Cashless Policy and the Nigerian Payment System

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Abstract: Before the introduction of the cashless policy by the Central Bank of Nigeria in 2011, the Nigerian economy was heavily cash-oriented in its transaction of goods and services contrary to the global trends. With the aid of paired data samples between 2007 and 2017, this study evaluates the impact of cashless policy on the Nigerian payment system. The operations of a cashless economy were assessed based on the use of Cheques, funds transfer channels and Automated Teller Machines (ATMs). Analysis of data showed that the volume and usage of cheques as a means of financial settlement has failed and was partially replaced by electronic payment systems. Banks are getting more involved in the use of interbank fund transfers rather than a cash settlement. It was also ascertained that the use of ATM's as a means of financial intermediation is increasing. It is anticipated that the use of ATMs will become even more popular in Nigeria in the near future. To some extent, the outcome of the study has justified the implementation of the cashless policy initiative in Nigeria. However, the innovation and operations of the policy are not without its related limitations. There are various challenges associated with its practice, ranging from poor infrastructural facilities and difficulty in imbibing the e-payment culture due to illiteracy. Other socio-cultural factors that constitute an impediment include celebrations like weddings, birthdays and festivals. On such occasions, Nigerians prefer to "display or spray raw cash" rather than issuing cheques. Thus, more effort needs to be put in place by the regulatory authority to re-orientate the masses and to encourage the use of E-payments channels, cheques, funds transfer options and, owning/ operating of bank accounts. This will give a further boost to the development of the Nigerian payment system.

Keywords: Cashless policy, Cheques, Automated teller machine, Funds Transfer, E-payments

1. Introduction

A cashless economy displays an economic situation whereby transactions are carried out without the need to move physical cash; and this is done with the use of credit card or debit card payments (Taiwo et al, 2016).

Money is often described based on its three functions; as a unit of account, a medium-of-exchange and a store-of-value. In a cashless economy, the store-of-value description is no longer applicable neither is the medium of exchange description. The cashless economy does not mean a complete absence of cash transactions, rather it refers to cash transactions being kept at the barest minimum. It is an economic system where transactions are not predominantly characterized as an exchange for actual cash (Swartz, and Fermar, 2004).). The Central Bank of Nigeria (CBN) adopted the cashless economy policy initiative that was already in use globally for a number of key reasons. This includes the need to:

- Increase the development and modernization of the Nigerian payment systems in line with the vision's 2020 goal to become one of the top 20 economies in the world by the year 2020.
- Create avenues for economic growth and to reduce the cost of banking services (including the cost of credit)

- Increase financial inclusion by providing more efficient transaction options that result in a wider reach.
- Improve monetary policy's effectiveness in driving economic growth and managing inflation.

The cashless policy also aims to reduce some of the negative consequences associated with the usage of physical cash in the economy, including:

- The costs of cash volume handling.
- Robberies and other cash-related crimes.
- Loss of physical cash during fire and flooding incidents.
- The entire banking population subsidizes the costs that the tiny minority users incurred in terms of high cash usage.
- It gives rise to a lot of money outside the formal economy, making it difficult to effectively implement monetary policy thus significantly affecting economic growth.
- It encourages cash-related fraudulent activities like money laundering, corruption, leakages amongst others.

Nigeria as a developing nation is beginning to improve its payment infrastructure. This will enable wider adoption and greater usage of non – cash means and channels

1.1 Problem Statement

According to the Central Bank of Nigeria, the cashless policy was introduced, in line with the nation's vision 2020 goal of being one of the top 20 economies of the world, to drive the development and modernization of the Nigerian payment system. However, the use of cash, according to Nwaolisa and Kasie (2014), in carrying out transactions has remained relatively high in Nigeria. This is due to the poor network connections in the use of Point-Of-Sale and bank transfers which often results in debiting customers' accounts more than once, high transaction charges by banks, as well as security and technical setbacks. These are some of the factors still posing challenges in crossing into a cashless society. The transition to a cashless economy raises a lot of concerns as it seems there is yet no substantial evidence to justify its implementation in Nigeria. Thus, this research is set to evaluate the impact of a cashless economy on the Nigerian payment system.

1.2 Aim of the Study

The major aim of this study is to identify the contributions of a cashless economy to the Nigerian payment system. The specific objectives are to ascertain the usage and impact of cheques, interbank fund transfers and ATM's on the Nigerian payment system.

Having stated the above objectives, the following research questions are considered relevant to the study.

- 1) To what extent has the cashless policy regime impacted the volume and value of cleared cheques in the Nigerian banking system?
- 2) What is the level of influence of the cashless policy regime on the volume and value of interbank funds transfer in the Nigerian banking system?
- 3) How has the cashless policy regime impacted the volume and value of ATM transactions in the Nigerian banking system?

The present study will seek to provide answers to the above questions.

The following hypotheses (all stated in the null) are tested in this study:

- The cashless policy regime has no significant impact on the volume and value of cleared cheques in the Nigerian banking system.
- The cashless policy regime has no significant impact on the volume and value of interbank funds transfer in the Nigerian banking system.

- The cashless policy regime has no significant impact on the volume and value of ATM transactions in the Nigerian banking system.

The study will enable policymakers to decide whether the enabling environment has been created for the cashless policy in order for the Nigerian payment system to thrive in the effectiveness. The period of investigation is delineated from the inception of the cashless policy regime from 2011 to 2018.

2. Literature Review

2.1 Conceptual Framework

According to Adurayemi (2016), the cashless policy of the Central Bank of Nigeria is designed to provide mobile payment services, breakdown the traditional barriers to financial inclusion of millions of Nigerians and reduce cost, and to provide convenient financial services for urban, semi-urban and rural services across the country. Presently, there are up to seven different electronic payment channels in Nigeria. Alternative means of payments that will affect the cashless economy include:

1. Cheques: There will be an upsurge in the use of cheques. Although, the cashing of third-party cheques across bank counters is prohibited and all cheques drawn in favor of a third-party must go through CBN clearinghouse and must not exceed N10million in value.

2. Bank Drafts and Other Bank Instruments: Most merchants that handle large transactions below N10million will switch to using bank drafts, this is because unlike personal cheques, bank drafts are paid across the counter but are still subject to three days clearing rule of the CBN.

3. Automated Teller Machines (ATM): These are used more frequently to make a variety of online payments like utility bills, cable subscriptions, airtime, and data recharges etc. Customers are consistently advised by their banks to keep their ATM cards (Debit and Credit) safe and never to divulge their ATM card pins.

4. NIBSS Fund Transfers: The Nigerian Interbank Settlement Scheme (NIBSS) is an interbank online transfer platform where banks exchange value from one customer to another. It includes NIP (NIBSS Instant Payment) and NEFT (NIBSS Electronic Funds Transfer) and aids the transfer of funds between banks for single or multiple beneficiaries for amounts not exceeding N10 million.

5. RTGS: Real-Time Gross Settlements is a transfer method used by Nigerian banks to move amounts above N10million in favor of a single beneficiary.

6. Mobile Money: This is an application, usually installed in mobile devices, that enables users to successfully transfer funds, make or receive payments and even make bank balance inquiries via their mobile devices by sending a code or a text over their mobile network.

7. E-transfers: This refers to electronic funds transfers performed usually via the internet by using Personal Computers (PCs), laptops, smartphones and other devices with internet access. To use this service, Nigerian banks require their customers to subscribe to internet banking.

8. Point of Sale (POS) Terminals: These are used by merchants in the day-to-day business. It enables customers to make payments via their ATM cards by slotting them into the POS terminal. As the POS terminals are linked to the merchant's bank account online real-time just as the customer's bank cards are; once payment is successfully made via the POS account, customer's bank account is debited immediately and that of the merchant is credited for the value of purchases made or services enjoyed. (Oyetade and Ofoelue, 2012).

2.1.1. Benefits of a Cashless Policy

- 1 It has significantly improved the speed at which banking services are rendered.
2. It has reduced exposure to bacteria from the handling of naira notes from one individual to another.
3. There has been a significant increase in sales and purchases since the purchases are no longer determined by the amount of cash a customer has in their wallet but rather based on how much funds they have in their accounts at the time.

- 4 The cashless system offers Nigerians a number of top-up options including use of credit and debit cards, reduction in payroll, etc. thereby reducing the use of cash and the related security risks
5. Managing staff entitlements is a lot easier since it can be easily programmed into the card payroll system and frequently updated to ensure that staff gets their salaries in the right amounts and in due time.
6. The reduction of cash in circulation also reduces the risk of armed robberies and other cash-related crimes in Nigerian society as most people no longer carry physical cash with them or keep it in their homes.
7. E-banking improves the time within which transactions are settled both locally and internationally.
8. Customers can now transact their banking businesses at any place and at any time with the use of the various alternatives provided in the cashless society rather than going to the bank branch where their accounts are domicile.
9. Since robbers are attracted by large volume cash movements by banks, the use of alternative electronic payment system has reduced the need for cash movement.
10. Payments to government agencies like customs duties are now made electronically and directly to the government account, thereby reducing leakages and other fraudulent incidents.
11. Lastly, with the implementation of the cashless policy, CBN has reduced costs associated with cash management.

2.1.2 Benefits to the Stakeholders

The various stakeholders will enjoy different benefits from embracing cashless policy:

- i. Consumers: it provides consumers increased convenience when they are making transactions, more options to suit their individual needs, access to their bank accounts on non-working days, reduction in exposure to the risk of cash-related crimes etc.
- ii. Corporations: it provides the corporation's access to funds when needed. It reduces the risk of both internal and external theft and also reduces the cost of cash handling.
- iii. Banks: it drastically improves the efficiency of Nigerian banks, it reduces the number of people that come to the banking halls thereby reducing the number of staff that the bank needs and their cost of operations. It also increases banking penetration (Oyetade and Ofoelue, 2012).
- iv. The Nigerian Economy: it provides the populace with the means to easily make their daily payments like paying utility bills, air tickets, school fees etc. thereby improving their standard of living.
- v. Government: it makes for easier tax collection, improves financial inclusion and economic development in Nigeria. The government will also benefit in the area of adequate budgeting, improved regulatory services, improved administrative processes (automation), and reduced cost of currency administration and management. (Ashike, 2011).

A cashless system cultured to use e-payment increases the profitability of companies (for large, small and Medium-sized Enterprises) through the following:

- i. Convenience – payments are made from any location by using the e-payment options, without having to physically visit the bank.
- ii. Immediacy –payments using e-payment options are designed to be instant.
- iii. Improved cash flow –instant payment helps improve the cash flow situation of the companies and reduces the pressure from waiting for cheques to clear and 30 day invoicing.
- iv. Growth– it helped to foster industry growth and inspired innovations leading to more payment channels such as phone, internet, etc, thereby increasing customer base.
- v. Competitive advantages – it gives firms an edge over some of their competitors and improves their ability to compete favorably with bigger competitors.

2.1.3 Challenges of Cashless Policy in Nigeria

Despite the numerous advantages of the cashless policy, it also has its own challenges, such as:

1. Nigerians, especially the elderly and uneducated population is already accustomed to cash transactions.
2. Some of the Nigerian banks are as conservative as their customers; they are slow to embrace innovative products.
3. The security issue is a major challenge in the development of cashless policy in Nigeria
4. Internet network issues due to the developing telecommunication infrastructure impede its effectiveness.
5. Nigeria's current laws neither recognize nor accommodate electronic contracts and signatures.
6. There is an inadequate banking system in Nigeria. This is bound to hamper the cashless policy
7. Political instability in Nigeria from the different aggrieved groups disturb the smooth operations of a business.
8. The state of power generation in Nigeria cannot accommodate the smooth operations of financial activities.
9. Nigeria does not have the adequate financial infrastructure needed to effectively run a cashless society. The cashless options like Automated Teller Machines (ATMs), Point-of-Sales (POS) terminals, mobile banking and other mediums should reach at least 40% of the Nigerian population.
10. The epileptic power supply in Nigeria and the developing telecommunication links significantly and negatively affect e-banking infrastructures
11. One other major deterrents of cashless policy are the frequent system/internet downtime in banks which make it difficult for customers to access their account.
12. Most Nigerian banks would rather use outdated e-banking equipment than bear the cost of procuring the more modern ones.

2.1.4 Negative Effects of Cashless Policy in Nigeria

1. It has increased unemployment by reducing the number of staff necessary.
2. Bank charges on E-transactions are high, thereby discouraging customer from using it
3. Many customers, especially the less-educated, have been duped by fraudsters via their ATM cards.
4. Customers are discouraged to use ATMs as it takes a long time to reverse a wrong debit entry into their accounts. At times, it ends up not resolved and the customer has to physically go to the banking halls.
5. Most ATM locations in Nigeria are not secured and the cameras on the ATM machines do not work, leaving fraudsters to successfully carry out their illegal activities without any arrest.
6. The use of ATM cards discourages thrift savings among Nigerians; customers can use their ATM cards to make withdrawals up to N150, 000 in a day, even on weekends and public holidays.

2.1.5 Fears of Cashless Economy in Nigeria

For the successful implementation of a cashless economy in Nigeria, it is necessary to address the issue of inadequate infrastructure, the issue of insecurity is also worrisome; as is the exposure of fraudsters and other cyber-related crimes. These issues form the basis of the skepticism surrounding Nigeria's readiness for a cashless economy. These issues can be summed up in the following statements:

1. What facilities does Nigeria have to aid to carry out the implementation of a cashless economy?
2. What is the literacy level of the Nigerian population and their knowledge of ICT?
3. What percentage of the Nigerian population can use electronic banking services?
4. How and when will Nigerians vulnerability to fraud be resolved?

5. Is the system sophisticated enough to withstand cyber-attacks that can end the whole cashless system?

2.1.6 Trend Analysis of Key Cashless Policy Channels

The cashless policy initiative of the federal government of Nigeria came into existence in 2011. At this stage, it would be beneficial to highlight some key attributes. These include the use of cheques, funds transfer channels, and ATMs.

2.1.7. The Use of Cheques

The value and volume of cheques cleared nationwide fell from 22.3 billion and 37.7 million Naira in 2011 to 5.4 billion and 10.8 million Naira respectively in 2017. This was attributed to the increase in the use of e-payment channels.

Table 1: Volume and value of cleared cheques (2011-2017)

Year	The volume of cheques cleared (Millions)	Value of cheques cleared (N' Billions)
2011	37.7	22.3
2012	37.2	19.8
2013	29.4	15.6
2014	15.4	7.4
2015	13.5	6.2
2016	11.7	5.8
2017	10.8	5.4

Source: CBN Annual Report (2011-2017)

The above table is aptly captured in figure 1 below.

Figure 1: Volume and value of cheques cleared (2011-2017)

Source: CBN Annual Report (2011-2017)

2.1.8 Use of E-Money Products (2011 -2017)

Table 2: Volumes and Values of Electronic payments in Nigeria (2011- 2017)

year	The volume of electronic payments (Millions)	Value of electronic payments (N, Billions)
2011	355.2	1671.4
2012	382.7	2095.7
2013	323.4	3180.1
2014	455.6	4391.4
2015	519.2	4952.7
2016	715.1	6636.4
2017	1023.6	9134.0

Source: CBN Annual Report (2011-2017)

The volume and value of payment on different cashless channels (comprising ATMs, POS, Mobile, and Internet) rose by 34.7 percent and 18.3 percent in 2017 to 1,023.6 million and N9,134.0 billion, respectively, compared with 355.2 million and 1671.4 billion nairas recorded in 2011.

The above table is aptly captured in figure 2 below:

Figure 2

Source: CBN Annual Report (2011-2017)

From the breakdown of e-payment transactions for 2017, the use of ATM machines has remained the most patronized, it accounts for 78.2 percent of the transactions, followed by POS terminals transactions and mobile payments with 14.3 and 4.7 percent, respectively. Most Nigerians stayed away from the web (internet) e-payment option and it was the least patronized, accounting for 2.8 percent of the total e-payment transactions. In terms of the value of the transactions, the ATM usage accounted for 70.5 percent, POS, 15.4 percent, mobile channels 12.1 percent, and web (internet), 2.0 percent. The rise in e-payment transactions was attributed to increased consumer confidence and awareness in the use of the e-payment channels. Having come this far, it is necessary we highlight the individual performance of ATM's and Funds transfers option as an integral aspect of the cashless policy regime. (CBN Annual report).

2.1.9 Automated Teller Machine (ATM) Transactions (2011 -2017)

As of December 2017, the number of ATMs deployed in Nigeria stood at 17,449 which is about 55% increase from the 9,640 as of December 2011. ATM transactions subsequently increased significantly in both volume and value by 43.42 and 24.26 percent, to 800,549,099 and N6,437.6 billion, respectively, in December 2017, compared with 347.6 million and N1561.8 billion at the end -December 2011. (CBN Annual report)

Table 3: Number of ATM machines, volume and value of transactions (2011-2017)

Year	Number of ATM Machines	The volume of transactions (Millions)	Value of Transactions (N' Billions)
2011	9640	347.6	1561.8
2012	10,727	375.5	1984.7
2013	12,755	295.3	2828.9
2014	15935	400.1	3679.9
2015	16406	433.6	3970.3
2016	17398	590.2	4988
2017	17449	800.6	6437

Source: CBN Annual Report (2011-2017)

The above table is aptly captured in figure 3, 4 and 5 below:

Obviously, the number of ATM machines has increased over time

Figure 3: Number of ATM machines in Nigeria (2011-2017)

Source: CBN Annual Report (2011-2017)

The number of ATM transactions has been on the increased over time as depicted in Figure 4 below:

Figure 4: Volume of ATM transactions (2011-2017)

Source: CBN Annual Report (2011-2017)

The value of ATM transactions has been on the increased over time as depicted in Figure 5 below:

Figure 5: Value of ATM transactions (2011-2017)

Source: CBN Annual Report (2011-2017)

2.1.10. Point-of-Sale (POS) Transactions (2011 - 2017)

The point of sale transactions improved drastically in both volume and value; POS transactions increased to 146,267,156 and 1,409.8 billion nairas from 2.1million and 31 billion Naira in 2011, respectively. This represents an increase of 6866 and 4447 percent. This increase is attributed to the increase in public confidence in the use of the POS.

Table 4: Volume and value of POS Transactions (2011-2017)

Year	Volume of POS Transaction(Millions)	Value of POS Transaction(N' Billions)
2011	2.1	31.0
2012	2.6	48.0
2013	9.4	161.0
2014	20.8	312.1
2015	33.7	448.5
2016	63.7	759.0
2017	146.3	1409.8

Source: CBN Annual Report (2011-2017)

The above information is aptly captured in Figure 6 below:

Figure 6: Volume and value of POS Transactions (2011-2017)

Source: CBN Annual Report (2011-2017)

Table 5: Volume and value of Web Transactions (2011-2017)

Year	The volume of WEB Transactions (Millions)	Value of WEB Transactions (N' Billions)
2011	3.6	58.0
2012	2.3	31.5
2013	2.9	47.3
2014	5.6	74.2
2015	8.0	91.6
2016	14	132.4
2017	29	184.6

Source: CBN Annual Report (2011-2017)

In 2017, the volume and value of transactions on the web increased to 28.99 and N184.6 billion from their respective 3.6 million and N58billion in 2011 representing an increase of 87.6 and 68.6 percent. This was attributed to increased consumer acceptance of the platform. The above data are aptly captured in Figure 7 below:

Figure 7: Volume and value of Web Transactions (2011-2017)

Source: CBN Annual Report (2011-2017)

2.1.11. Mobile Payments

Table 6: Volume and value of mobile payments (2011-2017)

Year	Volume of Mobile Payment transactions (Millions)	Value of Mobile Payment transactions (N'Billions)
2011	1.9	20.5
2012	1.5	31.5
2013	15.8	142.8
2014	27.7	339.2
2015	43.9	442.4
2016	47.1	756.9
2017	47.8	1102.0

Mobile payments increased in both volume and value by 2415.8 and 5275.6 percent; from 47,804,561 and N1 102.0 billion, respectively in 2017 to 1.9million and N20.5 billion in 2011. The increase in both the volume and value of transactions was also attributed to increased awareness and confidence in the usage of this channel.

The above data are aptly captured in Figure 8 below:

Figure 8: Volume and value of mobile payments (2011-2017)

Source: CBN Annual Report (2011-2017)

2.1.12. The Wholesale Payments System. The Real-Time Gross Settlement (RTGS) System

In 2017, the volume and value of inter-bank transactions through the RTGS System were at 1,210,567 and N418, 645.1 billion, respectively. This represents a 156 and 257.1 percent increase in volume and value when compared to 472,652 and N117246.51 billion in 2011.

Table 7: The Real-Time Gross Settlement (RTGS) System

Year	The volume of (RTGS transactions (Millions)	Value of RTGS transactions (N' Billions)
2011	472652	117246.51
2012	482791	113003.6
2013	398138	101616.0
2014	857441	135498.5
2015	935371	374216.5
2016	1159126	371638.4
2017	1210567	418645.1

Source: CBN Annual Report (2011-2017)

The above data are aptly captured in Figure 9 below:

Figure 9: Volume and value of the real-time gross settlement (RTGS) transactions

Source: CBN Annual Report (2011-2017)

2.1.13 NIBSS Instant Payment (NIP) Transactions (2011-2017)

In 2017, the NIBSS Instant Payment transactions also increased significantly in volume and value by 7467.3 and 3157.8 percent respectively; to 370.8 million and N56, 165.7 billion compared to the 4.9 million and N1724 billion in 2011. This rise in the use of the channel was attributed to increased consumer awareness and confidence.

Table 8: NIBBS Instant Payment (NIP) transactions

Year	The volume of NIBBS Instant payment transactions (N' M)	Value of NIBBS Instant payment transactions (NB') Ilions)
2011	4.9	1724
2012	4.5	3891
2013	17.1	10884.9
2014	40.8	19921.5
2015	71.6	25649.2
2016	153.6	38109.1
2017	370.8	56165.7

Source: CBN Annual Report (2011-2017)

The above data are aptly captured in Figure 10 below:

Figure 10: Volume and value of NIBBS Instant payment transactions

Source: CBN Annual Report (2011-2017)

Table 9: NIBBS Electronic Funds Transfer (NEFT)

Year	The volume of NIBBS Electronic funds transfer (Millions)	The volume of NIBBS electronic funds transfer (NEFT) (N' Billions)
2012	28.7	13660.0
2013	30.0	14307.3
2014	29.8	14616.6
2015	28.9	13087.1
2016	29.7	14584.8
2017	31	14946.5

Source: CBN Annual Report (2011-2017)

2.1.14 NIBBS Electronic Funds Transfer (NEFT)

The volume and value of the NIBBS electronic funds transfer increased, moderately by 8.01 and 9.42 percent to 31 million and N14, 946.5 billion, respectively, over 28.7 million and N13660 billion in 2012. The decline in 2015 was attributed to the user's preference for the NIBBS Instant Payment (NIP) transactions. The above data are aptly captured in Figure 11 below:

Figure 11: Volume and value of NIBBS Electronic Funds Transfer (NEFT) (2011-2017)

Source: CBN Annual Report (2011-2017)

2.1.15. Stylized Facts on the Operations of Cashless Policy in Nigeria

- Prior to the cashless policy, the Nigerian economy was heavily cash-oriented in the transactions of goods and services. This was neither in line with the global trend nor Nigeria's vision 2020 ambitions. In addition, it was estimated that 65% of the cash circulation was outside the banking system, this has severe consequences for the implementation of monetary policies. The 35% cash circulations within the banking system impose costs to both the bank and the customers; cost of cash management, cash handling, cash movements, currency printing, security threats, etc.
- The Central Bank of Nigeria aims to achieve a cashless society in line with global trends, it recognizes the need to balance its objectives of meeting genuine currency transaction demands and combating speculative market behaviors that may negatively affect economic growth and stabilization measures.
- As the biggest country in Africa and one of the strongest emerging economies, Nigeria should be at the forefront of any economic modernization.
- The cashless policy will help ensure that the bulk of the cash transactions in the economy are domiciled in the banking sector, giving the government avenue through the CBN to successfully implement stabilization measures.
- The policy recognizes that banking is mainly business and like most businesses, there are costs that are shared between the business and the customers. It aims at reducing these costs.
- The policy does not in any way prohibit the use of Cheques, rather it as well as the use of e-payment methods in daily transactions.
- It limits the amount of cash in circulation thereby curtailing crimes like armed robbery, kidnapping, and money laundering.
- With proper sensitization and reduced cost, SMEs are likely to run current accounts with banks and also adopt less cash-oriented methods in their transactions.
- It reduces the risks faced by keeping money at home, risks ranging from exposure to armed robberies to fire incidents.
- The successful implementation of the policy is to the betterment of every Nigerian; it leads to economic growth and development which comes with reduced unemployment levels and improved standard of living.
- The Nigerian government is currently working on fixing the gaps in infrastructure which are a huge challenge to the economic growth and development of the country. The government has adopted various initiatives to address these including the adoption of the Sustainable Development Goals (SDGs) in 2015; no 7 of the SDGs will aid improve power supply among other things.
- Banks are not likely to lose customers since the required infrastructure would have been improved before the commencement of the policy.

2.1.16. Concept of a Payment System

Payments are part of our individual daily lives. We make payments when transacting business on the streets, in stores, online, etc using different payment technologies. For the most part of

the 1900s, cash and cheques were the most common means of transacting business among individuals and between organizations (Evans & Schmalensee, 2005). Payment cards like credit and debit cards were introduced in the second half of the 1900s for store purchases and eventually to make cash withdrawals from Automatic Teller Machines (ATMs) (Slawsky & Zafar, 2005).

Towards the end of the 1990s, electronic commerce was viewed as an alternative way of conducting financial transactions over the Internet which subsequently led to internet payments (Zwass, 1996) and the merger between the internet and banks (Sandén, 1998). The recent introduction of mobile payment applications adds to the variety of digital payment technologies (Chae & Hedman, 2015).

In our society today, customers are not only charged with the responsibility of choosing between goods and services but also between payment technology options. An example is, even with online payment, the customer will choose between internet bank transfer, the use of POS terminals or even PayPal.

2.2. Theoretical Framework on Payment System

The theoretical underpinnings on payment system are presented below:

2.2.1 The Theory of Consumption Value (TCV)

The Theory of Consumption Value explains consumer's behavior as regards making choices between various products/services (Sheth et al., 1991). It provides a theoretical foundation for payment technology use. Payments are no longer about transacting with cash but also about the consumer's behavior towards payment choices and their perceptions of the various technologies. We will discuss below 4 consumption values in the context of payment technology use:

(1) *Functional value*: This is based on economic utility theory, it assumes the economic rationality of the consumer and relates the attributes of a product or service such as performance, price, quality, and reliability that would influence this rationality. (Humphrey, 2010).

(2) *Social value*: This involves highly visible products, services and/or objects and how they are perceived by consumers. Under this, a product or service is chosen more for the perceived social image or symbolic importance it is assumed to convey than for functional performance. For example, ATM card payments or a stack of banknotes.

(3) *Emotional value*: In this situation, the consumers' decisions are influenced by the product's potential to arouse emotions (positive or negative) with its use. An example of this is the emotional value attached to beauty and artistry products like manicure, pedicure, massages, painting etc.; their values are usually tied to how the customer felt. In the context of payment, the emotion that can be aroused is the so-called "pain-of-paying" which is associated with the transparency of the paying process (Soman, 2001).

(4) *Conditional value*: This applies to products or services, whose value is dependent on a specific context like location or time. It answers the question – "it depends". This means that the choice to pay in a certain way can be influenced by for instance the location (on the street, in-store or online) or the time (at the end of the month when salaries are paid or mid-month).

2.3 Empirical Review

Review of extant studies is taken strictly from the Nigerian perspective:

Adurayemi (2016), assessed the effects of cashless policy on the Nigerian economy; the start-off with, the manual and electronic payment options in Nigeria, the effects of cashless policy (negative and positive), the benefits to the economy and stakeholder. The study ended with

recommendations to the government on how to reduce the negative effects of the policy and necessary improvements to its implementation.

Elechi and Rufus (2016) examined cashless policy in Nigeria and its socio-economic impact on small scale businesses in Nigeria. They opined that if all the necessary measures are not put in place and the stakeholders carried along, that the cashless policy will negatively affect small-scale business and may lead to their failure.

Taiwo et al (2016) did an appraisal of Cashless Policy on the Nigerian Financial System. The study argued there is no significant evidence to justify the implementation of the cashless economy and that the current transition raises a lot of concerns.

Jatau and Dong (2014, enthused that the cashless policy, which involves adopting electronic processes to documenting all payments (e-payment), will provide an effective database for optimal revenue generation. The study argued that the process is capable of significantly reducing financial corruption because of the reduced cash movement and the leakages that it curbs.

Ezeamama et.al (2014) studied the impact of cashless policy in Nigeria's Economy using survey research. The data were collected using questionnaires. The study found that cashless policy will help curb corruption and cash-related robberies, increase the standard of living of Nigerians, reduce the operating cost of banks, attract international investors etc. thereby improving the economy.

Osazevaru, Sakpaide, and Ibubune (2014) examined the impact of cashless policy on the profitability of Nigerian banks. They were skeptical and quick to ask if, banks in the cashless regime will still make as many profits as they use to make. The result of the study revealed that cashless economic policy positively impacts on banks' profit through a reduction in the cost of operations and banking the unbanked populace.

2.4 Gap in the Literature

Beyond anecdotal reports, little attention has been paid to the impact of cashless policy on the Nigerian payment system in strictly empirical terms. Previous studies have been subjective and relied essentially on primary data, but here we are making use of secondary data, this is a research gap that this study intends to fill.

3. Research Methodology

This study made use of paired data samples between 2007 and 2018. It evaluated the impact of cashless policy on the Nigerian payment system. The operations of a cashless economy were assessed based on three major proxies namely, the use of cheques, funds transfer channels, and ATMs.

The cashless policy regime in Nigeria is a relatively new phenomenon. There is a dearth of continuous and authentic data on it, however, this researcher painstakingly undertook a data mining of the available information on this discussion. Thus, this study made use of only secondary data. Data were obtained for 13 years and partitioned into periods with 2011 (the year of commencement of the cashless policy) as the demarcating year. So the years 2005-2010 constitute the pre-cashless period, while 2012 to 2017 is the post cashless policy era. The data of pre and post cashless periods are then used to test the hypotheses that the cashless policy regime has no significant impact on the volume and values of cheques, interbank funds transfer and ATM transactions in the Nigerian banking system.

Data used for the study were obtained from CBN statistical Bulletin (2018) and the annual reports of NDIC, for the relevant years. The data collected were analyzed using both descriptive

and inferential analysis. The descriptive analysis was used to organize and characterize the data, while the inferential analysis (t-test) was used to validate the study hypotheses.

Inferential Statistics

Here we intend to apply the difference of two means (for a small sample size). The formula is given thus:

$$t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\sqrt{\{(s_1)^2 + (s_2)^2\}/N}} \dots \text{Equation 1}$$

Where $\bar{A}_1$ = Pre mean, $\bar{A}_2$ = Post mean, S_1 = Standard deviation in pre- era, S_2 = Standard deviation in post-era

N = Number or observations

Decision Rule: Accept H_0 if $t_{cal} < t_{tab0.05}$, Reject H_0 if $t_{cal} > t_{tab0.05}$

3.1. Apriori Expectations

While the use of physical cash is deemed to go down, that of cheques, funds transfer and ATM's are expected to go up.

4. Data Analysis and Interpretation

Table 10: Growth Rate of (Volume & Value) of Cheques Cleared

Regime	Year	Volume of Cleared Cheques (Millions)	Growth Rate (%)	Year	Value of Cleared Cheques Millions)	Growth Rate (%)
Pre cashless policy	2005	14.64	4.65	2005	13.92	26.66
	2006	14.93	1.98	2006	16.5	18.52
	2007	19.89	33.22	2007	28.11	70.45
	2008	30.17	51.68	2008	43.36	54.25
	2009	29.16	-3.35	2009	29.39	-47.53
	2010	33.99	16.56	2010	19.69	-33.0
	Mean	23.79	17.45	Mean	25.16	14.89
Post cashless policy	2012	37.2	-1.33	2012	19.3	-11.21
	2013	29.4	-20.96	2013	15.6	-21.12
	2014	15.4	-47.62	2014	7.4	-52.56
	2015	13.5	-12.34	2015	6.2	-16.21
	2016	11.7	-13.33	2016	5.8	-6.45
	2017	10.8	-7.69	2017	5.4	-6.89
	Mean	19.67	-17.21	Mean	9.95	-19.07
	PRECHQVOL		POSTCHQVOL	PRECHQVAL	POSTCHQVAL	

Source: E-views statistical package, version 7

Table 10 indicates that the average growth rate of the volume of cheques cleared during the pre-cashless policy regime stood at 17.45%. This dropped drastically to -17.21% in the post cashless policy regime, indicating that the volume and usage of cheques as a means of payment or settlement is on the decline. On the other hand, the average growth rate of the value of cheques cleared during the pre-cashless policy era stood at 14.89%. It maintained a persistent downward or negative trend in the post cashless policy era. This culminated in -19.07 average growth/decline in 2017. Again, the trend is indicative of the fact that the presentation of cheques as a means of payment or settlement is on the decline.

Table 11: Volume and Value of Cheque Transactions

Mean	23.79667	19.66667	25.16167	9.950000
Median	24.52500	14.45000	23.90000	6.800000
Maximum	33.99000	37.20000	43.36000	19.30000
Minimum	14.64000	10.80000	13.92000	5.400000
Std. Dev.	8.378701	10.95877	10.85440	5.963808
Skewness	-0.019424	0.798603	0.667082	0.787857
Kurtosis	1.301046	1.921423	2.292113	1.826447
Jarque-Bera	0.721989	0.928599	0.570275	0.965025
Probability	0.696983	0.628575	0.751911	0.617231
Sum	142.7800	118.0000	150.9700	59.70000
Sum Sq. Dev	351.0131	600.4733	589.0895	177.8350
Observations	6	6	6	6

Source: E-views statistical package, version 7

Test of hypothesis 1

Using the output of Table 4.2 above, and applying the difference of two means (for small sample size), we intend to test the hypothesis below:

H_{01a}: The cashless policy regime has no significant impact on the volume of cheques cleared within the Nigerian banking system.

Test of Hypothesis 1a:

Using the formula: $t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\sqrt{\frac{(s_1)^2 + (s_2)^2}{N}}}$ Equation 1

Where $\bar{A}_1$ = Pre mean; $\bar{A}_2$ = Post mean; S₁= Standard deviation in pre- era; S₁= Standard deviation in post-era

N = Number or observations. Applying Equation I above, we have it as:

$$t_{cal} = \frac{23.80 - 19.67}{\sqrt{\frac{(8.38)^2 + (10.96)^2}{6}}}$$

$$t_{cal} = \frac{4.13}{\sqrt{\frac{(70.22 + 120.12)}{6}}}; \quad t_{cal} = \frac{4.13}{\sqrt{\frac{(190.34)}{6}}}, \quad t_{cal} = \frac{4.13}{\sqrt{(31.72)}};$$

$$t_{cal} = \frac{4.13}{5.63} = 0.7335 = 0.73, \quad t_{cal} = 0.73 \text{ and } N-1(D,F) = 5 = 2.02$$

Decision: Accept H₀ if $t_{cal} < t_{tab0.05}$. Reject H₀ if $t_{cal} > t_{tab0.05}$

Since $0.73 < 2.02$; we accept H₀ and conclude that the cashless policy regime did not impact on the volume of cheques cleared within the Nigerian banking system. In other words, the cashless policy regime did not make for an increase in the volume of cheque transactions. People are skeptical over the use of cheques as a mode of payment. This may not be unconnected to lack of trust occasioned by cases of dud cheques. The above scenario is aptly represented below.

Figure 12: Volume of Cleared cheques

Source: Data were culled from various editions of CBN Annual Reports

Apparently, the volumes of cleared cheques are on the decrease.

Ho1b: The cashless policy regime has no significant impact on the value of cheques cleared within the Nigerian banking system.

Test of Hypothesis 1b:

$$t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\sqrt{S^2 \left\{ \frac{1}{n_1} + \frac{1}{n_2} \right\}}} \dots \text{Equation 1}$$

Applying Equation I above:

$$t_{cal} = \frac{25.16 - 9.95}{\sqrt{10.85^2 + (5.96)^2/6}}, \quad t_{cal} = \frac{15.21}{\sqrt{\{(117.72 + 35.52)/6\}}}$$

$$t_{cal} = \frac{15.21}{\sqrt{\{(153.24)/6\}}} = \frac{15.21}{\sqrt{\{25.54\}}}, \quad t_{cal} = \frac{15.21}{5.05} = 3.01$$

and $N-1(D,F) = 5 = 2.02$

Decision: Accept Ho if $t_{cal} < t_{tab0.05}$, Reject Ho if $t_{cal} > t_{tab0.05}$

Since $3.02 > 2.02$; we reject Ho and conclude that the cashless policy regime has a significant impact on the value of cheques cleared within the Nigerian banking system. Though the numbers of clearing cheques are on the decrease, the ones presented for clearing are value driven. The Figure below refers

Figure 13: Value of Cleared cheques

Source: Data were culled from various editions of CBN Annual Reports

Table 12: Growth Rate of (Volume & Value) of interbank funds transfers

Regime	Year	The volume of Interbank Funds transfers (Millions)	Growth Rate (%)	Year	Value of Interbank Funds transfer (Billions))	Growth Rate (%)
Pre cashless policy	2005	137437.87	-	2005	27970.0	-
	2006	92908.0	-32.4	2006	29200.0	4.4
	2007	103713.4	11.63	2007	63649.5	117.98
	2008	220326.0	112.44	2008	73076.0	14.81
	2009	289535.0	31.41	2009	64351.0	-11.94
	2010	373248.0	28.91	2010	92955.0	44.45
	Mean	202861.38	30.39	Mean	58533.58	33.94
Post cashless policy	2012	482791.0	-2.06	2012	113003.6	-3.62
	2013	398138.0	-17.53	2013	101616.0	-10.08
	2014	574418.0	44.28	2014	135498.5	33.34
	2015	935371.0	62.84	2015	374216.5	176.18
	2016	1159126.0	23.92	2016	371638.4	-0.69
	2017	1210567.0	4.4	2017	418645.1	12.64
	Mean	793401.83	19.31	Mean	252436.35	34.62

Source: E-views statistical package, vo. 7

Table 12 indicates that the average growth rate of the volume of interbank funds transfers during the pre-cashless policy regime stood at 30.39%. This dropped to 19.31 % in the post cashless policy regime, indicating that the volume and usage of an interbank funds transfer as a means of payment or settlement is on the decline. On the other hand, the average growth

rate of interbank funds transfers during the pre -cashless policy era stood at 33.94%. This increased to 34.62 in the post cashless policy era.

Table 13: Value and Volume of Interbank Funds Transfers: Test of Hyothesis2

	PRE CIFT VOL	POST CIFT VOL	PRE CIFT VALUE	POST CIFT VALUE
Mean	202861.4	793401.8	58533.58	252436.4
Median	178881.9	754894.5	64000.25	253568.5
Maximum	373248.0	1210567.	92955.00	418645.1
Minimum	92908.00	398138.0	27970.00	101616.0
Std. Dev.	112293.6	354570.9	25498.72	150018.4
Skewness	0.467118	0.108886	-0.126875	0.022768
Kurtosis	1.751576	1.284580	1.739157	1.074378
Jarque-Bera	0.607839	0.747523	0.413528	0.927523
Probability	0.737920	0.688141	0.813211	0.628913
Sum	1217168.	4760411.	351201.5	1514618.
Sum Sq. Dev.	6.30E+10	6.29E+11	3.25E+09	1.13E+11
Observations	6	6	6	6

Source: E-views statistical package, volume 7

Using the output of Table 13 above, and applying the difference of two means (for small sample size), we intend to test the hypotheses stated below:

H_{02a} : The cashless policy regime has no significant impact on the volume of interbank funds transfers within the Nigerian banking system.

Test of Hypothesis 2a:

Using the formula: $t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\sqrt{\{(s_1)^2 + (s_2)^2\}/N}}$ Equation 1

Where $\bar{A}_1$ = Pre mean, $\bar{A}_2$ = Post mean, S_1 = Standard deviation in pre- era, S_1 = Standard deviation in post-era . N = Number or observations.

Applying Equation I above, we have it as:

$$t_{cal} = \frac{202861.4 - 793401.8}{\sqrt{\{(112293.6)^2 + (354570.9)^2\}/6}}$$

$$t_{cal} = \frac{-590540.4}{\sqrt{\{(12609852600.96 + 125720523126.81)/6\}}}$$

$$t_{cal} = \frac{-590540.4}{\sqrt{\{(138330375727.77)/6\}}}, t_{cal} = \frac{-590540.4}{\sqrt{\{(23055062621.295)\}}}$$

$$t_{cal} = \frac{-590540.4}{151838.94} = \text{ABS } I = 3.89, t_{cal} = 3.89 \text{ and } N-1(D,F) = 5 = 2.02$$

Decision: Accept H_0 if $t_{cal} < t_{tab0.05}$, , Reject H_0 if $t_{cal} > t_{tab0.05}$

Figure 14: Volume of Inter bank transfer

Source: Data were culled from various editions of CBN Annual Reports

Since $3.89 > 2.02$; we reject H_0 and conclude that the cashless policy regime has a significant impact on the volume of interbank funds transfers within the Nigerian banking system. Banks are getting more involved in the use of interbank transfers rather than actual usage of cash as a means of settlement. That is the essence of the cashless policy. The above scenario is aptly represented below.

Ho_{2b}: The cashless policy regime has no significant impact on the value of interbank funds transfers within the Nigerian banking system.

Test of Hypothesis 2b:

$$t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\text{SQR} \{ (s_1)^2 + (s_2)^2 / N \}} \dots \text{Equation 1}$$

Applying Equation I above:

$$t_{cal} = \frac{58533.58 - 252436.4}{\text{SQR} \{ (25498.72)^2 + (150018.4)^2 / 6 \}}$$

$$t_{cal} = \frac{-193902.82}{\text{SQR} \{ (23155705060.1984) / 6 \}}$$

$$t_{cal} = \frac{-193902.82}{\text{SQR} \{ (3859284176.699733) / 6 \}}$$

$$t_{cal} = \frac{-193902.82}{(62123.1372)}$$

$$t_{cal} = -3.12; \text{ABS}(-3.12) = 3.12 \text{ and } N-1(D,F) = 5 = 2.02$$

Decision: Accept H_0 if $t_{cal} < t_{tab0.05}$; Reject H_0 if $t_{cal} > t_{tab0.05}$

Since $3.12 > 2.02$; we reject H_0 and conclude that the cashless policy regime has a significant impact on the value of interbank funds transfers in the Nigerian banking system. Banks are effecting more transfers than before as a mode or means of payment. The above scenario is aptly represented below:

Figure 15: Value of Inter bank transfer

Source: Data were culled from various editions of CBN Annual Reports

Table 14: Growth Rate of (Volume & Value) of ATM Transactions

Regime	Year	Volume of ATM Transactions.(Millions)	Growth Rate (%)	Year	Value of ATM Transactions (Billions))	Growth Rate (%)
Pre cashless policy	2005	0.0487	-	2005	0.02373	-
	2006	12.1	247.8	2006	63.2	265.3
	2007	15.7	29.5	2007	131.6	108.23
	2008	60.1	282.80	2008	399.7	203.72
	2009	109.6	82.36	2009	548.6	37.25
	2010	186.2	69.89	2010	954.0	73.90
	Mean	63.96	142.52	Mean	349.5	137.68
Post cashless policy	2012	375.5	8.02	2012	1984.7	470.97
	2013	295.3	-21.36	2013	2828.9	42.54
	2014	400.1	35.49	2014	3679.9	23.12
	2015	433.6	8.37	2015	3970.3	7.89
	2016	590.2	36.17	2016	4988.1	25.69
	2017	800.6	35.65	2017	6437.6	29.06
	Mean	482.55	17.06		3981.59	99.87

Table 14 indicates that the average volume of ATM transactions during the pre-cashless policy regime stood at about 64 million transactions. This represents an annual growth rate of 142.52% as of 2010; while the average volume of ATM transactions during the post-cashless policy regime stood at about 483 million representing an average growth rate of 17.06% as at 2017. It is necessary we state here that, the usage of ATM as a means of financial intermediation is on the increase. Nigerians have actually embraced the use of ATM for cash withdrawals, deposits, financial claims and settlement. With the increased use of ATM, people no longer carry so much cash on them. This is one of the cardinal objectives of the cashless policy. On the other hand, the average value of ATM transactions during the pre-cashless policy regime stood at about 954 billion Naira. This represents a growth rate of 73.90% as of 2017; while the average value of ATM transactions during the post-cashless policy regime stood at about 3981.59 billion nairas representing an average growth rate of 99.87% as at 2017.

Test of Hypothesis 3

Table 15: Value and Volume of ATM Transactions

	PREATMVOL	POSTATMVOL	PREATMVAL	POSTATMVAL
Mean	63.95812	482.5500	349.5206	3981.583
Median	37.90000	416.8500	265.6500	3825.100
Maximum	186.2000	800.6000	954.0000	6437.600
Minimum	0.048700	295.3000	0.023730	1984.700
Std. Dev.	72.30998	183.5542	363.0876	1578.129
Skewness	0.816356	0.883894	0.697446	0.351894
Kurtosis	2.255831	2.490458	2.195467	2.131476
Jarque-Bera	0.804884	0.846176	0.648249	0.312413
Probability	0.668685	0.655021	0.723160	0.855383
Sum	383.7487	2895.300	2097.124	23889.50
Sum Sq. Dev.	26143.67	168460.7	659162.9	12452456
Observations	6	6	6	6

Source: Source: E-views statistical package, volume 7

Using the output of Table 15 above, and applying the difference of two means (for small sample size), we intend to test the hypotheses stated below:

H03a The cashless policy regime has no significant impact on the volume of ATM transactions in the Nigerian banking system.

Test of Hypothesis 3a:

Using the formula: $t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\sqrt{(s_1^2 + s_2^2)/N}}$ Equation 1

Where $\bar{A}_1$ = Pre mean, $\bar{A}_2$ = Post mean, S_1 = Standard deviation in pre- era , S_1 = Standard deviation in post-era ; N = Number or observations.

Applying Equation I above, we have it as:

$$t_{cal} = \frac{63.95812 - 482.55}{\sqrt{(72.31^2 + (183.55)^2)/6}}, \quad t_{cal} = \frac{-418.59188}{\sqrt{(5228.7361 + 33690.6025)/6}}$$

$$t_{cal} = \frac{-418.591884}{\sqrt{(38919.3386)/6}}, \quad t_{cal} = \frac{-418.591884}{\sqrt{(6486.55643333)}}$$

$$t_{cal} = \frac{-418.591884}{80.53916086807295} = -5.20 \quad \text{ABS } -5.20 \text{ I} = 5.20$$

$$t_{cal} = 5.20 \text{ and } N-1(D,F) = 5 = 2.02$$

Decision: Accept H_0 if $t_{cal} < t_{tab0.05}$, Reject H_0 if $t_{cal} > t_{tab0.05}$

Since $5.20 > 2.02$; we reject H_0 and conclude that the cashless policy regime has a significant impact on the volume of ATM transactions in the Nigerian banking system. Bank customers are getting more involved in the use of ATM cards and machines in dispensing cash. The volume of ATM transactions received a boost. This is one of the cardinal objectives of the cashless policy. The above scenario is captured below:

Figure 16: Volume of ATM Transaction

Source: Data were culled from various editions of CBN Annual Reports

Ho3b: The cashless policy regime has no significant impact on the value of ATM transactions in the Nigerian banking system.

Test of Hypothesis 3b:

$$t_{cal} = \frac{\bar{A}_1 - \bar{A}_2}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}} \dots \text{Equation 1}$$

Applying Equation I above:

$$t_{cal} = \frac{349.52 - 3981.58}{\sqrt{\frac{(363.09)^2}{6} + \frac{(1578.13)^2}{6}}}, \quad t_{cal} = \frac{-3632.06}{\sqrt{\frac{(131834.35 + 2490494.30)}{6}}}$$

$$t_{cal} = \frac{-3632.06}{\sqrt{\frac{(2622328.65)}{6}}} = \frac{-3632.06}{\sqrt{437054.78}}$$

$$t_{cal} = \frac{-3632.06}{661.1} = -5.49; \quad \text{ABS } -5.49 = 5.49, \quad \text{Note that: } N-1(D,F) = 5 = 2.02,$$

Decision: Accept Ho if $t_{cal} < t_{tab0.05}$, Reject Ho if $t_{cal} > t_{tab0.05}$

Since $5.49 > 2.02$; we reject Ho and conclude that the cashless policy regime has a significant impact on the value of ATM transactions in the Nigerian banking system. Again we conclude that bank customers are getting more involved in the use of ATM cards and machines in dispensing cash. Values of ATM transactions have actually received a boost. This is one of the cardinal objectives of the cashless policy. The above scenario is captured below:

Figure 17: Value of ATM Transaction

Source: Data were culled from various editions of CBN Annual Reports

4.2 Discussion of Results

Table 16: Paired samples (pre and post cashless policy indicators)

/N	Pairs	T-statistics - calculated	T-statistics- Tabulated	Decision/ Remarks
1	Pre and post volume of cleared cheques	0.74	2.02	Accept Ho Not Significant
2	Pre and post value of cleared cheques	3.01	2.02	Reject Ho Significant
3	Pre and post volume of interbank transfers	3.89	2.02	Reject Ho Significant
4	Pre and post value of interbank transfers	3.12	2.02	Reject Ho Significant
5	Pre and post volume of ATM transactions	5.2	2.02	Reject Ho Significant
6	Pre and post value of ATM transactions	5.49	2.02	Reject Ho Significant

Source: Author's computations

Apparently from table 16 above, it could be seen that:

1. The volume of cheques as a means of payment or settlement is on the decline. It is not significant; thus we accept Ho. This is in contrast to our apriori expectation.
2. Though the numbers of clearing cheques are on the decrease, the ones presented for clearing were value-driven. It is significant; thus we reject Ho.
3. Banks are effecting more transfers than before as a mode of payment. They are getting more involved in the use of interbank transfers rather than a cash settlement. It is significant; thus we reject Ho.
4. The usage of ATM as a means of financial intermediation is on the increase. Nigerians have embraced the use of ATM for cash withdrawals, deposits, and financial settlement. It is significant; thus we reject Ho.
5. The values of ATM transactions are on the increase. It is significant; thus we reject Ho. As a matter of fact, the cashless policy gave a boost to ATM transactions.
6. With the increased use of ATM, people no longer carry so much cash on them. This is one of the cardinal objectives of the cashless policy. It is in line with the federal government's motive for setting up the cashless policy scheme. It is significant; thus we reject Ho.

5. Summary, Conclusion, And Recommendations

5.1 Summary

The main findings of this study are itemized below:

- ❖ The volume and usage of cheques as a means of financial settlement is on the decline.
- ❖ Banks are getting more involved in the use of interbank transfers rather than a cash settlement.
- ❖ The usage of ATM as a means of financial intermediation is on the increase too.

5.2 Conclusion

To some extent, the outcomes of our study have justified the implementation of this initiative. While the volume and values of clearing cheques are on the decrease, that of interbank funds transfer and ATM transactions are on the increase since the inception of cashless policy in Nigeria. One can say with some degree of certainty that the cashless economy is impacting positively on the development of our payment system in Nigeria.

5.3 Recommendations

Operating a cashless economy in a country like Nigeria has various significant challenges associated with it mainly the poor infrastructure regarding internet connectivity and power. The Nigerian population comprises mainly of low-income earners, like peasant farmers, whose level of education and exposure is quite low. The implementation of a cashless culture like e-payment has been a difficult task since most of them can neither read nor write. Other socio-cultural factors that constitute an impediment to a cashless society in Nigeria among others include celebrations like weddings, birthdays and festivals where Nigerians are culturally inclined to spray the celebrant's physical cash rather than issue cheque gifts. Religious activities like giving to the poor or offering in the church as a form of religious obligation are more appreciated in cash. It is interesting to note, that to some extent, the use of POS terminals is gradually coming to the rescue. The cultures of honoring people who display cash in the open constitute a further challenge to the cashless policy. Thus, more effort needs to be put in place by the regulatory authority to encourage a cashless economy. Making use of cheques, funds transfers, E – payments and owning/ operating of bank accounts should be encouraged. This will give a further boost to the enrichment of our payment system in Nigeria.

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