Digital Financial Inclusion and Financial Performance of Selected Money Deposit Banks in Nigeria

Oladipo Ibidokun Ibikunle, Moyosore Akingbade Adewumi, Adewale Olusesan Taiwo
Department of Management and Accounting,
Lead City University, Ibadan, Nigeria
ibikunle.oladipo@lcu.edu.ng, adewumi.moyosore@lcu.edu.ng, taiwo.adewale@lcu.edu.ng
+2348080806179, +2348186425501, +2348032342576

Abstract

The re-launch of Digital Financial inclusion in 2012 by the central bank of Nigeria has made Nigerian banks to embrace several innovative ideas towards providing better quality services to their customers. These innovations are expected to impact on the performance of the banks as suggested by theoretical literature. This study is therefore conducted to provide some empirical explanation on the impact of Digital Financial inclusion instruments on performance of Nigerian banks. Data were collected from World Bank database, Central Bank of Nigeria Statistical Bulletin, and annual reports of deposit money banks. The data were analysed with Fixed Effect Regression Model. The Regression analysis was conducted after conducting the Breusch-Pagan Lagragian Multiplier (BP-LM) test to determine the suitability of either the fixed effect or random effect model. The findings revealed positive and significant impact of Automated Teller Machines, Bank embranchment, and point of sale terminals on bank performance at both 1% and 5% levels of significance. However, the result on the number of bank account is not significant. The study concludes that improvement in the quality of financial services will attract more customers to the bank and boost their performance. It is thus recommended that more ATMs, POS and Branches be put in place for better inclusive finance.

Keywords: Automated Teller Machine, Bank Embranchment, Financial Inclusion, Point of Sales Terminals.

Introduction

Digital Financial inclusion is a subject of growing interest and one of the major socio-economic challenges on the agenda of international institutions, development-oriented agencies, policy makers and governments, central banks and other financial institutions (Demirgüç-Kunt & Klapper, 2013). Its importance stems from the promise it holds as a tool for economic development, particularly in the areas of improving welfare and general standard of living through wealth creation, employment generation and reduction of poverty (Sarma & Pais, 2011). According to survey conducted in Nigeria by a development finance organization, the global pursuit of Digital Financial inclusion as a vehicle for economic development has had a

positive effect in Nigeria as the exclusion rate reduced from 53% in 2008 to 46.3% in 2010 (EFInA, 2010). Without households' access to financial services such as saving and borrowing instruments via formal financial institutions, these households are prone to be at a disadvantage economically, as they cannot smooth consumption as easily, and face more difficulties in accumulating wealth (Honohan, 2008).

In Nigeria, the idea of Digital development-oriented financial inclusion was relaunched in Nigeria in 2012 by the Central Bank of Nigeria (CBN) in collaboration with other stakeholders to further reduce the exclusion rate to 20% by 2020 (Central Bank of Nigeria, 2012). Most Nigeria banks have embraced the concept where various initiatives such as mobile banking, electronic know-your-customer (e-KYCs), expansion of banks branch and credit enhancement programmes (Small and Medium Enterprise Credit Guarantee Scheme and Commercial Agricultural Credit scheme). This practice has opened access to financial services even in the remotest areas of the country (Ajayi & Ojo, 2006).

Despite the various tools of Digital financial inclusion introduced in Nigeria, available statistics show sub-optimal performance. In terms of credit accessibility, Nigeria's Digital financial inclusion index has not been encouraging compared to other countries within its bracket (World Bank, 2018). For instance, about 32% of South Africans have access to credit, while only about 2% of Nigerians have access to formal credit. Only about 21.6% of Nigerians have access to formal payment system compared to South Africa with 46% (Demirgüç-Kunt et al., 2018). Also, research showed that Nigeria is ranked 135 out of 176 countries on Digital financial inclusion index. According to World Bank (2018), Nigeria has dropped 1 place in the latest 2018 World Bank Ease of Doing Business Report to rank 146 of 190 economies in the globe.

Sequel to series of awareness campaigns by the regulatory authority, Nigerian banks have come to realize that the concept of Digital Financial inclusion goes beyond opening of bank accounts, opening of more branches, extension of credits and installation of automated teller machines (ATMs), which are the basic inclusion indicators (Ozili, 2018). As a result, banks keep innovating and creating more product and services, with the aim of satisfying the ever-changing customer demands. Bank customers thus benefit from Digital Financial inclusion through reduced costs of transactions, ease of access to services and increased level of efficiency (Allen et al., 2016). There has also been improvement in quality of services to the customers. These innovations through Digital Financial inclusion tend to enhance bank performance. This study therefore investigated the impact of Digital Financial inclusion on bank performance in Nigeria. This introduction is followed by review of literature, methodology, results and discussion of findings, conclusion and recommendation.

Conceptual Review

Digital Financial Inclusion
The concept of Digital Financial inclusion has attracted different definitions and measured differently by various researchers and stakeholders depending on their institutional settings and objectives, hence, disallowing uniformity in standard and cross-country comparisons (Sarma, 2012). According to a United Nations Report (2016), Digital Financial inclusion is the

sustainable provision of affordable financial services that bring the poor into the formal economy. Cyn-Young and Rogelio (2015) defined Digital Financial inclusion as the way financially excluded and underserved people in a society have access to a range of available financial services without any discrimination. Hariharan and Marktanner (2012) viewed Digital Financial inclusion as a process of making available an array of financial services, at a fair price and at the right place without any form of discrimination to all members of the society by the service provider. Also, Iqbal and Sami (2017) conceptualize Digital Financial inclusion as a strategy aimed at increasing the number of people in the society who have access to formal financial services. Chibba (2009) conceives Digital Financial inclusion as a financial intervention strategy that is aimed at overcoming the market challenges that hinder the poor and underprivileged from having access to financial services. In the study, Digital Financial inclusion was defined as the provision of wide range of financial services such as savings, insurance services, credits, remittance and payment services. Thorat (2007) asserts that Digital Financial inclusion is a state where financial services are delivered by a range of providers, mostly the private sector, to reach everyone who could use them. Specifically, it means a financial system that serves as many people as possible in a country, and Digital Financial inclusion links people to banking services including their attendant benefits.

Level of Digital Financial inclusion in a country may be measured with the following instruments: Automated Teller Machine (ATM), also known as automated banking machine particularly in the United States, is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller (Joseph & Stone, 2003). According to Narteh (2015), over the last few decades, the automated teller machine as part of self-service technology (SSTs) has emerged as a major channel for routing banking services to customers. ATMs were introduced in Nigeria retail banking on the ground of reduced labour cost, efficiency, greater consumer involvement, standardization of service delivery, customer satisfaction and loyalty (Pikkarainen et al., 2004). According to Ebringa (2010), less than the benefits, the deployment of ATMs terminals has averagely improved the performance of Nigerian banks because of the alarming rate of ATM fraud. Narteh (2015) contends that convenience, reliability, ease of use, privacy, security, responsiveness and fulfilment were found to be the major dimensions of ATMs service quality.

Point of sales (POS): A point of sale machine is the payment device that allows credit/debit cardholder to make payment at sales/purchase outlet. It involves a computer terminal in retail stores that will transfer funds instantly from the bank deposit of the store in which customer is making purchase (Dahlberg et al., 2015). Williams, Olalekan, and Timothy (2018) note that the computer will confirm the sufficiency of funds in the customer's account for completion of the transaction. POS improves customer services, allows purchase and instant payments through the point of sale; discounts to allow online purchases (Kim et al., 2010). The utilization of the electronic payments systems will also benefit all stakeholders.

Number of bank accounts: a bank account is a primary requirement which enables access to any banking service or product and helps administer business in insurance, mortgages, pensions, and so on (Beck et al., 2007). In fact, it is argued that one of the measurements of

financial exclusion is not having a bank account. In many parts of the world, social security benefits are administered through bank accounts (Honohan, 2008).

Banking embranchment: These are the number of bank branches/bank branch network that are geographically spread. Branches ensure direct contact with customers of the bank and allow for bank-customers interaction for other banking services (Berger et al., 2005). The main areas of concern for this study include the number of branches and their spread across the country, the effect in terms of changes in volume of transaction, and the cost incurred in the operations.

Access to Financial Services

According to Karlan and Morduch (2010), place of living, absence of legal identity, gender biasness, low level of knowledge, level of income, high bank charges, terms and conditions, and types of business are some of the factors affecting access to financial services in many countries. This is particularly true for developing economies like Nigeria. In Nigeria, several challenges have been pointed out in relation to financial inclusion (Okoye et al., 2017). Adesina (2017) observed that misconception, channel of implementation, market intelligence, operational framework and others are the major challenges facing Digital Financial inclusion tools implementation in Nigeria. For Digital Financial inclusion campaign to succeed in Nigeria, the factors must be adequately addressed.

Bank Performance

Cicea and Hincu (2009) posited that performance in a bank is all that helps to improve and viewed performance the ability to achieve the objectives while minimizing costs (efficiency and effectiveness). Efficiency and effectiveness are key terms in evaluation and measurement of business performance. Al-Abedallat (2017) stated that deposit money banks (DMBs) represent the core of the credit for any national economy. In turn, the credit is the engine that put in motion the financial flows that determine economic growth and development of a nation (Levine, 2005). Profitability is one of the most frequently used performance measures. It offers clues about the ability of the bank to undertake risks and to expand its activity (Athanasoglou et al., 2008). There has been a lot of discussion as to which profitability ratio is the best measure of financial performance. Although many indicators like Return on Asset (ROA), Return on Equity (ROE), Net interest margin (NIM) exist for measuring financial performance of banks, researchers have favoured Return on Asset (ROA) over other measures as it explicitly considers all the assets used to support business activities (Petria et al., 2015). Bank profitability is measured by the return on a bank's assets (ROA), a ratio of a bank's profits to its total assets.

Digital Financial inclusion and Bank Performance

Digital Financial inclusion via financial outreach (geographical and demographical), branch network penetration, banks can serve a wide range of customers potentially at a reduced cost once necessary infrastructure are in place (Hannig & Jansen, 2010). While banks extend deposit facilities to a large pool of customers, they can attract many retail deposits which are often cheaper than wholesale funding (Demirgüç-Kunt & Huizinga, 2010). Thus, greater diversification in financial services associated with Digital Financial inclusion in mobilizing deposits which enhances bank performance.

The greater Digital Financial inclusion is also likely to influence the overall level of lending opportunity of banks. By reaching out to unbanked/under-banked areas while extending small credits, banks can reduce distance and build strong relationship with customers (Petersen & Rajan, 2002). The study of Berger, Hasan, and Zhou (2010) corroborate that distance between lender and borrower undermines efficacy of banking services through intensification of asymmetric information problem. Deng and Elyasiani (2008) also find that diversification across more remote areas (in our case, the areas where financial services are hardly available) is associated with greater value enhancement. Therefore, when banks diversify to regions where more unbanked population are located, they are better able to understand the nuances of the local household/firm environment. This tends to reduce default risk, cost of monitoring and enhance lender-borrower proximity, and relationship, which in turn enhance banks return (Boot, 2000).

Theoretical Framework

This study is built upon Diffusion of Innovation Theory. The theory of diffusion of innovation was developed by Everett M. Rogers in 1962 (Rogers, 1962; 5th edition, 2003). Diffusion of innovation theory centres on the conditions which increase or decrease the likelihood that members of a given culture will adopt a new idea, product, or practice. According to Rogers (2003), the theory is based on four elements: innovation, time, communication channels and the social systems effects due to the innovation. Rogers (2003) further explains that critical factors that determine the adoption of an innovation at the general level are relative advantage, compatibility, complexity, trialability and observability.

Relative advantage refers to the degree to which an innovation (introduction of ATMs) is perceived as providing more benefits than its predecessor. It results in increased efficiency, economic benefits, and enhanced status (Tornatzky & Klein, 1982). Previous research has concluded that relative advantage of an innovation is positively related to the rate of adoption (Moore & Benbasat, 1991). When a user perceives relative advantage or usefulness of a new technology over an old one, they tend to adopt it.

Compatibility refers to the degree to which a service is perceived as consistent with users' existing values, beliefs, habits, and present and previous experiences (Rogers, 2003). Compatibility is an important feature of innovation as conformance with user's lifestyle can propel a rapid rate of adoption. The complexity (its ease of use) of technology will also impact on adoption (Venkatesh & Davis, 2000). If the use of technology requires considerable learning it is less likely that users will persevere with it.

Observability of an innovation describes the extent to which an innovation is visible to the members of a social system (banks embranchment) the benefits (bank profitability) can be easily observed and communicated. Moore and Benbasat (1991) simplified the original construct by redefining observability into two constructs: visibility (banks embranchment or numbers of bank account holders) and result demonstrability (Bank profitability of economy development). According to Rogers (2003), trialability is defined as the degree that the innovation (Digital Financial inclusion measures) can be evaluated and experimented before its inclusion. Potential adopters who are allowed to experiment with an innovation will feel more comfortable with it and are more likely to adopt it. In the context of this study, this theory

suggests that the degree of bankers adopting new technology/innovation (ATMs, electronic cards, bank accounts and bank embranchment) depends on the willingness of the individuals and the more the technology is compatible with the needs of the bankers, the faster the adoption which in turn results to profit. Rogers (2003) posited that, the theory finds innovations as being transmitted through certain channels over time and within particular social systems. Individuals are seen as possessing different degrees of willingness to adopt innovations and thus, it is observed that the portion of the population adopting an innovation is normally distributed over time. The theory explains how innovation diffuses from one segment of the economy to another or from one department to another within the same organization/bank.

Empirical Review

Nader (2011) analysed the profit efficiency of the Saudi Arabia Commercial banks during the period 1998-2007. The results of his study indicated that availability of phone banking, number of ATMs and number of branches had a positive effect on profit efficiency of Saudi banks. On the contrary, the study found that the number of point-of-sale terminals (POSs), availability of PC banking and availability of mobile banking did not improve profit efficiency.

Studying another dimension of financial inclusion, Kondo (2017) investigated whether branch network expansions/bank embranchment by Japanese regional banks influence their management performances positively at a time when management environments surrounding regional financial institutions have become increasingly severe due to the population decreases and shrinkage of regional economies. Thus, from the panel data analysis, it is deduced that establishing more branches is effective in increasing the total sum of loans and bills discounted by each bank because regional banks with many branches can contact more customers which in turn increase their profitability.

From Africa perspective, the study of Monyonko (2015) focused on use of technology such as Automatic Teller Machines (ATMs), mobile phone banking internet banking and agency banking and its impact on financial performance of commercial banks in Kenya and how these inclusion innovations have moved them closer to branchless banking. The target population of the study was 42 commercial banks licensed in Kenya by 2010. The study used time series data from central bank of Kenya (CBK) and Kenya bankers' association (KBA) annual bank supervisory reports (2010-2016). Through multiple regressions and correlation analysis the study found out that there is a strong positive relationship between Digital Financial inclusion strategies and financial performance.

Also, Oranga and Ondabu (2018) studied the effect of increased proliferation of bank branch spread, ATMs and mobile banking services on the financial performance of listed banks in Kenya. The study adopted a descriptive research design, and the study population included management and operational level employees of the 11 banks listed on the Nairobi Securities Exchange. The study found that bank branch spread, proliferation of ATMs and mobile banking services had positive but weak effect on financial performance of banks.

In Nigeria, Ebringa's (2010) study was principally based on primary data collected from users of the ATMs and a total of 1,141 users of ATM were sampled. The study used weighted scores of the responses to success factors identified in the literature that were analysed using the factor analysis simulation model. The study concluded that the provision of adequate

infrastructure such as power is critical for effective integration of the Nigerian banking system to the global network of electronic payment via ATMs.

Adelowotan (2016) assessed the implications of the contribution of the branches to banks performance. The study used the whole banks in Nigeria during the period 1981 and 2013 using a pooled data analysis on ordinary least square (OLS). The variables used include the total number of banks branches in rural and urban area and those domiciled abroad regarded as foreign branches, while the growth in Total Asset is proxied as the dependent variable. The study findings showed that there is a positive but no systematic relationship between number of banks and asset growth perhaps because banking organizations optimize the size of their branch network operations as part of an overall strategy involving both branch-based and non-branch-based activities.

Obiekwe and Anyanwaokoro (2017) specifically investigated the effect of Automated Teller Machine (ATM), Point of Sale (POS) and Mobile Payment (MPAY) on the profitability of commercial banks in Nigeria. A total sample of five (5) banks was considered for the period 2009 to 2015 and the study adopted the Panel Least Squares (PLS) estimation technique as the analytical tool. From the data collected from the Central Bank of Nigeria (CBN) Statistical Bulletin and Annual Reports and Statements of Accounts of the five banks used in the study, findings revealed that Automated Teller Machine (ATM) and Mobile Phone payment have significant effect on the profitability of commercial banks in Nigeria. However, Point of Sale (POS) has an insignificant effect on commercial banks' profitability in Nigeria.

Okon and Amaegberi (2018) adopted Panel unit root and SURE model estimation technique to conduct quantitative analysis of the impact of mobile banking transactions on bank profitability among four selected old and new generation banks in Nigeria. The results of the study were analysed 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.

Although it seems obvious that many empirical works are already conducted on Digital Financial inclusion and its impact on bank performance, findings are inconclusive as mixed reports were given by the studies. Some reported positive; some studies found effect of Digital Financial inclusion to be negative for banks while some others recorded no significant impact between the variables (Ozili, 2021). Having report of this nature suggested a further analysis of the relationship. This study therefore provides further empirical investigation on the impact of Digital Financial inclusion on bank performance in Nigeria.

Methodology

The study employed census approach to analyses the population which comprises all the deposit money banks in Nigeria. Secondary data used in the study have been extensively sourced from World Bank database, Central Bank of Nigeria (CBN), Nigerian Interbank Settlement System (NIBSS) and Nigeria Bureau of Statistics (NBS) and annual financial

reports of deposit money banks. Balanced panel data set was constructed, and static panel regression analysis was used as the estimation technique because data set for the study is a collection of multi-dimensional data set observed over multiple time periods (Baltagi, 2008). The study employed Breusch and Pagan Lagrangian Multiplier (BP-LM) test to determine the most suitable estimates between the pooled Ordinary Least Square (OLS) and Random/Fixed Effects to select the most suitable model between the fixed and random estimates (Breusch & Pagan, 1980).

Results

Descriptive statistics of the variables are presented in Table 1. It is observed that descriptive statistics of some variables showed significant variation because of the different structure of variables considered as a sample.

Table 1: Descriptive Analysis

Variable	ROA	ATMs	BET	LnNBA	LnPOS
Mean	1.793533	16.26933	5.556735	6.701840	4.815702
Median	1.786600	16.46650	5.547805	6.776385	4.835420
Maximum	2.610000	18.00000	5.903800	6.859138	5.159751
Minimum	1.020000	13.30400	5.362900	6.361728	4.418152
Std. Dev	0.562980	1.604950	0.188370	0.184882	0.269548
Skewness	0.086524	-1.059280	0.044210	-1.160666	-0.223754
Kurtosis	1.980644	3.150057	3.105231	2.933024	1.916701
Jarque-Bera	0.267258	1.127704	1.093143	1.348267	0.343450
Probability	0.874915	0.569013	0.578931	0.509598	0.842211

Source: Authors computation, (2021)

Table 1 shows that the average ROA, ATMs, BET, NBA, and POS over the selected periods are about 1.793533, 16.26933, 5.556735, 6.701840 and 4.815702 in their respective units. It also shows that all the variables did not vary significantly over the period as indicated by the low margins between the Minimum and maximum values except the ATMs. The skewness coefficient of ROA, BET, and POS are close to zero (0) and agree with the assumption of normal distribution. However, the skewness coefficient of ATMs and NBA are negative and significant, indicating evidence of deviation from normal distribution and that their means are also to the left of the peak. Checking the closeness of the data to normal distribution, the study used Jarque-Bera's test where the decision rule is to accept the null hypothesis (data followed a normal distribution) if the probability of a test (JB) is more than 5% (Gujarati & Porter, 2009). In Table 1, the result of the normal distribution test showed that the probability (J-B) for all variables is more than 5%. Therefore, this means that all the variables followed a normal distribution. Another parameter of relative importance in Table 1 is the maximum and minimum values of the variables. The values depict the largest value of each variable for the companies under study and the periods. For instance, the largest ATM value for the six-year period across

the DMBs is 18. This means every 18 ATMs is serving 100,000 adults which is not optimal and might contribute less to ROA of DMBs. The more ATMs deployed, the more the commission on turnover and the more profitability to the banks.

Table 2: Pair-wise correlation

Variable	ROA	ATMs	BET	LnNBA	LnPOS
ROA	1.000000	-0.318945	0.355610	-0.374475	-0.344042
ATMs	-0.318945	1.000000	-0.741496	0.661322	0.434916
BET	0.355610	-0.741496	1.000000	-0.844865	-0.585084
LnNBA	-0.374475	0.661322	-0.844865	1.000000	0.026877
LnPOS	-0.344042	0.434916	-0.585084	0.026877	1.000000

Source: Author's computation, (2021)

Table 2 shows the pair-wise correlation values for the explanatory variables. The values explain the possibility of having perfect linear relationship between any pair of two or more independent variables. This is because ordinary least square regression technique assumes the absence of multicollinearity among the independent variables (ATMs, BET, NBA, POS) if a higher level of accuracy is to be expected from the estimation. Applying a multicollinearity plagued regression for forecasting will be too hazardous. It is clear from Table 2 that there is no perfect relationship between the different pairs of independent variables. That is, there is no multicollinearity as no single values in the table is in the region identified by researchers and econometricians as multicollinearity headache. Gujarati and Porter (2009) asserts that multicollinearity becomes a serious issue whenever the correlation coefficient between two regressors is above 0.8.

Table 3: Breusch and Pagan Lagrangian Multiplier Test

Component	Var	sd = sqrt(Var)
ROA	14.65745	3.27456
E	21.22224	3.76043
U	0	0
Chibar2(Prob)	38.14(0.0581)	

Source: Author's computation, (2021)

Breusch and Pagan Lagrangian multiplier (lm) test was conducted to choose between pool OLS and random/fixed effect for the study model. The result suggests acceptance of null hypothesis indicating that the variance of the random effect is zero as the p-value is greater than 0.05. From the test, the regression analysis and hypotheses testing were made using the pool OLS.

Table 4: Digital Financial inclusion and Bank Performance

Variable	Coefficient	P-value	Significance
Constant	6.1481	0.3019	
ATMs	0.1847	0.0087	*
BET	5.4912	0.0008	*
LnNBA	0.0128	0.0856	***
LnPOS	-3.4567	0.0000	*

Model Statistics	Value
R²	0.8547
Adjusted R²	0.8316
F-statistic	28.14
P-value	0.0022*

*Notes: , ** and *** denotes statistically significant at 1%, 5% and 10% significance level respectively. Also, p-values are reported in parentheses.*

Source: Author's computation, (2021)

Table 4 depicts the result of the regression tests, based on the model illustrated in chapter three. The models represent the relationship between explanatory variables (ATMs, BET, LnNBA and LnPOS) and dependent variables under consideration (ROA). The model has significant explanatory power. All together the independent variables can explain almost 83% of the total variance of the dependent variable. It shows the coefficient of determination (R-Square) with a value of 0.8547 which means that in Nigeria, about 85% of the total systematic variations in capital structure variables can be explained by the variables namely ATMs, BET, LnNBA and LnPOS. The adjusted R-square shows that even after adjusting for the degree of freedom the model could still explain about 83% of the total systematic variations in capital structure (ROA). Only about 15% of the systematic variation of segment disclosure was left unaccounted for by the model which has been captured by the stochastic disturbance term in the model.

Moreover, regarding the overall statistical significance of the model as indicated by the F statistics, it was observed that the overall model was statistically significant since the calculated F-value of 28.14 was greater than the critical F-value of 5.0 at 5% level of significance. This shows that there exists a significant linear relationship between the independent variable and the dependent variables in the study and all variables are complementary to each other and banks would benefit more from their branchless banking investment if they used a multichannel strategy as opposed to adoption of a single channel strategy.

Based on the individual statistical significance, Table 4 further describes the influence of explanatory variables (ATMs, BET, LnNBA and LnPOS) on dependent variable (ROA). The findings suggest a positive relationship between ROA and explanatory variables (ATMs and BET) with 0.1847 and 5.4912 as coefficients and prob. values of 0.0087 and 0.0008 which are significant at 1% level. The LnPOS variable shows a negative coefficient of -3.4567 with p-value 0.0000 which is significant at 1%. Explanatory variable (LnNBA) with coefficient 0.0128 and p-value 0.0856 was not significant at 1% and 5% but at 10% significant level.

The finding on ATMs effect on bank performance is consistent with previous studies of Jegede (2014) who suggested that ATMs has a direct impact on ROA. The study also found that BET has significant influence on ROA and the finding is also in tandem with Adelowotan (2016) which stated that BET relates strongly to ROA. However, the result of the analysis indicates that NBA has a positive but insignificant influence on ROA at 5% level of significance, which is not consistent with findings of Nkuna et al. (2018) on the same variables. Also, on the POS, result of this study is in consonance with the study of Obiekwe and Anyanwaokoro (2017) but contrary to the studies of Okon and Amaegberi (2018) which found a positive though insignificant relationship between POS and ROA.

Conclusion

Based on the findings, the study can conclude that the improvement in the infrastructure of financial services encourages individuals and corporate bodies to take advantage of the financial services, hence enhance profitability of the banks. In the light of the conclusion, the study recommends that management of deposit money banks should deploy more ATMs in accessible locations so that quick and convenient services are provided to customers. Other facilities like POS services should be adequately provided to promote Digital Financial inclusion and boost profitability of the banks. More bank branches may be opened though with adequate awareness programmes to include more of unbanked people financially.

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