

# ANALYSIS OF EFFECTIVE CUSTOMERS' SERVICE SATISFACTION ON NIGERIA BANKS' PROFITABILITY: A QUEUING AND REGRESSION ANALYSIS IN SOKOTO METROPOLIS

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## ABSTRACT

*This study adopted Queuing and Regression analysis on data sourced through questionnaire from 100 customers of twelve (12) commercial banks branches in Sokoto metropolis to examine the impact of customer service satisfaction on banks' profitability. The descriptive statistics showed that majority of the respondents are married male between 31 – 43 years of age, and possess B. Sc/HND as their highest level of education. While the analysis of customers' perception of service quality has shown that most of the respondents are civil servants who operate current accounts for less than five years with the banks, and has enjoyed – loan (overdraft) facility. The Queuing and Regression analysis showed that some indicators of customer care satisfaction (time spend in the queue and number of channels) significantly influence banks' performance. The study suggested that the management of the banks should try every effort possible not to delay customers in the banking hall by enrolling them on the best network service possible and use alternative power supply to the normal electricity as these have the potential of improve banks' profitability.*

**Keywords:** *Customer care satisfaction, Bank profitability, Queuing and Regression analysis, Sokoto state, Nigeria.*

## 1. INTRODUCTION

Products were the major determinants of business success. The most successful firms were firms that were able to produce high quality products. Still in today's business, quality products are still crucial in business success. In the past, quality was defined and determined from the producers' or service providers' perspective with little or no consideration of the customer

expectations and perceptions. Customers were perceived not to know what they want and therefore accept what is available. This was the era of mass marketing. The mass marketing technique was effective as at that time because competition was less and consumers were not as sophisticated and informed as today.

In today's marketing environment however, customers have become the centre of all business decision right from the conception of a product to the delivery of the product. Customer centric marketing policies and processes are really important. The antecedents of the recent status of the customer in marketing and business operations are the intense global competition, emergence of service driven economies, increasing customer awareness and sophistication and advancement in information technology (Hamdallah and Evelyn, 2010). It is now generally accepted that the success of every business organization depends on how their customers are served and how the customers evaluate and perceive such services. The nature of the service may not matter but the value customers place on such service is of significant importance in customer's acquisition and retention.

The ultimate aim of all marketing activities in today's corporate world is to acquire and retain profitable customers. In practice, it is believed that it is cheaper to retain existing customers than to acquire new customers in today's intensive competitive business environment (Reichheld, 1996). It is empirically indicated that customer retention is influenced by three interdependent factors: service quality and value influence customer satisfaction (CS) or dissatisfaction (DS) (Thompson, 2004), customer satisfaction or dissatisfaction influence customer loyalty and according to Reichheld (1996), customer retention is influenced or determined by the level of customer loyalty. Since retaining existing customers is much cheaper than acquiring new once, perceived services quality, customer satisfaction and customer loyalty are crucial success factors for every business organization.

In academia this view has led to significant number of researches on conducting customer perceived service quality which resulted in the development of many service quality models for different industries including the banking industry. The story of customer retention and its indicators in the case of the banking industry in Nigeria is not different from what is in the literature. The banking industry has become one of the very competitive industries in recent time. The deregulation of the financial sector have led to proliferation of all kinds of financial institutions ranging from savings and loans firms, investment organizations, rural banks to commercial or what is popularly known as universal banks in the banking industry.

The recent level of competition in the industry has increased the need for customer retention since it is quite difficult to acquire new customers. Therefore, the importance of quality service, customer satisfaction, customer loyalty and customer retention to firms in the industry for survival, profitability and growth is laudable. There is no doubt that the increasing level of competition has improved the quality of service to customers of the banking industry. Majority banks have boosted the quality of their services in term of shorter transaction time, prestigious services, and customers' convenience. Now, based on above discussion how do customers'

services improve banks profitability? There are few amounts of researches on customer service quality and banking profitability. Most of these studies are comparative studies of the quality of service of two or three firms in the banking industry.

Therefore, the empirical issue of customer service and bank profitability in Nigeria still remains unresolved. There is the need to widen the understanding of customer service quality in the industry especially regarding its impact on profitability. This is only possible if a more encompassing survey with large sample size and scope is conducted. A better understanding of the impact of customers quality service satisfaction on bank profitability will be a sound basis for continuous improvement in the quality of service offered by banks in Nigeria to customers which provides the basis for this research work.

### **1.1 Statement of the Problem**

The statement of problem is the aspect of the introduction that identifies the current situation that calls for the study. It could be concerns that exist in the literature (e.g. to fill an empirical gap), a need to verify a theory or a need to address problems and challenges of policies and decision making in practice. As Fisher and Foreit (2002) put it “all research is set in motion by the existence of a problem”. This problem could be a perceived feeling of discomfort about the way things are or a perceived discrepancies between what someone believes should be the situation and what the real situation is (Fisher and Foreit, 2002).

There has been a proliferation of financial institutions in the country following the recapitalization of the banking industry. Consequently, competition in the industry was increased and banks are competing based on their perceived service quality. Service quality has various dimensions and each customer place different level of importance on each dimensions of service quality. Each bank has identified themselves with at least one of the dimensions of service quality that they think it will drive customers’ perceived service quality satisfaction, loyalty, and retention that will improve profitability. Therefore, the research questions were formulated as follows:

1. Does speed of transaction determine bank profitability?
2. Does queuing time influence bank profitability?
3. Do other variables determine bank profitability?

However, there are discrepancies between what the banks think is quality service satisfaction and what the customers expect from the banks, and the question of how it influences bank profitability is still unclear. Based on the above research questions, this study examines the impact of customer services satisfaction on banks’ profitability.

### **1.2 Objective of the Study**

The broad objective of this study is to analyze customer service satisfaction in the banking industry in Sokoto metropolis as the driver of banks’ profitability. Specific objectives include the followings:

1. To examine the level of effective speed transaction to banks' profitability in the study area.
2. To analyze how improved queuing time reduction is a strategy to increase banks profitability.
3. To investigate other determinants of banks' profitability in the study area and to offer useful suggestions for its implications.

### 1.3 Research Hypotheses

In line with research problems as well as the objectives, the following null hypotheses are stated and tested for this study as follows:

*H<sub>01</sub>: There is no significant relationship between level of speed in transaction and banks' profitability.*

*H<sub>02</sub>: There is no significant relationship between queuing time reduction and banks' profitability.*

*H<sub>03</sub>: There is no significant relationship between provision of other bank services and banks' profitability.*

### 1.4 Significance of the Study

One of the significance of this study lies on the fact that it is expected to provide empirical information to stakeholders of banks, marketing professionals, and policy makers of the banking industry of Nigeria. The stakeholders of the banking industry mentioned here particularly refer to the management, shareholders, and directors of banks in Nigeria. One, the findings of this study will provide the stakeholders with empirical information on what customers expect in terms of service quality from the banks as well as customers assessment of the quality of service they provide, and how it improves bank profitability.

Secondly, findings from the study are also expected to provide empirical information on the heterogeneity of customers perceived service quality in terms of customer background. Thus management will be guided in their strategic decisions on customer acquisition, customer satisfaction management, and customer retention to improve profitability. Thirdly, Shareholders and directors of banks in Nigeria are also expected to use such information as justification for their service quality decisions and policies.

Fourthly, to marketing/banking professionals and scholars, the findings of this study will be a great contribution to the existing literature, and the debates on service quality in banking. The findings of this study will extend the understanding and clarity of customers' expectations and perceptions of service quality in the banking industry of Nigeria. Marketing practitioners in other related service industries could therefore take clues from the findings, and make better meanings of the situation in their industries or firms.

Finally, the findings of the study are expected to be of significance to policy makers in the banking industry. In Nigeria, the policy maker of the banking industry is the government. The government regulates this industry through the ministry of finance and economic planning, and Central Bank of Nigeria. The findings of this study will provide an insight to the nature of

service quality in the banking industry of Nigeria and this could possibly be of any help in evaluating and reviewing service quality policies.

### **1.5 Scope and Limitation of the Study**

The scope of the study is limited to the imperatives of customer service contribution to bank profitability in the Nigeria with ten commercial banks (10) branches in Sokoto State which is are all made up of conventional were selected for this study. These include: First Bank of Nigeria, United Bank for Africa, Zenith Bank of Nigeria, Ecobank of Nigeria, Fidelity Bank, Union Bank of Nigeria, Guaranty Trust Bank, Skye Bank, FCMB, IBTC Bank, Unity Bank, and Access Bank. The study focuses on customer service satisfaction on banks' profitability in Nigeria with Sokoto metropolis as study area.

However, this study finding is hinder by the following limitations. In this dissertation, empirical data was obtained from bank clients and, hence, the study adopts the perspective of customers and not suppliers or employees in assessing relationships between customer service and bank profitability. The limitations identified in this study are incorporative of bank clients in providing the necessary information and inadequate literature addressing customer service and bank profitability. As such, this study endeavoured to collect data from those customers who are willing and corporative in providing the necessary information, and therefore sourced for related literatures in this area.

### **1.6 Scheme of Study**

This study is categorized into five sections. Section one is introduction, section two is review of literature, section three presents the study research methodology, section four contains the research findings and final section contains conclusion of the study.

## **2. REVIEW OF RELATED LITERATURE**

Performance is one of the most stringent requirements for large scale enterprise software applications. It is crucial in determining the success or failure of a large project. It spans various stages of a software product life cycle from designing to developing, and to final delivering to the customers. Adesola, Moradeyo and Oyeniya (2013) examined the impact of information and communication technology on the Nigerian banks operations in term of speed of banking operations, and efficient service delivery, workers' performance and bank's profit level, using United Bank for Africa (UBA) Plc. as a case study. The survey research design was used in this study. It involved the use of a self-designed structured questionnaire in collecting data from selected United Bank for Africa (UBA) Plc staff through simple random sampling method. The population of this study comprised all staff of UBA Plc while the sample size was fifty (50) respondents randomly selected from ten (10) purposively selected branches within Osun State. Data collected were analyzed using Simple Regression Analysis with the aid of Statistical

Package for Social Sciences (SPSS) software version 20. The result showed the usage of ICT contributed significantly to the speed of banking operations, and efficient service delivery, workers' performance and bank's profit level. It was then recommended that the banks should embark on more effective training for the workers, in order to further enhance their performance. And also management of banks should procure quality ICT gadgets that will enhance efficiency and customers' retention.

In this competitive commercial world, an organization has to satisfy the needs and wants of the customers, and has to attract new customers, and hence enhance their business. Customer value is considered as a control element for all business strategies. Therefore, every organization has to emphasize on customer satisfaction. As far as the banks are concerned this phenomenon is very prominent. To carry out this research, Premanth (2012) defined the Hypotheses as "The Market Segmentation highly positive impact on customer Satisfaction". This research is conducted with the intention of achieving the objectives of evaluating how far bank follow the concept of market segmentation; analyzing the market segmentation in Commercial Bank of Ceylon Plc; and analyzing what are the relationship between market segmentation & market mix and customer satisfaction in Commercial Bank of Ceylon Plc. For the research purpose, questionnaire has been used. The questionnaire was divided into two sections, first and second. In the first section, personal details of the selected customers. Employees were required to put the answer in to the section questionnaire. The Customer satisfaction with Market Segment has higher positive correlation 0.726. This means that high level of four market segment leads to highly increase in the customer satisfaction. This Co-efficient of determination 0.526 that the customer satisfaction in accounted for by market segment. In this connection hypothesis is accepted. That is market segments and marketing mix has strong impact on customer satisfaction.

Today, service companies and institutions worldwide, compete in space that due to the demands and expectations of the customers introduce a factor for the survival of their professional and only those groups of the institutions will be more successful that correctly recognize, customer is valuable investment. Banks and financial institutions are not exempt from this issue. Banks must attempt by new marketing strategies for attract more customers satisfaction. One of the new strategies is relationship marketing strategy. Today, relationship marketing is business art. The importance of this research toward marketing, service quality and consumer satisfaction as key to success elements of financial businesses faced with escalating competition and market changes recently. Society statistical present study is all customers having accounts at Saderat bank branches in Iran (Anzali) city. Taleghani Biabani, Gilaninia, Rahbarinia and Mousavian (2011) adopted available non-probability to collect data from the field through the help of questionnaire. Data analytical method was the correlation coefficient that finally, the hypothesis was confirmed. With survey fourth hypothesis and the results of the regression test, the intensity of relationship between Relationship benefits and customer satisfaction is 90/3 percent. Other words 81% customer satisfaction changes can be explained by relationship benefits. When the three variables together are into model, variable (Confidence benefits) lose its relationship with the

dependent variables, but was mentioned in the previous hypothesis that each of variables alone had a relationship with customer satisfaction. This means when three variables are entered in the model together, due to relationship between independent variables together (If some relationships with some of the independent variables is stronger than their relationship with the dependent variable) Variables mentioned in presence of other independent variables, their relationship lose with the dependent variables But the model is still significant. Thus for formation final model study, intended variables taken out and the final model is obtained. This means that the relationship between the scales of relationship benefits i.e. there is a relationship between Special treatment benefits and social benefits and customer's satisfaction of bank.

The aim of this research in Jordan is to measure the factors of service quality in Cairo-Amman Bank through its customers (Alkayed, 2014). To this end, the study utilizes a quantitative instrument. A random sample of banks' customers (n=190) was recruited from the selected Cairo-Amman banks for research participation. The results of this study indicated that service quality is an important antecedent of customer satisfaction. It is apparent that the managers and decision makers in Cairo-Amman banks seek to improve the elements of service quality that make the most significant contributions to customer satisfaction. This is consistent with results of past studies reporting a significant positive association between the two variables of service quality and customer satisfaction. This study also offers important implications for practice: utility of good quality in the maintenance of sustainable business practices and customer satisfaction, thus acknowledging customers as an important stakeholder group.

Williams, Ogege and Ideji (2014) investigated the impact of various elements of customer services adopted by some Nigerians banks to improve bank profitability in the Nigerian banking industry. It examined the mean profit and how each of the customer service elements adopted by the banks has impacted on the banks profitability and the level of impact of each of them. The study applies a pure quantitative analysis using five big Nigerian banks as a case study within a framework called the Queuing technique. Queuing Analysis revealed that the average time a bank customer spends waiting in the queue to carryout banking transaction has a linear relationship with the bank profitability. After the 2004 Nigerian banks consolidation and the recent failure of banks, leads to the study that examines the effectiveness of customer service on banks profitability. We found out that poor customer service management in banks may reduce banks profitability and thus may cause bank financial distress. However, the study also establishes that there is an inverse relationship between banks customers' services and profitability in Nigeria banks.

Adeoye and Lawanson (2012) described the characteristics of consumer behaviour in terms of their satisfaction; it does not ignore the explanation of the behaviour of customers vis-a-vis its determinants and effects on bank performance in Nigeria. Findings from the paper show that customers enjoying electronic banking services are still not satisfied with the quality and efficiency of the services. This is expressed in the number of times customers physically visit banks and length of time spent before such services are received. The paper concludes by

suggesting that they should improve their service delivery to justify the benefits of electronic banking products and services. This way, customers' interest would be aroused.

Onyeizugbe (2011) empirically examined the applicability of queuing model in First bank of Nigeria Plc, Onitsha aimed at identifying the features of a queuing system, identifying the causes of long queues and assessing the effects of the long queues on the service delivery of the bank. Data collected were presented in tables and analyzed using descriptive statistical measures. It was found that long queues in First Bank of Nigeria Plc, can result to customer dissatisfaction and economic losses to the bank. It is recommended that First bank of Nigeria PLC, Onitsha should use the principle of multiple channels to diversify their operation bases, single queue with multiple servers, training workers to be friendly, take a long-perspective toward getting rid of the queues for enhanced service delivery.

Ogunnaike (2010) examined the relationship between service quality and customer satisfaction. The study reveals that service quality has significant effect on customer satisfaction. The result also shows that there is a relationship between gender and customer service. Conclusion was drawn and it was recommended based on the findings of the study that the banks should focus more on their customers rather than on the products and services, which they sell because customers are the true business of every company.

Manda and Bhattacharya (2013) applied Grounded Theory Method to study the construct of customer satisfaction with respect to Indian retail banking from a qualitative perspective and the dimensions of customer satisfaction. The findings included the concepts generated which would determine the dimensions which might affect customer satisfaction. In the researchers' view, it is expected that this study would help to understand customer satisfaction in Indian retail banking better.

Olumide (2014) investigated ATM Usage and Customers' Satisfaction in Nigeria. It was discovered that despite the increasing number of ATM installations in Nigeria. Customers' needs are not satisfactorily met as customers are always seen on queue in large numbers at various ATM designated centers as well as poor service delivery of some of these machines. The research engages comparative analysis of three banks in Ogun State, Metropolis of Nigeria viz-a-viz First Bank, Guaranty Trust Bank and Skye Bank. However, questionnaires were distributed to the respondents. A total of 200 respondents answered the questionnaire cutting across the three banks, the chi-square statistical tool was used to analyze the data and the results showed a positive and significant relationship between ATM Usage and Customers' Satisfaction.

Dandago and Farouk (2012) investigated the impact of investment in information technology on the return on assets of selected banks in Nigeria for the period 2000-2010, using independent variables (MIS surrogates) which comprise of software, hardware investment, and number of ATMs, while the financial performance as a variable is proxied by the return on assets. The study employed secondary data generated from annual reports and accounts of selected banks quoted in the Nigerian Stock Exchange (NSE). The data were analyzed using multivariate regression



analysis; that is the Statistical Package for Social Sciences (SPSS). It was found that MIS surrogates which are software, hardware investment and number of ATMs had a significant impact on financial performance of Nigeria banks as measured by return on assets (ROA) because t-statistics results are all significant. The study recommends that banks should increase investment in software, hardware and ATMs which will enhance their Management Information System (MIS) and profitability. The study formally transits to queuing theory in a more rigorous format in the context of performance optimization on commercial banks branches in Sokoto State of Nigeria.

### **3. RESEARCH METHODOLOGY**

#### **3.1 Research Design**

Research design is an outline of the systematic and scientific procedures adopted in conducting a study (Saunders et al., 2007). The research purpose is the broad aim of the research. The purpose of every research may be classified as exploratory/descriptive or explanatory (Saunders et al, 2007). Exploratory research is research with the aim of seeking new insights, or assessing phenomena in a new light (Robson, 2002). The methods applicable in exploratory research include document analysis, expert's opinion, and focus group interviews. Descriptive researches are concern with portraying an accurate profile of persons, events or situations (Saunders et al 2007). While explanatory studies aim at establishing relationships between variables. In order words explanatory research is concerned with cause and effects analysis. The purpose of this study is to describe customer perceived service quality in the banking industry in Nigeria and explain the relationship between customer service and bank profitability in the banking industry of Nigeria. Thus this study is both descriptive and explanatory in purpose.

In terms of time horizon, a research design can be longitudinal or cross-sectional. A cross sectional research study a particular issue at a point in time by considering more cases (Saunders et al. 2007). On the other hand, longitudinal studies examine a particular issue over a period of time. This normally involves the use of time series information. This study is a cross-sectional study because data were collected from a cross section of customers of the banking industry of Nigeria at a point in time.

#### **3.2 Population**

The population of the study consists of all literate customers of commercial banks in Sokoto State of Nigeria. Customers of the commercial bank include all of the various categories of customers of the banking industry. This makes the commercial banks unique case for our study. The population is a composition of varied background characteristics in terms of sex, ages, level of education and experiences.

### **3.3 Sample Size**

A sample size of one hundred (100) customers of the commercial banks in Sokoto State of Nigeria were selected using convenient sampling because of financial and time constraints. After obtaining the number of customers to be selected from each bank, customers were met at the various banks and requested to complete the questionnaires. To get the required number of respondents for each commercial bank, more and more customers of a give commercial bank are requested to complete the questionnaire until the sample for that bank is exhausted. The next facet of the chapter discusses how the sample was selected.

### **3.4 Sampling Technique**

A multi stage sampling technique was adopted in selecting the study sample size. The author first of all adopted convenient sampling technique to select ten (10) commercial banks out of a total of seventeen (17) commercial banks operating in Sokoto State. The author further adopted convenient sampling technique to select a branch each of the selected commercial banks for the study. All the branches of the commercial banks in the sampled region could not be considered because of time and financial constraint. Using random sampling method, ten (10) respondents were selected for each of the banks.

### **3.5 Data Collection Procedures**

One of the most interesting characteristics of banking halls in Nigeria is long queues of customers waiting for services especially in the cities where commercial banks are more dominant. We took advantage of this situation in collecting data from the customers. A set of data was collected by visiting the banks during business hours and pleading with customers who are waiting for service to complete the questionnaires. In any case permission is sort from the bank authorities to administer the questionnaire. With this procedure we will approach as many customers as possible to meet the quota for a given commercial bank.

### **3.6 Data Collection Instruments**

This study adopted the questionnaire of Williams, Ogege and Ideji (2014) with little modification to reflect the study area. The entire questionnaire is made up of three sections. The first section collected data on the background profile of respondents. The second section contains items on customers' expectations of service quality performance of the banks. The third section contained items on customers' perceptions of service quality performance of the banks under each of the four factors outlined above.

### **3.7 Data Analysis**

The data analysis of effective customers' service on Nigeria banks profitability is based on the activities of ten (10) commercial banks operating in Sokoto State of Nigeria. The ten (10) commercial banks are First Bank of Nigeria, United Bank for Africa, Zenith Bank of Nigeria,

Ecobank of Nigeria, Fidelity Bank, Union Bank of Nigeria, Guaranty Trust Bank, Skye Bank, FCMB, IBTC Bank, Unity Bank, and Access Bank and Jaiz Bank. The data were extracted for the daily activities of these banks taking into consideration the time a customer spend on the queue and the time the bank cashier spend in attending to the customer. The choice of the ten (10) commercial banks branches in Sokoto State for this analysis is due to the banking activities and profitability of these banks. The data will be quantitatively presented in tables. Descriptive statistics (mean, standard deviations and median) are employed to analyze the collected data. Queuing and Regression analysis will also be carried out to determine the key factors of customer service that influence bank profitability.

This study applies queuing methodology based on the effect of customer service in the banking sub-sector of the Nigeria economy with special consideration to Sokoto State branches. The followings are the Queuing Assumptions applied to this work (Williams, Ogege and Ideji, 2014):

1. The arrival per unit of time follows a Poisson distribution probability.
2. Service times are follows an exponential distribution pattern.
3. Queue discipline follows a birth and death process.
4. The mean arrival rate is less than the mean service rate.

$\sum$  = Mean arrival rate of customers of commercial banks.

$H$  = Mean service rate of commercial banks customers.

Average number of customer in the system ( $L_s$ ) =  $\sum / H - \sum$ .

Average number of customer in the queue ( $L_q$ ) =  $\sum^2 / H (H - \sum)$ .

The average time a customer spends in the system ( $W_s$ ) =  $L_s / H - \sum$ .

The average time a customer spends waiting in the queue ( $W_q$ ) =  $\sum / H (H - \sum)$ .

The probability that the system is busy ( $P$ ) =  $\sum / H$ .

The probability that the system is idle ( $P_0$ ) =  $1 - \sum / H$ .

The probability that the number of customers in the system is greater than K (number of channels) ( $P_{nsk}$ ) =  $(\sum / H)^{k+1}$ .

### Multiple – Channel Queuing Model

$L_s = [\sum H (\sum / H)^k / (k - 1) (Ks - A)^2] [P_0 + \sum / H * \sum H]$ .

$P_0 = (\sum / H) \sim$  Probability of zero units in the system.

$K$  = Number of channels.

$L_q = L_s - \sum / H$  ( $L_s$  – equation from multiple channel).

$W_s = L_s / \sum$ .

$W_q = L_q / \sum$ .

$P = [1 / K * (\sum / H)^k] [ \{ KH / KH - \sum \} * P_0 ] \sim$  Probability that busy service.

Model Specification for the Study:

$MP = f(L_s + L_q + W_s + W_q + P_0 + P + K)$

The above model is hereby written in log —linear form as remove possible multicollinear problem:

$$\text{LinMP} = \beta_0 + \beta_1 \text{LinLs} + \beta_2 \text{LinLq} + \beta_3 \text{LinWs} + \beta_4 \text{LinWq} + \beta_5 \text{LinPo} + \beta_6 \text{LinP} + \beta_7 \text{LinK} + \beta_{n+1} \text{Lin}\sum CV + \alpha_t$$

Model Coefficients:  $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$  and  $\beta_{n+1}$

Where:

\*MP= Mean banks profit, Ls, Lq, Ws, Wq, Po, P, K = indicators of customer service proxied by queuing method above,  $\sum CV$  =Vector of control variables and  $\alpha_t$  = Error terms. It captures other variable not included in the model.

## 4. RESEARCH FINDINGS

### 4.1 Findings

#### 4.1 Table 1: Summary of Regression Results

Dependent variable: Natural Log of Mean Performance		
Variables	Coefficients	Significant Level
Constant	15.982	0.000***
Average number of customers in the system	-.838	0.302
Average time a customer spend in the system	1.712	0.182
Average time a customer spend in the queue	-2.268	0.083*
Probability that the system is busy	0.856	0.166
Probability that the system is idle	0.224	0.796
LinK	-0.874	0.061*
<b>Coefficient of Determination (<math>R^2</math>)</b>	<b>F - Calculated</b>	<b>F - Significant</b>
0.292	4.533	0.001***

Source: SPSS Output, and (\*) & (\*\*\*) indicate significant at 10% & 1% respectively.

Table 14 presents summary of regression result. The coefficient of determination ( $R^2$ ) is 0.292 indicating that approximately 29% variations in mean performance of commercial banks are explained by joint variations in the explanatory variables. This shows that customers care satisfaction play marginal role in explaining banks performance. More so, the F – calculated of 4.533 is significant at 1% level, indicating that the model is adequate and significant in explaining mean performance of commercial banks.

The intercept of the model with coefficient of 15.982 is significant at 1%. This shows that without variation in customer care satisfaction indicators, commercial banks performance will improve by 15.982%. However, number of customers in the queue was dropped as a result of multicollinearity. More so, the coefficient of number of customers in the system, time spend in system, busy system, and idle system are not statistically significant. However, their signs point relevancy of these indicators to bank performance. In addition, the coefficients of time spend in the queue, and the numbers of channels are negatively significant. These show that increase time spends in the queue and the numbers of channels significantly reduce bank performance. This

means that lesser time a customer spends in the queue within the banking hall, and the numbers of channels, the higher the performance of the bank and vice versa.

Based on the research findings, the study hypotheses were tested as follows: One, the study found time spend in the queue to be significant at 10% level, and therefore rejects the hypothesis that states that “there is no significant relationship between queuing time reduction and banks’ profitability”. It therefore means that the queuing time has significant influence on banks’ performance. Two, the study found the number of channels significant at 10% level, and therefore rejects the hypothesis that states that “there is no significant relationship between provision of other banks services and banks’ profitability”. It therefore means that other bank services through different channels significantly influence banks’ performance. Three, the study found time spend in the system not to be significant at any level of significant, and therefore accept the hypothesis that states that “there is no significant relationship between level of speed in transaction and banks’ profitability”. It therefore means that the level of speed in transaction do affect banks’ performance but not significantly for this particular study.

#### **4.2 Discussion of Findings**

The demographic characteristics and customers’ perception of service quality were analyzed using descriptive statistics. The findings on demographic characteristics (age, sex, highest level of education, and marital status) showed that majority of the respondents are married male between 31 – 43 years of age, and possess B. Sc/HND as their highest level of education. While the analysis of customers’ perception of service quality has shown that most of the respondents are civil servants who operate current accounts for less than five years with the banks, and has enjoyed – loan (overdraft) facility. These customers are of the view that the banks are very efficient in service delivery, and therefore continue banking with them based on the efficiency despite the fact that they stayed for less than 30 minutes in the bank to consummate transaction. However, the customers delayed transaction is due to network service breakdown as they often meet long queue in the banking hall as a result of power failure, network service breakdown etc. The testing of hypotheses was done with the help of regression technique. The findings showed that some indicators of customer care satisfaction (time spend in the queue and number of channels) significantly influence banks’ performance in with the findings of Adesola, Moradeyo and Oyeniyi (2013), Williams, Ogege and Ideji (2014), Onyeizube (2011), and Dandago and Farouk (2012).

#### **CONCLUSION**

This study collected both primary and secondary data, and adopted queuing and regression techniques to investigate the impact of customers care satisfaction on banks’ profitability with the assistance of SPSS software. The study relied heavily on both primary and secondary data. The primary data was collected from banks’ customers through the use of questionnaires, while

the secondary data set was collected from each bank annual financial statement of 2013. The findings showed that some indicators of customer care satisfaction (time spend in the queue and number of channels) significantly influence banks' performance. The study therefore concludes that some indicators of customer care satisfaction (time spend in the queue and number of channels) significantly influence banks performance.

Based on the research findings of this study, the following recommendations were offered. One, the bank management should adopt a strategy that will drastically reduce the queuing time of customers as this has the potential of improving their profitability and goodwill among the customers. Two, the customers should adopt other bank facilities that will reduce their queuing time and frustration in the bank to consummate transaction. This will go a long way in improving the time management skills of the bank and their personal gain. Three, the number of channels should not be arbitrary increase or decrease as the case maybe because of its potential of influencing banks' profitability. The changes should be monitored along the profitability of the unit to make sure that the impact is positive at any given period. Finally, the management of the banks should try every effort possible not to delay customers in the banking hall by enrolling on the best network service possible and use alternative power supply to the normal electricity as these too will improve the customer care satisfaction that will translate into improve banks' profitability.

## **BIBLIOGRAPHY**

- Adeoye, B. and Lawanson, O. (2012). Customers Satisfaction and its Implications for Bank Performance in Nigeria. *British Journal of Arts and Social Sciences*, 5(1).
- Adesola, M. A., Moradeyo, O. A. and Oyeniyi, K. O. (2013). Impact of Information and Communication Technology on Nigerian Banks Operations: A Study of United Bank for Africa (UBA) Plc. *International Journal of Business and Management Invention*, 2(9).
- Alkayed, W. (2014). Service Quality and Customer Satisfaction in Cairo – Amman Bank – in Jordan. *American International Journal of Contemporary Research*, 4(4).
- CBN (2012). *Annual Financial Reports*. Nigeria: Central Bank of Nigeria.
- Dandago, K. I. and Farouk, B. K. U. (2012). Impact of Investment in Information Technology on the Return on Assets of Selected Banks in Nigeria. *International Journal of Arts and Commerce*, 1(5).
- Edvardsson et al. (2005). Services Portrait in Service Research: A Critical Review. *International Journal of Service Industry Management*, 16 (1).

Fisher, A. and Foreit, J. (2002). Designing HIV/AIDS Intervention Studies: An Operational Research Handbook. Population Council, Washington, DC.

Gronroos, C. A. (1984). Service Model and Its Marketing Implications. *European Journal of Marketing*, 18(4).

Gronroos, C. A. (2000). *Service Management and Marketing*. Lexington Books, Lexington, MA.

Gronroos, C. A. (2001). The Perceived Quality Concept. A Mistake? *Managing Service Quality*, 11(3).

Groth, J. C. and Dye, R. T. (1999). Service Quality: Perceived Value, Expectations, Shortfalls, and Bonuses. *Managing Service Quality*, 9(4).

Kotler, P. and Kelvin, K. (2006). *Marketing Management*, 12<sup>th</sup> Ed. Pearson Education Inc, New Jersey.

Lovelock, C. (2005). Future Direction for Service Management Concepts, Research, Teaching, Practice. SerSIG Service Research Conference, NUS, Singapore, 4<sup>th</sup> June, 2005.

Manda, P. C. and Bhattacharya, S. (2013). Customer Satisfaction in Indian Retail Banking: A Grounded Theory Approach. *The Qualitative Report*, 18(56).

Ogunnaike, O. O. (2010). Assessing the relationship between service quality and customer satisfaction: Evidence from Nigerian banking industry. *Global Journal of Management and Business Research*, 10(2).

Olumide, O. A. (2014). Automated Teller Machine usage and customers' satisfaction in Nigeria. *Elite Research Journal of Accounting and Business Management*, 2(3).

Onyeizugbe, C. U. (2011). A Study of the Application of Queuing Model in First Bank of Nigeria Plc, Onitsha to Improve Service Delivery. *A Quarterly Journal of Association of National Accountants of Nigeria*, 19(1).

Premanth P. (2012). Market Segmentation and its impact on Customers Satisfaction with Especial Reference to Commercial Bank of Ceylon Plc. *Global Journal of Management and Business Research*, 12(17).

Reichheld, F. (1996). *The Loyalty Effect*. Harvard Business School Press, Boston, MA.

Robson, C. (2002). *Real world Research*, 2<sup>nd</sup> Ed., Oxford Blackwell.

Taleghani, M., Biabani, S., Gilaninia, S., Rahbarinia, S. B. and Mousavian, S. J. (2011). The Relationship between Customer Satisfaction and Relationship Marketing Benefits. *Arabian Journal of Business and Management Review*, 1(3).

Williams, H. T., Ogege, S. and Ideji, J. O. (2014). An Empirical Analysis of Effective Customers Service on Nigerian Banks Profitability. (A Queuing and Regression Approach). *Asian Economic and Financial Review*, 4(7).