

# Cashless Policy and Financial Inclusion in Nigeria

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**Abstract** – This study examines the impact of cashless payment systems on financial inclusion in Nigeria. This was aimed at ascertaining the level of financial inclusion caused by the cashless policy. The study was hinged on the theories of technology acceptance and diffusion of innovation. Thus, primary data was sourced and collated via structured questionnaires administered to 117 respondents and analyzed using simple percentages and presented using graphs. The data was further estimated using the ordered probit regression technique. The results indicate that nearness of financial products and service outlets to rural settlements, ease of digital financial transactions and reduced visits to banking halls aided by access to cashless payment mediums has enhanced financial inclusion in Nigeria. It also emerged that efficiency of cashless payment channels does not significantly reduce the use of financial products and services, hence financial inclusion. Furthermore, the results indicate that the desire to own bank account and excessive digital payment charges has a positive but insignificant influence on financial inclusion in Nigeria. The study concludes that cashless payment channels have enhanced equal access and use of financial products and services in Nigeria. The study recommends that the adoption of advanced financial technology (Fintech) that integrate all the attributes of the user groups would enhance user friendliness and further accelerate the penetration and use of bank financial products and services to rural settlements.

**Keywords:** cashless payment systems, cashless policy, financial inclusion, equal use and access, Nigeria.

## I. INTRODUCTION

The advent of the need for money and by extension cash can be traced back to the barter era in the evolution of mankind. In this era, it was found that trade by barter which entails direct exchange of goods for goods, goods for services and or services for services was onerous and thus impede trade, division of labour and specialization, which is the hallmark of modern economies. Consequently, several types of currencies were used in different societies on the basis of their occupation until the advent of standardized currencies in about 3000 years ago in ancient Lydia (Almeida, Fazendeiro, & Inácio, 2018). Thus, making cash an integrate part of financial transactions due to ease, durability, granularity and trust in the ages past.

It is widely held that Nigeria is cash centred economy, while advanced countries have since started exploring other mediums of payment with excellent outcomes. This is predicted on the belief that economic development should be inclusive (more than gross domestic product) and that improved access and use of financial services would enlarge payment systems of a nation and better the lot of every economic agent and spread the dividends of development to

all and sundry in a society (Kabakova & Plaksenkov, 2018; Resendiz, 2017). In addition, cashless payment channels and instruments help reduce cost and enhance quality of banking service delivery, thus enhancing affordability, penetration and use of banking financial services (Bayero, 2015; Ajayi, 2014). Strategies of cashless policies stimulated by financial technology (Fintech) create avenues and increase the reach of banks and encourage the push for financial inclusion in developing countries.

Financial inclusion which entails access and use of financial services is integral in the buying and selling of funds by financial institutions. This implies that lack of access, due to cost (deposit interest rate and lending interest rate) of financial services impairs the intermediation process and the benefits therein (Sapovadia, 2018). This hampers capital accumulation, availability of loanable funds and investment. Cashless transactions broaden and pull payments and deposits via point of sales machines, automated machines, mobile applications and other online channels with the aid of plastic cards (Ogbeide, 2019; Bayero, 2015; Fadoju, Evbuomwan, Olokoyo, Oyedele, Ogunwale, & Kolawole, 2018). Thus, cashless policy create more avenues to drive financial inclusion as economic agents (households and businesses) in a country interact by means of payments via diverse conduits and instruments (Resendiz, 2017; Malaguti, 2015).

Consequently, the Central Bank of Nigeria introduced the cashless policy in 2012 to digitalize payment channels and instruments, reduce cost of bank financial services to drive inclusive finance and to enhance monetary policy effectiveness and stimulate economic growth (Enhancing Financial Innovation and Access, EFInA, 2013). The hallmark of the policy was to accelerate and encourage digital payment systems and minimize the use of currency in facilitating transactions in country, in order ensure the flow of funds within the banking superstructure. However, it can be argued that cashless policy does have a direct bearing on the unbanked who do not have a bank account except they own an account that would enable them to carry out an electronic transaction (EFInA, 2013). This implies that cashless payment channels and instruments has the capacity to broadens the reach and penetration of bank financial services.

Researchers hold that awareness and the use of cashless payments channels and instruments have improved considerably within the last decade (Ejiofor & Rasak, 2012; Adesina & Ayo, 2010; Okoye & Ezejiofor, 2013). However, records show that only 0.7% of people with bank accounts utilized post of sales services, 0.8% of financially included

economic agents utilized the internet and below 2.5% utilized mobile device to facilitate financial transactions (Enhancing Financial Innovation & Access, EFINA, 2012). Epileptic Fintech, poor internet access and usage, poor service delivery, cost and digital fraud could be adduced as possible reasons for the poor use of digital payment channels and instruments (Ogbeide, 2019; Bayero, 2015; Almeida, et al. 2018). The nonexistence or lack of banking presence in rural areas could also mean that a good number of the universe of rural settlers have no access or minimal access to formal banking services and payment channels and instruments. No doubt, safe and efficient cashless payment system is seen as the gateway to improved access and usage of bank financial services. This was found to be empirical true by Bayero (2015). However, it is safe to say that a cashless payment system that is unsafe and inefficient could impair penetration, access and use of bank financial services (Malaguti, 2015).

Regardless of the importance and benefits of digital payment channels and instruments in driving financial inclusion, a manifest portion of the universe of people in Nigeria prefer cash based financial transactions to cashless financial transactions given the ratio of use alluded earlier. Given the broaden role of cashless payment systems, it is vital to ascertain the impact of the Central Bank of Nigeria cashless policy on financial inclusion in Nigeria. This is significant because there are few studies on the impact of cashless policy on financial inclusion in Nigeria. Thus, this study would be a valuable addition to the handful of extant studies on cashless payments and financial inclusion.

## II. BRIEF CONCEPTUAL REVIEW

Cashless society is one where households and businesses interact and facilitate exchange using cashless instruments. This implies that cashless policy encourage and accelerate the use of digital payment systems and discourage the use of currency in facilitating transactions in a country, in order to ensure the flow of funds within the banking system. This implies that going cashless does not eliminate the use of hard currency but rather, it discourage its use (Ajayi, 2014; Ezeamama, Ndubuisi, Marire, & Mgbodile, 2014). This type of payment system aids the utilization of automated payment channels like point of sales terminals, cash machines, personal digital assistant, etc. and instruments like plastic cards (debit and credit cards). Cashless financial transactions therefore entails electronic book entries – that is, credit entry for every receipt and debit entry for every payment devoid of physical cash.

Cashless policy was introduced in 2012 by the Central Bank of Nigeria. The object was anchored principally to digitalize payment channels and instruments, to enhance monetary policy effectiveness and stimulate economic growth and reduce cost of bank financial services to drive inclusive finance in Nigeria (EFInA, 2013, Bayero, 2015). The concept of financial inclusion entails the delivery of financial services at affordable costs to sections of disadvantaged and low-

income segments of society. Extending access to finance is the first building block for people to build a better life. Not only does it help families plan for long-term goals and emergencies, it also facilitates day-to-day living and yields positive results in many different ways, e.g. education, health, and employment. Digital payment systems and instruments can help to cover the universe of people not served.

Cashless payment system broadens and increase the reach of bank financial services. This implies that firms and individuals can have improved access and operate their account via online channels and instruments to facilitate exchange. This is mostly the case when the payment system is safe and efficient (Malaguti, 2015; Yanying, Liuc, Renzisd, & Schmiedel, 2019).

## III. THEORETICAL FRAMEWORK

This study is hinged on the Technology Acceptance Theory and Diffusion of Innovation Theory. The theory was propounded by Fred Davies in 1985. The theory explains how a user of a new technology accepts and starts utilizing the technology. The theory posits that the utilization of a technology by a user is predicated on three grounds. They include; perceived usefulness, perceived ease of use and finally user attitude towards usage (Mugo, Njagi, Chemwei, & Motanya, 2017). According to Davies (1989), these factors put together determine the utilization of a new technology. Thus, this implies the usefulness of a financial technology is predicated on how the payment channels and instruments would enhance the user's financial interactions with others. A technology that cannot be easily used and its considered usefulness are in doubt when compared to already existing mediums would necessitate the unwillingness of users to utilize the said product. The theory invariably explains the things that will a user welcome a new tech in order to ease job performance (Ajayi, 2014; Ailemen, Enobong, Osuma, Evbuomwan, & Ndigwe, 2018). That is, the intended need for a product by the user and how the product would meet that need easily invariably determines the acceptance of a new technology.

Similarly, the diffusion of innovation theory describes how an innovation spreads and penetrates in a society or a given user group. That is, the theory focuses on the specific needs of their customer groups, identifies and integrates it and offer inclusive technology to suit the various customer groups.

According to Robinson (2009), a new innovation is an idea, behaviour, or object that is perceived as new by its audience. The diffusion of innovation theory was propounded by Gabriel and Rogers in 1962. The theory holds that innovation "diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system" (Ajayi, 2014). According to the theory, diffusion of innovation entails the innovations to change to suit the needs of the people, whereas the reverse is true for other social change theories (Robinson, 2009). That is, the focus is not to persuade the end users but instead the

Fintech is reinvented to suit the various user groups. Thus, the spread of a new technology is a function reinventing Fintech to suit the needs of the end users. The theory comprises of: innovation characteristics, individual user characteristics, adopter distribution over time, diffusion networks, innovativeness and adopter categories, and the individual adoption process.

#### IV. REVIEW OF RELATED EMPIRICAL STUDIES

There are only a handful of studies on cashless policy and financial inclusion on Nigeria. This could be attributed to the fact that the cashless policy was introduced in 2012. Regardless, this section presents a review of related empirical studies.

Bayero (2015) used a cross sectional survey design to examine the effect of cashless policy on financial inclusion in Nigeria. The specific objectives are to determine the influence of the explanatory variables; business model, awareness, customer value and infrastructure on financial inclusion in Nigeria. Primary data were collated from a sample group of working age adults comprising of 230 respondents. The data were estimated using the multiple ordinary least square technique. The study found that business model, awareness, customer value and infrastructure has a significant impact on financial inclusion in Nigeria.

Tijani (n.d) investigated digital payment channels on access to banking services in Nigeria. Primary data was collated from 5 locations via personal interviews. The sample size of the study was 100. The data collated was estimated using simple percentages and descriptive statistical methods. The analyses revealed that cashless payment systems have stimulated financial inclusion in Nigeria.

Mieseigha and Ogbodo (2013) examined the contributions of cashless policy on the Nigerian economy. Primary data collated via structured questionnaire. A sample size of 520 respondents was selected via the opportunity sampling technique. The primary data collated was analysed using simple percentages, chi-square and analysis of variance. The results reveal that cashless payments systems exert a significant linear relationship with accountability, transparency and fraud. Results also reveal that cashless policy exert a significant linear effect on economic growth in Nigeria.

Ajayi (2014) used a case study to investigate the impact of cashless policy on the banking sector of Nigeria. The Taro Yemane formula was used to arrive at a sample size of 370 respondents from Guaranty Trust Bank in Ekiti state. The primary data was extract via structured questionnaire and analysed using chi-square. The analyses reveal that cashless policy exert a positive impact on banking operations. And that, it reduces queues and ease banking activity and transactions. The study identified possible impediments of the policy as epileptic Fintech infrastructure and financial illiteracy.

Muyiwa, Tunmibi and John-Dewole (2013) used survey research design to examine the impact of cashless policy in Nigeria. Primary data was collated using structure questionnaire. The findings from the qualitative research indicate that cashless economy positive influence on employment and foreign direct transactions. It also emerged that the policy would reduce robbery and cash based corruption.

Ogbeide (2019) used ordinary least square technique to examine the impact of cashless transactions on financial inclusion in Nigeria. The specific objectives of the study was to ascertain the effect of volume of automated teller machine transactions, volume of point of sales transactions, web based transactions on financial inclusion. To achieve this, time series data spanning 2007 to 2016 was collated and estimated. The results revealed that; the volume of ATM and POS transactions has a significant positive effect on financial inclusion in city centres to rural areas, while web based transactions exerted an insignificant impact on financial inclusion.

Ailemen, et al. (2018) examined the influence electronic banking on cashless economy in Nigeria. Time series data spanning 2006 to 2015 was collated from the central bank and the Nigeria Interbank Settlement System database and estimated using the ordinary least square technique. The results indicate that ATM, POS, webTrans and mobile transactions, which are the components of electronic banking does not have significant positive impact on cash in circulation.

Siyanbola (2013) examined the impact of cashless economy on the Nigerian macro economy. Primary data was collected via observations, interviews and structure questionnaire. A non-random sampling technique was used to selection a sample frame of 70 respondents. The data was estimated using chi-square. The results indicate that cashless economy has a significant relationship with the Nigerian economy. The results also indicate that cashless policy exerts a negative impact on employment.

Lema (2017) investigated the factors influencing the adoption of mobile financial services in the unbanked population. A cross-sectional research design and structured questionnaires were used to collate from 250 respondents. The key variables of the study are usefulness, ease of use, trust, cost, risk and social influence. A structural equation model was built and estimated using the multiple regression technique. The estimates indicate that the explanatory variables have a significant impact on mobile financial services.

#### V. METHODOLOGY

The study employed the exploratory research design in conjunction with the mixed research technique; that is, a mix of qualitative and quantitative research. The qualitative research techniques ensures that in a natural setting, issues being studied can be thoroughly understood (Saunders, Lewis,

& Thornhill, 2012); while quantitative method describes a phenomenon by gathering statistical data that can be analyzed and estimated using mathematical techniques (Aliaga & Gunderson, 2000). The choice of this technique is informed by the fact that the mixed research method provide a more comprehensive and in-depth understanding of the components considered as well as ensure quality and clarity of data that will be analyzed in this study (Swanborn, 2010).

Primary data was collated via structured questionnaire from three (3) out of the eight (8) local government areas of Bayelsa state. A respondent size of one hundred and seventeen (117) was purposively selected to represent the universe of rural settlers in Bayelsa state. This implies that forty (39) respondents apiece from the sample size made up the respondent group of the study. The data was analyzed and presented using graphs, simple percentages and the ordered probit regression technique.

The main objective is to determine the impact of cashless policy on financial inclusion in Nigeria. The specific objectives includes the variables in the model specified below;

$$EAAU = f(EOT, FOBV, NTRS, UECP, DTOBA, EDPC, EOCPC)$$

This is further expressed as follows;

$$EAAU = a + a1EOT + a2FOBV + a3NTRS + a4UECP + a5DTOBA + a6EDPC + a7EOCPC$$

Where:

EAAU is equal access and use of financial products and services

EOT is ease of digital transactions

FOBV is frequency of bank visit

NTRS is nearness of digital payment systems to rural settlements. That is, nearness of cashless payment channels to rural areas.

UECP is access toe-payment channels. That is, the frequency of using cashless payment channels

DTOBA is the desire to own bank accounts

EDPC is excessive digital payment charges

EOCPC is efficiency of cashless payment channels

## VI. ECONOMETRIC RESULTS

### 1. Demographic Statistics

This section presents information on the demographic statistics of the respondent groups of the study. This entails the gender, educational qualifications and the occupation of the respondents in field work.

Figure 1: Gender Distribution

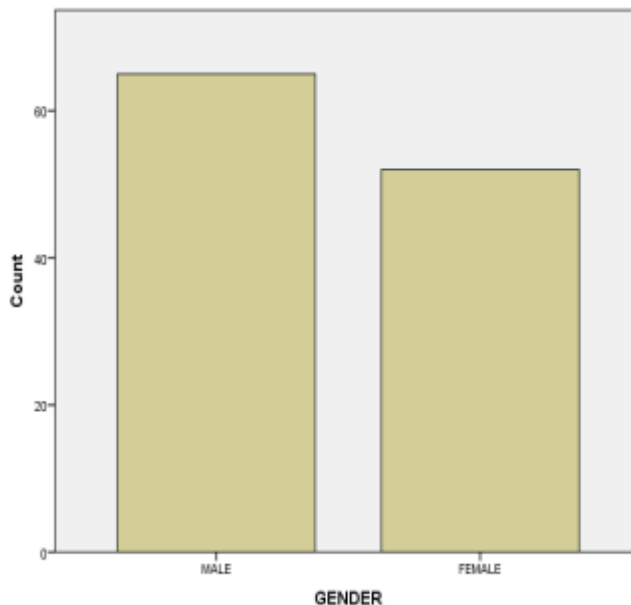


Figure 1 shows the distribution between the male and female respondents in the fieldwork. Specifically, the bar chart indicates that 55.5% of the 117 respondents were male while the remaining 44.4% were female.

Figure 2: Distribution of Occupation

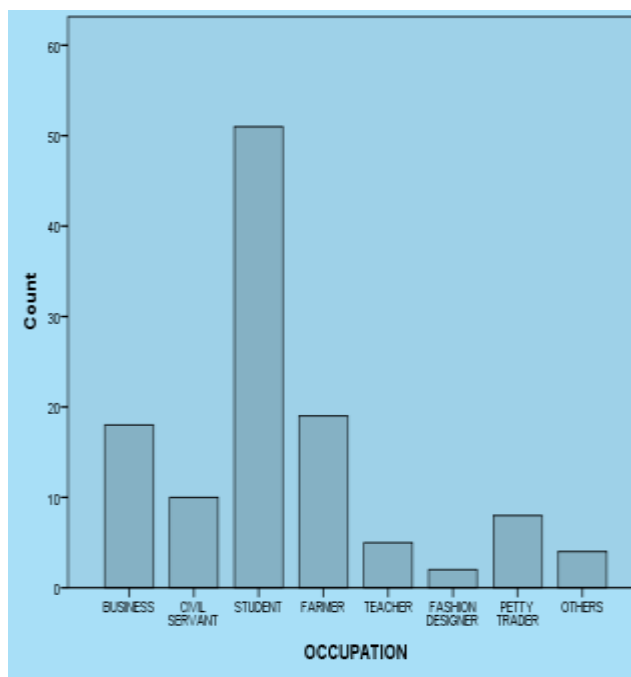


Figure 2 shows the occupation distribution of the respondents of the study. The bar chart indicates that the highest percentage of the respondents were students, then followed by farmers, business owners, civil servants, petty traders, teachers, others and fashion designers. Specifically, 43.3% students, 16.2% farmers, 15.4% business owners, 8.5% civil

servants, 6.8% petty traders, 4.3% teachers, 3.4% others and 1.7% fashion designers.

Figure 3: Distribution of Educational Qualifications

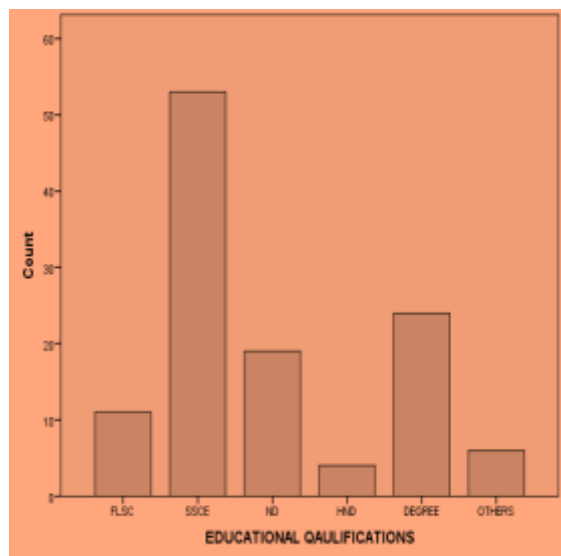


Figure 3 shows the educational qualification distribution of the respondents of the study. The bar chart indicates that the highest percentage of the respondents were SSCE holders, then followed by degree holders, ND, FLSC, others and HND holders respectively. Specifically 45.3% SSCE, 20.5% degree, 16.2% ND, 9.4% FSLC, 5.1% others and 3.4% HND respectively.

## 2. Estimates and Discussions of Results

The ordered probit regression results are reported in Table 1.

Table 1: Estimated Coefficients of the Ordered Probit Model

Dependent Variable: EAAU				
Regressor	Coefficient	Standard Error	Z-Ratio	Probability
<i>DTOBA</i>	0.09	0.13	0.68	0.50
<i>EDPC</i>	0.15	0.12	1.28	0.20
<i>EOPC</i>	-0.14	0.12	-1.10	0.27
<i>EOT</i>	0.37	0.15	2.41	0.02
<i>FOB</i>	0.30	0.16	1.92	0.05
<i>NTRS</i>	0.37	0.14	2.56	0.01
<i>UECP</i>	0.16	0.18	0.89	0.37
<i>Pseudo R-Squared = 0.12    LR Statistic = 31.87</i> <i>Prob.(LR statistic) = 0.00004</i>				

Source: Author’s computation

From the ordered probit regression results above, it was revealed that the pseudo R-squared value of 0.12 shows that there is 12% likelihood that the selected independent variables correctly predict equal access and use of financial services. This implies that the goodness of fit the probit model is not very impressive. The likelihood ratio (LR) statistic value of

31.87, with its associated p-value less than 1%, shows that the overall model is statistically significant at the 1 percent level.

As depicted in Table 1, the coefficients of desire to own bank account (*DTOBA*) and excessive digital payment charges (*EDPC*) were found to be positive but insignificant at even at the 10% level of significance. The findings revealed that the desire to own bank account and excessive digital payment charges do not significantly determine financial inclusion. This implies that charges on cashless payment channels has not limited or impaired the banking habit of the people. The results further aver that the desire to own bank account is not significantly stimulated by digital payment channels but rather the study argue that the stimulant of account ownership may be as a result of the per capita income of economic units. However, the study holds that account ownership in formal financial institutions is integral in the quest for banking the unbanked sections of rural settlements. This position was rightly upheld by the positive coefficient of the desire to own bank account.

The coefficient of efficiency of cashless payment channels (*EOPC*) is negative but insignificant even at the 10% level. This shows that efficiency of cashless payment channels does not significantly reduce financial inclusion. This implies that the use of financial products and services is not determined by the efficiency of the cashless payment channels available.

The coefficients of nearness of cashless payment channels to rural settlements (*NTRS*), ease of digital transactions (*EOT*), and frequency of bank visit (*FOB*) exerts a positive and statistically significant impact on financial inclusion in Nigeria. The implication is that ease of digital financial transactions; reduced visits to banking halls aided by cashless payment mediums; and nearness of financial service outlets to rural settlement are more likely to enhance financial inclusion in Nigeria. This is indicative of the penetration of banking financial products and services in rural settlements.

According to the technology acceptance theory of Fred Davis in 1985, the acceptance and utilization of a new technology is anchored on the perceived usefulness, perceived ease of use and finally user attitude towards usage. The positive affirmation of reduced frequency of visits to banking halls and the ease of using digital payments channels stand to validate the technology acceptance theory on two fronts, which perceived ease of use and usefulness.

However, the coefficient of use e-payment channel (*UECP*) was positive but insignificant even at the 10% level. This indicates that the use of e-payment channels does not significantly determine financial inclusion. It can be argued that access and use of cashless payment channels stimulate the speed of financial inclusion in positively.

## VII. SUMMARY AND CONCLUSION

The study examines the impact of cashless payment channels and financial inclusion in Nigeria. This was aimed at

ascertaining the level of financial inclusion caused by the cashless policy.

The study assumed that equal access and use of financial products and services is a function of ease of digital transactions, nearness of digital payments channels to rural settlements, access to e-payment channels, frequency of bank visits, desire to own bank accounts, excessive digital payment charges and efficiency of cashless payment channels. Thus, primary data was collated via structured questionnaires and analyzed using simple percentages and presented using graphs.

The data was estimated using the ordered probit regression technique. The results indicate that nearness of cashless payment channels to rural settlement, ease of digital transactions, and frequency of bank visit exerts a positive and statistically significant impact on financial inclusion in Nigeria. This implies that ease of digital financial transactions; reduced visits to banking halls aided by access to cashless payment mediums; and nearness of financial service outlets to rural settlement are more likely to enhance financial inclusion in Nigeria. It further emerged that efficiency of cashless payment channels is negative and an invalid determinant of financial inclusion in Nigeria. This means that efficiency of cashless payment channels does not significantly reduce the use of financial products and services, hence financial inclusion. Finally, the results indicate that the desire to own bank account and excessive digital payment charges has a positive but insignificant influence on financial inclusion in Nigeria.

The study concludes that cashless payment channels have enhanced equal access and use of financial products and services in Nigeria.

### VIII. RECOMMENDATIONS

The study recommend as follows:

1. That the adoption of advanced financial technology (Fintech) would further accelerate the penetration of bank financial products and services to rural settlements.
2. That there is the need to review cashless payment charges to encourage sustained use by rural settlements. This is owing to the fact that the per capita incomes of rural settlers are lower compared to other settlements and cash based transactions cost almost nothing.
3. That there is the need to consider the educational class of rural settlements in developing cashless payment technology to cater for all segments of the society. This will engender user friendliness to all members of the society

### IX. LIMITATION AND SUGGESTIONS FOR FURTHER STUDIES

Although the study was able to establish that cashless policy has stimulated financial inclusion in Nigeria, the generalization of this conclusion is limited due to the small sample size and respondents engaged in the fieldwork. In this regard, the study suggests that a robust sample size and respondents group be used to further interrogate the influence of cashless payment systems and inclusive finance in Nigeria.

Furthermore, the ordered probit regression results inferred the need to include more elements in examining the impact of cashless policy on financial inclusion in Nigeria. This study therefore suggests the inclusion of additional factors in future attempts at interrogating the impact of cashless payment channels on equal access and use of financial products and services in Nigeria.

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