplish the socioeconomic objectives of a nation. The telecommunication services have witnessed phenomenal changes over the last two decades and the information technology has brought tremendous changes in the day-to-day activities of the common man in Nigeria. The craze for mobile phone services in the Sub-saharan continents is increasing substantially. (Mohideen, Ishaq & Ilyas, 2018).

Through Nigeria's regulatory body, the Nigeria Communication Commission (NCC), the Government modernized and expanded the mobile telecommunications network and services by granting Global System for Mobile telecommunication (GSM) license to three service providers in January 2001. These providers included Mobile Telecommunication Network (MTN) Nigeria, Econet Wireless (now Airtel), the first national carrier, NITEL (M-tel), and Globacom in 2002 as well as several other fixed wireless telecommunication services. These telecommunication companies introduced great innovations and continued to provide aggressive and varied marketing strategies in order to establish meaningful and differentiated presence through their names and brands; (Hosea, 2018). Nigeria is believed to be one of the largest telecommunication market in the world, having an estimated subscriber base of about 204,228,679 as at December 2020, and 192,081,282 as at March, 2021 while June 2021 stands at 583,585,507 respectively; (NCC, 2021). The subscriber base is in continuous increase and the sector has delivered strong return on investments year by year. The Telecommunication sector in Nigeria is a major contributor to the country's Gross Domestic Products (GDP) accounting about

9.1% of the Nigerian Gross Domestic Product (GDP) (NBS, 2001) in (Nwakanma et al 2018).

Okolo, Victor, Agu, Okey & Ikechukwu (2019) defines it as “a customer’s overall evaluation of the performance of an offering to date”. (Abdul-Aziz, et-al 2018), stated that CS is “an experience-based assessment made by the customer of how far his own expectations about the individual characteristics or the overall functionality of the service obtained from the provider have been fulfilled”. Again, “Satisfaction is a person’s feeling of pleasure or disappointment resulting from comparing a product’s performance in relation to his or her expectation” (Kotler & Kevin, 2001 p.144) in Abdul-Aziz, et-al (2018). It is believed that satisfied customers tell five other people about their good treatment and that five-percent (5%) increase in loyalty can increase profits by 25%-85%. Conversely, the average customer with a problem eventually tells eight (8) to ten (10) other people; (SPSS White paper 1996). According to Victor, (2018) customer loyalty “is a behavioural result of consumers’ preferences for a specific brand from a set of similar ones. According to (Alharthey 2019), customers’ trust is the positive beliefs about a trustee’s compassionate and trustworthy behaviour. According to Williams, Samuel & Obong (2019), customer retention is the activity that a selling organization uses to reduce customer defections; Wang & Spiegel, (2018). Customer retention is also an effort carried out by companies to ensure that its customers do not switch over to competitors products and services, (Williams, Samuel & Obong, 2019).

1.1 OBJECTIVE OF THE STUDY

The objective of the study is to find out how customer satisfaction, loyalty, trust and retention relate to network service quality delivery of the GSM providers in Nigeria, particularly North-Eastern Nigeria (Bauchi metropolis in focus).

1.2 STATEMENT OF PROBLEM

At the onset of the GSM marketing in Nigeria, there has been a great deal of satisfaction and passion among customers as regards to the quality of the network and availability of the products despite its cost. However, as time goes on, customers started experiencing some dissatisfactions and difficulties in their dealings with these companies. Practically, the GSM firms in Nigeria came up with high tariff plan and poor services delivery which made customers to get shortchanged in their business relationship with the services providers, (Okolo, Agu, Obikeze & Ugonna 2018). It was observed in Obijiofor, (2003) that subscribers receive from the GSM companies' rudeness, disrespectful treatment, call drops, charging of unconnected calls, over congestion of lines, low network coverage, among others. This has made customers of GSM in Nigeria to have less trust in their business transactions with these companies; (Emmanuel, et al 2018).

1.3 REVIEW OF RELATED LITERATURES

According to (Lawal, et-al, 2018), GSM Service Network Quality can be generally described as the level of satisfaction a customer, subscriber or an end-user obtained from a network service provider. One of the key challenges confronting these Telecommunication companies is how they manage their service quality, which holds a great deal to customer satisfaction. Alabar, Egena, & Richard, (2018) asserted that service quality and customer satisfaction are very essential in maintaining customer loyalty. It is therefore essential or absolutely necessary for the operators of GSM in Nigeria to wake up from their slumber in order to provide qualitative service to their teaming customers if only they want customers' loyalty and subsequent retention.

Bala, Hossain, and Mondal, (2018) measure the customer satisfaction of different mobile operators in Bangladesh. The study divulged that employee responsibility, customer

care, internet cost, network quality, call tariff, and coverage were the major antecedents of perceived value of customers in telecom service. The study stressed that mobile telecom services facilitate information sharing, information searching, social media connectivity, and communication purposes. It was found that mobile service providers were planning to increase customer experience and perceived value on their brand by providing effective services. Results of the study revealed that customers perceived value on different services provided by the network operators has significant impact on customer satisfaction. Findings suggested that mobile network operators should increase customer satisfaction through relevant measures. (Mamo, 2018) also assess factors that affect customer satisfaction on service quality – Service delivery, price fairness, reliability, complaint handling, network status, and time to get services rendered are major roles in gaining customer satisfaction. Furthermore, all service quality aspects were not uniformly considerably allied to customer satisfaction. It was found that assurance and responsiveness were the main predictors of customer satisfaction in telecom services. Sustainable service quality is positively related to customer satisfaction, (Hadi, et-al, 2019).

In the telecommunication industry in Akwa Ibom State, the service providers use different relationship marketing underpinnings in an attempt to win customer loyalty. Despite the application of the various underpinnings, there is little empirical research as to how they relate to customer loyalty in the industry. Specifically, no study on the relationship between communication and customer loyalty within the telecommunication industry in Akwa Ibom State could be found (Etuk, 2018).

Trust is specifically important for the mobile telecommunication companies which are frequently being criticized with poor business practices and bad service quality which

affect the purchase intention and satisfaction of consumers. According to Alharthey, (2019), business environment nowadays is extremely competitive, turbulent and disjointed. Companies are trying to provide excellent service quality in their stores which helps in building trusting relationships with their customers, to make them loyal to their store as well and create their position in the market.

Kungumapriya & Malarmathi, (2018) examined the impact of service quality, perceived value, and customer satisfaction in calculative commitment and customer loyalty in the Indian telephone sector. Findings showed that perceived value, calculative commitment, customer satisfaction, and service quality had positive and significant effect on loyalty intentions of customers. Moreover, loyalty intentions had positive effect on attitudinal and behavioural loyalty of customers as a result of customer trust. However, it is important to state that similar factors can exist in different geographical locations. This means that the service providers have to work hard in improving the network service quality in order to meet up with the demands of their teaming customers and to gain their total loyalty and trust. According to (Nwakanma et-al, 2019) academicians and specialists, are both putting efforts to comprehend the contributing factors of customer satisfaction, trust and loyalty. He also states that marketing managers are keen to recognize about the level of trust or loyalty that will upsurge the customer retention and maintainable improvement and long term success. Moreover, Trust comprises of belief that the other party causes a positive consequence, although the likelihood that the action may originate a negative outcome. The outcome of past study proposes that the association between service quality and trust is highly positive; (Alharthey, 2019). The Parasuraman Service Delivery Theory (1985) was used as the Underpinning Theory.

Based on the above empirical evidences, the following hypothesis are formulated and tested:

H₁ There is significant relationship between customer satisfaction and service quality.

H₂ There is significant relationship between customer loyalty and service quality.

H₃ There is significant relationship between customer trust and service quality.

H₄ There is significant relationship between customer retention and service quality.

2.0 RESEARCH FRAMEWORK

This study aims at addressing the issues of service quality delivery in relation to customer satisfaction, loyal, trust, and retention. After examining these determining factors (IVs) that influenced the (DV) – (network service quality) and their relationships, the conceptual model of the framework for this study is thus prescribed as shown below.

Independent Variables
Dependent Variable

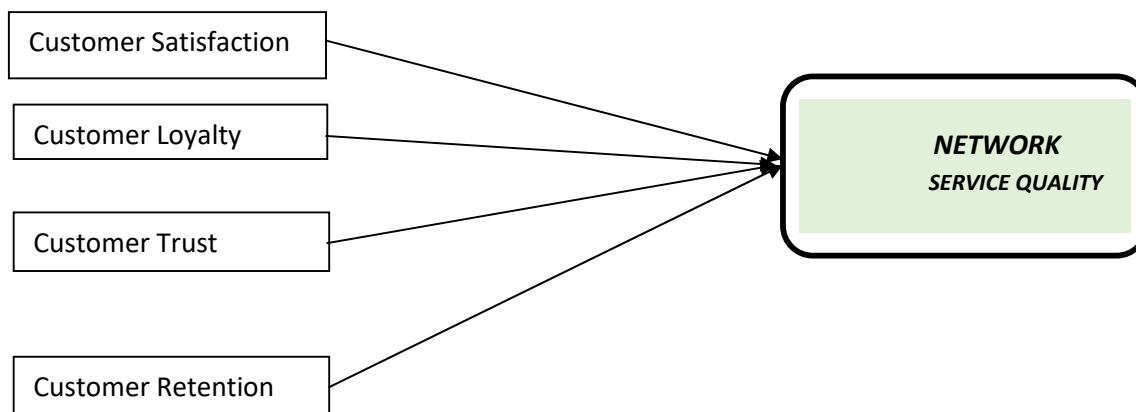


Fig.1

3.0 RESEARCH METHODOLOGY (SURVEY DESIGN APPROACH)

This research is carried out in Bauchi metropolis of Bauchi State Capital in the North-Eastern Nigeria with an estimated population of 316,173; (NPC, 2004). Despite the fact

that a census period above 20 years in Nigeria cannot be totally relied upon for accuracy of research result due to the high population growth annually, the estimate shown above is only the official population figure of Bauchi metropolis. However, the researcher is more concerned with the GSM services subscribers and staff of the service providers in the study area as units of analysis. The metropolis consists of representatives from all the 20 local governments, other states of the federation and expatriates. This made it very convenient and reliable to get dependable information, as the data that could provide a reliable result. However, it is pertinent to note that the researcher is only interested in the population of the GSM services subscribers and their candid opinions, attitudes, and behaviors towards the service providers and the network services in Bauchi metropolis. This has resulted in obtaining the total available record/number of active subscriber base of all the four (4) Private Network Operators (PTOs) in Bauchi – (MTN, AIRTEL, GLOBACOM and ETISALAT (9-mobile) as well as their staff which stood at 6,559,519 for both active voice calls and internet services, NBS (2021) and 27 staff of the service providers. This amounted to the total of 6,559,546. (Field survey, 2022). Consequently, the sample size stands at 438 using Krejcie and Morgan table plus the 20% *Alseekh, et-al. (2021)* which results to 455. Questionnaire was used as the instrument for data collection. The data for this study were analyzed using the PLS-SEM statistical research model. The research work employed survey design methods for collecting, analyzing, interpreting, and reporting data.

4.0 EXPLANATION OF RESPONSES RATES

Demographic profile of the repondents include; gender, age, educational qualification, years of working experience, and status. The statistics show that from the 438 participants, 261 (59.6%) are male, while the female figure stands at 177 (40.4%). It could

be observed that the number of male respondents is greater than that of the females, this is due to the easy access of the males and their prompt response to the instrument. In terms of ages, respondents between the ages of 18 to 28, 136 (31.1%), those between the ages of 29 to 40 are 146 (33.5%), those within the age range of 41 to 51 are 97 (22.1), while 59 of them fall within the age range of 51 and above (13.5%). It is seen that the number of youths is higher than other age brackets because of the fancy and high usage of the GSM networks. Regarding educational qualification of the respondents, it was found that 13 (3.0%) of the respondents fall within the category of PhD, 37 (8.4%) have MSc., 41 (9.4%) have MBA, 43 (10.0%) have BSc., 51 (11.6%) obtained HND, 111 (25.1%) ND, 17 (3.8%) OND, 13 (3.0%) NCE, SSCE 74 (17.0%), Primary certificate 22 (5.0%), and Others 16 (3.7%). Categorically, it is evident that the number of higher degrees are lower in this respect because of the high cost of and access to education in Nigeria.

For GSM staff work experience, 128 (29.2%) fall between 0 to 10 years, then 124 (28.3%) of them have 11 to 20 years working experience, 98 (22.4%) have 21 to 30 years working experience and 88 (20.1%) have 31 and above years of working experience. Regarding the status of the GSM staff respondents, 277 (63.2%) are marketing staff while 161 (36.8%) are technical staff. With regards to GSM usage, all the 438 (100%) respondents use GSM network services.

5.0 DESCRIPTIVE STATISTICS OF QUESTIONNAIRE ITEMS AND CONSTRUCTS

There are mean and standard deviation values for all the 38 items and 5 constructs used in the study. The detailed statistics for each respective item and construct of the study are provided here. The descriptive statistics for items on the 5-Likert scale show that CS4 and CT3 have the highest mean value of 4.06, while CS1 has the lowest mean value of 3.75.

Similarly, for standard deviation, NSQ4 has the highest value of 0.909, and CL4 with the lowest value of 0.721.

6.0 ASSESSMENT OF MEASUREMENT MODEL

The PLS-SEM 4.0 by (Ringle, Wende, & Becker, 2015) was properly and carefully utilized in running the regression analysis for the research. Hair et al. (2017, 2014) were of the opinion that dual stages are involved in examining a model using PLS-SEM. Stage one deals with the measurement model assessment, while stage two comprises structural model assessment. However, there are two main procedures for assessing a reflective measurement model: the internal consistency assessment & convergent validity and discriminant validity assessment. Indicator reliability is expected to have an outer loading of 0.708 and above. However, loadings greater than 0.5, 0.6, and 0.7 are recommended acceptable by Hair et al. (2014), provided that the average variance extracted (AVE) and composite reliability CR threshold 0.50 and 0.70 are all satisfactory. In this study, the result shows that individual indicator loadings for all items were between the ranges of 0.638 and 0.842. The Composite reliability (CR) was used to evaluate internal consistency among the constructs. The rule of thumb for CR should have a value of higher than 0.70 (Hair et al., 2014, 2011; Wong, 2013). From the result of this study, the CR value for all the constructs adequately satisfied such requirements as the values lie between 0.861 and 0.853.

The convergent validity assessment of the measurement model, CVA was also assessed. The CVA stands as the squared loadings' grand mean of all items related to a construct (Hair et al., 2017). To attain convergent validity, the AVE value for each construct must be above 0.50 (50%) (Hair, Hult, Ringle, & Sarstedt, 2014; Hair et al., 2017). It was indicated that the AVE values were within the range of 0.500 and 0.643, this is above the

rules of thumb. Hence, with item loadings above 0.50, CR that is above 0.70, and AVE also above the threshold of 0.50, the measurement model of this study now has adequately met the required standard. In this regard, the model has established a suitable convergent validity.

7.0 DISCRIMINANT VALIDITY – HETEROTRAIT-MONOTRAIT RATIO (HTMT) CRITERION

According to Henseler, Ringle, & Sarstedt, (2015), and Hair et al., (2017) the Fornell-Larcker approach lacks the reliability to detect discriminant validity issues among constructs. As a result of the Fornell-Larcker approach shortcomings, Henseler et al (2015) have proposed a better procedure called Heterotrait-Monotrait Ratio (HTMT) for detecting discriminant validity among constructs; and stated that all the values above 0.90 depict discriminant validity issues. However, Kline (2011) asserted that a value not above 0.85 also indicates the absence of discriminant validity. All the values fall within an acceptable threshold, as a result, discriminant validity is not of concern in this research work.

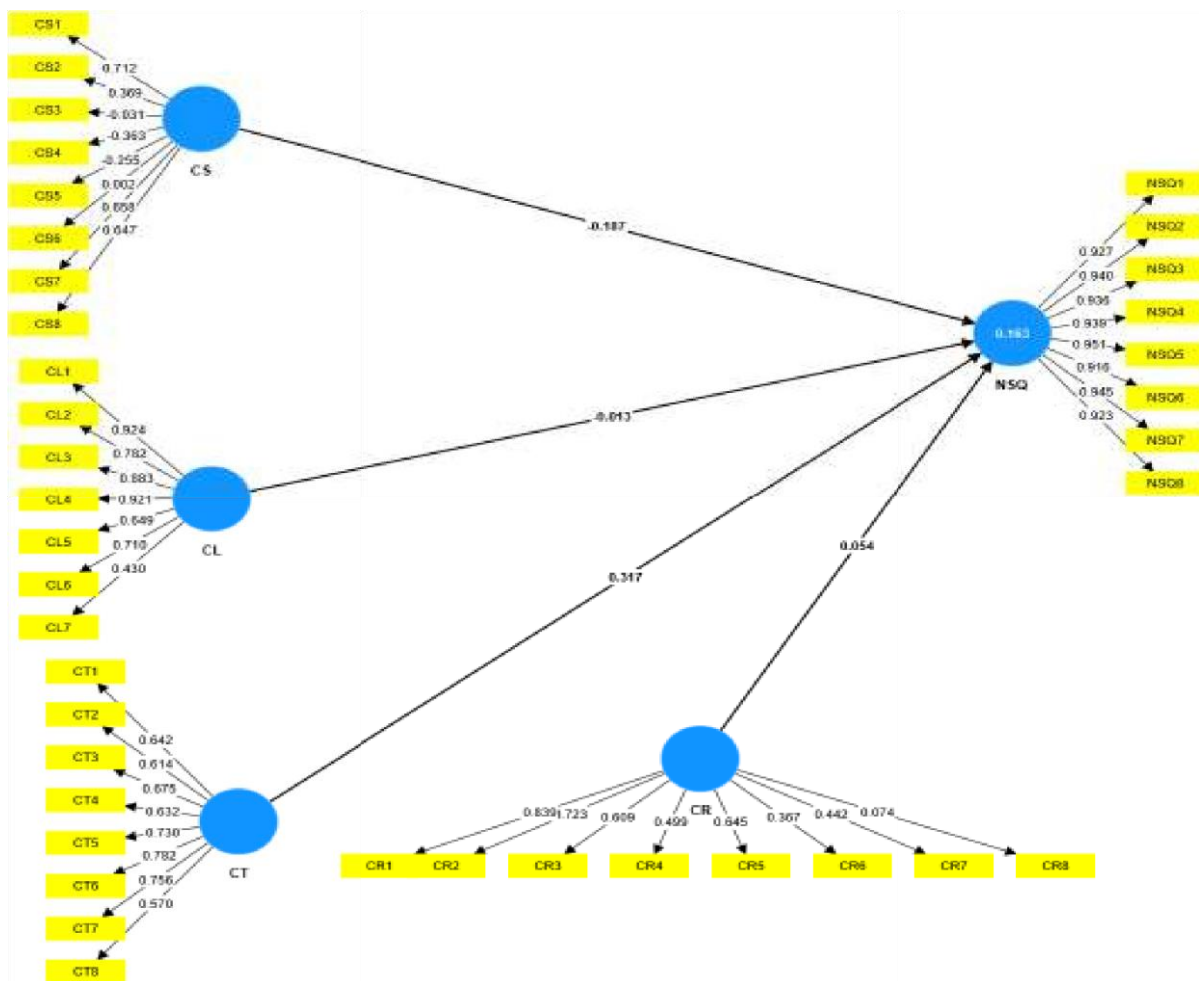
Table 1 Heterotrait-Monotrait (HTMT) Matrix

Construct	CS	CL	CT	CR	NSQ
CS					
CL	0.643				
CT	0.638	0.578			
CR	0.788	0.442	0.806		

8.o ASSESSMENT OF STRUCTURAL MODEL

Imperially, the structural model or inner model aimed at confirming the research model. This is the stage where some fundamental analyses such as collinearity assessment, assessing the significance of the path coefficients, the coefficient of determination (R^2) values, the effect size (f^2) as well as the predictive relevance (Q^2) and PLS-predict (Q^2 predict) are being carried out. The hypotheses and their relationships were also tested and confirmed in the structural model using the bootstrapping process.

Figure 2: Structural Model



9.0 Multi Collinearity Assessment

According to (Tabachnick & Fidell, 2019), Collinearity is an incident that occurs when the bivariate correlation of independent variables is too high (mostly around 0.90 or higher) while singularity represents a situation where the scores of two variables measure the same thing. Where the bivariate correlation reaches 0.90, it shows that the variables are practically the same. The presence of collinearity inflates the standard error of a path coefficient, which in turn renders it statistically insignificant (Hair et al., 2017; Tabachnick & Fidell, 2019). In another development, Hair et al., (2019), opined that VIF values should not exceed 3 (i.e 3 and below). The result of the multi-collinearity assessment for this research work shows that the VIF values among all the constructs lie between 2.929 and 1.368 which shows the absence of collinearity amongst the constructs in this study.

Coefficient of Determination Assessment (R^2)

This is the total combined effect of all the predicting constructs linked directly to a given endogenous or criterion variable. The coefficient of determination signifies the magnitude of variance in the dependent variable explained by all the constructs directly predicting it (Rigdon, 2012; Sarstedt, Ringle, Henseler, & Hair, 2014). Even though there is no firm rule to the acceptable level of R-square (R^2), it is determined by the complexity of the model and nature of the phenomenon of study (Hair et al., 2014). Furthermore, Hair et al. (2011) classified coefficient of determination (R^2) values of 0.25, 0.50 and 0.75 as weak, moderate and substantial, respectively.

Assessing the Effect Size (f^2)

According to (Hair, Risher, et al., 2019), effect size describes how the removal of the source variable in a structural model affects the R^2 value of the endogenous variable. In other words, it provides the estimate of in-sample predictive ability of the individual exogenous variable in a particular model. (Hair et al., 2020), only variables with statistical significance will show effect size, that is, its relative importance in the explaining endogenous/target variable in a model. It is expressed using the formula $f^2 = (R^2_{included} - R^2_{excluded}) / (1 - R^2_{included})$. Effect size (f^2) values above 0.35, 0.15 and 0.02 were regarded as large, in customer satisfaction, loyalty and retention respectively. Cohen, (1992), also, Kenney's (2018) suggested thresholds of 0.005, 0.01, and 0.025 which is insignificant for customer trust. Customer trust have insignificant impact on network service quality with f^2 of 0.001, customer satisfaction have a large f^2 of 0.747 on network service quality, loyalty has the impact of 0.601 on network service quality f^2 of 0.004 and lastly, retention has f^2 of 0.514 on network service quality respectively.

Table 2: Effect Sizes (f^2)

Construct	Effect Sizes (f^2)	Interpretation
NSQ		
CS	0.747	Large impact
CL	0.601	Large impact
CR	0.514	Large impact
CT	0.001	Little impact

Kenney's (2018) thresholds of 0.005, 0.01, and 0.025 are insignificant for customer trust.

10.0 HYPOTHESES TESTING

According to Hair et al., 2019; Hair et al., (2020), Inuwa, Islam & Male (2022); all of them suggested that based on two-tailed tests, values from 1.65 be significant at 10%, while 1.96 and 2.57 are also considered significant at 5% and 1% significance levels, respectively. On the one-tailed test, values of 1.28 are significant at 10%, while 1.65 and 2.33 are significantly at 5% and 1% significance levels, respectively (Hair et al., 2019). All the relationships hypothesized in this study are directional. Therefore, the one-tailed test was used to assess the path coefficient's t-values and the significant effect. Hence, the path with values from 1.65 and above was significant using the 5% significance level, and the hypotheses are accepted. However, the hypotheses are rejected for the path coefficient with t-values lower than 1.65.

11.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

The research work was carried out to study the impact of customer satisfaction, loyalty, trust and retention on GSM network service quality in Nigeria, particularly in Bauchi metropolis, of Bauchi State.

11.1 Summary of findings

Base on the data analysis results, it is evidence that three out of the four (4) research hypothesis were found to be statistically positive and significant influence on the network service quality delivered by the GSM services providers.

On the direct path coefficient, Customer Satisfaction was found to be positively and significantly related to the network service quality delivery; alternative hypothesis H_1 of the study postulates that “customer satisfaction has positive and direct impact on the GSM network service quality.” (H_1), as indicated in the result, the relationship is supported, as the path coefficient for the relationship shows a statistically positive and significant result with ($\beta = 0.065$, t-value = 2.318 and $p < 0.010$). This very finding of (H_1) was empirically proofed by prior studies. Jere & Mukupa (2018) measured the customer satisfaction and loyalty drivers in mobile telecom industry in Zambia. Results showed that network coverage was the stronger determinant; it indicates higher network

coverage had contributes more to customer satisfaction and trust. Customer service was the second most important aspect while tariff was the third largest predictor of customer satisfaction.

Customer Loyalty was also found to be positively and insignificantly related to the quality of the network service delivery. The second alternate hypothesis (H_2), postulates that “there is significant relationship between customer loyalty and network service quality.” This was also supported because the path coefficient for this relationship, as shown turns out to be statistically positive and significant with ($\beta = 0.876$, $t\text{-value} = 5.973$ and $p < 0.000$). In a related study, Belwal & Amireh (2018) analyzed the service quality and attitudinal loyalty of consumers of telecom companies in Omen. Findings showed that assurance and reliability has positive influence on attitudinal loyalty of customers.

Customer Trust was found to be positively but not significantly related to the quality of network service delivery of the GSM. On the other hand, the third alternate hypothesis (H_3), which postulates that “there is significant relationship between customer trust and network service quality” is not supported as the path coefficient that specified this relationship was statistically positive but insignificant with ($\beta = 0.054$, $t\text{-value} = 0.950$ and $p < 0.171$). Tomoliyus (2019) in his study believed that to achieve customer loyalty, management should meet the diverse customer demands, some of which are good business relationship, high quality products, trust and value.

Moreover, Customer Retention was found to be positively and significantly related to the network service quality delivery. It was depicted in the coefficient of the significant relationship between Customer Retention and Network Service Quality as positive. The result revealed that the Beta value of the relationship between customer retention and network service quality was $\beta = 0.906$, $p = 0.000$. Accordingly, the values of Beta, T-statistics, and P values of the relationships of the variables were $\beta = 0.906$; $t = 7.261$; $p = 0.000$. In this respect, all the values of such relationships are above 1.645 at $p < 0.05$ confidence levels using one tail test (rule of thumb). The result of findings was supported by a study of Victor, et-al, (2019), which revealed that the rate of customer retention was low for MTN and slightly below average for both Glo and Airtel networks. It was then concluded that GSM service providers have not done enough to improve customer

satisfaction through the level of loyalty and retentions strategies adopted on their subscribers.

11.2 Research Implications

The outcome of this study has important implications for theory, empirical, managerial and practical implications. These are in line with the generalization and the applicability of the underpinning theory of this research across different marketing and entrepreneurship context and practice. It is also critical to consider the implications, as well as Nigerian entrepreneurship stakeholders and entrepreneurs in other parts of the world who may actively be involved in making good utilization of these findings to improve their extant of the entrepreneurship practices in accomplishing an effective customer relationship management (CRM) for self-employment.

The Parasuraman Service Delivery Theory (1985) and pull & push mooring model of Dann (1977) prior empirical research findings on network service quality.

The theories proposed and hold the notion that customers from their environmental context and individual level can be influenced by the network service quality. This research has made a significant implication to the theory and knowledge by exploring and showing how the effects of customers' motivation are channeled to behavioral outcomes in respect of a network service quality as guided by (Obinna, et-al, 2018), and (Wang, Yang, Gao & Abudu, 2021) who stated that it includes better network service quality for customers' survival, because the push-pull-mooring model has been applied with strong predictive power in consumer switching literature, career commitment and online games.

The contributions of this study are to rectify the inadequacies in the past literatures by confirming the relationship between customer satisfaction, customer loyalty, customer trust, customer retention and network service quality in such relationships. Most explicitly, this study learned that maintaining customer satisfaction, customer loyalty, customer trust and customer retention in such relationships could enhance network service quality since building strong and reliable customers generate greater income.

Practically, it will be of benefit to the GSM service providers as they take appropriate steps for better service delivery. Results of this research will go a long way in assisting the operators in areas of market segmentation and understanding the switching behaviours of their customers with a view to providing services that will keep the customers. By doing so, the information rendered will provide guidelines for service providers to help develop appropriate working marketing strategies, putting these factors into consideration in order to satisfy their current customers, attract new ones and maintain a sustainable larger market share (Nwakanma, Udunwa, Anyiam, Ukwunna, Obasi& Bubagha). The finding posted yet another important magnitude for GSM service providers to exploit on motivating and enhance motivation among customers for patronage. These assertions were supported by the viewpoints of The Parasuraman Service Delivery Theory (1985) and pull & push mooring model of Dann (1977) prior empirical research findings on network service quality.

The customers on the other hand will understand the essence of value for money as well as win-win business relationships in the network service delivery because customers are considered to be very important in today's world business success, as its profitability moves around customers in every aspect.

This study premises the methodological implications in evaluating the phenomenon using some entrepreneurial intention measures. This research bridges a methodological gap through assessing less-researched network service quality determinants from the context of a new customer patronage through a quantitative approach (Melia et al., 2010; Martha et al., 2011). This present research used a quantitative approach in conducting the research using a survey questionnaire to collect data. In this direction, the present study modified and removed irrelevant statement from the adapted research instrument on GSM service providers.

11.3 Conclusion

Telecommunication has always been part of societal development in the last half century and continues to march towards innovative technologies and better living. The wireless subscriber base is growing at a rapid pace. All operations and communications across the world are being enabled by GSM mobile communications. However, the telecommunication services have been recognized worldwide as an important tool indicating the socio-economic development of a nation and the telecom infrastructure is treated as a crucial factor to realize and accomplish the socioeconomic objectives of a nation. The telecommunication services have witnessed phenomenal changes in Nigeria over the last two decades.

11.4 Recommendations

The study has the following managerial inferences or implications. First, there is the need for GSM Network providers to identify quality factors that can create value for customers' satisfaction and mutual business relationships.

Second, there is need for GSM Network providers and regulators to have an integrated view of all GSM Networks. Through integration and coordination of the networks, the service providers can increase customers' perception of the service value.

Thirdly, GSM Network providers should set up a priority quality plan for the overall satisfaction of consumers in a daily service delivery context and face-to-face contact with customers.

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