Impact of Cashless Policy on Financial Inclusion in Nigeria

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ABSTRACT: The study evaluated the impact of cashless policy on financial inclusion in Nigeria for the period 2009 to 2019. Cashless policy instruments adopted in the study were automated teller machine, Point of Sale terminals, mobile phone banking and web (internet) banking while number of depositors per 1,000 adults was adopted as proxy for financial inclusion. Rather than investigating the 'joint impact' of cashless policy instruments on financial inclusion, this study investigated the 'individual impacts' of the policy instruments on the aforementioned target variable - financial inclusion. Thus, simple regression technique was employed in carrying out the empirical analysis. Findings revealed that automated teller machines; point of sale terminals; mobile phone banking and web cashless instruments had significant impacts on financial inclusion in Nigeria. However, the elasticity of financial inclusion to these cashless policy instruments varied with automated teller machines and web cashless instruments having larger elasticity than point of sale terminals and mobile phone cashless instruments. The study recommended, among others, that Central Bank of Nigeria should make policies aimed at compelling deposit money banks in Nigeria to establish more automated teller machine points in major cities and rural areas as well as increase web transactions in Nigeria. In this way, financial inclusion in Nigeria would be enhanced.

KEYWORDS: Cashless policy, cashless policy instruments, financial inclusion, automated teller machines, point of sale, mobile phone banking, web banking.

1 INTRODUCTION

Before the introduction of cashless policy in Nigeria, there was a lot of financial recklessness and upheavals in the Nigerian economic architecture (Oginni, El-Maude, Mohammed & Michael, 2013). To the customers of commercial banks, the pre-cashless policy era spelt doom as they were exposed to armed robbery attacks because they were meant to carry huge sums of money so as to finalize their financial transactions. However, to the commercial banks, the pre-cashless policy era resulted in clumsiness as well as overcrowding of the banking halls as customers had to queue endlessly just to deposit monies or make withdrawals (Achor & Anuforo, 2013). Thus, the pre-cashless policy era was ingloriously associated with low saving as people preferred to keep their monies at home instead of keeping them in the banks thereby having too much money existing outside the banking system. According to World Bank (2018), gross domestic savings in Nigeria stood at ₦2.55 trillion in 1999 and continued to fluctuate in the other pre-cashless periods reaching ₦12.16 trillion in 2008. In 2009, which marked the beginning of data-backed cashless policy era in Nigeria, gross domestic savings stood at ₦10.11 trillion and continued to fluctuate in the other post-cashless periods reaching ₦23 trillion in 2018. The highest gross pre-cashless policy domestic savings in Nigeria was recorded in 2006 at ₦13.48 trillion while maximum all-time, gross domestic savings in Nigeria was recorded in 2018 at ₦23 trillion – post-cashless policy era.

In the quest to bring sanity to the Nigerian financial system and the economy, the Central Bank of Nigeria came up with the cashless policy with one of its cardinal objectives being to help the Central Bank of Nigeria have a firm grip on monetary policy especially as it pertains to inflation rate (Akhalumeh & Ohiokha, 2012). Cashless policy is a policy of the Central Bank of Nigeria (CBN) that encourages electronic payment methods in executing financial transactions (Odior & Banuso, 2012). It was argued that beyond the need to reduce cash transactions, cashless policy was meant to reduce huge costs of providing banking services, increase efficiency, increase deposit mobilization and increase credit lending activities of the commercial banks thereby enthrone financial inclusion (Ovat, 2012). In addition, the cashless policy was aimed at establishing a change in

Nigeria's payment system as a way to attain the vision 20: 20: 20 of the government to become one of the 20 best economies in the world by the year 2020 (Ajayi, 2014).

Nigeria's cashless policy anchors on technology-based instruments in order to be effective (Chibueze, Maxwell & Osondu, 2013). These instruments include: Automated Teller Machine (ATM), Point of Sale (POS), internet (web), mobile phones etc. The use of these instruments facilitates convenience in handling financial transactions (Itah, 2014). It therefore not surprising that the usage of these instruments had been on the increase as evidenced by the value of transactions carried out using them. For instance, in 2009, the volume and value of ATM transactions stood at ₦548.6 billion and value of ATM transactions in Nigeria increased steadily reaching ₦6,512.61 billion in 2019 (CBN, 2019). In the case of Point of Sale, the value of POS transactions was put ₦11.03 billion in 2009 and steadily increased reaching ₦3,204.75 billion in 2019. Value of web transactions stood at ₦84.15 billion in 2009 and fluctuated in the years that followed reaching ₦478.14 billion in 2019. Finally, the value of transactions carried out using mobile phones stood at ₦1.27 billion in 2009 and increased steadily reaching ₦5,080.96 billion in 2019 (CBN, 2019). Overall, it could be argued that Nigeria's cashless policy has been impressive given its penetration as evidenced in the value of transactions carried out with the cashless policy instruments. Based on the value of transactions executed using the cashless policy instruments, one wonders whether financial inclusion in Nigeria has been enhanced.

1.1 STATEMENT OF THE PROBLEM

Despite the huge benefits of the cashless policy in Nigeria, one of the major issues confronting its success is insecurity. Insecurity exists mainly in the hacking of the e-payment platforms by fraudsters. As fraudsters hack into these e-payment channels, people get the impression that their monies can just 'evaporate' by the click of a button by someone somewhere. This leads to growing apathy on the acceptance of the cashless policy thereby reducing the positive impact it would have had on the financial sector in particular and the economy in general. Inadequate infrastructure to enhance the operations of the cashless channels is another major issue bedeviling the cashless policy. With inadequate power supply and frequent network challenges in Nigeria, most of the times customers of the banks are confronted with situations where the e-banking channels are not working and this leads to frustrations. The more the customers get frustrated with the e-banking channels, the less the acceptability of the cashless policy and the less it enhances the development of the financial sector in Nigeria.

In view of the foregoing, there are concerns that the cashless policy introduced by government may not have achieved its intended objective of enhancing financial inclusion in Nigeria; reducing currency outside the banks and shoring up the deposit base of banks for more effective financial intermediation activities. This formed the "raison d'être" for this work.

Previous studies on the impact of cashless policy on financial inclusion have acknowledged that cashless policy instruments have positive impact on financial inclusion. For example, Bansal (2014) established that mobile banking and ATM had positive influence on financial inclusion in India. Ogbeide (2019) and Ene, Abba and Fatokun (2019) investigated the impact of cashless policy on financial inclusion in Nigeria and found that cashless policy had positive impact on financial inclusion in Nigeria. However, the magnitude of the impact on cashless policy on financial inclusion has become a subject of intense debate among scholars. While some cashless policy instrument had significant impact on financial inclusion in one study, they had insignificant impact on financial inclusion in another study. Ogbeide (2019) found that ATM had significant impact on financial inclusion in Nigeria while Ene *et al* (2019) found that ATM had insignificant impact on financial inclusion in Nigeria. To fill this gap, this study investigated the "individual" impact of a set of cashless policy instruments (including ATM) on financial inclusion in Nigeria.

1.2 OBJECTIVES OF THE STUDY

The broad objective of the study was to examine the impact of cashless policy on financial inclusion in Nigeria. The specific objectives of the study are as follows:

- To determine the impact of automated teller machine (ATM) cashless instrument on number of depositor per 1,000 adults in Nigeria.

- To investigate the impact of Point of Sale (POS) cashless instrument on number of depositor per 1,000 adults in Nigeria.

- To analyze the impact of web cashless instrument on number of depositor per 1,000 adults in Nigeria.

- To determine the impact of mobile phone cashless instrument on number of depositor per 1,000 adults in Nigeria.

1.3 RESEARCH HYPOTHESES

Four hypotheses were tested in the study and they are specified in their null forms as:

- H_0: Automated teller machine (ATM) cashless instrument does not have significant impact on usage of financial services in Nigeria.

- H_0: Point of Sale (POS) cashless instrument has no significant impact on usage of financial services in Nigeria.

- H_0: Web cashless instrument does not have significant impact on usage of financial services in Nigeria.

- H_0: Mobile phone cashless instrument has no significant impact on usage of financial services in Nigeria.

1.4 SCOPE OF THE STUDY

The study covered the period 2009 to 2019. Year 2009 was chosen as the base year for the study due to availability of data. Usage of financial services dimension of financial inclusion was concentrated on in the study.

2 REVIEW OF RELATED LITERATURE

2.1 CONTRIBUTION OF CASHLESS POLICY IN NIGERIA

Cashless policy has been identified as important contributor to the growth of the Nigerian economy given that it benefits banks' customers, benefits corporations, benefits government and benefits the banking industry in Nigeria. To the commercial banks' customers, cashless policy offers increased convenience given that they do not need to carry large sums of money wherever they go just to carry out financial transactions. This is against the backdrop that the bank customer only needs to make use of either the Point of Sale (POS) platform, mobile phone platform, or the ATM platform in order to make payments for goods or services that he/she purchases. Most importantly, the cashless policy introduced by the Nigerian government has curbed the high incidences of risks associated with armed robberies and other criminal activities who hitherto attacked banks' customers who used to carry large sums of money. With the introduction of cashless policy in Nigeria, bank customers do not need to carry large sums of money about thereby eliminating the possibility of being easy targets for criminals and other miscreants in the society. In addition to this, the advancement of cashless policy in Nigeria provided the bank customer with easy and cheaper access to banking services as he/she does not physically be in the bank in order to make financial transactions. This is against the backdrop that he/she can electronically transact his/her businesses from the confines of his/her home (Oghojafor, Muo & Alaneme, 2013).

Just as cashless policy is beneficial to the banks' customers; it is also beneficial to the government because it helps the government in achieving increased tax collection, increased financial inclusion and increased economic growth and development (Ayoola, 2013). This is against the backdrop that firms and individuals in the informal sector who were not hitherto taxed because they were literally unknown to the government could now have their earnings evaluated as the cashless policy expands the financial inclusion frontier owing to innovations associated with cashless policy. Cashless policy enthrones more innovations leading informal sector firms to become captured in the banking net thereby making government have more capacity to evaluate their earnings and the proper tax that should be paid by them imposed. In this way, the efficiency of tax collection in Nigeria has increased and government revenue in Nigeria (Osazevbaru & Yomere, (2015). Broadly speaking, cashless policy in Nigeria has enhanced the financial inclusion drive of the government given that cashless policy has extended banking services to people and places where the banks and banking services would ordinarily not been able to reach. With the cashless policy came the era of 'branchless banking' in Nigeria as people and firms perform financial transactions without necessarily visiting the bank physically. In the views of Yaqub, Bello and Adenuga (2013), financial inclusion agenda of the government actualized, monetary policy implementation of the government has began to materialize due to the introduction of cashless policy in Nigeria and this has led to increased economic growth and economic development in Nigeria.

Most corporate bodies usually trade with high volume of cash. Thus, the introduction of cashless policy offers faster access to capital; reduces leakages of revenue and even reduces costs associated with cash handling (Ugwuanyi & Ugwuanyi, 2013). In the event that a firm seeks for loans and advances from the banks, the cashless policy makes the application and processing of bank loans easier since the use of ICT is fully mobilized. Unlike what obtained in the era when cashless policy had not introduced, then loan application was done manually which takes a lot of time. The implication of this is that the introduction of cashless policy reduced the time it takes for the bank to process the loan sought by the corporations thereby increasing accessibility to capital and performance. In addition, cashless policy benefits corporations because it reduces leakages of

revenue. This is because handling of cash by personnel is reduced thereby reducing the possibility of theft and embezzlement of company's funds. In the case of the Central Bank of Nigeria (CBN), cashless policy helped it in curbing inflation and other macroeconomic imbalances associated with money supply in the country (Olanipekun, Brimah & Akanni, 2013).

Through electronic payment platforms such as ATM, POS, internet banking, mobile phone banking just to mention but a few; banking services have become more efficient thereby making banking halls less crowded and customers' satisfaction becoming more enhanced. Secondly, costs often incurred by the banks in the past such as transportation costs to carry files from one branch to another, staff costs and other logistics are minimized with the introduction of the cashless policy. This is because most of these operations are now done electronically thereby eliminating the associated costs. Finally, the cashless policy has also led to increased banking penetration being that the banks may not have to put up physical presence everywhere but through the various electronic platforms the banking services are rendered (Osazevbaru, Sakpaide & Ibubune, 2014).

2.2 THEORETICAL FRAMEWORK

This study anchored on technology acceptance model (TAM) and diffusion of innovation (DOI) theory.

2.2.1 TECHNOLOGY ACCEPTANCE THEORY

Technology acceptance theory was postulated by Fred Davis in 1989 and emphasized that individuals accept and use a technology based on two key factors namely perceived usefulness (PU) and perceived ease-of-use (PEOU). Here, perceived usefulness refers to the degree to which an individual believes that a particular technology would enhance his job performance. On the other hand, perceived ease-of-use refers to the degree to which an individual believes that the use of a particular technology would be effortless. Based on the technology acceptance theory, the acceptance of a technology is therefore dependent on individuals' belief that the usage of the technology will be easy and that it will help him to perform better. This theory favours this study because cashless policy is basically introduced to accelerate financial transactions thereby enhance financial inclusion.

2.2.2 DIFFUSION OF INNOVATION (DOI) THEORY

Diffusion of innovation theory was developed by Gabriel Trade and Rogers in 1962 and explains the processes which technology spreads cultures and societies. These processes encompasses how, why and at what rate new ideas and technology spread through cultures or societies. In the diffusion of innovation theory, culture plays important role in determining how individuals living in a community, state or a nation accepts or rejects any technological innovations. Diffusion of innovation theory could be used in explaining the different levels of acceptance of cashless policy. It tends to explain why some countries or segment of the society embraced cashless policy using the instrument of electronic payment whereas some others are yet to key into this phenomenon. This theory also favours this study because it explains the rate at which cashless policy has been accepted in Nigeria and the penetration of the electronic payment methods in Nigeria.

2.3 EMPIRICAL LITERATURE

Gakii (2012) examined the determinants of financial inclusion in Nairobi. Mobile financial services including mobile money transfer, mobile payments and money banking were adopted as indicators of financial inclusion. However, age, gender, education level, tariffs associated with service and volume of transactions were adopted as possible determinants of financial inclusion. Descriptive statistics and multinomial Logit model were employed as analytical techniques. Findings revealed that mobile money transfer, mobile payments and money banking were significantly determined by age, gender, education level, tariff of service and volume of transactions in Nairobi.

Bansal (2014) explored how technology aided financial inclusion in rural India. Mobile banking and ATM banking were adopted as factors that influence financial inclusion in rural India. Qualitative research method was employed as analytical tool. Findings revealed that mobile banking and ATM have huge influence on financial inclusion because ATM and mobile banking enable banking services to be provided to the populace. The researcher concluded that technology significantly influenced financial inclusion in rural India.

Bayero (2015) analyzed effects of cashless economy policy on financial inclusion in Nigeria. Business models, awareness, value proposition and payment infrastructure were adopted as indicators of cashless economy policy. Questionnaire was distributed to 230 respondents which were used as the sample size. Regression analysis was employed in the study. Findings

showed that business models had positive and insignificant effect on financial inclusion in Nigeria. On the other hand, awareness, value proposition and payment infrastructure had positive and significant effect on financial inclusion in Nigeria.

Ali and Emenike (2016) examined impact of automated teller machine on banking services delivery in Nigeria from January 2009 to December 2013. Value of ATM transactions was used as independent variable while private sector saving deposits, private sector demand deposits and private sector time deposits were adopted as proxies of banking services delivery. Ordinary Least Squares (OLS) simple regression technique was employed to analyze the data. Findings revealed that value of ATM transactions had positive and significant impact on private sector demand deposits in Nigeria. On the other hand, value of ATM transactions had no significant impact on private sector saving deposits and private sector time deposits.

Ogbeide (2019) assessed the effects of cashless policy on financial inclusion in the Nigerian economy for the period 2007 to 2016. Number of commercial banks branches in rural area, number of commercial banks branches in the urban area, deposits and loans granted by commercial banks branches in the rural area and aggregate number of commercial banks branches in the urban and rural areas were adopted as proxies for financial inclusion while volume of automated teller machine transaction, volume of Point of Sale transactions and volume of web transactions were adopted as proxies for cashless policy. Ordinary Least Squares (OLS) multiple regress technique was employed to analyze the data used in the study. Findings revealed that volume of ATM transactions had positive and significant effect on financial inclusion indicators in urban areas while an insignificant effect was established in the rural area. Similarly, the study showed that POS transactions and web transactions had more significant effect on financial inclusion in the urban area than it exhibited for rural area.

Ene, Abba and Fatokun (2019) investigated the impact of electronic banking on financial inclusion in Nigeria for the period 2008 to 2017. Number of bankable adults with access to formal sector banking system products scaled by number of bankable adults was adopted as proxy for financial inclusion while number of ATMs in the country and number of POS in the country were adopted as indicators of electronic banking. Ordinary Least Squares (OLS) regression technique was employed as analytical technique. Findings showed that number of ATM had positive and insignificant impact on financial inclusion in Nigeria. On the other hand, findings revealed that number of POS positively and significantly impacted financial inclusion in Nigeria.

3 MATERIAL AND METHODS

3.1 RESEARCH DESIGN

The study adopted the *ex-post facto* research design. The *ex-post facto* research design relies on the use of existing data to determine the impact of the independent variables on the dependent variable. Because of this attribute, the *ex-post facto* research design was considered most appropriate for this study being that data for number of depositor per 1,000 adults, value of ATM transactions, value of POS transactions, value of web transactions and value of mobile phone transactions (which are the variables to be used in this study) already exists and cannot be manipulated by the researcher (Osuala, 2009).

3.2 SOURCES OF DATA

The study made use of secondary data which were collected from the Central Bank of Nigeria (CBN) *Statistical Bulletin* and World Bank Development Reports. Thus, data on number of depositor per 1,000 adults was sourced from World Bank Report (World Bank Development Indicators, 2018) while value of ATM transactions, value of POS transactions, value of web transactions and value of mobile phone transactions were collected from the Central Bank of Nigeria (CBN) *Statistical Bulletin*.

3.3 MODEL SPECIFICATION

This study was built on the technology acceptance theory and diffusion of innovation theory both of which explains the acceptability and spread of technology in societies (nations) thereby impacting financial inclusion. These theories encourage cashless policy and bring to the fore the positive link between cashless policy and financial inclusion. Ogbeide (2019) specified models linking cashless policy and financial inclusion in the Nigerian economy as:

NCBNKBR = f (ATMVL, POSVL, WEBVL)　　　　　(1)

NCBNKBU = f (ATMVL, POSVL, WEBVL)　　　　　(2)

DLRCBNKB = f (ATMVL, POSVL, WEBVL)　　　　　(3)

ACBNKUR = f (ATMVL, POSVL, WEBVL)　　　　　(4)

Where:

NCBNKBR = Number of commercial bank branches in rural area.

NCBNKBU = Number of commercial bank branches in urban area.

DLRCBNKB = Deposits and loans in rural area of commercial bank branches in Nigeria.

ACBNKUR = Aggregate number of commercial bank branches in urban and rural areas of Nigeria.

ATMVL = Volume of automated teller machines in the banks

POSVL = Volume of Point of Sales

WEBVL = Volume of web based techniques

In line with Ogbeide (2019) with modifications, the models for this study are specified as:

$$DEP = f(ATM) \tag{5}$$

$$DEP = f(POS) \tag{6}$$

$$DEP = f(WEB) \tag{7}$$

$$DEP = f(MOB) \tag{8}$$

Transforming equation (2) into its econometric form, it becomes

$$DEP = \beta_0 + \beta_1 ATM_t + \mu \tag{9}$$

$$DEP = \beta_0 + \beta_1 POS_t + \mu \tag{10}$$

$$DEP = \beta_0 + \beta_1 WEB_t + \mu \tag{11}$$

$$DEP = \beta_0 + \beta_1 MOB_t + \mu \tag{12}$$

Where:

DEP = Number of depositor per 1,000 adults (proxy for financial inclusion)

ATM = Value of automated teller machine transactions

POS = Value of Point of Sale transactions

WEB = Value of web banking transactions

MOB = Value of mobile phone transactions

μ = error term

β_0 = Constant term

β_1, β_2 and β_3 = Coefficient parameters of the independent variables.

By a priori, $\beta_0 > 0$, $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$

3.4 ANALYTICAL TECHNIQUES

The study employed the Ordinary Least Squares (OLS) technique in order to determine the impact of cashless policy on the Nigerian economy. To interpret the outcomes, this study used inferential statistics such as t-statistic, F-statistic, R-squared statistic and Durbin-Watson in order to establish the effect of the independent variables on the dependent variable.

4 RESULTS

Table 1. Impact of Automated Teller Machine (ATM) Cashless Instrument on Number of Depositor per 1,000 Adults

Variable	Coefficient	t-statistic	Prob.
LOG (ATM)	0.2758138	6.22	0.000
C	1.896822	12.43	0.000
Adjusted R-squared = 0.7901 Prob. (F-statistic) = 0.0002 DW-statistic = 1.621101			

Source: Researcher's computation (2020) using STATA 13 software package

The result showed that there was a positive relationship between Automated Teller Machine (ATM) cashless instrument and number of depositors per 1,000 adults in Nigeria. From the result, I percent increase in the use of ATM led to 27.58 percent increase in the number of depositor per 1,000 adults in Nigeria. The probability value of ATM (0.000) was less than the test significant level (i.e. $p < 0.05$). Thus, the researcher concluded that ATM cashless instrument had significant impact on the number of depositor per 1,000 adults in Nigeria. The coefficient of determination (adjusted R-squared) of 0.79 showed that 79 percent of variations in the number of depositor per 1,000 adults are attributed to the use of ATM cashless instrument. The model was significant, appropriate and reliable because the probability F-statistic (0.0002) was less than the test significant level (0.05). The Durbin-Watson statistic (1.62) lied within the acceptance region being that $2 \leq DW < 4$ and this indicated that positive autocorrelation could be ignored.

Table 2. Impact of Point of Sale (POS) Cashless Instrument on Number of Depositor per 1,000 Adults

Variable	Coefficient	t-statistic	Prob.
LOG (POS)	0.1405862	10.75	0.000
C	2.512122	77.63	0.000
Adjusted R-squared = 0.9198 Prob. (F-statistic) = 0.0000 DW-statistic = 1.71551			

Source: Researcher's computation (2020) using STATA 13 software package

The result showed that there was a positive relationship between Point of Sale (POS) cashless instrument and the number of depositors per 1,000 adults in Nigeria. From the result, I percent increase in the use of POS led to 14.06 percent increase in the number of depositor per 1,000 adults in Nigeria. The probability value of POS (0.000) was less than the test significant level (i.e. $p < 0.05$). Thus, the researcher concluded that POS cashless instrument had significant impact on the number of depositor per 1,000 adults in Nigeria. The coefficient of determination (adjusted R-squared) of 0.92 showed that 92 percent of variations in the number of depositor per 1,000 adults are attributed to the use of POS cashless instrument. The model was significant, appropriate and reliable because the probability F-statistic (0.0000) was less than the test significant level (0.05). The Durbin-Watson statistic (1.72) lied within the acceptance region being that $2 \leq DW < 4$ and this indicated that positive autocorrelation could be ignored.

Table 3. Impact of Mobile Phone (MOB) Cashless Instrument on Number of Depositor per 1,000 Adults

Variable	Coefficient	t-statistic	Prob.
LOG (MOB)	0.108639	8.10	0.000
C	2.602745	80.09	0.000
Adjusted R-squared = 0.8660 Prob. (F-statistic) = 0.0000 DW-statistic = 1.773755			

Source: Researcher's computation (2020) using STATA 13 software package

The result showed that there was a positive relationship between mobile phone (MOB) cashless instrument and the number of depositors per 1,000 adults in Nigeria. From the result, I percent increase in the use of mobile phone cashless instrument led to 10.86 percent increase in the number of depositor per 1,000 adults in Nigeria. The probability value of MOB (0.000) was less than the test significant level (i.e. $p < 0.05$). Thus, the researcher concluded that mobile phone cashless instrument had significant impact on the number of depositor per 1,000 adults in Nigeria. The coefficient of determination (adjusted R-squared) of 0.87 showed that 87 percent of variations in the number of depositor per 1,000 adults are attributed to the use of mobile phone cashless instrument. The model was significant, appropriate and reliable because the probability F-statistic (0.0000) was less than the test significant level (0.05). The Durbin-Watson statistic (1.77) lied within the acceptance region being that $2 \leq$ DW < 4 and this indicated that positive autocorrelation could be ignored.

Table 4. Impact of Mobile web (WEB) Cashless Instrument on the Number of Depositor per 1,000 Adults

Variable	Coefficient	t-statistic	Prob.
LOG (WEB)	0.2649191	4.72	0.001
C	2.314594	20.43	0.000
Adjusted R-squared = 0.6803 Prob. (F-statistic) = 0.0011 DW-statistic = 1.61462			

Source: Researcher's computation (2020) using STATA 13 software package

The result showed that there was a positive relationship between web (WEB) cashless instrument and the number of depositors per 1,000 adults in Nigeria. From the result, I percent increase in the use of web cashless instrument led to 26.49 percent increase in the number of depositor per 1,000 adults in Nigeria. The probability value of WEB (0.001) was less than the test significant level (i.e. $p < 0.05$). Thus, the researcher concluded that web cashless instrument had significant impact on the number of depositor per 1,000 adults in Nigeria. The coefficient of determination (adjusted R-squared) of 0.68 showed that 68 percent of variations in the number of depositor per 1,000 adults are attributed to the use of web cashless instrument. The model was significant, appropriate and reliable because the probability F-statistic (0.0011) was less than the test significant level (0.05). The Durbin-Watson statistic (1.61) lied within the acceptance region being that $2 \leq$ DW < 4 and this indicated that positive autocorrelation could be ignored.

5 DISCUSSION OF FINDINGS

The study showed that all the measures of financial technology adopted in the study had positive and significant effects on financial inclusion (proxied by the number of depositors per 1,000 adults) in Nigeria. However, the elasticity of financial inclusion to cashless policy instruments varied. The responsiveness of financial inclusion to ATM cashless policy and web cashless policy instruments were larger than the responsiveness of POS cashless policy and mobile phone cashless policy instruments. This finding corroborates Ogbeide (2019) which found that changes in ATM and web cashless policy instruments led to greater changes in financial inclusion (proxied by number of commercial bank branches in the rural areas) in Nigeria. This finding might be attributed to high penetration of ATM and web instruments and their increased usage among individuals and corporate organizations, respectively. On the other hand, lower elasticity of financial inclusion to POS and mobile phone cashless policy instruments could be attributed to the excessive fees charged by POS agents and the fear of mobile phone theft associated with usage of POS and mobile phones, respectively.

6 CONCLUSION

The study evaluated the impact of cashless policy on financial inclusion in Nigeria. Cashless policy instruments adopted in the study were automated teller machine, Point of Sale, mobile phone and web (internet) while number of depositor per 1,000 adults was adopted as proxy for financial inclusion. Rather than investigating the 'joint impact' of cashless policy instruments on financial inclusion, this study investigated the 'individual impacts' of ATM, POS, mobile phone and web cashless policy instruments on the aforementioned variables on financial inclusion. Thus, simple regression technique was employed in carrying out the empirical analysis. Findings revealed that ATM, POS, mobile phone and web cashless instruments had significant impact on financial inclusion in Nigeria. However, the elasticity of financial inclusion to these cashless policy instruments varied with ATM and web cashless instruments having larger elasticity than POS and mobile phone cashless instruments. Despite the varying elasticities, the study concluded that cashless policy had significant impact on financial inclusion in Nigeria.

7 RECOMMENDATIONS

The study recommended as follows:

- Central Bank of Nigeria (CBN) should make policies aimed at compelling deposit money banks in Nigeria to establish more ATM points in major cities and rural areas as well as increase web transactions in Nigeria. In this way, financial inclusion in Nigeria would be enhanced.

- Central Bank of Nigeria (CBN) should make policies and strengthen guidelines to regulate the activities of POS operators in Nigeria in order to control how much they charge as service fees from users. This will increase the usage of POS as alternative means of payment and carrying out other financial transactions thereby enhancing financial inclusion in Nigeria.

- Commercial banks should fashion out ways of determining when a fraudulent transaction is been executed using a stolen mobile phone. Software can be installed by the banks as a way to achieve this.

- Government should fashion out ways of improving the nation's infrastructure so as to enhance the efficiency and effectiveness of the various cashless policy instruments.

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