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MOBILE BANKING TRANSACTIONS AND BANK PROFITABILITY IN NIGERIA

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Abstract

This study estimates the impact of mobile banking transactions on bank profitability in Nigeria using selected banks data from Electronic payment system office, Central Bank of Nigeria statistical bulletin from 2007-2016.The study adopts Panel unit root and SURE model estimation technique to conduct quantitative analysis for four selected old and new generation banks. The results of this study were analyzed using economic a priori criteria, statistical criteria and econometric criteria. The positive and statistically significant relationship between automated teller machine of old and new generation banks in Nigeria indicates that automated teller machine is a major factor that contributes to old and new banks performance in Nigeria. The positive and statistically significant relationship between point of sale of old and new generation bank in Nigeria indicates that point of sale is a major factor that contributes to old and new banks performance in Nigeria. The positive and statistically significant relationship between mobile banking of old and new generation banks in Nigeria indicates that mobile banking is a major factor that contributes to old and new banks performance in Nigeria. The study recommends that banks should intensify efforts to increase the assets of banks in Nigeria in order to make more profit. The study also calls for efficient management and utilization of funds to train and evaluate bank workers at every point in time.

Keywords: Mobile Banking, Credit Transactions, Credit Access, Electronic cards, banks Profitability

INTRODUCTION

Globalization, technological changes and advanced development in different economies' financial system especially in this 21st century have really changed the dynamics of financial transactions globally (Johnnson, 2005; Ozuru, Chikwe & Uduma, 2010). According to Oyewole, Abba, Gambo and Arikpo (2013), explosive growth in ICTs have removed the narrowed digital divide and turned business sphere into an electronic world (e-world). Edith (2008) also view mobile banking transactions as a framework by which exchanges are settled electronically with the utilization of electronic contraption like automated teller machines (ATMs), point of sales (POS) terminals, global system of mobile (GSM) telephones, and V-cards etc which can be taken care of by e-card holders, banks client and partners. Nigerian banks are no exception as banks in Nigeria, especially after the consolidation and recapitalization exercises, have strengthened and streamlined their facilities, tailored their services as well as automated their operations in line with this trend (Hassan, Aliyu and Farouk, 2013).This has given rise to the adoption of aggressive marketing approaches by the banks. In the heat of competition, banks are now adding to the stock of e-banking in order to maintain a competitive edge over their competitors (Adewuyi, 2011). The trend of mobile banking have progressed from inception in 1986 when the societe Generale Bank of Nigeria (SGBN) stream lined real-time banking into five subdivisions in Lagos State (Okoro, 2014) and launched its 1st Automated Teller Machine (ATM) in November of the year 1990 (Adewuyi, 2011).

Progressively, the early 2000s was characterized with the prevalent adoption of e-banking by many other Nigerian banks. Today, Nigeria banking industry has been characterized by the deployment of ATMs, internet, phones and Point of Sale (POS) as electronic payment tools (Okoro, 2014). In view of the cashless policy and technological development in Nigeria, the Nigerian banking system is appreciating the use of electronic forms of banking. ATMs, mobile phones, credit cards and debit cards, internet, cyber cash also become delivery avenues for normal banking services and products (NBS,2012).Currently, all commercial banks in Nigeria have their individual networks and platforms for payment like credit and debit cards as well as operation of ATM switch networks.

Mobile banking transactions has indeed revolutionized the Nigerian banking system such that it has tackled most of the challenges associated with the old, manual way of conducting banking transactions given the rate of increase in Electronic banking innovations in Nigeria banking system, it is surprising that empirical evidence using adequate data are not sufficient on quantitative evidence on bank performance-Electronic banking innovations nexus despite the increasing rate of usage. Thus, this research work seeks to proffer empirical

evidence on e-banking innovations on old and new generation banks performance in Nigeria that are e-banking innovations compliant within the research period.

A sound, efficient and productive financial system is a prerequisite for the health and development of any economy. The banking sector makes up dominants part of the financial system of any economy (Salehi,2010). It is a major player in allocation of fund from the lenders to borrowers. The few years especially from 2004 where bank consolidation was effected, the Nigerian banking sector system has registered great success with 24 registered banks working through more than 5,000 ATM terminals as at 2015 (Central Bank of Nigeria,2015). In Nigeria, the banking system account for about 76 percent of the Nigerian financial market. As at 2014 financial year, the ratio of deposit money banks total asset to the GDP was equal to 46 percent and the relative significance of financial services including deposit money banks was the highest compared to other sectors (CBN, 2014).

Despite the performance of banks in Nigerian banking sector, it is surprising that the recent publications from National Bureau of statistics, (2014) and CBN (2014) based on the CAMELS (Capital Adequacy, Asset Quality, Management, Earnings, Liquidity and risk sensitivity) system for banks' health concluded that only four banks were categorized as strong, nine banks satisfactory, seven banks were shaking and four banks were on the brink of distress. The capital adequacy ratio (CAR) of commercial banks decreased from 17.8 percent in 2013 to 15.92 percent in 2014 and however surpassed the capital base sufficiency edge of 10 percent. The savings money industry aggregate credits and advances remained at 12.63 trillion in 2014, demonstrating an increment of 25.73 percent more than 10.04 trillion in 2014.NBS (2014) further showed that the business volume of non profitable advances in banks expanded by 10.26 percent from 321.66 billion in 2013 to 354.84 billion in 2014, whereas non profitable advances to aggregate credits proportion increased from 3.20 percent in 2013 to 2.81 percent in 2014.

Moreover, available statistics revealed that Eco-bank recorded N40 billion as profit after tax (PAT), Union bank of Nigeria declared N18.1 billion as profit after (PAT), FCMB posted N2.5 billion as profit after tax (PAT), Fidelity Bank recorded N14 billion profit after tax (PAT) and Wema Bank recorded N3.046 billion as profit after tax (NSE, 2015).

Again, other DMBs that released their 2015 annual reports in March 2016 recorded a huge increase in profits in both profit before tax (PBT) and profit after tax (PAT) irrespective of their enormous provision for bad loans that most of the DMBs made in the 2015 financial year. These are GTB, UBA, Access Bank, Sterling Bank and Zenith bank Plc. Sterling bank PBT increases from N10.7 billion in the previous year to N11 billion in 2015 while its PAT rose from N9 billion to N10.3 billion, United bank for Africa PBT rose from N42.4 billion to N50.8 billion, while PAT rose from N40 billion to N47 .6 billion and zenith bank PBT rose from N107 billion to

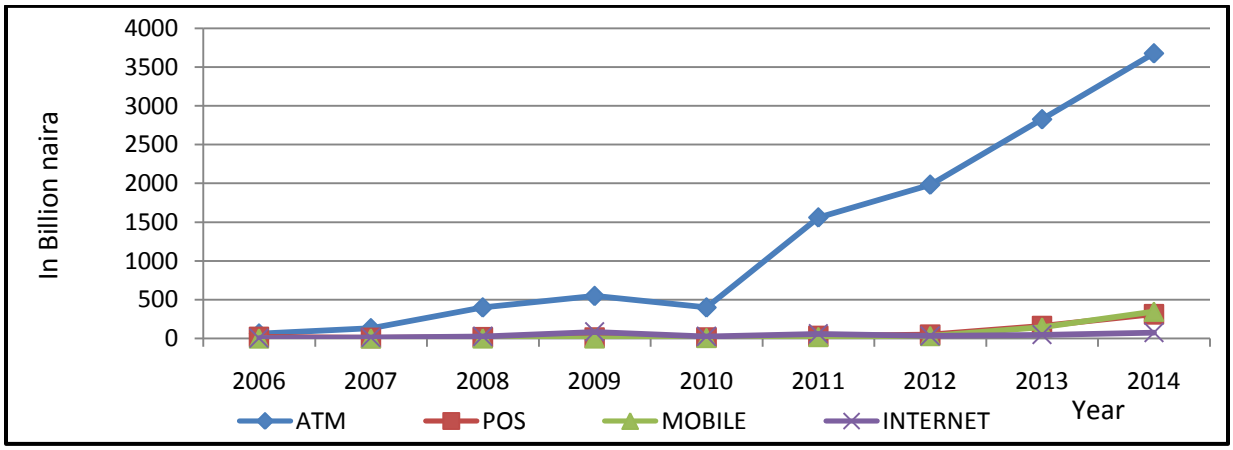
N115 billion, while the PAT rose from N92.4 billion and Access bank's PBT increased from N46.1 billion to N65.2 billion while it PAT increased from N39.9 billion to N58.9 billion.

Statistics have further shown that Nigeria still have low payment penetration rate in spite of revolution in modern payment systems. Compared to some of its contemporaries, statistics have shown that Nigeria has a low formal payment penetration rate of 21.6 per cent as against 46 per cent obtained in both Kenya and South Africa, while accessibility to savings accounts in Nigeria stood at an average of 461 savings accounts for every 1000 population when compared to 2,063 savings accounts for every 1000 population in Malaysia (Mbutor2013).

Evidence has also shown that the number of automated teller machines (ATMs) in Nigeria deployed at the end of 2011 was 9,640, representing an average of 11 number of automated teller machines (ATMs) for every 100,000 adults population of Nigeria, compared with an average of 59 number of automated teller machines (ATMs) for every 100,000 adult population in South Africa, 42 automated teller machines (ATMs) for every 100,000 adult population in Argentina, 13 automated teller machines (ATMs) for every 100,000 adult population in Indonesia, 56 automated teller machines (ATMs) for every 100,000 adult population in Malaysia, and 120 automated teller machines (ATMs) for every 100,000 adult population in Brazil.

Figure 1 depicts stylized facts on trend performance of the electronic payment channels in Nigeria. As depicted in the figure, value of ATM cash dispensing and transactions rose from N63.2 billion in 2006 to N399.7 billion in 2008 and further increased to N548.60 billion in 2009. The value of ATMs fell sharply to N399.71 billion in 2010 but thereafter rose rapidly N1,561.74 billion in 2011. The value of ATMs further increased from N1,984,66 billion in 2012 to N3,679.88 billion in 2014.

Figure. 1: Performance of E-payment channels in Nigeria, 2006-2014



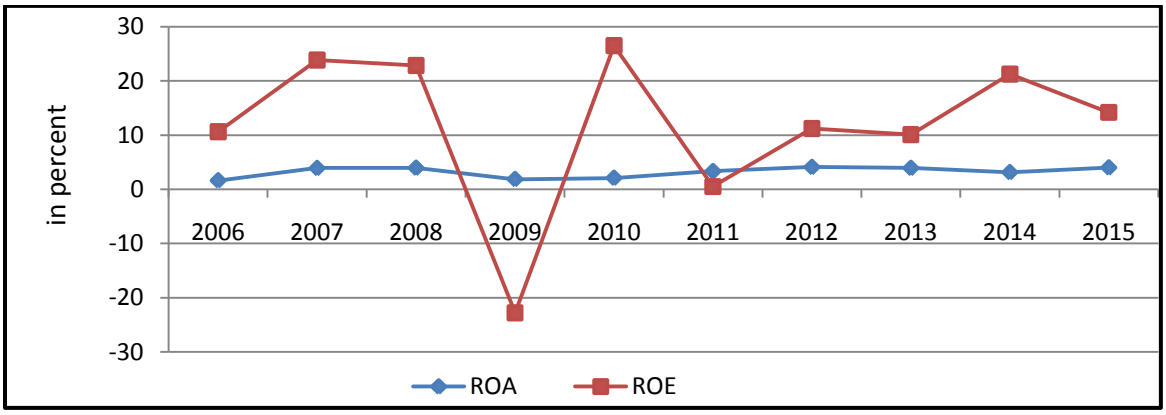
Source: CBN (2015) and Researcher's computation, (2015)

The value of POS transactions declined from N20.2 billion in 2006 to N6.4 billion in 2007. The value of POS thereafter increased rapidly to N16.1 billion in 2008 but fell again to N11.03 billion in 2009. The value of POS thereafter increased from N12.72 billion in 2010 to N48.01 billion in 2012. The value of POS then increased rapidly from N 161.02 billion in 2013 to N312.07 billion in 2014 (CBN,2014).

Statistics in figure 1 further showed that the value of mobile payments increased consistently from N0.10 billion in 2006 to N1.27 billion in 2009 and increased further to N18.98 billion in 2011. The value of mobile transaction increased further from 142.80 billion in 2013 to N346.47 billion in 2014. The increase in the use of mobile payment system was due to the increase in the number of banks offering the services and increased public confidence in e-payments. Further examination of information in figure 1 showed that the value of internet transaction rose from N3.0 billion in 2006 to N25.1 billion in 2008 and thereafter rose sharply to N84.15 million in 2009. The value of internet transaction declined to N25.05 billion in 2010 before rising consistently to N74.04 billion in 2014 (CBN, 2014).

During the same period, returns on asset (ROA) declined from 1.85 percent in 2005 to 1.61 percent in 2006 but increased consistently to 3.95 percent in 2008 and fell to 1.85 percent in 2009. In the same period, return on equity (ROE) increased from 10.60 percent in 2006 to 23.84 percent in 2007 and then fell sharply to -22.80 percent in 2009 and thereafter increased rapidly to 26.50 percent in 2010. Return on asset increased gradually from 2.08 percent in 2010 to 4.10 percent in 2012 but fell to 3.13 percent in 2014 and then rose slightly to 4.01 percent in 2015. On the other hand, return on equity fell to 0.50 percent in 2011 and rose sharply to 11.20 percent in 2012 and thereafter fluctuated between 10.10 percent and 21.23 percent from 2013 to 2015 (see figure 2).

Figure 2. Performance of Return on Assets (ROA) and Return on Equity(ROE) (2006-2015)



Source: CBN, 2016 and Researcher's Computation, 2015

Notwithstanding the rapid increase in both the volume and value of the various payment channels in Nigeria, the e-payment system is not without its dark side. In Nigeria, Internet banking and ATM are the leading channels for perpetuating e-fraud. Statistics show that the volume of e-fraud reported was 822 in 2013 and in 2014, the volume rose rapidly to 1,461 (CBN, 2015). Attempted fraud value reported was N19,148,787,069 billion in 2013 and in 2014, attempted fraud value reported was N7,750,152,718 billion. In the same way, the actual loss value due to e-fraud was N485,194,350 million in 2013 and N6,215,987,323 billion in 2014 (CBN, 2015).

The problem of high illiteracy among the Nigerian population has also affected the successful implementation and operation of electronic banking in Nigeria. Inadequate education coupled with poor enlightenment of bankers and customers on various aspects and issue of electronic payment transactions and cashless policy before launching the scheme has made the strategies for marketing the project fall short of expectations (Ajayi, 2014). A research study by Akhalumeh & Ohioka (2011) showed that 34.0 percent of the respondents identified the problem of internet fraud, 15.5% cited problem of limited POS/ATM, and 19.6% cited problem of illiteracy among the people as some of the challenges militating against the smooth operation of the cashless policy in Nigeria.

Meanwhile, in Nigeria there seems to be a serious debate on whether the financial sector reforms have contributed to performance of the banking sector. This is because the Nigeria's financial system is not effectively providing its development roles as such and is currently not in a position to fulfill its potential as a propeller of economic growth and development (Nkoro & Uko, 2013). And in spite of the banking sector reforms in the areas of bank recapitalization, electronic banking and effective corporate governance, the Nigeria's major productive sectors have considerably shrunk in size since the 1980s prompting arguments as to the efficacy of the reforms. The policy of bank recapitalization came up in the mid 2004 which was predicated on the need to increase risk management procedures and enhance corporate governance in order to strengthen and reposition the banking industry to enable it contribute effectively to the development of the real sector through its intermediation process. The essence of the electronic banking reform was to promote a comprehensive process of substantially improving the regulatory and surveillance framework, fostering healthy competition in banking operations, ensuring an efficient framework for monetary management, expansion of savings mobilization, enforcement of capital adequacy, promotion of investment and growth through market-based interest rates, increasing sophistication of the global financial products, and even the recent global financial crisis, all make the need for banking sector reforms a sine qua non, but the challenges of insecurity and inadequate infrastructure are still

persistent. Poverty is deep, severe and pervasive, with about 70% of the population living below poverty line. Poverty is also becoming entrenched in Nigeria, with the threat that the children of the poor are also likely to end up poor. Income distribution is so skewed that the country is one of the most unequal societies in the world, with 50% of the population having only 8% of the national income (Soludo et al, 2007, Nkoro & Uko, 2013). Hence, despite the rapid development in electronic banking innovations, the scenarios have cast doubt as to whether e-banking innovations have impacted positively and significantly on banks performance in Nigeria. The study estimates the impact of e-banking innovations on the performance of selected banks in Nigeria.

It is expected that the results from this study will offer policy recommendations to the government, financial analysts, financial authorities like the Central Bank of Nigeria on how best the financial system can be organized through Electronic banking innovations to promote the performance of banks in Nigeria. To the government and the central bank of Nigeria, findings from this study will help provide raw information from which appropriate policies can be instituted in order to ensure the successful operation of the cashless policy in Nigeria.

This study adopts Non-probability sampling techniques using secondary data from six selected Deposit Money banks (DMBs) to achieve the said objectives of the study. These selection captured selected old and new generation banks in Nigeria from 2007-2016. This period is chosen because of the increase in awareness of e-banking innovations across the 24 Nigerian deposit money banks. The selected deposit money banks for this study include: First Bank of Nigeria Plc, United Bank for Africa Plc, Union Bank of Nigeria Plc, Zenith Bank Plc, Guaranty Trust Bank Plc, and Diamond Bank Plc. The six banks are chosen based on the fact that the first three represents the old generation banks and the last three represent new generation banks in Nigeria.

Performance of the Nigerian banking industry

One of the indicators of performance for commercial banks is profitability and commercial banks in Nigeria have reported a sustained increase in profit over the decade though in some years the profit have been increasing in a decreasing rate which positioned the Nigeria Banks as the second most profitable banking system in Africa (Omotunde, Sunday & John-Dewole,2013).The performance review of banks on Profit After Tax (PAT) margin based on 2013 financial review of commercial banks revealed that Guaranty trust bank has the highest positive PAT value at 39.46 percent. Zenith bank comes second at a PAT margin of 26.56 percent and third by First bank of Nigeria at 24.22 percent. Wema bank had the least PAT value at 1.82 percent.

In the same review of commercial bank, Omotunde et al, (2013) registered that Zenith bank emerged the industry leader, declaring N110.59 billion as profit before tax (PBT) , Guaranty trust bank recorded a PBT of N107.09 billion and came second in the trend, while First bank of Nigeria came third with PBT of N91.346 billion. And the fourth position was United Bank for Africa with N56 billion in profits after tax, followed by access bank in the fifth position with a PBT of N44.9 billion and Diamond bank with N32.1 billion as profit after tax in the sixth. Stanbic IBTC recorded N32.1 billion as PAT to come seventh. First City Monument Bank came eighth with PBT of N18.2 billion, Skye bank followed with N17.13 billion and Eco bank Nigeria which declared a profit before tax of N10.53 billion came tenth. Next was sterling bank with N9.31 billion and it was followed by fidelity Bank, Union Bank and Wema bank with profits after tax as N9.08 billion, N4.2 billion and N1.9 billion as profit after tax respectively.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Conceptual Framework

Electronic banking

Sadr (2013) defined electronic banking as rapid spread of services that enables customers to access and use computer to access account specific information and also conduct transactions from any location. Now, compared to the traditional system of banking, banks provide fast information delivery from customer to customer making it obvious that variations exist between services offered by electronic enable banks and non-banks (Singhal & Padhmanabhanm, 2008). It is noted that in 2005, mobile banking transactions was considered fastest growing commercial activity on the internet and this has improved banking transactions for global competitiveness in the 21st century (Udeze, Okafor, Nwafor & Abarikwu, 2013).Precisely, mobile banking transactions have eased and fastened banking transactions, lowered cost of banks operations, improved profits maximization (Saleh &Alipour, 2010).

Transactions Cost Innovative Theory

The transaction cost innovation theory pioneered by Niehans (2006) advocated that the dominant factor of financial innovation is the reduction of transaction cost, and in fact, financial innovation is the response of the advance in technology which caused the transaction cost to reduce. The reduction of transaction cost can stimulate financial innovation and improvement of financial service. It states that financial innovation reduces transaction costs. Transaction costs Innovation theory is also relevant in this context: for instance, the use of Internet-connected Information Technology (IT) can substantially reduce a firm's transaction costs as it enables efficient coordination, management and use of information. Mobile, Internet-connected IT may

further lower transaction costs as it provides also off-site access to the firm's internal database and other relevant sources of information. Consequently, reduction of operation costs through agency banking, internet banking and mobile banking may influence growth in profitability for the bank.

Technology Acceptance Model (TAM)

This theory was developed by Davis in 1986. The model was formally developed from the research conducted by Davis (1989) on technological issues. The result of this research led to the development of the Technology Acceptance Model (TAM). This model seeks to establish the relationship between individuals' behavioural and the use of Information and Communication Technology (ICT). It is argued that the behaviour of individual influences his attitude towards adopting new technology. However attitude and perceived usefulness are both determined by ease of use. (Pedersen et al 2002) maintains that adopting the TAM model is based on knowing end-users requirements with respect to how easy and friendly the technology is presented.

The banking industry in Nigeria revaluated its options and discovered that only 10 percent of its client's base accounted for 90 percent of its expenses. The focus thus became how to eliminate costs by attending to those 10 percent. Competitiveness, high growth levels and increased sophistication in world systems and sub-systems thus forced the banking sector to revaluate techniques and innovations to improve its efficiency, profitability and overall performance. In recent years, advances in banking related technology has reduced the need for physical location and banking transactions are now being conducted from remote location using personal computers and ATMs.

In another study, Oyewole, El-Mauda, Abba and Arikpo (2013) carried out a study on e-banking and bank performance in Nigeria. Panel data comprised annual audited financial statements of eight banks that have adopted e-banking and retained their brand name banking between 2000 and 2010 as well as macroeconomic control variables were employed to investigate the impact of e-banking on return on asset (ROA), return on equity (ROE) and net interest margin (NIM). Result from pooled OLS estimations indicate that e-banking begins to contribute positively to bank performance in terms of ROA and NIM with a time lag of two years while a negative impact was observed in the first year of adoption. It was recommended that investment decision on electronic banking should be rational so as to justify cost and revenue implications on bank performance.

Wali, Wright and Reynolds (2014) examined the impact of the cashless system on user's perception and retail marketing performance in Nigeria retail sector, using survey instrument (questionnaire) and randomly selected 550 samples as to generate data on the impact of

cashless systems on user' perception and retail marketing performance in Nigeria. The study revealed that the adoption of cashless policy impacted on marketing performance of retail outlets in Nigeria. Specifically, the study revealed that the use of point of sale terminal (POS) as an instrument of cashless policy has strong and positive relationship with profitability and sales volume of retail outlet. The study further found that the use of E-cash wallet influences customers purchase intention as well as impact on customers repeat purchase behaviour.

Ogunlowore and Oladele (2014) empirically investigated the impact of electronic banking on the satisfaction of customers using GTB bank, Lagos as a case study. A total respondent of 100 respondents were sampled using a carefully structured questionnaire. Data obtained were analyzed using descriptive measures such as simple tables and percentages. The formulated hypotheses were validated using the chi-square statistical measure. The empirical result from the chi-square analysis revealed that electronic banking has significant relationship with customer satisfaction in GTB bank in particular and the general banking customers in general. The result also revealed that the introduction of electronic banking has enhanced bank profitability level. Finally, the results showed the application of electronic banking has increased the market share of banks in Nigeria. the study recommended that there is utmost need for the bank management to utilize the electronic banking resources so as to enhance the effectiveness and efficiency of banks.

Oloyede, Azeez and Aluko (2015) assessed the benefit of e-commerce and e-banking to the Nigerian economy. In particular, the study examined the impact of e-commerce and e-banking on economic growth in Nigeria, sampling 100 respondents selected from banks and the general public. The study employed non-parametric statistics measure such as chi-square in testing the formulated hypothesis. The results of the test established that e-commerce and e-banking have significant positive impact on the Nigerian economy. This, it does by enhancing a better transaction exchange and reduced time wasting and slowness associated paper business transactions. The results also showed that electronics commerce and electronic banking has led to easy access to global market leading to a huge gain from such global integration. Further examination of the results showed that the application of electronic commerce and electronic banking has ensured the promotion of effectiveness and efficiency in business transactions in Nigeria. Lastly, the results revealed that the adoption of e-commerce and e-banking has resulted to the overall economic growth in Nigeria. The authors recommended that the government should provide adequate infrastructures such as telecommunication and power infrastructures so that the gain from e-banking and e-commerce currently experienced could be sustained.

Suberu, Afonja, Akande and Adeyinka (2015) studied the effect of cashless policy, saving and bank credit on Nigerian deregulated economy. Data were collected from secondary sources. The ordinary least square econometric technique was used to analyze the data. Findings from this study revealed that the marginal productivity coefficient of bank credit to the domestic economy is positive but insignificant. The implication is that banks credit did not affect the productive sectors sufficiently for the latter to impact significantly on the Nigerian economy. In view of this, the paper recommended that banks should be willing to give both short and long-term loans for productive purposes as there would be more available funds with introduction of cashless policy, as this will eventually lead to economic growth. Also the regulatory body (CBN) should adopt a direct credit control that will be beneficial to the productive sector of the economy.

Igbara, Egbrenini, Fabian and Daasi (2015) examined the impact of cashless policy on small scale business in Ogoni land of River state, Nigeria. The study used the purposive sampling technique, 250 owners and operators of small scale businesses were selected and administered questionnaire. The data collected were coded and analyzed using frequency table and percentage, while regression analysis was used to test the formulated hypotheses using SPSS (Statistical Package for Social Sciences). The results indicate that: small scale businesses in Ogoni land are predominately occupied by sole proprietorship with meager income with a significant numbers of them having a very poor banking habit; it was also found out that small scale businesses statistically do not rely on heavy capital outlay; couple with the fact that provision of services is their main business activity that makes bank transaction, ATMs usage and online banking is of less or no significance since their transaction is grossly hinged on “cash and carry basis”; the findings from the study also suggest that operators of small scale business have zero tolerance to ICT usage in both the operations and transactions of their businesses; and this constitute a major challenge to the adoption of cashless policy in the study area and generally, there was a negative significant influence of the introduction of cashless policy on the operations and growth of small scale businesses in Ogoni land.

This study will deviate from the existing studies in terms of theoretical framework and methodology of the study. It is noted that the previous studies failed to anchor their studies on relevant theoretical framework and methodology to show how e-banking impact on banks performance in Nigeria.

To the best of our knowledge and with thorough research, we have not come across any study that investigated the impact of e-banking innovations on bank performance in Nigeria using SURE model. One of these studies was conducted by Oyewole, Abba, Gambo, & Arikpo (2013) who examined E-banking and bank performance in Nigeria using annual reports for 8

Nigeria commercial banks for 11 years 2000-2010.The panel analysis consisting of both macroeconomic and bank variables showed similar results with that of Auda and Kingoo (2012) for Kenya. The study established that e-banking does not contribute to profitability within two years and a negative impact was found in the first year of adoption between e-banking and profitability.

In the context of Nigeria, majority of the study shed light on the importance of e-banking with some using survey analytical technique. Most of the studies did not provide quantitative econometric evidence as to the relevance of e-banking innovations and its performance prospects for commercial banks in Nigeria. The purpose of this study is to fill the gap by estimating the impact of e-banking innovations quantitatively using SURE model regression of some old and new generation banks in Nigeria.

The theoretical background of this study is anchored on the diffusion of innovation theory. This theory attempt to explain how, why and the rate at which new ideas and technology spread across societies. According to the diffusion of innovation theory, the process of adopting a new idea, product, behavior or technology (that is, innovation) does not necessarily occur simultaneously in a social system but that it is a process whereby some people are more readily disposed to adopting the innovation than others.

METHODOLOGY

The Data

Data used for the study were sourced from Central Bank of Nigeria Publications, National Bureau of Statistics Publication and the sampled commercial banks' annual report and statement of accounts. The study covered the period of 2007-2016.This period is appropriate because the sampled banks adopted intensive mobile banking transaction from 2007 and by 2016 it is believed that majority of the banks have adopted mobile services and the process have gotten established in their usage.

Model specification

The empirical model for this study can be expressed functionally as:

ROA = f(ATM, POS, MOB, SIZE, PIV, INFL) 4.1

Where:

ROA = return on assets, measuring performance of deposit money banks.

ATM = value of Automated Teller Machines transactions

POS = value of Point of Sales transactions

MOB = mobile banking transactions

SIZE = bank size, represented by total assets of the banks

PIV = private investment in Nigeria.

INFL = inflation rate, measuring macroeconomic instability

Econometrically, equation 4.1 can be expressed in its linear form as:

$ROA_{it} = \beta_0 + \beta_1 ATM_{it} + \beta_2 POS_{it} + \beta_3 MOB_{it} + \beta_4 SIZE_{it} + \beta_5 PIV_{it} + \beta_6 INFL_{it} + \mu$ 4.2

Where:

β_0 to β_6 are the parameters to be estimated

μ= Stochastic error term

t= time dimension of the variables

This study employs the Seemingly Unrelated Regression Equations (SURE) in the modeling of equations for this study. A seemingly unrelated regression equation (SURE) according to Roger Moon, Ghosh et al (2006) is a system of equations comprising several individual relationships that are linked by the fact that their disturbances are correlated. The SURE model can be expressed analytically by considering a model comprising of M multiple regression equations of the form:

$$y_{ti} = \sum_{j=1}^{ki} x_{tij}\beta_{ij} + \varepsilon_{ti}, t = 1,2,..., T; i = 1,2,..., M; j = 1,2,...., K_i \quad 4.3$$

Where: y_{ti} is the t^{th} observation on the i^{th} dependent variable which is to be explained by the i^{th} regression equation, X_{tij} is the i^{th} observation on j^{th} explanatory variable appearing in the i^{th} equation, β_{ij} is the coefficient associated with X_{tij} at each observation and ε_{ti} is the i^{th} value of the random error component associated with equation of the model.

The M system of equations can be expressed in a compact way as:

$Y_i = X_i\beta_i + \varepsilon_i$, I = 1,2,…,M 4.4

Where: y_i is (T x 1) vector with element y_{ti}; X_i is (T x K_i) matrix whose columns represent the T observations on an explanatory variable in the i^{th} equation; β_i is a (K_i x 1) vector with elements β_{ij}; and ε_i is a (T x 1) vector of disturbances.

The M equations can be further expressed as:

$$\begin{bmatrix} y_1 \\ y_2 \\ . \\ . \\ . \\ y_3 \end{bmatrix} = \begin{bmatrix} X_1 & 0 \ldots\ldots\ldots\ldots & 0 \\ 0 & X_2 \ldots\ldots\ldots\ldots & 0 \\ . & . & . \\ . & . \quad . & . \\ . & . \quad . & . \\ 0 & 0 \ldots\ldots\ldots\ldots & X_M \end{bmatrix} \begin{bmatrix} \beta_1 \\ \beta_2 \\ . \\ . \\ . \\ \beta_3 \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \\ \\ \\ \varepsilon_3 \end{bmatrix} \quad 4.5$$

Or

$Y = X\beta + \varepsilon$ 4.6

Where the order of Y is (TM x 1), X is (TM x K*), β is (K* x 1), ε is (TM x 1) and $K^* = \sum_i K_i$

Description and justification of variables

Dependent variable

Return on Assets (ROA): Return on assets is the ratio of annual net income to average total assets of a business during a financial year. It measures efficiency of the business in using its assets to generate net income. It is a profitability ratio that has been adopted by most empirical literature (Ogbulu & Ndugwu, 2002). Return on assets (ROA) assesses how efficiently a bank is managing its revenues and expenses, and also reflects the ability of the management of the bank to generate profits by using the available financial and real assets (Jahan, 2012).

Return on assets (ROA) = $\frac{\text{Annual net income}}{\text{Average total assets}}$

Net income is the after tax income which can be found on income statement of companies. Average total assets are calculated by dividing the sum of total assets at the beginning and at the end of the financial year by 2.

Independent variables

Automated Teller Machine (ATM): These are computer-enhanced telecommunication machines that permit bank customers to have accessibility cash and perform financial transactions, usually situated in public places and in the enclosure of banks. Automated teller machine (ATMs) is captured in this study by value of ATMs transactions in the studied banks in Nigeria. An increase in the number of ATMs leads to an increase in the volume and value of transactions. The increase in the volume and value of ATM transaction enhances the payment system in turn, which leads to banking sector performance. Thus, the coefficient of ATMs is expected to be positive in relation to banking performance.

Mobile Banking (MOB): This is the process whereby formal banking transactions are carried out through the use of telephone and mobile phones. Mobile banking allows its customers to conduct some financial transactions remotely using a mobile device such as a mobile phone or tablet. Mobile banking is represented by value of mobile banking transactions in the sampled banks for this study. An increase in the volume and value of mobile banking transactions enhance payment system and hence increase in bank performance. Therefore, the coefficient of mobile banking variable is expected to be positive.

Point of Sale (POS) terminal: This is a machine used to accept cards for payment of goods and services. POS terminal allows a cardholder to have a real-time online access to funds and information in his/her bank account through debit or cash cards. POS system can include the ability to record and track customer orders, process credit and debit cards, connect to other systems in a network, and manage inventory. Point of sale terminal is represented in this study by value of point of sale transactions. A positive relationship is expected on the coefficient of POS since POS terminal reduces the cost of banks transactions, access to credit and reduces the cost of setting bank infrastructure such as bank branches as a case may be.

Control Variables

Bank Size (Size): This represents the economies and diseconomies of scale associated with firm size. Bank size is captured in this study by bank assets. According to the financial intermediation theory, banks can only make profit as a result of the degree of economies of scale. For example larger banks that engaged on oligopoly can enjoy low transaction cost and retained high profit (Flamini, McDonald & Schumacher, 2009). Also these banks would have access to larger levels of loans, product diversification and market assess compared to smaller banks (Guru, Staunton & Balashanmugam, 2002).

Private investment: This is the purchase of a capital asset that is expected to produce income, appreciate in value, or both generate income and appreciate in value. This type of investment is undertaken by the private individuals mainly for profit motives. It is argued that an increase in accumulation of capital stock increases the overall investment level in the country including investment in financial sector. Thus, an increase in capital formation leads to an increase in investment and hence an increase in banking sector performance. The coefficient of private investment is expected to be positive.

Inflation (INF): This is consistent and sustained increase in the general level of prices in the country. The extent to which inflation impacts on the profitability of deposit money banks depends on the rational expectations. It is ambiguous. It may be negative or positive. That is, whether the inflation is anticipated or unanticipated. If the rate is anticipated it may be that the bank can plan ahead by adjusting interest rate which increases it faster than cost thus impacting positively on profit. If inflation rate is unanticipated, it could lead to increase in cost due to imperfect interest rate adjustment and hence reduces profit (Kehinde & Adejuwon, 2011). For this study, we expect inflation rate to have a negative effect on profit of the banks. This is because high inflation rate discourages savings as the value of money is reduced. People will prefer to spend their cash rather than save. A reduction in saving reduces the ability of banks to

mobilize deposit which can be lent out and earn profit from interest charged. Thus, inflation is expected to exert a negative impact on bank performance.

The general assumption of Cross-Sectional independence as applicable to first generation panels, the Im-Persaran-Shin (IPS) test was used to test for the presence of unit root in the panel series. This test controls the assumption of the Levin-Lin-Chu test, that ρ_i must be the same for all series under the alternative hypothesis.

The Correlation Matrix Test

The Correlation matrix test was conducted to choose either OLS or SURE estimation methods, and Simultaneous covariance testing was employed to investigate whether there are correlations between SURE errors. For the simultaneous covariance test, r(ij) values are calculated. Firstly variance-covariance and correlation matrices are calculated from the errors obtained from the SURE method to show how SURE model is appropriate.

SURE model estimation was used to estimate and analyze the relationship between the dependent variable and the independent variables for the sampled banks. Post estimation tests were conducted to ascertain the reliability of results obtained from the estimated result: These tests are Statistical and Econometric second order using both T-statistic and Durbin Watson to show the statistical significance of the parameter estimates and autocorrelation of the estimated model. The t-statistic test was employed to test statistical significance of the estimated model.

RESULTS AND DISCUSSION OF FINDINGS

Descriptive statistics

The summary of the individual banks descriptive statistics showed that the statistics-mean, median, mode, maximum, minimum and standard deviation for the dependent and independent variables for the four sampled banks for ten years (2007-2016). Mean value shows the average values of ROA, ATM, POS, MOB, SIZE, PIV and INF for the four banks captured in the study.

From the tables, it is shown that the average profit for the banks as indicated by ROA was recorded by GTB which is 2.60, UBN recorded a minimum value of 1.25 and FBN recorded maximum value of 3.46 and the standard deviation of return on assets stood at 3.36.This implies that Nigeria banks can convert N1 asset to about 3.36 kobo .That is the banks were able to generate 3.36kobo for every N1 they employed into their banking operation.

For mobile banking indicators, the descriptive statistics indicates that UBN recorded the maximum value for ATM as 2.39billion with a minimum value from First bank of Nigeria as 1.68billion and the mean values for ATM, POS and MOS used as indicated by the values of

banks investment in the Nigerian inter-banks settlement system were 3.56 billion, 7.78 billion and 7.89 billion respectively.

Furthermore, First bank of Nigeria recorded the maximum value of POS as 2.74 billion with minimum value of 1.93 billion from GTB PLC. Similarly, First bank of Nigeria recorded the maximum value of 3.02 billion for MOB and a minimum of 2,000,000 billion from Union bank of Nigeria.

The mean value of percentage of bank size indicated by the total asset of the banks as0.066 percents which 6.645 billion with a minimum value of 5.89 from Union bank of Nigeria and a maximum value of 9.84 from GTB with an average standard deviation of 6.34.PIV relates to the private investment which shows the level of investment at the private sector for the period under study. The PIV's mean value for banks was N1.19 billion. On average the Nigerian inflationary trend during the period was 6.3 percent with a minimum value of 5.4percent and maximum value of 12.3percent.

The Jarque-Bera statistics showed that the distribution for all the variables captured in the model were normally distributed since the values of jarque-bera calculated at 7 degree of freedom is less than its critical values as obtained from chi-square distribution tables.

Correlation Matrix Analysis

The table below reports the degree of correlation the variables of the model. Correlation value falls between -1 and +1. A correlation co-efficient of -1 indicates that the variables in question move in exact opposite direction and vice versa for a coefficient of +1.The table indicates that the correlation between ATM and ROA is 0.5770.This implies that ATM and ROA moves in the same direction. Similarly, the correlation between ROA and other indicators of e-banking like POS, MOB and SIZE recorded a positive relationship at 0.5937, 0.5956 and 0.4112 respectively. Among the variables, MOB recorded the highest correlation with ROA positive at 0.5956 and the lowest among the explanatory variables are INFL and PIV positively and negatively correlated at 0.3874 and -0.2840 respectively.

Table 1. Correlation Matrix of Dependent and Independent Variables

	ROA	ATM	POS	MOB	SIZE	PIV	INFL
ROA	1.0000	0.5770	0.5937	0.5956	0.4112	-0.2840	0.3874
ATM	0.5770	1.0000	0.9189	0.9132	0.4126	-0.5426	0.5436
POS	0.5937	0.9189	1.0000	0.9917	0.4670	-0.3943	0.6630
MOB	0.5956	0.9132	0.9917	1.0000	0.4667	-0.3837	0.6809
SIZE	0.4112	0.4126	0.4670	0.4667	1.0000	-0.2781	0.3591
PIV	-0.2840	-0.5426	-0.3943	-0.3837	-0.2781	1.0000	-0.1747
INFL	0.38747	0.5436	0.6630	0.6809	0.3591	-0.1747	1.0000

Source: Author's Computation (E-views 9.0), 2017

Table 2. Unit Root Test at 5% Significance Level

	Levin, Lin and Chu Test				Pesaran and Shin Test				Order
	Levels		I[st] difference		Levels		1[st]difference		
	T-stat	P V	T-stat	PV	T-stat	P V	T-stat	PV	
ROA	-0.21631	0.4144	-5.64362	0.0000	1.14700	0.8743	-2.01737	0.0218	I(1)
ATM	1.14561	0.8740	-2.84732	0.0022	2.58283	0.9951	-0.4077	0.3417	I(1)
POS	-1.64057	0.0504	-3.29433	0.0005	-1.45695	0.0726	-0.89181	0.1862	I(1)
MOB	1.75543	0.9604	-3.55364	0.0002	1.41775	0.9219	-0.05832	0.4767	I(1)
SZE	1.25723	0.8957	-22.4264	0.0000	3.53508	0.9998	-4.09890	0.0000	I(1)
PIV	0.0000	1.0000			-7.8E+12	0.0000			I(0)
INF	49.9058	1.0000			8.76045	1.0000			1(0)

Source: Author's Computation (E-views 9.0), 2017

Analysis of SURE Model Empirical Results for Banks

Analysis of Empirical Results for New Generation Banks (Guaranty trust bank)

Table 3. Dependent Variable (RoA)

VARIABLES	COEFFICIENTS	Std. Error	T-STATISTICS	P_VALUE
CONSTANT	125.0471	55.25277	2.263183	0.1520
ATM	9.92E-12	0.002775	4.562638	0.0448
Log(POS)	-1.000435	0.128910	-7.760719	0.0162
Log(MOB)	0.30752	0.037072	10.27057	0.0093
Log(PIV)	0.012663	2.389568	-1.678047	0.2353
Log(SIZE)	-4.009807	2.18E-12	4.547292	0.0451
INFL(-1)	0.229970	0.040569	5.668674	0.0297
R-squared	0.936446			
Adj. R-Squared	0.745783			
D.Watson Stat.	2.121107			

Source: Author's Computation (E-view 9), 2017

The estimated SURE model result for GTB bank revealed that Log(PIV), Log(MOB), ATM and INFL(-1) are positively related to return of assets which are consistent with apriori expectation because of their signs and magnitudes while Log(POS) and Log(SIZE) are negatively related to return on asset which does not conform to apriori expectation indicating that a unit increase in Log(PIV), Log(MOB), ATM and INFL(-1) will lead to a corresponding increase in ROA by

(0.012663) units, (0.380752)units (9.92E-12) units and (0.229970) units respectively with a minimum standard error of 1.2 percent for Log(PIV), 3 percent for Log(MOB), 21 percent for ATM and 4 percent for INFL(-1).In the same view, Log(POS and Log(SIZE) have a negative relationship with return on asset which does not conform with the apriori expectation indicating that a unit increase in Log(POS) and Log(SIZE) will reduce return on asset by (-1.000435) units and (-4.009807) units with a minimum standard error of 12 percent for Log(POS), 23 percent for Log(SIZE). Therefore based on the findings, PIV, MOB, ATM and INF have a positive and significant impact on return on asset implying that PIV, MOB, ATM and INF are the major determinants of Guaranty trust bank performance in Nigeria.

This result is in line with the study conducted by Oyewole (2013) in Nigeria using panel data method of analysis which revealed that e-banking contribute positively to bank performance in Nigeria with a time lag of two years while a negative impact was observed in the first year of adoption. But contrary with the study conducted by Carlson,(2001) in India using Univariate model of analysis which revealed that profitability and offering of internet does not have any significant relationship with risk profile of the bank in Nigeria.

The value of R-squared for Guaranty trust bank estimated SURE model result is pegged at 0.93 indicating that the explanatory variables explained about 93% systematic variation in the level of profit over the observed years in the Nigerian banks while the remaining 7% variation is explained by other determining variables outside the model.

The Durbin Watson value of 2.12 indicates present of serial autocorrelation in the model implying that the model is well behaved and specified and its findings can be used for policy formulation and forecasting in the banking industry.

Analysis of Empirical SURE model Results for New Generation Banks (Zenith bank)

Table 4. Dependent Variable (RoA) (E-view 9 output)

VARIABLES	COEFFICIENTS	Std. Error	T-STATISTICS	P_VALUE
CONSTANT	8.40E+09	5.55E+09	1.513506	0.2693
Log(ATM)	1.01E+09	1.10E+08	9.191025	0.0116
Log(POS)	-4.710346	1.006341	-4.680664	0.0427
Log(MOB)	5.33E+08	8.0426950	6.626528	0.0220
Log(PIV)	0.357491	0.056390	6.339571	0.0240
SIZE	0.438812	0.169542	2.588214	0.1225
INFL(-1)	-0.0000107	3.41E-05	-3.148421	0.0878
R-squared	0.997	Adjusted R-squared	0.991	
Durbin Watson Stat.	1.77			

Analysis of Empirical Results for New Generation Banks (Zenith bank)

The estimated SURE model result for Zenith bank revealed that Log(ATM(-1)), PIV, MOB and INFL(-1) are positively related to return of assets which are consistent with apriori expectation because of their signs and magnitudes while POS and SIZE are negatively related to return on asset which does not conform to apriori expectation indicating that a unit increase in Log(ATM(-1)), PIV, MOB and INFL(-1) will lead to a corresponding increase in return on asset by (1.01E+09) units, (5.33E+08)units, (0.357491) units and (0.438812) units respectively with a minimum standard error term of 11 percent for Log(ATM(-1)), 8 percent for PIV, 5 percent for MOB and 10 percent for INFL(-1). In the same view, Log(POS) and Log(SIZE) have a negative relationship with return on asset which does not conform with the apriori expectation indicating that a unit increase in Log(POS) and Log(SIZE) will reduce return on asset by (-4.710346) units and (-0.000107) units with a minimum standard error term of 10 percent for Log(POS), 16 percent for Log(SIZE)**.** Therefore based on the findings, ATM, PIV, MOB, and INF have a positive and significant impact on return on asset which means that PIV, MOB, ATM and INF are the major determinants of Zenith bank performance in Nigeria.

This result is in line with the study conducted by Farouk (2013) in Nigeria using Survey data analysis which revealed that e-banking contribute positively to bank performance in Nigeria.

But contrary with the study conducted by Jahan,(2012) in Bangladesh using correlation matrix analysis which revealed that cost efficiency and off balance sheet have negative and significant impact on bank profitability.

The value of R-squared (0.99) for the Zenith bank estimated SURE model result is pegged at 99% indicating that ATM, POS, MOB, SIZE, PIV and INFL explained about 99% systematic variation in the level of profit over the observed years in the Nigerian banks while the remaining 1% variation is explained by other determining variables outside the model.

The Durbin Watson value of 1.77 indicates present of autocorrelation in the model implying that the model is well behaved and specified and its findings can be used for policy making formulation and forecasting in the banking industry.

Analysis of Empirical Results for Old Generation Banks (Union bank)

Table 5. Dependent Variable (RoA)

VARIABLES	COEFFICIENTS	Std. Error	T-STATISTICS	P_VALUE
CONSTANT	8.40E+09	5.55E+09	1.513506	0.2693
Log(ATM(-1))	1.01E+09	1.10E+08	9.191025	0.0116

Table 5...

Log(POS)	-4.710346	1.006341	-4.680664	0.0427
PIV	5.33E+08	8.0426950	6.626528	0.0220
MOB	0.438812	0.056390	6.339571	0.0240
INFL(-1)	0.438812	0.169542	2.588214	0.1225
SIZE	-0.000107	3.41E-05	-3.148421	0.0878
R-squared	0.997			
Adj. R-squared	0.991			
DW. Stat	1.776			

Source: Author's Computation (E-view 9), 2017

The estimated SURE model result for **Union bank of Nigeria** revealed that Log(ATM(-1)), PIV, MOB and INFL(-1) are positively related to return of assets which are consistent with a priori expectation because of their signs and magnitudes indicating that a unit increase in Log(ATM(-1)), PIV, MOB and INFL(-1) will lead to a corresponding increase in return on asset by (1.01E+09) units, (5.33E+08) units, (0.438812) units and (0.438812)units respectively with a minimum standard error term of 55 percent for Log(ATM(-1)), 11 percent for POS and 5 percent for MOB. In the same view, POS, and SIZE have a negative relationship with return on asset which does not conform to apriori expectation indicating that a unit increase in POS, and SIZE will reduce return on asset by (-4.710346) units, and (-0.000107) units with a minimum standard error term of 10percent for POS and 34 percent for INFL.

Therefore based on the findings, ATM, PIV, MOB and INFL have a positive and significant impact on return on asset which indicates that ATM, PIV, MOB and INFL are the major determinants of **Union bank of Nigeria** performance in Nigeria. This result is in line with the study conducted by Gambo (2013) in Nigeria using Ordinary least square analysis, which revealed that e-banking, contributed to bank performance in terms of return on assets with a time lag of two years. But contrary with the study conducted by Itah,(2012) in Nigeria using Ordinary least square analysis which revealed that ATM and POS are positively related to ROE while web based transaction (WBT) are negatively related to ROE.

The value of R-squared for Union bank estimated SURE model result is pegged at 99% indicating that the explanatory variables explained about 99% systematic variation in the level of profit over the observed years in the Nigerian banks while the remaining 1% variation is explained by other determining variables outside the model.

The Durbin Watson value of (1.77) indicates present of serial autocorrelation in the model which means that the model is well behaved and specified and its findings can be used for policy making formulation and forecasting in the banking industry.

Analysis of Empirical Results for Old Generation Banks (First bank of Nigeria)

Table 6. Dependent Variable (RoA)

VARIABLES	COEFFICIENTS	Std. Error	T-STATISTICS	P_VALUE
CONSTANT	-6.04E+09	1.62E+09	-3.737974	0.0647
Log(ATM)	0.007768	0.001810	4.291159	0.0502
Log(POS)	0.131288	0.048637	2.699355	0.1142
Log(MOB(-1))	-0.249340	0.065288	-3.819075	0.0622
SIZE	1.621500	0.338394	4.791750	0.0409
PIV	-6.37E-05	2.28E-05	-2.794306	0.1078
INFL(-1)	-5.87E+08	1.34E+08	-4.372144	0.0485
R-squared	0.987512			
Adj. R-Squared	0.950049			
Durbin Watson Stat.	2.801695			

Source: Author's Computation (E-view 9), 2017

The estimated SURE model result for **First bank of Nigeria** revealed that ATM, POS and SIZE are positively related to return of assets which are consistent with a priori expectation because of their signs and magnitudes indicating that a unit increase in ATM, POS and SIZE will lead to a corresponding increase in return on asset by (0.007768) units, (0.131288) units and (1.621500) units respectively with a minimum standard error term of 0.1 percent for ATM, 4 percent for POS and 30 percent for SIZE.

In the same view, MOB (-1), PIV and INFL (-1) have a negative relationship with return on asset which does not conform to apriori expectation indicating that a unit increase in MOB, PIV and INFL(-1) will reduce return on asset by (-0.249340) units, (-6.37E-05) and (-5.87E+08) units with a minimum standard error term of 6 percent for MOB,22 percent for PIV and 13 percent for INFL.

Therefore based on the findings, ATM, POS, SIZE have a positive and significant impact on return on asset which indicates that ATM, POS, SIZE are the major determinants of **First bank of Nigeria** performance in Nigeria.

This result is in line with the study conducted by Agboola (2006) in Nigeria using survey data Analysis, which revealed that there has been significant migration of people away from holding cash to automated transactions, there by leading to the reduction in the volume of cash in circulation. But contrary with the study conducted by Al-wabel, (2011) in Jordan using

Ordinary least square analysis, which revealed that the adoption of electronic banking has significant negative effect on the performance of banks in Jordan.

The value of R-squared (0.98) for the First bank of Nigeria estimated SURE model result is pegged at 98% indicating that ATM, POS, MOB, SIZE, PIV and INFL explained about 98% systematic variation in the level of profit over the observed years in the Nigerian banks while the remaining 2% variation is explained by other determining variables outside the model.

The Durbin Watson value of 2.80 indicates present of autocorrelation in the model implying that the model is well behaved and specified and its findings can be used for policy making formulation and forecasting in the banking industry.

CONCLUSION

The use of mobile banking is wide spread in banks and most financial institutions nowadays. The internet has really changed the dimensions of competition in the retail banking sector. New distributive channels used in rendering services to customers are being achieved. Bankers and banks customers have adopted mobile banking because of acceptance of the new innovative information technology of which customers in Nigeria are not exempted. The notion that mobile banking would significantly impact on return on asset (profitability) has been established in this study which means that mobile banking is an integral part of the participating bank's business strategies to make profits.

The finding from this study presented significant progress toward understanding the nature of mobile banking and its perceived impact on commercial banks in Nigeria. Findings revealed that in sum, Automated teller machine, point of sale, mobile banking and bank size were positive and statistically significant factors contributing to old and new generation banks performance in Nigeria compared to other mobile banking indicators. This finding is interesting but not surprising because of the rate of usage of these factors and structural changes that affected banks performances in Nigeria. The Finding is in contrast to the study conducted by Hernando and Nieto (2006) that found a negative effect deposit growth on return on equity for Spanish banks using GLS Estimation.

Summarily, the study has shown that electronic banking innovations impact on the overall banking performance and the impact is significant. Again, the major determinants of banks performance among the variables captured in the study are automated teller machine, point of sale, mobile banking and bank size.

Electronic banking innovation impact on the overall banking performance and the impact is significant. The major determinants of banks performance among the variables captured in the study are automated teller machine, point of sale, mobile banking and bank size. Although

this study using a comprehensive SURE model econometrics techniques empirically estimates the impact of mobile banking transactions and bank profitability in Nigeria, the following are yet to be explored; Impact of Cashless policy on real sectors performance in Nigeria from 2007-2017.

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