

## **Electronic Banking and Customers' Satisfaction: Evidence from some Selected Deposit Money Banks in Nigeria**

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**Abstract:** The aim of this study is to examine the effect of electronic banking on customers' satisfaction in deposit money banks in Nigeria between 2013 and 2018 with aid of graphical, correlation and pooled regression analysis. From the results of the study, it could be pinpointed that UBA, First bank and Access bank registered the substantial number of customers' complaints regarding the use of electronic banking. All the banks selected for the study were able to resolve almost every complaint of their customers regarding the use of internet banking. Similarly, there is a positive relationship between electronic banking and customers resolved complaints in deposit money banks in Nigeria. This relationship is significant at 10% level of significance. However, there is a negative relationship between electronic banking and total customers complaints which is significant at 5% level of significance. Based on these findings, this study recommended that all hands must be on deck by the policy makers in these organizations to ensure effective and efficient management of electronic banking on a sustainable basis in meeting customers' needs. Also, the banks should make sure that the complaints of customers are resolved on time so that the customers will have a high confidence on the electronic banking system in money deposit banks in Nigeria

**Keywords:** Electronic Banking; Customers; Satisfaction; Deposit Money Banks

**JEL Classification:** G24

### **1. Introduction**

The emergence of information communication technologies (ICTs) has caused a rapid change in the structure and activities of the banking industry around the world in the last few decades. The banking industry and its prevailing environment in the

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21st century have becoming complex and competitive which made information and communication technology to take the central stage in the operations of banks.

However, the Basel Committee in 2003 conceptualised E-banking as a medium through which banking products and services could be extended to the customers via electronic channels such as internet banking, telephone banking, PC Banking, mobile banking, TV based banking and ATMs. Prior to the emergence of modern banking system, operations of banks were normally conducted manually which invariably resulted into delays in the settlement of transactions. Meanwhile, the advent of electronic banking has made transfer of funds, viewing and checking account balances, payment of mortgages, bills and purchase of financial instruments and certificates of deposits etc. easier and faster with a view to improving customer satisfaction.

The critical need to catch up with global developments, international best practices in the quality of their service delivery, Nigerian banks have embarked on massive investments on information and communication technologies over time. The increasing rate of technological progress in ICTs has made banks to provide e-banking services and other online banking services in order to gain competitive advantage in the economy (Ali, Sacid, Reza and Hamed, 2016). In the same vein, the need for the Central Bank of Nigeria (CBN) to set the Nigerian financial system in tune with the global trends and creating a formidable economic growth in the country has facilitated the recent cashless policy embarked upon by the CBN. The cashless policy is a policy on cash-based transactions which stipulates a 'cash handling charge' on daily cash withdrawals or cash deposits that exceed 500,000 for individuals and 3,000,000 for corporate bodies. The goal of the policy is to reduce, not eliminating the amount of physical cash in circulation and at the same time encouraging more electronic-based transactions in Nigeria (CBN, 2012).

Consequently, a careful observation has shown that electronic banking gives competitive advantage to banks by reducing operational cost and provides the best ways of satisfying customer needs. As such many financial institutions in the country are directing their strategies towards increasing customer satisfaction and loyalty through improved service quality. Against this backdrop, money deposit banks in Nigeria are embracing the use of E-banking in their day to day operations, because electronic banking products and services delivery improve efficiency and effectiveness of bank operations so that huge volume of transactions can be processed faster and in the most convenient way. This will undoubtedly increase the overall performance of the banks in terms of a quick service delivery, reduction in the frequency of customer physical appearance and cash handling.

Due to the numerous benefits of electronic banking to the Nigerian economic activities, several attempts have been made by the scholars in the recent times to explore how electronic banking has satisfied the needs of customers of deposit

money banks in the country. In light of the above, Iluno and Yakubu (2017) examined the linkage between E-commerce and customer satisfaction in Kaduna State Metropolis. In the same vein, Obikeze, Okolo, Okolo, Mmamel and Okonkwo, (2017) focused their study on some selected banks in Anambra State, Dedekuma and Ndugbe (2017) some selected banks in Asaba Metropolis in Delta State. Ogunlowore and Oladele (2014) and Adewoye (2013) carried out their studies in Lagos state, so also Babatunde and Salawudeen (2017), Taiwo and Agwu, (2017) carried out the same study in Nigeria. It is worth of note that the majority of studies on this subject matter have not fully explored Ogun state in the recent time, the gap in which this study intends to fill. The uniqueness of this study also lies in the adoption of new methodology in which majority of past studies have undermined. Therefore, this study will cover ten (10) selected deposit money banks in Ota, Ogun State, Nigeria.

## 2. Empirical Literature Review

Olannye, Dedekuma and Ndugbe, (2017) investigated the relationship between electronic service delivery channels and customer retention in some selected banks in Asaba Metropolis of Delta State, Nigeria. The study employed a sample of 235 employees from the banks with the aid of a cross sectional survey design method, correlation and multiple regression analysis. It was discovered from the study that point of sales service, online banking service and mobile banking have significant relationships with customer retention in the selected banks. Hussein and Elyjoy (2018) examined how internet banking and operational performance of commercial banks were related in Nakuru County, Kenya with the application of a structured questionnaires on 56 employees of the commercial banks. Correlation and regression analysis was used to address the objective of the study. The submitted that the internet banking has a positive significant effect on operational performance of the commercial banks. In another perspective, Babatunde and Salawudeen (2017) assessed impact of electronic banking on financial institutions and banking industry in Nigeria with the employment of both descriptive and inferential statistics in analysing the data. The study concluded that electronic banking emergence facilitated the efficiency, effectiveness and productivity of the banks in the country.

However, Adam, Nabil and Mohanad (2018) investigated the impact of e-banking and customer satisfaction using regression analysis. It was discovered from the paper that the internet banking services have a positive impact on customer satisfaction.

However, Sadaf and Rahela (2017) employed Judgmental and convenience sampling of 194 internet banking customers to examine the relationship between various dimensions of internet banking service quality and satisfaction of customers in India. It could be concluded from the study that the internet banking service quality

dimensions have a significant impact on the customer satisfaction in the country. While examining nexus between automated teller machine (ATM), customer satisfaction and profitability of commercial banks in Nigeria, Ekanem, Alhaji, Adeniyi and Adeogun (2017) utilized a quantitative approach and a well-structured closed ended questionnaire to obtain data from both customers and workers of commercial banks in Maiduguri, Borno state, Nigeria. The findings that emerged in the works showed that automated technology contributed immensely to the development of the banking activities, customer satisfaction and profitability of commercial banks in Nigeria. Sulieman and Ahlam (2017) examined investigated the linkage between electronic banking services and the loyalty of commercial banks` customers with the aid of a random sample of (400) participants. The authors argued that the electronic banking services has a significant positive impact on customers` loyalty in the banks in Jordan.

Chukwukaelo, Onyeiwu and Amah, (2018) employed a panel data regression to estimate the relationship between e-banking and the profitability of organisations in Nigeria. The findings from the study showed that electronic banking and profitability of deposit money banks had a significant positive relationship in the country. Iluno and Yakubu (2017) utilized both descriptive and regression analysis to examine the connection between E-commerce and customer satisfaction in Kaduna State Metropolis. The authors posited that internet reliability, inefficiency and security in the selected banks brought about a significant impact on customer satisfaction. Iluno, Farouk and Saheed (2018) focused their study in Kaduna state by investigating the impact of electronic banking on customers` satisfaction with the application of both quantitative and qualitative methods. It was discovered from the paper that electronic banking services and electronic banking products have a significant positive impact on the satisfaction of the customers of the banks in Kaduna State, Nigeria.

However, the reviewed of the empirical literature so far established that the studies on E-banking and customers` satisfaction in Nigeria are yet to reach a consensus about the nature of the relationship that exists between these variables. Hence, the relevance of this study.

### 3. Methodology

Secondary data from 2013 to 2018 were sourced from ten (10) selected deposit money banks in Nigeria. The target population in this study is 25 banks which are listed on the Nigerian Stock Exchange as at 2018. Meanwhile, a total of 10 banks was purposively chosen for this study. This accounts for about 40% of the targeted population in this work. The selected sample size is large enough to make empirical generalization because Uwuigbe (2014) argued that a minimum of 5% of a defined population is an appropriate sample size for making generalization. It is instructive to state that the purposive sampling technique adopted in this study was largely due to the availability of the annual reports of the companies. The following are the list of the selected banks for the study; Access Bank, Wema Bank, GTBank, Zenith Bank, FCM Bank, Union Bank, First Bank, Sterling Bank, UBA Bank and Unity Bank.

#### 3.1.

#### Specification

#### Model

$$E-B = F(RSC, TC, URC) \dots \dots \dots (1)$$

$$E-B = \alpha_0 + \alpha_1 RSC + \alpha_2 TC + \alpha_3 URC + \mu^3 \dots \dots \dots (2)$$

Where

E-B= Electronic Banking.

RSC= Resolved Complaint.

TC= Total Complaint

URC = Unresolved Customers Complaint

$\mu$ = Stochastic error term/ random error term.

$\alpha$ = Intercept.

#### 3.2. A-priori Expectation

The effect of electronic banking is expected to have a positive effect on customer satisfaction in money deposit banks of Nigeria. This is mathematically stated as:  $\alpha_1 > 0$ ,  $\alpha_2$  and  $\alpha_3 < 0$ .

#### 3.3. Measurements of Model Variables

The following model variables are explained below: The dependent variable in this research is electronic banking and is measured by the total number of Automated Teller Machines in each of the selected banks, and the independent variable in this research is customer satisfaction. The customer satisfaction is measured using the

model that is break down into two which are resolved customers` complaints, the total customers` complaints and unresolved customers` complaint.

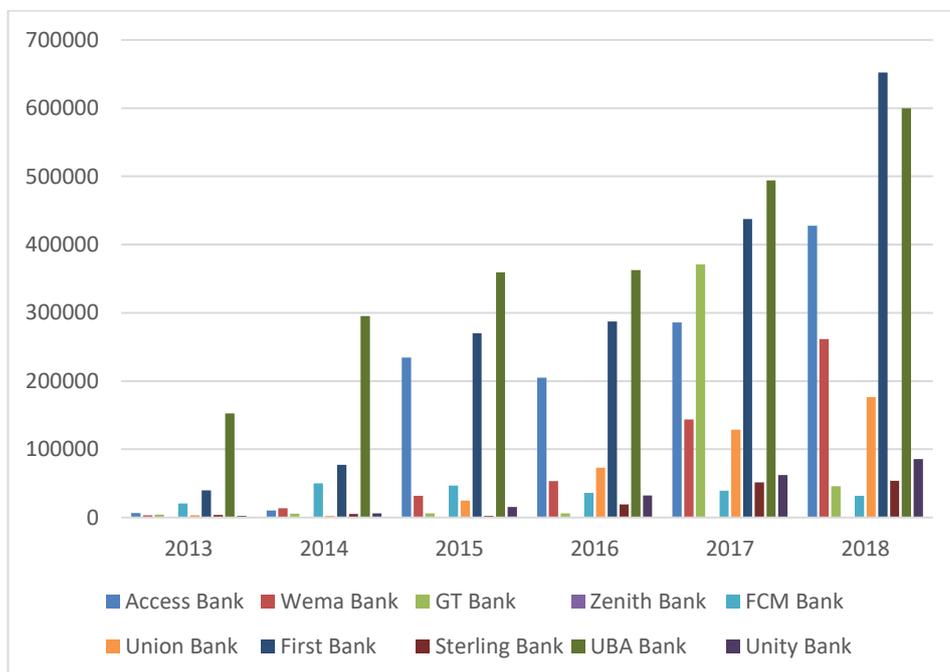
**3.4. Techniques of Data Analysis**

Descriptive statistics used included frequencies and percentages to analysis the data. Multiple linear regressions was used to estimate the relationship between the variables. Eviews 9 software package was used to run the data.

**3.5. Results and Discussion**

This study utilized data from secondary sources on which pictorial, descriptive and econometric techniques were employed for data analysis. In this chapter, the obtained results based on each respective objective of this study were discussed. Furthermore, the results were compared with both the a priori expectations of the study and the findings of previous empirical studies, and would subsequently be discussed in line with current literature on effect of electronic banking on customers` satisfaction.

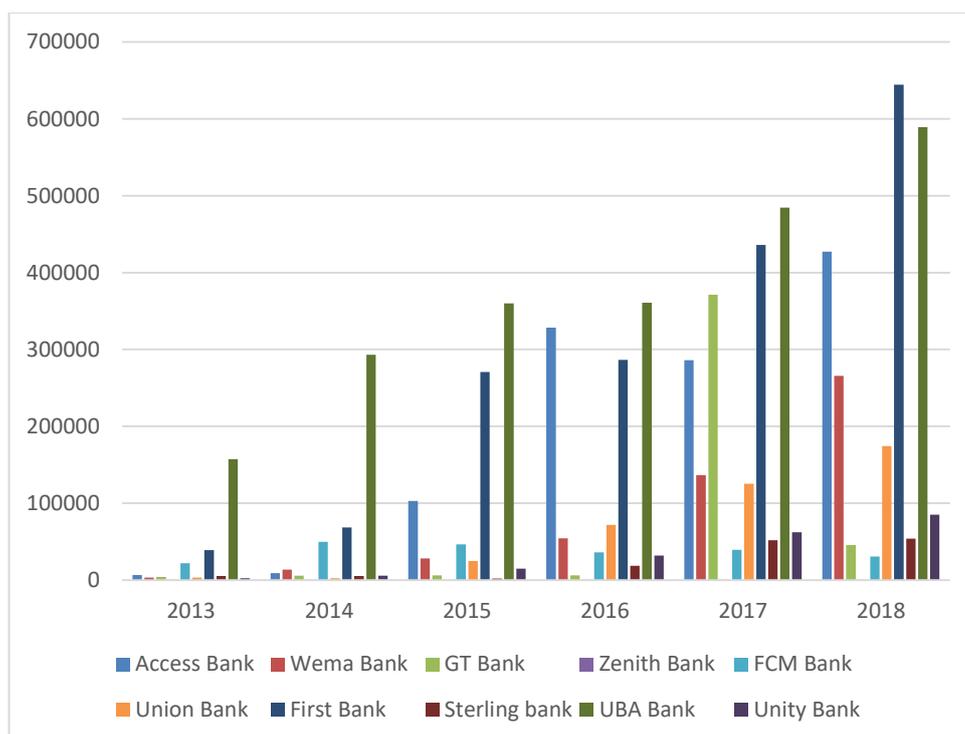
**3.6. The Trend and Pattern of Customers Complaint and Satisfaction of Deposit Money Banks in Nigeria**



**Figure 1. The Total Complaints of Customers in the Selected Banks**

*Source: Author`s Computation (2019)*

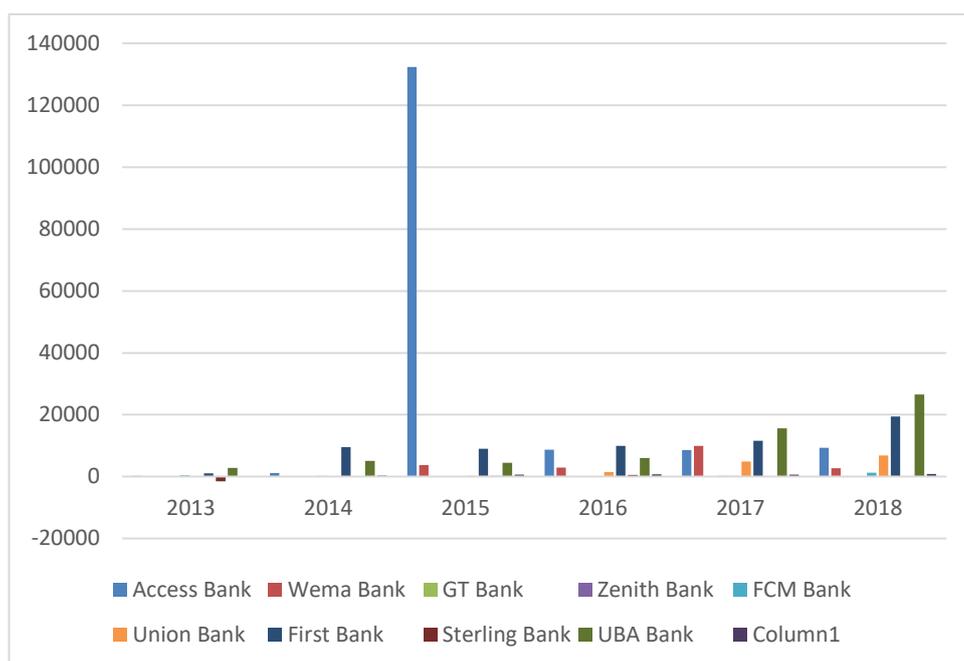
From figure 1, it could be deduced that from year 2013 to 2016, UBA, First bank and Access bank registered consistent highest number of customers' complaints respectively. Meanwhile, in year 2017, UBA had the highest number of customers' complaints followed by First bank and Guaranty Trust concurrently. In the same year, Access bank had a minimum customers complaints a great improvement on while the rest of the banks had very little customers' complaints. Consequently, in 2018, First bank had the highest number of customers' complaints regarding the use of electronic banking, followed by UBA and Access bank respectively. However, the rest of the banks selected for the study had minimum customers' complaints in that year. This implies that the level of customers' satisfaction regarding the use of electronic banking is very low in the following banks: UBA, First bank and Access bank but the level of customers' satisfaction is around average in the following banks: Wema bank. Guaranty Trust bank. Whereas, the level of customers' satisfaction is very high in the following banks: Zenith bank, FCMB, Union bank, Sterling bank and Unity bank.



**Figure 2. The Total Resolved Complaints of Customers in the Selected Banks**

*Source: Author's Computation (2019)*

From figure 2, it could be deduced that from 2013 to 2018, UBA, First bank and Access bank that registered the substantial number of customers' complaints regarding the use of electronic banking and other banks were able to resolve almost every complaint of their customers regarding the use of internet banking. The shows that there is high level of satisfaction of customers of the deposit money banks in Nigeria over the time.



**Figure 3. The Unresolved Complaints of Customers in the Selected Banks**

*Source: Author's Computation (2019)*

From figure 1, it could be deduced that the unresolved complaints of the customers are extreme low in all the banks from 2013 to 2018 except 2015 in which access bank has a huge unresolved complaints. This connotes that the customers have a substantial level of satisfaction with the usage of internet banking in Nigeria

**Table 4. Descriptive Statistics of Variables**

Descriptive Statistics	E-B	RSC	TC	CR
Mean	645.9314	31954.05	324975.3	1.109358
Median	764.0000	39238.00	401710.0	1.026997
Maximum	188449.0	644499.0	663928.0	2.540984
Minimum	126.0000	70.00000	89.00000	0.701404
Std. Deviation	45380.82	164571.9	169789.2	0.286817
Skewness	3.055952	1.523680	1.490029	3.627058
Kurtosis	1.052586	4.345990	4.301945	1.666037
Jarque-Bera	231.0684	27.28279	25.99885	588.1022
Probability	0.000000	0.000001	0.000002	0.000000
Sum	860995.0	7052889.	7373542.	65.45210
Sum. Sq. Deviation	1.19E+11	1.57E+12	1.67E+12	4.771309
Observation	59	59	59	59

*Source: Author's Computation (2019)*

The above shows the descriptive statistics of the data series used for the econometric analysis in this study. The various descriptive statistics of the data such as the mean, median, minimum and maximum values and the distribution of the sample measured by the skewness, kurtosis and Jarque-Bera statistics provide information about the sample series. However, it could be observed that the values of mean and median of the relevant variables are very close. This shows that the distribution of the series in the study is symmetrical in nature. Consequently, econometric analyses are often based on the assumptions of normality and asymptotic properties of data series. There is therefore the need to test for the existence or otherwise of these two properties because most probability distributions and test statistics like t, F, and  $\chi^2$  are based on them. Also, the value of kurtosis of all the variables are not far from 3 this attests to the normal distribution of the dataset in this study.

**Table 5. The Impact of Electronic Banking on Customers Satisfaction in Nigeria****Dependent Variable: E-B**

Variable	Coefficient	t-statistics	P-value
C	32237.62	1.075719	0.2867
RSC	0.079822***	1.879540	0.0582
TC	-0.091251**	2.213412	0.0318
URC	-0.430846	0.787952	0.4340
R-Squared	0.715332		
Adjusted R-Squared	0.637418		
Durbin-Watson stat	2.126679		

*Source: Authors' Computation (2019)*

\*Significant at 10%, \*\*Significant at 5%, \*\*\*Significant at 1%

The estimated results of the regression analysis were presented in the above table. It is clearly evident that all the coefficients of the explanatory variables which are total complaints, resolved complaints and unresolved complaints followed the apriori expectation. However, the explanatory variables of the model which consist of total complaints, resolved complaints and unresolved complaints jointly explained about 71% of the systematic variations in the dependent variable, electronic banking leaving 29% unexplained as result of random chance. This implication of this result is that this model is comparatively good for the analysis. But, the explanatory power reduces to 63%, when the loss in the degree of freedom was adjusted. Also, the result from the Durbin Watson statistic shows that the model is free from the problem of auto correlation its value is not far from 2.

Moreover, there is a positive relationship between electronic banking and customers resolved complaints in deposit money banks in Nigeria. This relationship is significant at 10% level of significance. Therefore, a unit change in resolved customers' complaints brings about 8% increment in the use of electronic banking by the customers. This implies that the use of electronic banking in these money deposit banks brings about customers satisfaction. In addition, there is a negative relationship between electronic banking and total customers complaints. This relationship is significant at 5% level of significance. This means that the use of electronic banking reduces the customers' complaints in the banking in industry in Nigeria. Also, electronic banking has a negative relationship with unresolved complaints but not significant at 10% level of significance.

#### 4. Conclusion and Recommendation

Attempt has been made in this study to account for effect of electronic banking on customers' satisfaction in deposit money bank in Nigeria over the period of 2013 to 2018. The study sets out to establish among others, the trend and pattern of customers satisfaction, the relationship between total complaints and resolved complaints, and effect of electronic banking on customers satisfaction in the Nigerian deposit money banks. To achieve the stated objectives, the study examining trend and pattern, descriptive statistics of the variables. Also, regression analysis was estimated. Meanwhile, on the basis of the empirical analyses, the findings that emerged in this study could be summarized as follows: from 2013 to 2018, UBA, First bank and Access bank registered the substantial number of customers' complaints regarding the use of electronic banking. All the banks selected for the study were able to resolve almost every complaint of their customers regarding the use of internet banking. The shows that there is high level of satisfaction of customers of the money deposit banks in Nigeria over the time. Similarly, there is a positive relationship between electronic banking and customers resolved complaints in deposit money banks in Nigeria. This implies that the use of electronic banking in these deposit money banks brings about customers satisfaction. In addition, there is a negative relationship between electronic banking and total customers complaints. This means that the use of electronic banking reduces the customers' complaints in the banking in industry in Nigeria. From the findings that emerged in this study, it is paramount that the following vital policy implications are drawn. Electronic banking has a significant impact on customers' satisfaction. Therefore, all hands must be on deck by the policy makers in these organizations to ensure effective and efficient management of electronic banking on a sustainable basis in meeting customers' needs. Also, the banks should make sure that the complaints of customers are resolved on time so that the customers will have a high confidence on the electronic banking system in money deposit banks in Nigeria.

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