**OPERATIONALIZATION OF THE CASHLESS ECONOMY SYSTEM IN NIGERIA**

**Abstract**

This study was carried out on Operationalization of the Cashless economy system in Nigeria. Financial sector reform is an essential ingredient in the economic growth and development process. This is clearly underscored in the literatures linking financial sector growth with economic growth. In recognition of this fact, managers of the Nigerian economy have targeted the banking sector as a channel for implementing economic policy reforms and policy shift. The recent of such economic reforms in the financial sector is the formal introduction of cash-less financial policy in January, 2012. The Central Bank of Nigeria in order to level up to the global standards began practising cashless policy in the Nigerian economy. What are the benefits and challenges of this policy vis-à-vis the cash based policy? Specifically, will other Point of Sales card acceptance services stakeholders attract a significant part of banks’ income in cash-less economy? This is the central thrust of this paper. To address this, secondary data were collected and content analysis applied in data analysis. After factoring in other POS stakeholders share of income, the study found banks’ income higher in cash-less setting than in cash based arrangement. Thus, the cash-less policy offers immense benefits to the banking sector. It is recommended that appropriate infrastructures and legal support be provided to facilitate the religious implementation of the policy.

**TABLE OF CONTENTS**

Abstract

CHAPTER ONE: INTRODUCTION

1.1 Background to the study

1.2 Statement of the research problem

1.3 Objectives of the study

1.4 Research question

1.5 Scope of the study

1.6 Significance of the study

1.7 Limitations of the study

1.8 Organization of the study

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 CONCEPTUAL REVIEW

2.2 Theoretical Framework

2.3 Empirical Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research design

3.2 Sources of study

3.3 Method of data analysis

3.4 Model

CHAPTER FOUR: PRESENTATION AND DISCUSSION OF RESULTS

4.1. Descriptive Analysis

4.2 Empirical Analysis and Interpretation

4.3 Unit Root Test

4.4 Ordinary Least Squares

CHAPTER FIVE: FINDINGS, RECOMMENDATION, AND CONCLUSION.

5.1 Theoretical Findings

5.2 Empirical Findings

5.3 Recommendations

5.4 Conclusions

References

**CHAPTER ONE**

**INTRODUCTION**

**1.1 Background to the study**

The world is evolving every day. Gone are the days when communication was limited to face to face, signals or by postage. Today communication can take place between two or more people from any distance in the world through telecommunication or internet or other technological means. But the technological world is not stopping at that rather, new innovations are coming out, making life easier and of course more and more sophisticated.

These innovations as they come makes serious impacts on the way things are being done all over the world and whatever is dictated as the new trend by the technological power house becomes the target of every nation. Thus, the trend of e-payment that began in the United States of America decades ago has become the next big thing for developing countries. For many years, developed country like Canada, United Kingdom, Sweden, France among others, have run their economy trough electronic payment without hitches. Interestingly, a lot of other African countries have keyed into this system, embracing electronic system of payment while dealing with less of cash. Countries like Kenya, Tanzania, South Africa, and Ghana among others have become reference point in the continent in terms of electronic payment system. Kenya for instance had introduced the M-PESA, a small value electronic payment and store of value system that is accessible from ordinary mobile phones. It has been exceptional growth since its introduction by mobile phone operator Safaricom in Kenya in March 2007 and has already been adopted by 9 million customers which is about 40 percent of Kenya’s adult population. Again several electronic payment system has been introduced in Ghana in recent times with the most significant being e-zwich smart card payment system, a national domestic smart card payment system meant to reduce the large amount of cash held out side the banking system. Already it is showing the signs of reversing the trend of majority un-banked population in the country as more people embrace it.

In this regard, it is not surprising that Nigeria having successfully transverse the world of Global System for Mobile Communication (GSM) is now set to test the waters of a cashless economy. A key factors in the adoption of this new system, according to the Central Bank of Nigeria (CBN) is the fact that Nigeria economy is too heavily cash-oriented in transaction of goods and services, a development which is seen as a negation to global trend considering Nigeria’s ambition to be amongst the top 20 economies of the world by the year 2020. Besides, it is also targeted at reducing the huge volume of cash transactions which imposes tremendous cost to the banking sector and, consequently the customer, in terms of cash management, frequent printing of currency notes, currency sorting and cash movements. A cashless economy or an e-payment system is a situation where there is little or very low cash flow in a given society, thus every other purchases and transaction will be made by electronic channels, examples of which are direct debit electronic fund transfer, while payments, multi-functional ATMs, internet banking and a significant increase in point of sales (POS) penetration and usage. In other word, it simply refers to the widespread application of computer technology in the financial system. Payments under this new system will range from a list of options such as cheques, wine transfer. Debit and credit cards, online transactions and mobile banking (Central Bank of Nigeria, transition to a cashless economy in Nigeria. May, 2011).

As a result of this new technological change in the banking system world over and Nigeria’s consideration to be amongst the top 20 economies of the world by the year 2020, the this new system Central Bank of Nigeria(CBN), lead by its Governor Sanusi Lamido Sanusi, has put forward a policy requiring that all cash withdrawals and deposits be set at a daily limit of a maximum of N150,000 while pegging that of corporate entities at N1,000,000 with penalty fees of N100 per extra, N1,200 per extra, N1,000 imposed on individuals and corporate defaulters respectively (Central Bank of Nigeria, Transition to a cashless economy in Nigeria, May 10, 2011).

In this study, the preferred channels of operation of the Central Bank of Nigeria (CBN) cashless policy will be analyzed.

**1.2 Statement of the research problem**

Indeed the effort towards a better baking as regards to settling utility bills, payment for goods and services and money transfer can only yield the desired result if there are reliable and efficient payment system in place and this is the trust of the cashless economy system as initiated by the Central Bank of Nigeria (CBN). Despite that fact that the Central Bank of Nigeria and other indigenous banks are spearheading financial system reforms, we are yet to make a significant breakthrough in the acceptability, efficiency and reliability on non-cash payment system in Nigeria because, cash still remains the most popular transaction payment instrument, even cashless system is being contemplated.

**1.3 Objectives of the study**

This study attempts to tackle issues on the operationalization of the cashless system through the various e-payments schemes available, its acceptability, contribution to the reduction of physical cash payment system and the possible challenges of its hitch free operation. The following objectives are outlined.

1. To find out the channels of operation
2. To find out the most preferred channels of operation
3. To find out its procedures of operation.
4. To find out challenges/problems of operation.

**1.4 Research question**

The e-payment system even though has been in use in other advanced countries in the world and most recently in some African countries, it is a relatively new in the Nigerian financial system. Therefore, this e-payment system and it various channels of operation needs to be clearly explained to all stakeholders/users for there to be a clear understanding of how this system works and the enormous economic benefits to be gained if the system actually works as described by the Central Bank of Nigeria (CBN).

For this study, the following are the research questions:

1. What are the channels through which the cashless system can be operated?
2. What are the most preferred channels of the system’s operation?
3. What are the procedures of the system’s operation?
4. What are the challenges/problems of the operation of the system?

**1.5 Scope of the study**

This study aims at analyzing the cashless system, its preferred channels of operation, the procedures and some potential challenges that many stand as an impediment against the smooth running or operation of the cashless system in Nigeria. Also, references will be made with other channels of operation in other countries of the world. The list of the available channels through which the system can be operated world over is in exhaustive. Some selected channels of means through which is system can be operationalized. Another important issue that this study will be also focus is the Nigeria perception about this relatively new trend (cashless system) in the financial system by the apex bank.

**1.6 Significance of the study**

The primary informal nature of Nigeria’s economy, however, requires a heavy reliance on cash transaction in both the retail and commercial sectors. The enormous negative effect of a high usage of physical cash includes: cash related crimes and robberies, increasingly high cost of cash exchanging hands and enabling corruption, high cost of maintenance and money laundering just to mention a few. All these has a considerable effect on the Nigeria financial system. Thus the cashless policy through effective and efficient channels of operation will reduce these problems to the barest minimum.

This study is designed to examine the operationalization of the cashless system in Nigeria through its preferred channels, thereby creating more awareness about the system and the various available channels of operation to the general public. Thus this study including its conclusion and recommendations of the research findings will be very useful to all stakeholders (including customers, corporations and government) bringing to their knowledge, have full understanding of the cashless system, its benefits and the role of these stakeholders to ensure the effectiveness of this system.

**1.7 Limitations of the study**

One of the major limitations of this study is relatively small sample size and this is as a result of cost and timeliness. Another limitation encountered in the course of this research is the fact that some respondent were unwilling to fill the questionnaire administered, reason being either they were too busy and or uninterested.

**1.8 Organization of the study**

The study is divided into five chapters. Chapter one deals with the study’s introduction and gives a background to the study. Chapter two reviews related and relevant literature. The chapter three gives the research methodology while the chapter four gives the study’s analysis and interpretation of data. The study concludes with chapter five which deals on the summary, conclusion and recommendation.

**CHAPTER TWO**

**REVIEW OF RELATED LITERATURE**

One of the prerequisites for the development of national economy according to Ajayi and Ojo (2006) is to encourage a payment system that is secure, convenient and affordable. In this regard , developed countries of the world, to a large extent are moving away from the payment instruments toward electronic ones, especially payment cards( Humphrey, 2004). In recent times, the mobile phones is increasingly used to purchase digital contents (ringtones, music or games, tickets, parking fees and transport fees etc) just by subscription on mobile phones or using Point of Sales. In Nigeria, as it is in many developing countries, cash is the main mode of payment and a large percentage of the population is unbanked (Ajayi and Ojo, 2006) which makes the economy to be heavily cash-based . However, the cost of cash to the Nigerian financial system is high and increasing; the cost was very close to fifty million naira in 2008 (CBN,2012).Cashless economy does not mean a total elimination of cash as money will continue to be a means of exchange for goods and services in the foreseeable future. It is a financial environment that minimizes the use of physical cash by providing alternative channels for making payments. The cashless policy of the Central Bank of Nigeria is designed to provide mobile payment services, breakdown the traditional barriers hindering financial inclusion of millions of Nigerians and bring low cost, secure convenient financial services to urban, semi-urban and rural services across the country.

**2.1 CONCEPTUAL REVIEW**

# 2.1.1 CASHLESS POLICY IN NIGERIA

Money is often described as having three functions: (i) a unit of account function, (ii) a medium-of-exchange function, and (iii) a store-of-value function. In a cashless economy, the third is not operative and, probably, neither is the second. Cashless economy is a global issue apart from the fact that Nigeria just launched itself into the system. Cashless economy does not refer to an outright absence of cash transactions in the economic setting but one in which the amount of cash-based transactions are kept to the barest minimum (Yaqub, Bello, Adenuga and Ogundeji, 2013). According Adewale (2013) a cashless society rightly illustrates a gradual movement of the entire payment system of an economy from the use of physical cash for all levels of personal, corporate, governmental including local and international commercial settlement activities to a systemic adoption of other nonphysical cash mode payment in settlements of all types of transaction both in the public and private sectors of an economy. It is an economic system in which transactions are not done predominantly in exchange for actual cash [7].

However, as much as there is the need to change into a society where cash will no longer be dominant in the payment system, proponents of cash money have on the other hand claim that in the developing and the underdeveloped nations physical cash money is still the most convenient means of settlement of transactions as a result of illiteracy, and Nigeria is very guilty in this regard. In a Nation with over 150 Million inhabitants, the proponents of a cashless society in "Nigeria argued that it will aid in the drastic reduction in money laundering, terrorist financing and other economic and financial crimes (Soyemi, Soyemi and Hammed, 2015)[8]. Others believe that a cashless society will encourage financial inclusion for most Nigerians since less than 30 per cent of bankable Nigerian adults own bank accounts. A larger percentage of the population rather keeps their money under their mattresses, in their pockets and probably in old cooking pots. Scholars also opined that a cashless Nigeria will promote and implement realistic monetary and fiscal policies that will reduce inflation and encourage investments.

A cashless society possesses the following characteristics; all the money used is issued by private financial institutions (banks, and possibly other firms). It is conceivable that the central bank continues to operate like other banks, issuing its own deposits that could be used as money in the same way as other bank deposits are. However, in that case the central bank has no monopoly in the issue of Money [13]. In a cashless society the unit of account (e.g. Dollar, euro) remains a national affair and is provided by the state. The followings among others enhance the functioning of cashless economy; e-finance, e-banking, e-money, ebrokering, e-exchanges etc.

In a modern economy, the use of noncash payment methods such as cards (credit and debit) dominates the use of cash in payments. The card based payment system has several players. On the one hand, are the providers of the card based payment system- first of which is the card companies like MasterCard and Visa who provide their payment network for the system to function. The second sets of providers are the banks that act as acquirers for merchants and issuers for cardholders and reach the card payment services to the ultimate users. On the other side of the system are the users- both merchants and cardholders. The benefits these two players derive from the system are manifold- the convenience of electronic transactions, the ease of credit availability, increased sales, increased purchasing power, to list a few. Since they are the end users of the convenience the card payment system generates, they are the ones who bear the cost of the system. Apart from these four players there is the regulator of the payment system, usually the central bank of the country. The card based payment system cannot function in absence of any of its players. The global volume of non-cash transactions totaled 260 billion in 2009 [14]. citing World Payments Report, 2011), after sustained average annual gains of 6.8% since 2001. The outright volume of these payments only remains heavily concentrated in developed markets. Developing countries are just improving their payments infrastructures, enabling wider adoption and greater usage of non-cash means and channels.

Ejoh *et al.,* (2014) noted that in the new cash policy, the Central Bank of Nigeria (CBN) recently pegged daily cash withdrawals and lodgments by individual to NGN 150,000.00 and corporate bodies NGN 1m respectively with effect from the 1st of June 2012. Other key reasons for introducing the cash policy include, driving development and modernization of our payment system in line with Nigeria's vision 2020 goal of being amongst the top 20 economies by the year 2020. An efficient and modern payment system is positively correlated with economic development, and is a key enabler for economic growth. Also to reduce the cost of banking services (including cost of credit) drive financial inclusion by providing more efficient transaction options and greater reach. Moreover, it arms at improving the effectiveness of monetary policy in managing inflation and driving economic growth.

# 2.1.1.1 BENEFITS OF CASHLESS POLICY

1. Faster transactions- through reduction in queue at the banking halls. It has been proven from time to time that queue at point of sale terminals has been reduced which leaves much time for employees to enjoy their break, there has been an improvement in the speed of rendering banking services
2. Improving Hygiene: it has eliminated bacterial spread through handling of notes and coins from one individual to another.
3. Increased Sales: it has been demonstrated that with the introduction of a cashless policy, there has been increase in sales by 20%. Vending and catering purchases are often dictated by the amount of loose balance we have in pockets. With the introduction of cashless policy, this is never a problem; the value on the card is available 24hours and 7days a week
4. Cash collection made simple: time spent on collecting, counting and sorting cash is eliminated. The cashless system offers a choice of top-up options including payroll reduction, credit and debit cards. Removing all the cash from your site removes the security issues relating to cash handling significantly and reduces the risk of vandalism and theft from your vending and catering points of sale. A payroll loader, where money is transferred from your salary to your smart card, or a credit card, where money can be loaded from Access, Visa or Master card directly to your smartcard offers you and your customers a truly cashless system.

5.Managing staff entitlements: free vends, corporate cash, royalty and hospitality are all entitlements which can be programmed in to the card, this can be refreshed daily, weekly or monthly while the card can be configured so that any unused allowance is accumulated depending on the client’s request. In some instances, it may be necessary to charge different tariffs for visitors and staff.

6. Reduction in cash circulation: a cashless system prevents too much of cash in circulation thereby curbing armed robbery and cash related crime.

# 2.1.1.2 POSITIVE EFFECTS OF CASHLESS POLICY

i. Prompt settlement of transactions: E- banking speeds up settlement of transactions both locally and internationally, where the bank stands as paying bank to the customers for settlement of transaction or as collecting bank for collection of payment on transactions; ii. Reduction in the frequency of visits to banks: unlike before customers can now transact their banking businesses in branches nearer to them and they can also withdraw money from any ATM including the ones located outside the bank where they have account. They can also transact banking business at home with the aid of telephone iii. Stimulation of cashless policy: e- banking paves way for cashless society as the introduction of electronic machine has reduced the use of raw cash thereby transiting the country into a cashless society .

1. Reduction of theft: since robbers are attracted by volume of cash movement through bullion vans, the use of alternative electronic payment system will no doubt reduce incidence of robbery in the society, this is one of the reasons why CBN continues to emphasize that people should buy into the policy as soon as possible.
2. Clearance of goods: payment system in the custom services help in ensuring easy facilitation of clearance of goods by importer, this is apart from the fact that money due to government would be paid electronically to the right account, thereby reducing the incidence of fraudulent practices of diverting government funds to individual pockets.
3. With cashless policy , CBN will reduce cash management costs by as much as N192 billion annually. CBN is of the opinion that the cash handling accounts for at least one third of infrastructural and labour costs in the sector, hence cashless policy will impact negatively on employment of those handling cash in the bank. The policy will also reduce cash related vices like robbery, cost of processing cash, revenue leakages from cash handling and inefficient treasury management through cash processing.

# 2.1.1.3 NEGATIVE EFFECTS OF CASHLESS POLICY

The following are the constraints that affect effectiveness of e- banking in Nigeria presently:

1. Erratic power supply and communication link: power failure negatively affects e- banking infrastructures like ATM, network failure of communication link due to much congestion, change in weather also affect the policy
2. Non- existence of computer back-up: there is bound to be total loss of data on customers’ accounts if there is no back up and the entire file is damaged. This may lead to misappropriation of customers’ account, hence bank should maintain back up of all its information outside the bank’s premises. iii. Inadequacy of fund to invest in information technology: most banks find it difficult to fund procurement of modern equipments needed for e-banking. Nevertheless, there has been tremendous improvement in automation of bank operation in the country in the last 5years but there are still rooms for further expansion so as to catch up with hi-tech , which is in vogue in developed countries; iv. Replacement of workforce by machine: electronic banking has now somehow reduced the number of employees needed to handle most transactions in the bank as most work done by workers are now being handled by machines thereby translating to increase in the rate of unemployment in the country;

v. High bank charges for the use of e- banking machines : commission charged by bank on ATM transactions, as an example , is too high , thereby discouraging customer from using it;Central Bank of Nigeria is working out a modality to stop forthwith charges for usage of ATM. This will be a sort of relief and stimulates the effectiveness of the policy in Nigeria, if fully implemented. vi. Low acceptance by the public: many people have burnt their fingers as a result of fraudulent withdrawals from their accounts through the use of ATM by unscrupulous individuals who believe in using master cards to withdraw money from unsuspecting individuals. Not to mention situations whereby customers are debited by the ATM with withdrawals not supported by cash that fail to drop down from the machine as expected. Customers are discouraged to use the machine as it takes longer time before the wrong debit is reversed if it does not end up unsolved.

vii. Inadequate securities around the ATM location: most ATM locations are not secured thereby making it easier for fraudulent persons to carry out their fraudulent activities without any arrest. Computer hackers also use the porous security system to steal data by breaking the codes or passwords. viii. Encouragement of excessive withdrawals: customers can use their cards to effect withdrawals as many times as possible, even on weekend and during public holidays. They can even make impulse withdrawals while attending a ceremony with the use of their credit cards.

# 2.1.1.4 BENEFITS TO THE STAKEHOLDERS

Having considered the benefits of the cashless policy generally, the advantages of the policy to stakeholders cannot be overemphasized. A variety of benefits are expected to be derived by various stakeholders from an increased utilization of e-payment which includes:

1. For consumers; increased convenience, more service options, reduced risk of cash- related crimes, cheaper access to (out of branch) banking services and access to credit
2. For Corporations; faster access to capital, reduced revenue leakage, and reduced cash handling costs
3. For Banks; efficiency through electric payment processing, reduced cost of operations and increased banking penetration (Oyetade and Ofoelue, 2012)
4. Benefits to the economy; through the system, users can also pay utility bills, school fees, hotel booking, house rents, among other transactions, using a mobile phone device
5. For Government; increased tax collection, greater financial inclusion, increased economic development. The government will also benefit from the cashless policy in the area of adequate budgeting and taxation, improved regulatory services, improved administrative processes (automation), and reduced cost of currency administration and management (Ashike,2011).

The cashless system which is cultured to the use of e-payment increases profitability through the following ways:

i. Convenience - removing administrative resources required by invoices, cheque and cash

ii. Immediacy - credit cards enable instant purchases without delay

1. Improved cash flow - payment at the time of purchase reduces the pressure caused by 30days invoicing
2. Growth – opens additional payment channels via the phone, mail order, internet and increases customers’ base. More customers means more revenue
3. Competitive advantages –match and beat the services of competitors and gain the edge

**2.1.1.5 CASHLESS BANKING CHANNELS**

Some outstanding cashless banking channels known all over the world are mobile banking, internet banking, and telephone banking. They are explained below.

**Mobile Banking**

Mobile banking refers to the provision of banking and financial services with the help of mobile telecommunication devices. It is a system that allows customers of a financial institution to conduct a number of financial transactions through a mobile device such a mobile phone. It involves the use of mobile phone for settlement of financial transactions. Mobile banking is popular and exciting to the customers given the low infrastructure requirements and a rapidly increasing mobile phone penetration in Nigeria. Services covered by this product include account enquiry, funds transfer, phone vending, changing password, and bill payments (Siyanbola, 2013). Banks like First Bank, Ecobank, Guarantee Trust Bank, United Bank for Africa and others have begun using mobile banking to serve their customers. First Bank brand for mobile banking is Firstmonies. Some of the features of mobile banking are: the GSM phone number serves as the account number which is linked to the customer’s account; it has a wallet which can be loaded just by moving cash from bank account.

**Internet Banking**

Internet banking is also referred to as online banking. It involves conducting banking transaction on the internet (www) using electronic tools such as the computer without visiting the banking hall. Internet banking, like mobile banking, uses the electronic card infrastructure for executing payment instructions and final settlement of goods and services over the internet between the merchant and the customers (Siyanbola, 2013).

**Telephone Banking**

This 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 inter-branch money transfer, transaction alert (withdrawal or deposit) and enquiry (Adewuyi, 2011)

Electronic banking is a compound word that comprises two words "electronic" and "banking" were electronic is defined according to the Oxford university press dictionary as anything carried out through a computer especially over a network and banking is defined as a financial institution saddled with the responsibility of carrying out banking operations, and channeling of funds from surplus spending unit to the deficit spending units of an economy. Electronic banking (e-Banking) involves the use of the internet to perform various banking transactions. E-Banking is also referred to as Electronic fund transfer and it is a process whereby information and other banking services can be carried out by a customer through the internet (Ojeka and Ikpefan, 2011). According to Abaenewe, Ogbulu, and Ndugbu (2013), electronic banking involves driving the banks immediate and future goals through the use of information technology. It involves carrying out banking business electronically. E-Banking involves delivering banks new and traditional products or services to bank customers automatically. It is a system which allows individuals, businesses and even financial institutions transact business or obtain information on products or services through the internet (Rifat, 2013).

Shehu, Aliyu, and Musa (2013) posited that e-Banking involves providing retail or small value products and also large or wholesale banking products electronically. This definition is in tandem with the types of services banks offer their customers. According to Adewolo (2015), E-Banking involves creating opportunities through the infrastructure in the digital age. Electronic Banking is a technological upgrade that encourages the movement of less cash in the economy, in other words, a cashless economy. As stated above, E-Banking involves providing services and information for customers electronically. Some of the services which are offered through E-Banking includes; balance inquiry, payment of bills, transfer of funds etc. these are the basic services that are offered by banks. It should be noted that banks have also expanded their E-Banking services by including brokerage services, loan and credit services, and many others. Each bank has its own peculiar product it offers to its customers.

**2.1.2 ELECTRONIC PAYMENT MEANS IN NIGERIA**

There are up to seven different electronic payment channels in Nigeria: Automated Teller Machine (ATM), Point of Sales terminals, mobile voice, web, inter-bank, intra –bank and kiosks. E-payment initiatives in Nigeria have been undertaken by indigenous firms and have been stimulated by improvement in technology and infrastructure (Babalola,2008). Other alternative means of payments include the following:

1. CHEQUES: there is an expected surge in the use of cheque. However, encashment of third party cheque across the counter is prohibited and all cheque drawn in favour of any beneficiary other than the account owner be presented through CBN clearing house. The value on cheque must not exceed N10million.
2. Bank Drafts and Other Bank Instruments: bank drafts will become the toast of many merchants for big transactions not more than N10million. This is because bank draft unlike personal cheque cannot be paid across the counter and will still be subject to three days clearing rule of CBN for cheque.
3. ATM: Automated Teller Machines will be used much frequently for making variety of online payments such as utility bills, T.V subscriptions, GSM recharges etc. Customers are advised to keep their ATM cards (Debit and Credit) safe and never to divulge their PINs.
4. NIBSS Fund Transfers: The Nigerian Interbank Settlement Scheme is an online platform where banks exchange value thereby enabling the performance of interbank transfer such as NEFT and NIBSS instant transferring funds between banks for single or multiple beneficiaries for individual amounts not exceeding N10million. NEFT transfers ( National Electronic Funds Transfer), once affected works with the next available clearing session of CBN and is received in the beneficiary’s account the same day or next working day, but NIBSS instant payments are immediate.
5. RTGS: Real Time Gross Settlements is used to transfer sums above N10million in favour of a single beneficiary. It is used for big ticket transactions which must have been effected before noon for most banks if the funds are to reach the recipient bank the same day.
6. Mobile Money: This is a product that enables users to conduct fund transfer, make payment or receive balance enquiries on their mobile phones.

7. E- transfers: It refers to electronic transfers which can be affected via the internet on (Personal Computers) PCs, laptops and other devices. Bank customers who have subscribed to internet banking can do basic banking transactions via the web.

8. POS Terminal : Point of Sale terminals are deployed to merchant locations where users slot their electronic cards through POS in order to make payments for purchases or services instead of using raw cash. As the POS terminals are online real-time, the customer’s bank account is debited immediately for value of purchases made or services enjoyed. There are indeed alternatives to handling or transacting cash for transfers and for payments of goods and services purchased. These include: ATMs, mobile banking/ payments which can be done through the use of mobile phones for balance enquiry, fund transfer, bills payment, internet banking which can be used for instant balance enquiries, fund transfer, bills payment and other transactions. Most banks require you to have a token device for internet banking services in order to give some security for customers banking application. Yet, other alternative includes Point of Sale(POS) terminals which allow merchants access to card payments for sale of products and services e.g recharge cards, bill payments, lottery tickets etc and finally there is electronic fund transfer through which one can transfer money electronically from his account to other account. Some banks also offer an instant electronic fund transfer service. However, most of these e-payment channels require you to have an ATM/ Debit card (Oyetade and Ofoelue,2012).

**2.2 Theoretical Framework**

***Technological Acceptance Model***

This study is anchored on the technological acceptance model which was propounded by Fred Davis in 1993. The theory of technological acceptance explains how individuals accept new technology and it leads to growth in an economy. In essence, it shows how a user of a proposed technology welcomes and adapts to a new technology. He stated that two beliefs determine the complete acceptance of a technology. These beliefs are perceived usefulness and perceived ease of use. Perceived Usefulness is a factor that affects user’s acceptance because it is based on how capable the new technology will help improve job performance. The technology must be capable of producing an advantageous result and must also be able to generate a positive performance. As for perceived Ease of Use, Fred Davis defined it as how easy it is for users to make use of new technology. It means that the ability to employ the new technology should be effortless. Prior to the implementation of the cashless policy, Nigeria was a huge cash-based economy. In order to increase the effect of the policy on citizens, the people have to believe that the policy will be easy to use and also result in positive performance thereby, leading to economic growth. E-Banking products must also be reengineered to make electronic payment effortless which will stir the country toward a cashless economy (Nwankwo and Eze, 2013).

## 2.3 Empirical Framework

Electronic banking, as well as cashless policy, has been covered by several authors. In electronic banking, key issues such as their benefits and challenges, strengths and weaknesses barriers of e-banking, forms of e-banking and many other issues have been discussed by various researchers. (Alireza, 2011; Rifat, 2013). Ikpefan and Ehimare (2012) addressed cash management by the central bank of Nigeria and stated the benefits and challenges of a cashless economy in Nigeria. They concluded that the triumph of the new cash policy hinges on a strong legal framework, state of infrastructure, availability of real data, technological investments, adequate security, and an effective and efficient judiciary process would ensure the success of the new cash policy. Nwankwo and Eze (2013), carried out a study to ascertain the extent to which electronic payment affect the cashless economy in Nigeria. The results showed that the electronic payment has a great implication in cashless economy of Nigeria but it will lead to a significant decrease in deposit mobilization and credit extension by Nigerian Deposit Money Banks. The authors finalized their results by saying there should be an improvement in infrastructural development so as to enhance the e-payment system.

Okafor, Imhonopi and Urim (2011) carried out a study on internet service utilization and the impact on research outputs and teaching. Where they carried out a survey and the result of the survey indicated that majority of their respondents were computer compliant/literate (94.4%), while the remaining (5.6%) were not computer literates. However it was based on self-assessment. If 94.4% of their study population are highly information and communication technology (ICT) compliant, it can therefore be inferred that the awareness of cashless policy, cyber security, interswitch problems and other related e-payment issues needs to be checked and resolved in other to strengthen the confidence of the public to patronize modern e- payment platforms.

Ejoh and Okpa (2014) examined the cashless economic system so as to assess its feasibility and practicability in the Nigeria context Vis-à-Vis; timeless preparedness and adequacy against the backdrop of our level of development both technologically and educationally. The study used a sample size of 120 respondents. Results showed that majority of Nigerians are already aware of the policy and adequate payment facilities in the banking sector have been developed to enhance the policy in the economy. Moreover, Ejoh, Adebisi, and Okpa (2014) carried out a study that examined the cashless economy in other to evaluate the relationship between ICT and implementation of cashless policy. They administered 120 questionnaires and tested the data using chi-square. The results showed that there exists a significant level of relationship between ICT and cashless policy implementation in the Nigerian financial environment. Moreover, public awareness should be done to encourage cashless economy in Nigeria.

Latifat and Alhassan (2015) embarked on a research to examine the pre-and postimplementation period of cashless policy tools in Nigeria. They focused the relationships between the cashless policy tools and currency outside deposit money banks (DMBs) in the Nigerian economy it was between 2009-2012. The data was regressed upon using the ordinary least square method to test the effects of this tool on the level of currency in circulation. Their findings show that not a single cashless policy tool has a significant relationship with currency in circulation outside banks mainly due to high collinearity between the tools of cashless policy.

Kehinde and Adelowo (2016) carried out a study to assess the level of Nigerians preparedness for e-commerce and cashless policy using the level of Information Communication Technology (ICT) adoption, usage and infrastructure available covering a space of 13 years. The paper concluded that ICT policy needs to be fully implemented and private and public sectors collaborations or partnership should be supported to facilitate the ecommerce and cashless policy. Taiwo, Kehinde, Afieroho and Agwu, (2016) carried out a study to appraise the implementation of the cashless policy since its introduction into the Nigerian Financial system in 2012. Another objective of the study was also to access the persistent challenges facing its implementation. They issued 120 questionnaires to respondents in Zenith Bank, First Bank, and United Bank of Africa. The results were analyzed using the Statistical Package for Social Sciences (SPSS) and one sample t-test. The results showed that the cashless policy will have the desired impact if a lot is done to ensure the implementation of an effective cashless policy system.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 Research design**

This study employed correlational study design to carry out the study.

**3.2 Sources of study**

The study embarked on secondary sources of data. The secondary sources include journals, bulletins, textbooks and the internet. This study collected data from Apex bank.

**3.3 Method of data analysis**

Data was presented in tables. Data was collected and interpreted using E-Views 9 software.

**3.4 Model**

This study is anchored on the technological acceptance model which states how end users come to accept and use a new technology. In this study, the main aim is to determine Operationalization of the Cashless economy system in Nigeria.

The model will try to capture the variables that give an indication of the impact of electronic banking on cashless policy.

MODEL 1

CIC= *f (ATM, POS, MB, WEB)*

CIC= ∑ *β0 + β1 ATM + β2POS + β3MB +β4 WEB + μ*

MODEL 2

GDP= *f (ATM, POS, MB, WEB)*

GDP= ∑*β0 + β1ATM + β2POS + β3MB +β4 WEB + μ*

Where,

*GDP*: Gross Domestic Product

*CIC*: Currency in Circulation,

*ATM*: Automated Teller Machine *POS*: Point of Sale Machine *MB*: Mobile Banking. *WEB*: Web/Online Banking *μ*: Error term

**CHAPTER FOUR**

# PRESENTATION AND DISCUSSION OF RESULTS

## 4.1. Descriptive Analysis

The table 4.2.1 below displays the descriptive statistical analysis of the variables; currency in circulation (LCIC), automated teller machines (LATM), point of sale (LPOS), mobile (LMOBILE) and web (LWEB) also table 4.2.2 shows the descriptive statistics of gross domestic product(LGDP), automated teller machines (LATM), point of sale (LPOS), mobile (LMOBILE) and web (LWEB) showing the mean, median, maximum, minimum, standard deviation and so on.

**Table 4.2.1** Descriptive statistics of Variables for model 1 LCIC

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **LCIC** | **LATM** | **LPOS** | **LWEB** | **LMOBILE** |
| Mean | 14.12176 | 4.850671 | 0.952345 | 0.870330 | 0.926838 |
| Median | 14.19994 | 5.457407 | 0.462129 | 1.028981 | 0.614820 |
| Maximum | 14.43498 | 6.072122 | 3.517498 | 2.079442 | 3.781914 |
| Minimum | 13.56609 | 2.493205 | -0.916291 | -1.609438 | -3.218876 |
| Std. Dev. | 0.293857 | 1.323919 | 1.488519 | 1.100062 | 2.031927 |
| Skewness | -0.641743 | -0.879206 | 0.625799 | -1.093731 | -0.430074 |
| Kurtosis | 2.209316 | 2.257178 | 2.039731 | 3.618708 | 2.963068 |
| Jarque-Bera | 0.946883 | 1.518248 | 1.036921 | 2.153244 | 0.308841 |
| Probability | 0.622855 | 0.468076 | 0.595436 | 0.340745 | 0.856911 |
| Sum | 141.2176 | 48.50671 | 9.523446 | 8.703300 | 9.268384 |
| Sum Sq. Dev. | 0.777169 | 15.77485 | 19.94119 | 10.89124 | 37.15856 |
| Observations | 10 | 10 | 10 | 10 | 10 |

Source: computed by researchers using E-Views 9

**Table 4.2.2** Descriptive statistics of Variables for model 2 LGDP

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **LGDP** | **LATM** | **LMOBILE** | **LPOS** | **LWEB** |
| Mean | 10.89972 | 4.850671 | 0.926838 | 0.952345 | 0.870330 |
| Median | 10.93387 | 5.457407 | 0.614820 | 0.462129 | 1.028981 |
| Maximum | 11.14221 | 6.072122 | 3.781914 | 3.517498 | 2.079442 |
| Minimum | 10.59652 | 2.493205 | -3.218876 | -0.916291 | -1.609438 |
| Std. Dev. | 0.189243 | 1.323919 | 2.031927 | 1.488519 | 1.100062 |
| Skewness | -0.28007 | -0.879206 | -0.430074 | 0.625799 | -1.093731 |
| Kurtosis | 1.772534 | 2.257178 | 2.963068 | 2.039731 | 3.618708 |
| Jarque-Bera | 0.758513 | 1.518248 | 0.308841 | 1.036921 | 2.153244 |
| Probability | 0.684370 | 0.468076 | 0.856911 | 0.595436 | 0.340745 |
| Sum | 108.9972 | 48.50671 | 9.268384 | 9.523446 | 8.703300 |
| Sum Sq. Dev. | 0.322318 | 15.77485 | 37.15856 | 19.94119 | 10.89124 |
| Observations | 10 | 10 | 10 | 10 | 10 |

Source: computed by researchers using E-Views 9

The mean and median are measures of central tendency while the standard deviation is the sum of squared deviations from the mean. The mean is the arithmetic average of values after summing up all figures for each variables of the years (2006-2015) and dividing by the number of years (10). From table 4.2.1 above it is seen that LWEB has the lowest mean value while LCIC has the highest mean value. LCIC also has the lowest standard deviation and LMOBILE has the highest standard deviation. From table 4.2.2, the lowest mean value is LMOBILE, LGDP has both the highest mean value and lowest standard deviation while LWEB has the highest standard deviation.

Skewness measures the asymmetry of a probability distribution of a real-valued random variable about its mean. Skewness can be negative or positive depending on whether data points are skewed to the left and negative or to the right and positive of the data average. If skewness is less than -1 or greater than +1, the distribution is highly skewed: if skewness is between -1 and -0.5 or between 0.5 and 1, the distribution is moderately skewed and if the skewness is between -0.5 and 0.5 the distribution is highly skewed. From the table 4.2.1 above LCIC, LATM, LPOS, and LMOBILE are negatively skewed while LWEB is positively skewed. From table 4.2.2 only LPOS is positively skewed, the other variables (LGDP, LATM, LWEB, and LMOBILE) are negatively skewed.

Kurtosis measures the peakedness or flatness of the distribution of the series. It is a measure of tailedness of the probability distribution of a real-valued random variable. If the value of the kurtosis is greater than 3, the distribution is leptokurtic, that is, peaked relative to the normal but if it is less than 3, the distribution is platykurtic which means flat relative to the normal. From the table 4.2.1, LCIC, LATM, LPOS, LMOBILE are all less than 3 meaning they are peaked while LWEB is greater than 3 so it is flat. From table 4.2.2, LWEB is above 3 meaning it is peaked while the other variables are flat relative to the normal distribution The Jarque-Bera test is a goodness of fit test to test whether the sample data have skewness and the kurtosis matching a normal distribution. When the probability statistics is significant, the null hypothesis is rejected. For the null hypothesis to be rejected, the probability statistics must be greater than 0.1. From the tables (both 4.2.1 and 4.2.2) all variables are significant because the probability statistics is less than 0.1.

## 4.2 Empirical Analysis and Interpretation

The study seeks to examine the time series data from 2006-2015. The E-VIEWS 9 software was used to carry out the analysis. The unit root using augmented dickey-fuller (ADF) was carried out for stationarity of each variable.

## 4.3 Unit Root Test

In carrying out this test, the augmented-Dickey Fuller test was used. The test is carried out to test for the stationarity of each variable. The rule of thumb of the test is such that if the absolute value of the ADF test statistic is greater than the critical value at 5%, then we reject the null hypothesis that the variable is non-stationary. This implies that the variable is stationary when the absolute value of the ADF statistics test is greater than the critical value at 5%.

**Table 4.3.1:** Unit Root Test for Model 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **VARIABLES** | **LAG LENGTH** | **ADF TEST**  **STATISTICS**  **AT LEVELS** | **CRITICAL VALUE (5%)** | **ORDER OF INTEGRATION** | **REMARKS** |
| **CIC** | 1 | -6.773079 | -4.450425 | 1(1) | STATIONARY |
| **ATM** | 0 | -5.989818 | -4.246503 | 1(1) | STATIONARY |
| **POS** | 1 | -6.585059 | 4.450425 | 1(1) | STATIONARY |
| **WEB** | 0 | -5.98278 | -4.246503 | 1(1) | STATIONARY |
| **MOBILE** | 0 | -6.539777 | 4.246503 | 1(1) | STATIONARY |

Source: computed by researchers using E-Views 9

**Table 4.3.2:** Unit Root Test for Model 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **VARIABLES** | **LAG LENGTH** | **ADF TEST**  **STATISTICS**  **AT LEVELS** | **CRITICAL VALUE (5%)** | **ORDER OF INTEGRATION** | **REMARKS** |
| **GDP** | 0 | -4.632774 | -3.320969 | 1(1) | STATIONARY |
| **ATM** | 0 | -4.809459 | -3.320969 | 1(1) | STATIONARY |
| **POS** | 0 | -4.63148 | -3.320969 | 1(1) | STATIONARY |
| **WEB** | 0 | -4.680924 | -3.320969 | 1(1) | STATIONARY |
| **MOBILE** | 0 | -4.911894 | -3.320969 | 1(1) | STATIONARY |

Source: computed by researchers using E-Views 9

From the table 4.3.1, the variables CIC, ATM POS WEB and MOBILE are all stationary. The test is run on first difference at the first order. In absolute terms, the ADF test statistics is greater than the critical value at 5%. Therefore, the variables must be integrated in the same order. The study adopts the unit root test at first difference because all variables are stationary of order 1 (first difference)

From the table 4.3.2, the variables GDP, ATM POS WEB and MOBILE are all stationary. The test is run on first difference at first order. In absolute terms, the ADF test statistics is greater than the critical value at 5%. Therefore, the variables must be integrated in the same order. The study adopts the unit root test at first difference because all variables are stationary of order 1 (first difference).

## 4.4 Ordinary Least Squares

In this study, the OLS estimation technique is used to test the influence of the explanatory variable on the dependent variables. It calculates the coefficients of the impacts of the explanatory variables on the dependent variable. The result is subjected to economic, statistical and economic tests shown below:

**Table 4.3.3:** Ordinary least square regression analysis for model 1.

Dependent Variable: LCIC

Method: Least Squares

Date: 08/30/18 Time: 10:59

Sample: 2006 2015

Included observations: 10

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Coefficient** | **Std. Error** | **t-Statistic** | **Prob.** |
| C | 13.28709 | 0.131803 | 100.8105 | 0.0000 |
| LATM | 0.163969 | 0.034389 | 4.768041 | 0.0050 |
| LPOS | 0.017302 | 0.028417 | 0.608868 | 0.5692 |
| LWEB | -0.019453 | 0.045891 | -0.423888 | 0.0396 |
| LMOBILE | 0.042903 | 0.024847 | 1.726705 | 0.1448 |
| R-squared | 0.979533 | Mean depende | nt var | 14.12176 |
| Adjusted R-squared | 0.963159 | S.D. dependent var | | 0.293857 |
| S.E. of regression | 0.056403 | Akaike info criterion | | -2.605746 |
| Sum squared resid | 0.015906 | Schwarz criterion | | -2.454453 |
| Log-likelihood | 18.02873 | Hannan-Quinn criter. | | -2.771713 |
| F-statistic | 59.82388 | Durbin-Watson stat | | 2.076968 |
| Prob(F-statistic) 0.0000207 | | | | |

Source: computed by researchers using E-Views 9

**Table 4.3.4:** Ordinary least square regression analysis for model 2.

Dependent Variable: LGDP

Method: Least Squares

Date: 08/30/18 Time: 23:10

Sample: 2006 2015

Included observations: 10

**Chart 1. Analysis of Results based on economic criteria and statistical criteria.**

|  |  |
| --- | --- |
| **MODEL 1** | **MODEL 2** |
| **Automated Teller Machine: The coefficient is 0.163969. This indicates a positive significant relationship between automated teller machines and currency in circulation, showing that a unit increase in ATM will increase CIC by 0.163969.** | **Automated Teller Machines:** The coefficient is 0.071596. This indicates a positive significant relationship between automated teller machines and in GDP, showing that a unit increase in ATM transactions will increase GDP by 0.071596. |
| **Point of Sale (POS): POS transactions has a positive coefficient of 0.017302. This indicates that POS transactions have a positive relationship with CIC, showing that a unit increase in POS will increase CIC by 0.017302.** | **Point Of Sale (POS)**: POS terminals has a positive coefficient of 0.057642. This indicates that POS transactions have a positive relationship with GDP, showing that a unit increase in POS will increase GDP by 0.057642. |
| **Web / Online Banking (Web): This has a negative coefficient of -0.019453. This indicates that WEB has a negative relationship with CIC, showing that a unit increase in WEB will reduce CIC by -0.019453.** | **Web / Online Banking (Web)**: Web / Online banking has a positive coefficient of 0.024874. This indicates that WEB rate has a positive relationship with GDP, showing that a unit increase in WEB will increase GDP by 0.024874. |
| **Mobile Banking (Mobile): The coefficient is 0.042903. This indicates a positive relationship between mobile banking and currency in circulation, showing that a unit increase in MOBILE will increase CIC by 0.163969.** | **Mobile Banking (Mobile)**: The coefficient is-0.001895. This indicates a negative relationship between mobile banking and GDP, showing that a unit increase in MOBILE will reduce GDP by -0.001895. |
| **In table 4.3.3 the regression analysis has R2 of 0.979533, which implies there is a goodness of fit between the independent and explanatory variables and that about 97% of the variation in CIC is explained by the independent variable (Automated**  **Teller Machines (ATM), Point of Sale terminals (POS), web/online Banking (WEB) and mobile banking (MOBILE).** | **In table 4.3.4** the regression analysis has R2 of 0.977754, which implies there is a goodness of fit between the independent and explanatory variables and that about 97% of the variation in GDP is explained by the independent variable (Automated Teller Machines (ATM), Point of Sale terminals (POS), web/online Banking (WEB) and mobile banking (MOBILE). |

Source: Author’s computation.

## Analysis of Results Based on Econometric Criteria

Test for Heteroscedasticity: This test is carried out to determine if the error term has a constant variance. The null hypothesis is that there is constant or equal variance (homoscedasticity) and to accept the null hypothesis we must have a p-value of less than 0.05or 5%.

**Table 4.3.7:** Test for Heteroscedasticity for model 1

Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic 1.610196  Prob. F(4,5) 0.3040

Obs\*R-squared 5.629670 Prob. Chi-Square(4) 0.2286

Scaled explained SS 0.913258 Prob. Chi-Square(4) 0.9227

Source: computed by researcher : computed using E- Views 9

**Table 4.3.8:** Test for Heteroscedasticity for model 2

Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic 3.037071 Prob. F(4,5) 0.1272

Obs\*R-squared 7.084256 Prob. Chi-Square(4) 0.1315

Scaled explained SS 1.576049 Prob. Chi-Square(4) 0.8131

Source: computed by researcherusing E-Views 9

From the table 4.3.7 for model 1, we reject the null hypothesis and conclude there is heteroscedasticity. Also from the table 4.3.8, for model 2, we reject the null hypothesis and conclude there is no heteroscedasticity.

**Table 4.3.9**: Auto Correlation Table for Model 1

Breusch-Godfrey Serial Correlation LM Test

|  |  |  |
| --- | --- | --- |
| F-statistic  Obs\*R-squared | 1.191244 Prob. F(2,3)  4.426370 Prob. Chi-Square(2) | 0.0702  0.0388 |
| Source: computed by researchers using E-Views 9  **Table 4.3.10:** Auto Correlation Table for Model 2 Breusch-Godfrey Serial Correlation LM Test. | |  |
| F-statistic | 1.800040 Prob. F(2,3) | 0.0306 |
| Obs\*R-squared | 5.454600 Prob. Chi-Square(2) | 0.0454 |

Source: computed by researchers using E-Views 9

The term autocorrelation may be defined as the correlation between members of a series of observation ordered in time (as in time series data) or space (as in cross-sectional data). In the regression context, the classical linear regression model assumes that such autocorrelation does not exist in the disturbances. The test is carried out to determine if the error terms are correlated with the regression. The OLS analysis assumes that there is no autocorrelation. The

Brush-Godfrey serial correlation test is used to detect for autocorrelation in this study. The rule of thumb states that to accept the null hypothesis we must have a prob. Chi-square less than 5%. From the table 4.3.9 representing model 1 below, we accept the null hypothesis that there is autocorrelation. From table 4.3.10 representing model 2, we accept the null hypothesis that there is autocorrelation.

**CHAPTER FIVE**

**FINDINGS, RECOMMENDATION, AND CONCLUSION.**

## 5.1 Theoretical Findings

From the discovered literature, cashless policy was introduced in Nigeria in the year 2012. However, the cashless economic system has not been fully actualized. This means that the Assertion of the technology acceptance model which connotes that's end users tends to take up new technological innovations has not been fully actualized in Nigeria. Prior to the implementation of the cashless policy, Nigeria was a huge cash-based economy.

## 5.2 Empirical Findings

The results obtained from the tests reveal that the independent variables employed in model 1 (automated teller machines, point of sale transactions, web banking and mobile banking) explain about 97% of the systematic variation in the dependent variables. Also, the explanatory variables explain 27% of the dependent variable in model 2.

Automated teller machines have a positive significant impact on currency in circulation, POS and MOBILE have an insignificant impact on currency in circulation while WEB has a negative and insignificant impact on currency in circulation.

Automated teller machine is also the most patronized electronic banking tool and this is seen from the descriptive analysis. ATM has the highest average amongst all other variables.

The electronic banking tools also have no significant impact on economic growth.

## 5.3 Recommendations

From the analysis conducted in this study, it is important that the following recommendations be made to improve the output performance of sectors in Nigeria.

Public enlightenment programs and awareness programs on the cashless system should be put in place by the Central Bank of Nigeria to foster conversance with the system. This will create awareness and entice the unbanked people into the banking system.

Although on the average, ATM is the most patronized during the period of study, more awareness should be embarked upon and transaction charges reviewed downwards to encourage more patronage, and this will enhance e-payments.

The central bank of Nigeria should adopt new policies that will encourage business owners and companies to settle transactions electronically. This will help create a vehicle of change needed to drive the cashless economic system.

E-Banking products must also be re-engineered to make electronic payment effortless which will stir the country toward a cashless economy. Some of the product are point of sale machines, web/online banking, mobile banking should have added features which will make them more attractive for use by Nigerians and hence, promote the cashless system. This is because they have an insignificant impact on currency in circulation.

The banks and e-payment service providers should ensure that materials are not tampered with and also promote effectiveness while delivering services. New platforms can also be created to enhance delivery of services.

## 5.4 Conclusions

This study has finally concluded that cashless policy is very important to the Nigerian economy and therefore, the platforms for achieving this policy must be promoted. This platform consists of automated teller machines, point of sale machines, web banking and mobile banking.

**References**

Abimbola, A. (2012). *The imperative of a cashless society.* The NEWS. Retrieved 14 June, 2012from http://tlienewsafrica.com/2011 /05/23/the-imperative of-a cashless-society.

Adanna, A. (2011). *Nigeria moves towards a cashless society.* FACE2faceAfrica. Retrieved 20 June, 2012 from [http://face2faceafrica.com/article/nigeriamoves towards-being-a-cashless-s](http://face2faceafrica.com/article/nigeriamoves-�����������towards-being-a-cashless-)ociety.

Adegbaju, A.A. and Olokoyo, P.O. (2008). Recapitalizations and bank performance: A casestudy of Nigerian banks. *African Economic and Business Review, 6(* 1), 222-234.

Adewale, A. A. (2013). The cashless Nigeria project, subsequent backpedaling in the course of implementation and recent updates. *Global Advanced Research Journal of Management and Business Studies*, 2(1): 37-43.

Adewale, A.A. (2012). *Evaluating the systemic transition to a cashless economy in Nigeria.*Social Science Research Network. Social Science Electronic Publishing.

Adewuyi, I. D. (2011) Electronic banking in Nigeria: challenges of the regulatory authorities and the way forward, retrieved from

Ajayi, S. I. & Ojo, O. O. (2006). *Money and banking: Analysis and policy in the Nigerian context*[second ed.]. University of Ibadan: Daily Graphics Nigeria Ltd.

Akhalumeh. P. B. and Ohiokha, F. (2012) Nigeria’s cashless economy: the imperatives, International Journal of Management and Business Studies, 2(2) 31-36

Alao, A. A.& Sorinola, O. O. (2015). Cashless policy and customers’ satisfaction: A study of commercial banks in Ogun state, Nigeria. *Research Journal of Finance and Accounting*, 6(2), 37-47.

Amaka, E. (2012) Prospects and challenges of mobile money in Nigerian economy, retrieved from [http://www.thisdaylive.com/articles/prospects-and-challenges-of-mobile-money-onnigeria-economy/129273](http://www.thisdaylive.com/articles/prospects-and-challenges-of-mobile-money-on-nigeria-economy/129273)

Ayo, C. K. (2010). The state of e-banking implementation in Nigeria: A post-consolidation review. *Journal of Emerging Trends in Economics and Management Sciences (JETMS*), 1(1):37-45.

Central Bank of Nigeria (2011) New cash policy, Retrieved from [www.cenbank.org](http://www.cenbank.org/)

Central Bank of Nigeria, (2012) Toward a cashless Nigeria: tool and strategies, Retrieved from [www.ncs.org.ng/wpcontent/uploads/2012/08/cashless2012-4.pdf](http://www.ncs.org.ng/wpcontent/uploads/2012/08/cashless2012-4.pdf)

Claudia, C. and De-Grauwe, P. (2001) Monetary policy in a cashless society, Brussels, CEPR Discussion Study

COBB Anne. (2004). <http://www.ameinfo.com/50050.html>

Corrow, K.A. and Staten, M.E. (2000) Plastic choices, consumer usage of bank cards Vs propriety credit cards, Working Study, April

Daniel, D.G., Swartz, R.W. and Fermar, A.L. (2004). *Economics of a cashless society: an analysis of costs and benefits of payment instruments,* AEI-Brookings Joint Center

De-Grauwe, P., Buyst, E. and Rinaldi, L. (2000) The costs of cash and cards compared: the cases of Iceland and Belgium, mimeo, University of Leuven

ECOBANK Annual Activity Report. (2012).

Ejiofor, V. E. and Rasika, J. O. (2012) Realizing the Benefits and Challenges of Cashless Economy in Nigeria: Its’ Perspective, International Journal of Advances in Computer Science and Technology, 1(1) 7-13 Retrieved from http://warse.org/pdfs/ijacst02112012.pdf

Ejiro, O. (2012). What Nigerians think of the cashless economy policy*. Nigerian Journal of Economy,* 4(6):

Ejoh, N. & Okpa, I. (2014). Challenges and benefits of the cash-less policy implementation in the Nigerian economy. *European Journal of Business and Management*, 6 (26): 24-32

Esezobor, E. A. (2010). *Practice of banking*. Lagos: CIBN Press Ltd. pp: 185-186.

Gali, J. and Gambetti, L. (2009) On the sources of the great moderation, America Economic Journal: Macroeconomics, 14 26-57

[http://www.icidr.org/ijedrivol12no1april2011/Electronic%20Banking20in%20Nigeria%20 Challenges%20of%20the%20Regulatory%20Authorities%20and%20the%20Way%20For ward.pdf](http://www.icidr.org/ijedrivol12no1april2011/Electronic%20Banking20in%20Nigeria%20Challenges%20of%20the%20Regulatory%20Authorities%20and%20the%20Way%20Forward.pdf)

Humphrey, D. B. (20 04). Replacement of cash by cards in U.S. Consumer Payments. *Journal of Economics and Business*, 56: 211–225.

Humphrey, D. B. and Berger, A. N. (1990) Market failure and resource use: economic incentives to different payment instrument, New York, Monograph Series in Finance and Economics

Humphrey, D. B., Pulley, L. B. and Vesala, J. M. (1996) Cash, paper, and electronic payments: a cross country analysis, Journal of Money, Credit and Banking, 28 914-939.

Ikpefan, O. A. & Ehimare, O. A. (2012). Fast tracking business transactions through a cashless economy in Nigeria: Benefits and challenges. *The Nigerian Banker,* April-June: 17-26.

June, 2012 from http://wwvv.vanguardngr.eom/2011/l1/cashlesssociety-is possible-in-nigeria-intermarc-boss

Kriwoluzky, A. and Stoltenberg, A.C. (2010) Money and reality, Department of Economics, University of Amsterdam

Laudon, D. P. and Laudon, J. P. (2001) Management information system: organization and technology in the network enterprise, Prentice Hall International, USA 4th ed

Marco, A. and Bandiera, L. (2004). Monetary policy, monetary areas and financial development with electronic money, IMF Working Study.

Muhammad A.H. (2012). Analysis of value creation of electronic banking in Nigeria. *International Journal of Advanced Research in IT and Engineering,* Vol. 1(2), 29-46.

Nahimah, A.M. (2012). *Attaining cashless society in Nigeria.* Lagos Daily Trust Newspaper Monday, 06 February 2012.

Nakajima, M. (2012). The evolution of payment systems. *The European Financial Review*, February 12, 2012. http://www.europeanfinancialreview.com/?p=2032

Nnamdi, O. (2011). *Cashless society is possible in Nigeria.* Retrieved

Nwankwo, O. & Eze, O. R. (2013). Electronic Payment in cashless economy of Nigeria: Problems and prospect. *Journal of Management Research*, 5(1): 138.

Nweke, F. (2012) The Nigeria in 2012: the vision of cashless economy, In Proceedings of the Nigeria Economic Summit Group, Abuja.

Obina, C. (2012) Going cash-less will reduce cost of banking operations, This Day Live, April 11. Retrieved from [www.thisdaylive.com/articles/-going-cash-less-ll-reduce-cost-0of-bankingoperations-/113437](http://www.thisdaylive.com/articles/-going-cash-less-ll-reduce-cost-0of-banking-operations-/113437)

Obumneke, E., Oluseyi, A.S., and Ojarikre, O.J (2014) The cashless policy and foreign direct investment in Nigeria: a Vector Error Correction Model approach” International Journal of Financial Economics 2(2) 43-57

Odior, S. E. and Banuso, B. F. (2012) Cashless banking in Nigeria: challenges, benefits and policy implications”, European Scientific Journal, 8(12). Retrieved from eujournal.org/index.php/esj/article/view/192

Okey, O. O. (2013) The Central Bank of Nigeria’s cashless policy: benefits and challenges, Journal of Economics and Sustainable Development, 2(14) 128-133. Retrieved from [www.iiste.org/journals/index.php/JEDS/ article/viewFile/3730/30/3779](http://www.iiste.org/journals/index.php/JEDS/%20article/viewFile/3730/30/3779)

1. Onyinye, N. (2012) Banking the unbanked still the CBN’s major hurdle, Microfinance Nigeria, Retrieved from <http://www.microfinancenigeria.com/latest-news/>

Soyemi, J., Soyemi, B.O. and Hammed, M. (2015). Nigeria cashless culture: the open issues. *International Journal of Engineering Sciences,* 4 (4), 51-56.

Yaqub, J.O., Bello, H.T. Adenuga, I.A. and Ogundeji, M.O. (2013). The Cashless-Policy in Nigeria: Prospects and Challenges, *International Journal of Humanities and Social Science,* 3( 3), 200-212.