

Appraising the Impact of Cashless Economic System on the Financial Performance of Financial Institutions in Nigeria

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DOI: 10.56201/jafm.v9.no9.2023.pg265.285

Abstract

The main objective of the study is to investigate the effect of cashless economic system on the financial performance of deposit money banks in Nigeria. This study adopts a survey research design and a sample size of 290 was drawn from a population of 350 using Taro Yamani formula. The obtained data was analyzed using simple regression analysis. The findings show that Automated Teller Machine (ATM), and Online Banking each has a positive and significant effect on return on assets of deposit money banks. Point of Sale has a positive but insignificant effect on return on assets while mobile banking has a negative and statistically significant effect on return on assets. This study thus concludes that cashless economic system has positively affected the financial performance of deposit money banks in Nigeria. Thus it was recommended that more ATM centers/ outlets should be opened in order to enhance the success of the cashless monetary policy of the Nigerian government. This is suggested in that ATM contributes positively to the success of the cash less policy and income generation, consequently the financial performance of the banks in the Nigerian banking sector. It is also recommended that the use Point of sales (POS) should be encouraged by organizations and other businesses at effectuating business transactions as this would enhance its contribution to the cashless economic system in Nigeria

1.1 Introduction

A cashless monetary system is a policy direction of the governments gear towards increase in economic performance level, customers' deposit, quick and easy assesses to financial services among others. It entails reducing in the short run and eliminating in the long run cash based economy characterized by high cost of operation. According to Ajayi (2014), a cashless economy is referred to as an environment in which money is spent without being physically carried from one place to another. Nigeria's quest to migrate from cash to cashless economy has been at the fore for quite a while and prior to introduction of the policy; most transactions were effected using analog and cumbersome means which delay processing of transactions. Theoretically, cashless policy/system is presumed to have a corollary effect on speedy transfer of money, income generation and reduction of cost. Most banks in Nigeria in their operations under a cash based economy are known for the huge profit they declare each year, notwithstanding the fact that such system is characterized by high cost of operations (Osazevbawu, Sakpaide & Ibubune, 2014). Cash dependency by Nigerians has been a major issue of concern to the Central Bank of Nigeria (CBN) prior to the cashless policy in Nigeria.

The relatively newly introduced cashless policy in Nigeria is quite enhancing to the business climate. It however has certain observable draw backs such as level of fraud and fraudulent practices. Since the cashless policy is all about electronic money transactions, series of cybercrime and fraud have been a common thing with it in Nigeria over the year in addition with high level of unstable networks. Studies have shown that the crucial role played by financial inclusion to strengthen the growth and development of any economy of the world cannot be over emphasized. In fact, for an economy to achieve its desired development there must be an easy access to mobilization and circulation of fund within all strata of the economy. This can only be achieved where there is a robust and functional banking system, operation of a cashless economy and inclusive financial services that are available to all and sundry in that economy. In the present digital world, various ranges of personal finance options are available for every income class of the population. This is what is generally called financial inclusiveness; where people are having access to formal financial institutions because they can use financial product or services of any financial institution at their desired disposal anytime.

The pronouncement of cashless economic policy by the Central Bank of Nigeria (CBN) in 2006 has drawn the attention of scholars and researchers to the subject matter of effective cashless economic system and its impact on the entire economy. However, this study is restricted to a key component and one of the main drivers of the economy which is the financial service sector. It has been observed that the transaction system of the cashless monetary policy of the government has transformed consumers' payment profile in Nigeria. This assertion is in relation to the volume of business transacted and the value derived from the business by the consumers. Adesina and Ayo (2010) stated that the emerging financial transactions has risen tremendously which amounted to billion worth of business deal in the year 2008. But Ejiofor and Rasaki (2012) and Adeoti and Osotimehin (2012) observed that when the CBN began the cashless scheme in Lagos State, a significant number of the commercial nerve center residents displayed low level of perceived awareness about the scheme. Till date many residents in the rural areas are yet to be incorporated into this policy and thus, they are being deprived of the benefits there in.

In another development, it was found that the awareness has been created among the vast majority of Nigerians and they agree to the fact that it will assist to lower the uncertainty of what may happen when carrying cash about but the rate of satisfaction from the customers is still at the lower ebb of speed, degree of service offered by the agents, responsiveness as well as transaction safety (Okoye & Ezejiofor, 2013; Adeoti & Osotimehin, 2012). Among the uncertainty is the issue of counting and confirming what is paid manually, fear of men of the underworld and risk of destruction through accident such as fire violence at homes and shops.

According to CBN (2018) the fundamental reason for Financial Inclusion Strategy of the nation is to lay down a clear plan for the appreciably rising accessibility as well as usage of financial products by 2020. Hence financial inclusion can be looked at as the ability of adults (18 years and above) having ease of access to varieties of prescribed financial services that satisfy their desires and these services must be affordable in terms of cost NFIS (2018). Besides, financial inclusion thrives more in a cashless platform.

The conceptualization of the cashless policy in Nigeria was the fore thought of the Central Bank of Nigeria (CBN). Following the hitherto heavy dependence on cash based economy; the idea was to migrate to a cashless one through the conduit of the payment system. The expected immediate benefits of this would be to discourage the citizens and corporations from manually moving with cash, enhance the proficiency of Nigeria's payment system, improve on the service quality being offered to the banking public, and above all, the Nigeria monetary system would be in line with international best practices (Adewoye, 2013).

The frequent and soaring practice of the traditional habit of using physical cash in an economy comes with negative ramifications. This practice usually leads to increased cost of cash, somewhat elevated risk, high subsidy, promotion of inefficient and corrupt practices, and results to informal economy (CBN, 2011). For example, according to Osazevaru an Yomere (2015), the cost of printing new notes to replace the old ones that are torn or worn out due to frequent handling continue to be high. Osazevaru an Yomere quoted the CBN at putting the direct cost of cash to the Nigerian financial system as at 2009 at N114.5 billion.

The introduced policies are therefore aimed at curbing some of these ills which results from the high rate of using physical cash. One should not mistake a cashless economy to the complete absence of cash. It should clearly be understood as an economic structure or setting whereby goods and services bought or sold is paid for by the use of, or through electric media. Despite the usefulness of the proposed cashless policy, there are still some problems of a cashless society such as unstable electronic value of money which has become even more volatile especially given the fact that people will be conducting businesses with imaginary money. For instance the government has been able to monitor purchases, spending habits and corresponding patronage. The implication is that under this new system, the government will have a total control of our transaction and therefore exposing the privacy of individuals (Siyanbola, 2013).

In spite of the stated implication of the cashless policy, the introduction and implementation of cashless policy in Nigeria has a strong influence on the development of payment system as well as the financial performance of banks. It involves commitment of huge amount of financial resources on computer technology, telecommunication facilities, constant electricity and other devices. It has equally generally been asserted that cash-less **economy** is likely to have led to increased convenience, more service option, reduced risk of cash related crimes, cheaper access to banking services, and credit to customers and corporate organizations will **benefit** by way of faster access to capital, reduce revenue leakages, cash handling cost. As well as improved financial performance.

1.2 Statement of the problem

There have been negative concerns related to extra ordinary use of raw cash in transacting business in the Nigerian economy. There is the cost involved in printing the money and maintenance of money notes and also the cost of security of such monies in circulation as well as those in banks. Other problems encountered prior to the introduction of the cashless policy are delay payment system and the insecurity of payment transactions. In the same vein, corrupt activities from payer to collector/receiver were effectively monitored with ease but with the introduction of the cashless

policy affords the regulators and other authorized parties the needed platform and/or wherewithal to effectively monitor with ease cashless receipts and payments?

Prior to the introduction of cashless policy by the Central Bank of Nigeria in 2012, Nigerian banks have been characterized with so many challenges, ranging from poor handling of physical cash, high usage of cash in doing business which affect the cost of banking operation., leakages, money laundering and other financial related offence due to high cash usage within our various economic sector. As a technique of economic management, cashless policy is yet to be fully operational in Nigeria especially in the rural areas due to many factors such as inadequate infrastructures such as the provision of internet connectivity, computers and point of sale machines in some part of the country as well as non availability of economic and reliable data.

A Study by Osazevbaru and Yomere (2015) found banks' income higher in cashless setting than in cash based arrangement thus highlighting the immense benefits of cash-less policy offers to the banking sector. Ochei, Achugamonu, Areghan and Edwin (2015) revealed that the rate of fraud and unemployment in Nigeria would increase as a result of cashless economy. Abubakar, Gatawa, and Birnin-Kebbi, (2013) suggest that cashless policy has negative effect on the performance of commercial banks in Nigeria. The non-uniformity in opinions, outcomes and conclusions of these researchers in respect of its positive and negative influence suggests that there is inconsistency and gap in literature which need to be filled. The motivation for this study stems from the fact that besides the conflicting findings, most of these studies are theoretical, and very few use secondary data covering many cashless policy variables in their models. Secondly, there are many presumed benefits of cashless policy which require an in-depth empirical investigation adopting expanded approach.

This study thus close the gap that arises from inconsistency in the previous empirical outcomes by including online banking, automated teller machine, point of sale and mobile banking , all in one model to determine the actual influence of cashless policy on the financial performance of Deposit money Banks in Nigeria. This study attempts to contribute to the existing body of literature on the effect of cashless policy on bank financial performance in Nigeria by addressing the above shortcomings identified in previous works. Therefore, the objective of this study is to investigate the effect of cashless policy on the financial performance of deposit money banks in Nigeria applying a simple regression analysis approach.

1.3 Objectives of the study

The main objective of the study is to investigate the effect of cashless policy on the financial performance of deposit money banks in Nigeria. This is intended to be achieved through the following specific objectives.

- i. To investigate the effect of mobile banking on return on assets of deposit money banks in Nigeria.
- ii. To investigate the effect of automated teller machine on return on asset of deposit money banks in Nigeria.

- iii. To investigate the effect of point of sale on return on assets of deposit money banks in Nigeria.
- iv. To investigate the effect of online banking on return on assets of deposit money banks in Nigeria.

1.4 Research questions

The following research questions were drawn to meet the objectives of the study.

- i. To what extent does mobile banking affect return on assets of deposit money banks in Nigeria?
- ii. To what extent does automated teller machine affect return on assets of deposit money banks in Nigeria?
- iii. To what extent does point of sale affect return on assets of deposit money banks in Nigeria?
- iv. To what extent does online banking affect return on assets of deposit money banks in Nigeria?

1.5 Research hypotheses

The following hypotheses were formulated in line with the objectives of the study are in agreement with the research questions.

- i. Mobile banking does not have significant effect on return on assets of deposit money banks in Nigeria.
- ii. Automated teller machine does not have significant effect on return on assets of deposit money banks in Nigeria.
- iii. Point of sale does not have significant effect on return on assets of deposit money banks in Nigeria.
- iv. Online banking does not have significant effect on return on assets of deposit money banks in Nigeria.

2.1 Conceptual Framework

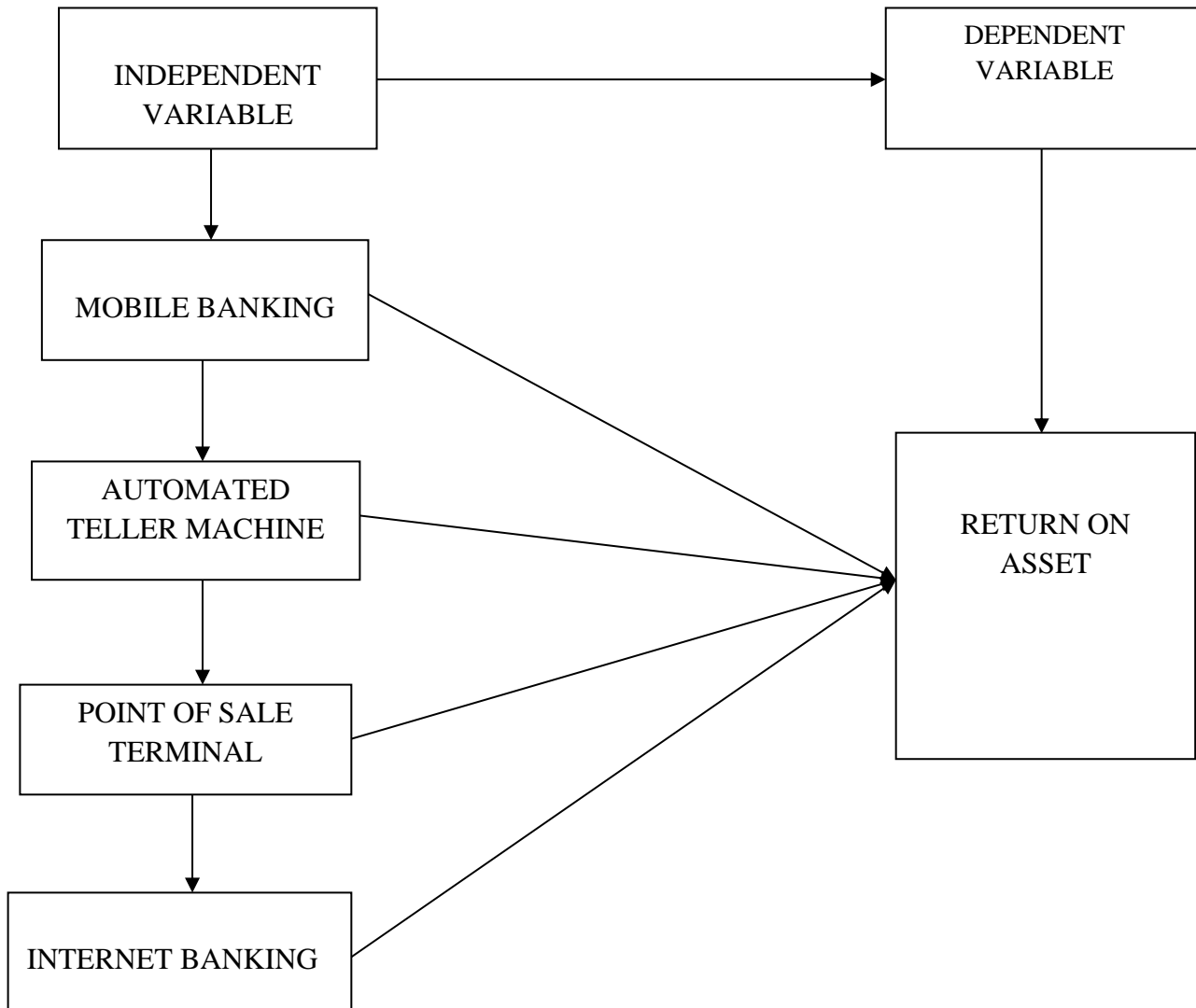


Fig. 1.1 Conceptualization of cashless policy and financial performance

2.1.1 Conceptual issues

2.1.2 Cashless monetary policy

A cashless monetary policy which could also be referred to as cashless scheme, cashless system or cashless economy is a policy direction of the government aims at minimizing the use of physical cash in business transaction. The objective is not to totally eliminate cash from the economy as money remains the medium of exchange for goods and services. The essence is to reduce the use of physical cash as much as possible, and at the same time, provide alternative channels for making payments. In this regard, converse to what the term may suggest, cashless economy is not an outright absence of cash transactions in the economic setting, but refers to a setting in which the amount of cash-based transactions are minimally maintained. According to Ajayi (2014), a cashless economy is an economic setting where goods and services are mostly bought and paid for

through electronic media. It has been stressed repeatedly therefore that a cashless economy is not the complete absence of cash. It is rather an economic setting in which electronic media is the dominant method for buying and paying goods and services. In such an economic system, transactions are not done principally in exchange for actual cash. It is not equally the barter system where goods and services are exchanged for goods and services.

In a cashless economy, there is no point to worry about how much cash is in ones wallet as this is practically irrelevant. One could pay for purchases by either credit cards or bank transfer (Roth, 2010). It has been observed that advanced nations of the world like the United Kingdom and the United States have virtually moved away from paper payment instruments and embraced electronic means, especially payment cards. Some aspects of the functioning of the cashless economy are enhanced by e-finance, e-money, e-brokering and e-exchanges. These refer to how transactions and payments are effected in a cashless economy (Mohammed, Mohammed, & Alexander, 2014). Ajayi, (2014) argued that by increasing the use of cashless banking instruments, monetary policy effectiveness is strengthened and further stated that the present level of e-money usage is not yet posing a threat to the stability of the financial system. However, Ajayi cautioned that if the government does not run a responsible fiscal policy, the central banks may eventually lose control over monetary policy. For Woodford (2003), in cashless economy, there is assumedly no transactions friction that can be reduced through the use of money balances, and that consequently provide a reason for holding such balances even when they earn rate of return. Basel Committee (1998) emphasized the difficulty in accurately defining electronic money. The committee however, agrees that it blends technological and economic characteristics.

In a similar vein, other reputable institutions and experts have tried to define concept of electronic money which they all consider as the backbone of the cashless economy. According to ECB (1998), electronic money is generally characterized as an electronic store of money value, usually on a technical device, and that could be extensively used for making payments to undertakings except for the issuer, and not necessarily involving bank accounts in the transactions, although actually acting as a prepaid bearer instrument. Electronic payments as arguably have a significant number of economic benefits aside their convenience and safety.

These benefits when maximized can contribute immensely to economic development of a nation. Bank deposits are deepened following the use of automated electronic payments. As a result, funds available for commercial loans considered as a driver of the general economic activity are increased. There is a wide range of significant macroeconomic benefits that come with efficient, safe and convenient electronic payments. One could liken the impact of establishing electronic payments to using the gears on a bicycle. Put in place an additional efficient electronic payments system to an economy, and the economy is kicked into a higher gear. Add better-controlled consumer and business credit, and you notch up economic velocity even further (Okoye & Raymond 2013).

Mobile Banking

Mobile banking is concerned with the use of mobile phone for settlement of financial transactions. It entails the provision of banking and financial services through the help of mobile telecommunication devices. This is more or less fund transfer process between customers with

funds available immediately for the beneficiary. Card infrastructure is used for movement of payment instructions equally as secure SMS messaging to beneficiaries intended for confirmation of receipts. It has become a very popular as well as exciting innovation to the customers given that it requires low infrastructure to function and the speedy mobile phone penetration in the country.

Services covered by this product include account enquiry; funds transfer; recharge phones; changing passwords, bill payments. Although the product may appear exciting, it is surprising to note that most customers are yet to fully buy into it in Nigeria. In this regard, the apex banks alongside other banks are urged to increase awareness of the product to the saving populace in the country (Siyanbola, 2013). The scope of services offered may include facilities to conduct bank and stock market transactions, administer accounts and to access customized information (Kennedy & Jacky, 2013). Mobile banking is an electronic banking product that allows customers to access banking services through a dedicated telephone line from the comfort of their homes, offices etc. Services rendered here include; balance transfer, change of pin, authorization of inters branch money transfer, transaction alert (withdrawal or deposit) and enquiry (Adewoye, 2013).

This is the most common of the tele-banking devices. It allows customers to transact banking business via phone. It can be used as an alternative to the traditional branch banking or in conjunction with it (Agwu, Atuma Ikpefan, & Aigbiremolen, 2014). The customer can access their accounts using telephone lines as a link to the financial institutions computer centre. Some of the services rendered here include account balance, transfer, and change of pin. This product has also experienced low patronage as a result of inadequate awareness and education of the customer on how to maximize the use of their phones to transact simple banking operations (Siyanbola, 2013).

Automated Teller Machine (ATM)

ATM is a computer controlled device that can be instructed to dispense cash and equally provide other services to customers who are identified with a personal identification number (PIN). The introduction of this service has greatly reduced the physical carriage of cash and frequent visits to the banks. With ATM, cash is dispensed at anytime of the day and it must not necessarily be located within the banking premises. It could be located even in stores, shopping malls, and fuel stations etc. This is different from the customary method where customers queue, and sometimes, for a very long period to withdraw cash or transfer funds.

This is one of the main advantages of ATM. The ATM is the most popular e-transaction solution in Nigeria. Its popularity stems from its convenience as it has rendered withdrawing cash, or checking of account balance a lot more easy. However, despite its popularity, the effect of ATM has not been as expected as there is still huge amount of cash in circulation in the economy. Apparently, its introduction has done very little in reducing the amount of cash in the economy. This could be attributable to the fact that most Nigerians use ATM only for cash withdrawal. The vast majority of customers ignore the fact that ATM machines can perform other functions like fund/cash transfer, mobile phone credit recharge and bills payment.

It has been noticed that cash withdrawals and balance inquiry are the most popular applications

requested by users in Nigeria. This may be due to absence of education on the part of banks who are expected to properly educate their customers. The absence of merchants has also been sited among the reasons for not utilizing the other functions of ATM. For the fact that ATM machines are mainly used for cash withdrawals, their impact has not gone far enough in turning Nigeria into a cashless economy. ATM has succeeded in making more cash available in the economy since depositors can withdraw cash with ease. To turn Nigeria into a cashless economy, Nigerians need more than just ATM cards; they need credit/debit cards.

Point of Sales and Electronic Banking

Point of Sale (POS) is a place where customers could execute payments for goods or services. It could be a point of sale or point of purchase. On electronic banking, different authors have defined Electronic Banking in different ways based on their understanding E-banking is the term used for new age banking system and it is also called online banking (Amu, & Nathaniel, 2016). E-banking makes use of the internet as the delivery channel through which banking activities can be conducted, for instance, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments as well as certificates of deposits (Amu, & Nathaniel, 2016). Electronic banking is the delivery of banking services and products through the use of electronic means irrespective of place, time and distance. Such products and services include; deposit-taking, lending, account management, provision of financial advice, electronic bill payment, as well as the provision of other electronic payment products and services such as electronic money. Electronic banking is also known as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels (Echekoba & Ezu (2012). As has been pointed out by Adewuyi, (2011) electronic banking means the provision of information about the bank and its product via a page on the internet. Akubueze, (2013) assert that electronic banking is a means where by banking business is transacted using automated processes and electronic devices such as personal computers, telephones, fax machines, internet, card payments and other electronic channels.

Online Banking

Online banking is also known as internet banking as it is a type of e-banking service where customers are offered the liberty of enjoying banking services from the comfort of their homes and offices using their computer or electronic devices. The implication is that customers can purchase goods by simply placing orders from the net, instructing their banks to pay the vendor the invoice amount involved, and the products are subsequently delivered to the destination where the buyer wants. Internet banking involves getting access by customers to their various accounts in addition to wide-ranging information on bank products and services and making use of banks' websites without inconveniencing themselves by sending letters, faxes, original signature, and or telephone confirmation (Olorunsegun, 2010). It also involves carrying out banking transactions using the internet (www) by means of electronic tools, for example the computer, without visiting the banking hall (Siyanbola, 2013).

E-commerce is known to have been facilitated by internet banking and is most frequently used to effect payment. Internet banking like mobile banking equally employs the use of the electronic card infrastructure to execute payment instructions and merchants use it for final settlement of

goods and services with their customers over the internet. Some of the most widely used internet banking transactions in Nigeria include settlement of commercial bills as well as purchase of air tickets through the websites of the merchants. It has been noticed that the Level of awareness of the saving populace of the benefits of this product is still very low. This implies that there is still room for improvement if the effectiveness of cashless banking would be upheld as expected (Siyanbola, 2013).

Internet banking (e-banking) is the use of internet and telecommunication networks to deliver a wide range of value added products and services to bank customers (Uchenna, 2015) through the use of a system that allows individuals to perform banking activities at home or from their offices or over the internet. Some of these services are offered by traditional banks which also offer online banking, meanwhile some are specifically online only without any physical presence. With online banking in traditional banks, customers could perform most routine transactions, including account transfers, balance inquiries, bill payments, and stop-payment requests. Some go as far as offering online loan applications. In addition, it has been made possible for customers to access account information at any time of the day, and from anywhere. Internet banking has improved banking efficiency in rendering services to customers.

Financial performance of deposit banking

Traditionally, financial performance in deposit money banking has been measured through net profit margin, return on assets, return on equity, earnings per share, dividend per share, return on capital employed and few others. However, in this study, return on assets which is measured by dividing the profit of a firm by the totals assets to evaluate efficiency in the use of assets is adopted.

2.2 Theoretical review

The study is anchored on the Technology Acceptance Model (TAM) by Davis (1985). TAM is one of the models that have been developed to provide a better understanding of the usage and adoption of information technology which is the base of cashless policy. The model is an information systems theory that models how users come to accept cashless policy and use a technology that could enhance financial performance. It is presently a prominent theory used in modeling technology acceptance and adoption in information systems research. The model implies that when users are presented with a new technology, a number of factors such as perceived usefulness, perceived ease-of-use etc influence their decision about how and when they will use it. According to TAM, individuals or companies' actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions and perceived usefulness of the system to such users.

2.3 Empirical reviews

There have been divergent findings and conclusion in respect of various empirical studies that have been performed on the effect of cashless policy on the financial performance of Deposit money banks. Itah and Ene (2014) determined the impact of cashless banking on banks' profitability in Nigeria. The study used proxies for cashless banking such as Automated Teller Machine (ATM), point of sale (POS) and web based transaction (WBT) to examine its impact on the aggregate return on equity (ROE) of deposit money banks in Nigeria through an ordinary least

square (OLS) multiple regression method of analysis. The finding obtained indicates that ATM and POS are positively related to ROE, while WBT related negatively to ROE. The study attributed the mixed result to high rates of bank charges on online deposits. Osazevbaru and Yomere (2015) investigated the benefits and challenges of Nigeria's cashless policy. To address the issue, secondary data were collected and analyzed by means of content analysis. The study found that banks' income was higher in cashless setting than in cash based arrangement. The study concludes that cashless policy offers immense benefits to the banking sector; similarly, they recommended that appropriate infrastructures and legal support be provided to facilitate the implementation of the policy.

Ogutu and Fatoki (2019) investigated the effect of electronic banking on financial performance of listed commercial banks in Kenya. Quantitative research design was employed by the study using panel data analysis. The target population of the study was the 11 listed commercial banks in Kenya. Secondary data was extracted from CBK banking supervisory reports and published annual reports of banks. The data was recorded on data collection sheets. Both descriptive and inferential statistics were used. The findings were presented using tables with associated explanations. The study found that there was strong positive relationship between mobile banking, agency banking, ATM banking and online banking and financial performance of listed commercial banks in Kenya. Financial performance of commercial banks and m-banking were strongly and positively correlated. Hussein and Elyjoy (2018) examined the effect of internet banking on operational performance of commercial banks in Nakuru County, Kenya. The study employed Bank-Focused Theory as well as The Technology Acceptance Model (TAM). The study adopted a cross-sectional research design. The population of the study comprised of 56 employees of the commercial banks. Since the banks were few, the study adopted a census survey. Data was collected using structured questionnaires. A pilot study was conducted in Uasin Gishu County to determine validity of the research instruments where Cronbach's alpha coefficient (0.7) was employed. Data was analyzed using correlation and regression analysis. The study established that internet banking had a positive significant effect on operational performance of the commercial banks.

Taiwo, and Agwu (2017) investigated the roles e-banking adoption has played in the performance of organizations using a case study of commercial banks in Nigeria. Primary data were obtained by administering questionnaires to staff of four purposively selected banks (Ecobank, UBA, GTB and First bank). Pearson correlation was used to analyze the results obtained using the Statistical Package for Social Sciences (SPSS) and it was observed that banks' operational efficiency in Nigeria since the adoption of electronic banking has improved compared to the era of traditional banking. Amu, and Nathaniel (2016) studied the relationship between electronic banking and the performance of Nigerian commercial banks. The study became necessary due to the increased adoption of the electronic banking which has redefined the banking service both in Nigeria and internationally. Electronic banking was proxied by value of Point-of-Sale transactions while commercial banking performance was proxied by customers' deposits. Engle-Granger cointegration model was used to analyze data. The results show that POS is not cointegrated with both the savings and time deposits but are cointegrated with demand deposits.

Abaenewe, Ogbulu, and Ndugbu, (2015) investigated the profitability performance of Nigerian banks following the full adoption of electronic banking system. The study became necessary as a result of increased penetration of electronic banking which has redefined the banking operations in Nigeria and around the world. Judgmental sampling method was adopted by utilizing data collected from four Nigerian banks. These four banks are the only banks in Nigeria that have consistently retained their brand names and remain quoted in the Nigerian Stock Exchange since 1997. The profitability performance of these banks was measured in terms of returns on equity (ROE) and returns on assets (ROA). With the data collected, we tested the pre- and post-adoption of e-banking performance difference between means using a standard statistical technique for independent sample at 5 percent level of significance for performance factors such as ROE and ROA. The study revealed that the adoption of electronic banking has positively and significantly improved the returns on equity (ROE) of Nigerian banks.

Alao and Sorinola, (2015) examined cashless policy and customers' satisfaction: A Study of Deposit money Banks in Ogun State, Nigeria. The study seeks to investigate the customers' satisfaction of the recently introduced cashless policy in Ogun State, Nigeria with a survey of bank customers in Abeokuta. Data was collected with a well structured questionnaire and analyzed with descriptive statistics, while hypotheses formulated for the study were tested with correlation coefficient. The findings of the study reveal that cashless policy contributed significantly to customers' satisfaction in Ogun State. Igbara, Emerenini, and Daasi, (2015) examined the impact of cashless policy on small scale businesses. The study carried out in Ogoni of Rivers state, using 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.

Isaac and Michael (2015) examined the effectiveness of mobile banking services in selected Deposit money Banks in Rwanda. Descriptive design involving both qualitative and quantitative approaches was employed. Sample size of 227 was computed from a total population of 524 employees from the selected banks and the selection of respondents was done through systematic random sampling. The instruments of data collection used in this study included both structured questionnaires and interview. In data analysis, quantitative data was analyzed through frequencies and percentages for respondents', mean values were used to determine the effectiveness of mobile banking services in the selected Deposit Money Banks. Difference in effectiveness of mobile banking services was determined through One-Way-ANOVA. Research findings reveal that mobile banking services in the selected Deposit money Banks were generally effective.

3.1 Research Design and population of the study

This study adopts survey research design given that the obtained data are primary data in nature – structured questionnaire administered to respondents designed in a 5-likert scale response questionnaire format and proved to be reliable at Cronbach's Alpha result of 0.879 which exceeds the 0.70 rule of thumb making the instrument very reliable for the study. The target population of

the study covers the 21 deposit money banks operating in Nigeria while the accessible population is restricted to employees and high net worth customers of five (5) major banks which are Zenith Bank, First Bank, Guaranty Trust Bank, Access Bank and Eco Bank operating in Rivers State, Nigeria estimated at 350 persons.

3.2 Sample/sampling techniques

As a result of the inability of the researcher to effectively manage the whole population, a representative number was chosen as the sample size population. Two Hundred and Ninety (290) was used as the sample size from the five (5) selected banks. The sample size was calculated using Taro – Yamane scientific formula which is given as:

$$n = \frac{N}{1+N(e)^2}$$

Where:

N is the population (350 was the population for the study)

I us the Constant

e is the degree of error expected

n is the sample size

$$\begin{aligned} n &= \frac{350}{1+350(0.005)^2} \\ n &= \frac{350}{1+350(0.0025)} \\ n &= \frac{350}{1+0.205} \\ n &= \frac{350}{1+205} \\ n &= 290 \end{aligned}$$

3.3 Model specification

The model used for the study was the adaptation and modifications from the work of Alagh and Emeka (2014). They analyzed the effect of Cashless policy on Banks' Profitability in Nigeria.

The model is stated thus:

$$ROA = f (MB, ATM, POS, OB)$$

Where:

ROA = Return on Asset

MB = Mobile Banking

ATM = Automated Teller Machine

POS = Point of sale

OB = Online Banking (OB)

This was transformed to an econometric equation thus;

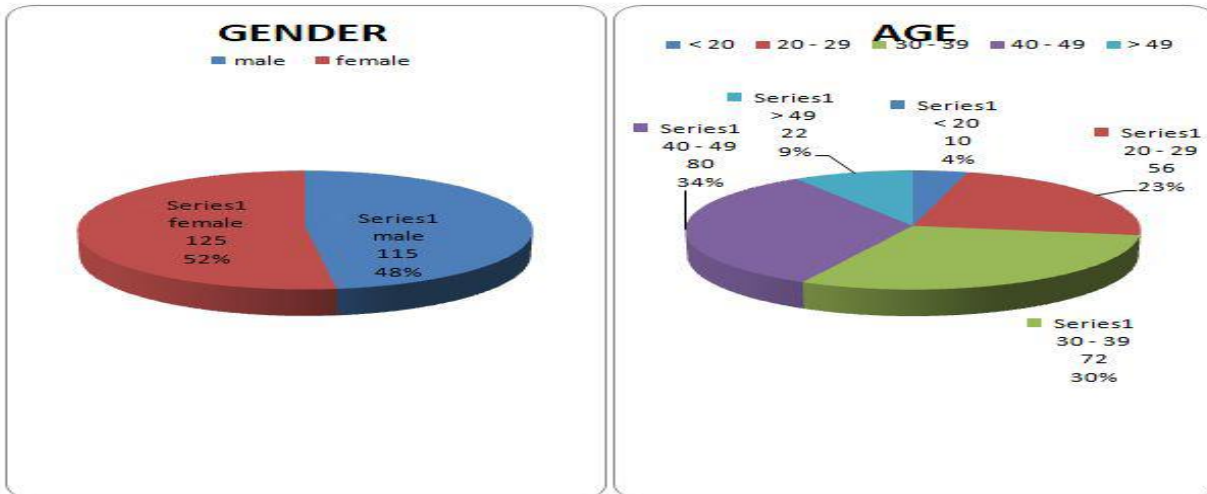
$$ROA = \beta_0 + \beta_1 MB + \beta_2 ATM + \beta_3 POS + \beta_4 OB + \mu \dots \dots 1$$

Where:

β_0 and μ are the constant and error term respectively while β_1 , β_2 , β_3 , and β_4 are the coefficient of cashless policy on the performance of deposit money banks in Nigeria

4.1 Presentation of data

Figure 2: Panel A is Gender and Panel B is Age Distributions of the Respondents



In Figure 2, Panel A shows that 52% of the respondents are male while the remaining Percentage (48%) represents that of the female. Panel B shows the age distribution of the respondents. 34% are within the age bracket of 40-49 and 9% are 49 years and above. 20-29 are just 23% while less than 20 years are 4%. These results indicate that many of the respondents are adults who know what is right and beneficial to them and could make the right judgment.

4.2 Analysis of data

Table 4.1: Descriptive Analysis

	ROA	MB	ATM	POS	OB
Mean	15.8247	117.8442	848.4001	138.8780	32.92728
Median	16.8550	898.7450	73.0250	62.7170	21.47800
Maximum	24.7000	1,844.5700	814.3500	592.9400	221.52000
Minimum	0.8300	62.5900	2.8800	0.0600	3.37000
Std. Dev.	5.8168	189.9780	540.4782	149.6055	45.87496
Skewness	(0.9110)	0.2345	1.6143	1.4888	3.35418
Kurtosis	3.7782	1.8475	4.6370	4.6144	13.97234
Jarque-Bera	4.9821	2.5804	21.8400	19.1216	275.65710

Probability	0.0734	0.3454	0.0000	0.0001	0.00000
Sum	590.7900	41,879.8100	578.3400	4870.4100	2282.92000
Sum Sq. Dev.	907.8617	124,825.4800	1,442,145.0000	882874.7000	1819.59000

Table 4.1 shows the descriptive statistics of the study. The results indicate that a mean of the return on asset is 15.82 %, that of mobile banking is N 117.8442, automated teller machine N848.4001 Billion, point of sale N138.8780Billion and online banking has a mean of N32.92728 Billion. This implies that ATM has the highest mean while online banking has the lowest mean. The following standard deviations of were produced: 5.82% (ROA), N189.9780 Billion (MB), N540.4782Billion (ATM), N 149.6055 Billion (POS), and N 45.87496 billion(OB). These outcomes suggest that apart from ROA and ATM whose deviations are less than their means, the deviations of the rest of the variables exceeds their means. This implies a wide variation within the values of each series of the variables. Also, the values for their respectively skewness and kurtosis are close to 0 and 3 respectively except for online banking indicating presence of normal distribution in the series.

Table 4.2 Regression analysis

Dependent Variable:
ROA

Variable	Coefficient	Std. Error	t-stastic	p-value
ROA	1.15862	0.18103	6.400151	0.0000
MB	-0.013363	0.016959	-0.787979	0.4381
ATM	0.009529	0.004535	2.101333	0.0459
POS	0.063185	0.038926	1.62321	0.2142
OB	0.009529	0.016538	2.031708	0.0529
C	2.760094	1.302236	2.119504	0.0442
R-Squared		0.912444	Mean dependent var	15.13838
Adj. R. Squared		0.873919	S.D. dependent var	4.748881
S.E. of Regression		1.686227	Akaike info criterion	4.139471
Sum Squared Resid.		71.08406	Schwarz criterion	4.661931
Log likelihood		-64.58021	Hannan-Quinn criter	4.323663
F-statistic		23.68461	Durbin-Watson stat	2.017091
Prob(F-statistic)		0.000000		

Table 4.3 Long run coefficient

Dependent Variable: ROA

Coefficient	Std. Error	t-statistic	p-value
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MB	-0.109394	0.046983	-2.328359	0.0032
ATM	0.014881	0.004729	3.073418	0.0041
POS	0.015748	0.036941	0.514783	0.6053
OB	0.132815	0.059637	2.227063	0.0352
C	6.778742	2.378675	2.766287	0.0108

Given that the stated equation is: $ROA = \beta_0 + \beta_1 MB + \beta_2 ATM + \beta_3 POS + \beta_4 OB + \mu$ - - - - 1

From Table 4.2, the co-integrating equation is therefore given as

$$ROA = -0.1094*MB + 0.0149*ATM + 0.0157*POS + 0.1328*OB + 6.7787$$

4.3 Interpretation of results

The regression equation based on the model put forward in section 3.0 is analyzed based on our stated method of analysis. Table 4.2 and 4.3 show the result of the data analysis.

Constant: The Constant on Table 4.3 had a coefficient of 6.778742, showing that if all other variables are kept constant, deposit money banks financial performance will increase by 6.778742 units. Mobile banking exhibited a negative effect on the dependent variable (ROA) based on their coefficient outputs of -0.109394 and -0.013363 respectively. Also, the constant on Table 4.2 had a coefficient of 2.760094 showing that if all other variables are kept constant, ROA (deposit money banks financial performance) will increase by 2.760094 units.

The Coefficient of Determination (R-Square): From the estimated linear regression model shown in table 4.2, the computed R-square obtained were 0.912444. this implies that 91 percent variation in ROA is explained by the selected explanatory variable (Mobile Banking, Automated Teller Machine, Point of Sales, and Online Banking) within the period of study while the remaining 8 percent variation are explained by other variables that are not captured in the model.

The F-Test: This is the test for the overall significance of the model. The null hypothesis of this test states that the estimated model is not statistically significant. The computed F-statistic of 23.68461 with p-value < 0.0 5 shows that it is significant. Therefore; we reject the null hypothesis and conclude that the overall parameter estimated of the regression is significant.

Durbin-Watson: The Durbin-Watson test values of 2.017091 which is within the 2 value range means that there is no presence of autocorrelation.

4.3.1 Test of hypotheses

The hypothesis stated in section 1.5 is tested in this section. The test of significance of each variable is carried out at 5 per cent critical level. The t- statistic is employed to perform the test; hence the acceptance or rejection of any of the hypotheses is based on t-value and level of significance of the regression coefficient of the explanatory variable.

H₀₁: Mobile banking does not have significant effect on return on assets of deposit money banks in Nigeria.

From the result of the regression analysis carried out as shown in table 4.3, the computed t- value of the regression coefficient of mobile banking is -2.328359 with p-value of 0.003 < 0.05 level of significance. We therefore reject the null hypothesis (H₀₁) and conclude that mobile banking

has a negative and statistically significant effect on return on assets (ROA) of deposit money banks in Nigeria.

Ho₂: Automated teller machine does not have significant effect on return on assets of deposit money banks in Nigeria

From the regression analysis carried out as shown in table 4.3, the computed t- value of the regression coefficient of 3.073418 with p-value of 0.0041 shows that the relationship between the variables are positive and significant. We therefore reject the null hypothesis (Ho₂) and conclude that automated teller machine has a positive and statistically significant effect on return on assets (ROA) of deposit money banks in Nigeria.

Ho₃: Point of sale does not have any significant effect on return on assets of deposit money banks in Nigeria.

The result of the regression analysis carried out as shown in table 4.3 shows that the t-value and the p-value are 0.514783 and 0.6053 respectively. This result indicates that point of sale has a positive but insignificant effect on return on assets of deposit money banks in Nigeria leading to the acceptance of the null hypothesis.

Ho₄: Online banking does not have significant effect on return on assets of deposit money banks in Nigeria.

The regression analysis result shows that the t-value and the p-value are 2.227063 and 0.0352 respectively and given that 0.0352 is less than 0.0 level of significance, we therefore reject the null hypothesis (Ho₄) and conclude that online banking has a positive and significant effect on return on assets (ROA) of deposit money banks in Nigeria.

4.4 Discussion of findings

The estimated linear regression model shown in table 4.2 produced an R-square value of 0.912444 and adjusted R-squared of 0.873919. Using the adjusted r-square as the most dependable basis of interpretation, the result implies that 87 percent changes in return on asset (ROA) is explained by the selected explanatory variable (Mobile Banking, Automated Teller Machine, Point of Sales, and Online Banking) within the period of study while the remaining 13 percent variation are explained by other factors not captured in the model. The F-statistic of 23.68461 with p-value < 0.05 shows that the overall parameter estimated of the regression is significant.

The negative coefficient of Mobile banking (MB) of -0.109394 suggest that an increase of one unit in mobile banking will lead to a decrease in return on asset of money deposit banks by 10.9%. The result contrasts that of Asidok, and Michael, (2018) which rather revealed that mobile banking has significant effect on the performance of deposit money banks in Nigeria.

The coefficient of ATM of 0.0149881 showed that a unit increase in value of ATM transaction will lead to 1.5% increase in returns on asset of money deposit banks and vice versa. The results of this finding is consistent with the work of Adu, (2016) which showed that automated teller machine has positive effect on the financial performance of deposit money banks in Nigeria. The result indicates that point of sale has an insignificant positive effect on the financial performance of deposit money banks in Nigeria given that it has a positive coefficient of 0.015748 and p-value of 0.6053 > 0.05 significant levels. The result of the findings is inconsistent with the work of Agwu, Atuma, Ikpefan, (2014) and Aigbiremolen (2016). They posited that point of sale has negative and insignificant effect on the financial performance of deposit money banks in Nigeria.

The coefficient of online banking (OB) of 0.132815 showed that a unit increase in online banking will result to a 13.3% increase in Return on asset of deposit money banks. The finding is consistent with the work of Okoro (2014) which revealed that internet banking has significant effect on the performance of Deposit money Banks in Nigeria

The above findings generally agree with that of Ighoroje and Osevwe-Okoroyibo (2020) who found in their study that Automated Teller Machine (ATM) and Internet Banking each has a positive and significant effect on return on equity (ROE). Point of Sale (POS) has a positive but Insignificant effect on return on equity, while Mobile Banking (MB has a negative and statistically significant effect on ROE. Thus they conclude that cashless policy has positively affected the performance of money deposit banks in Nigeria.

5.1 Summary of findings and Conclusion

- Ho1: The results show that mobile banking (MB) with a coefficient and p-value of -0.109394 and 0.0032 respectively has a negative and statistically significant effect on return on assets (ROA) of deposit money banks in Nigeria.
- Ho2: Automated teller machine (ATM) with a coefficient and p-value of 0.014881 and 0.0041 respectively has a positive effect on return on asset of deposit money banks in Nigeria and the effect is statistically significant at 5% level of significance
- Ho3: Point of sale (POS) with a coefficient and p-value of 0.015748 and 0.6053 respective has a positive but insignificant effect on return on assets of deposit money banks in Nigeria.
- Ho4: Online banking (OB) with a coefficient and p-value 0.132815 and 0.0352 respectively has a positive and significant effect on return on assets of deposit money banks in Nigeria.

The intercept of the model C is 6.778742 and its probability p-value 0.0108 clearly indicates that return on asset (ROA) which is the dependent variable(Y) has a positive value suggesting that if all the explanatory variables (X) are held constant at zero, return on asset (ROA) as a dependent variable (Y) will equate to 6.778742 units. The study thus concludes that cashless monetary policy is imperative for the continued improved financial performance of deposit money banks in Nigeria

5.2 Recommendations

On the basis of the findings which were hinged on the objectives and hypotheses of the study, the following far reaching recommendations are made:

- i. The Central Bank of Nigeria needs to make its policies on mobile banking friendlier to stakeholders to rekindle their perception and enthusiasm in the Nigerian banking industry. The interest of stakeholders regarding the cashless economic system should be carefully considered and all stakeholders should be carried along as much as possible.
- ii. More ATM centers/ outlets should be opened in order to enhance the success of the cash less policy. This is suggested in that ATM contributes positively to the success of the cash less monetary policy, consequently the financial performance of the banks in the Nigerian banking sector. Caution should be exercised by the apex bank in Nigeria at influencing the cash less policy in favour of banks as this could make the policy one way sided

- iii. Point of sales (P.O.S) should be encouraged by organizations and other businesses at effectuating business transactions as this would enhance its contribution to the cash less policy in Nigeria.
- iv. Online Banking: The public should be encouraged and educated on the use and benefits of online banking, automated teller machine and point of sales as enhancers of cashless system in Nigeria.
- v. Government should provide uninterrupted power supply and adequate communication link while shortfalls should be covered by banks through backup arrangement to power standby generator in case of power outage which may affect the effective implementation of the cashless economic policy of the government.

5.3 Limitations of the study

The sample size used for this study is not large enough and the respondents were somehow reluctant in responding to some of the questions. Small sample size was used due to time constraints and the envisaged difficulties in reaching out to the respondents. However, the researcher was able to motivate respondents to respond and modalities put in place to conduct the research and come out with a result which corroborates the work of past researchers.

Conflicting Interest: The authors hereby declare that there is no conflicting interest in this manuscript.

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