Innovations

Cashless Policy and Monetary Policy Conduct in Nigeria

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Abstract: *The cashless policy de-emphasised the usage of actual cash in favor of alternative payment methods like bank transfers, ATM cards, and Point-of-Sale (POS) systems. Monetary policies are major economic policies made by the Central Bank of a country to control the volume and availability of credit and money in the economy. The paper analyses the nexus between cashless policy and monetary policy conduct in Nigeria using time series data (1987-2023). Having observed that the data properties contain I(0) and I(1), the Autoregressive Distributed (ARDL) approach was used in the methodology. The findings show that a unit change in economic growth necessitated by a cashless policy brings about a 0.5% change in money supply. Nevertheless, the policy resulted to over 500% increase in the general price level. In light of the foregoing, it is suggested that robust security measures that guarantee data protection in the digital payment transaction process, with a comprehensive strategy that addresses the needs of various stakeholders, including consumers, businesses, and financial institutions, be developed, monitored, and aggregated, for a smooth transition to a cashless economy.*

Keywords: *Digital payment, cashless policy, monetary policy, ARDL, Central Bank*

Introduction

The Central Bank of Nigeria (CBN) naira redesign brought the resurgence of the cashless policy into the limelight. In October 2022, the CBN announced that the two-hundred-naira (N200), the five-hundred-naira (N500) notes, and the one thousand naira (N1000) note would no longer be legal tender in December 2022. Barely one month after the announcement, the reality of the policy brought scarcity of old notes, as many Nigerians rushed to the banks to deposit the notes as directed by the CBN. Banks' deposits increase sporadically, since physical cash has been deposited with the banks. Most Nigerians were left with no other choice but to resort to alternative modes of payment such as ATM, POS, and web transactions. This turn of events reinforces the CBN's conduct of monetary policy in line with the cashless policy (CBN, 2023). However, it should be noted that cashless policies were introduced in

2012 in Lagos as a pilot run before it was expanded nationwide in 2014. Lagos is seen as one of Nigeria's commercial centers. Introducing it in Lagos first, was not unexpected. The aim, among others, is to reduce physical cash handling with the aim of promoting the electronic payment system. Remita (2024) opined that this initiative is to strengthen Nigeria's financial system, improve transaction efficiency, reduce banking services costs, and strengthen the monetary policy conduct. Before the introduction of the cashless policy, research shows that cash transactions dominated about 90% of the Nigerian economy (Wikipedia, 2015). The challenge becomes high cash handling costs, high security risk, especially risk of theft and gross inefficiency in Nigerian financial system. in a policy strand, the financial system, especially the Nigerian banks as directed by CBN imposed charges on cash withdrawal exceeding specific threshold to encourage the use of alternative electronic payment channels such as Automated Teller Machine (ATM), mobile banking, Points of Sale (POS) and Internet banking. It pegs the daily cash transactions over the counter for individual and corporate bodies at one hundred and fifty thousand naira (N150 000) and one million naira, respectively (Okey, 2012). These amounts were later reviewed upward by CBN to five hundred thousand naira (N500000) for individuals and three million naira (N3000000) for corporate organizations. The implication is that any over-the-counter cash transactions above the stipulated amount attract a charge. This policy undoubtedly sensitized the Nigerian people to gradually shift from physical cash transactions to alternative means of payment that undoubtedly contribute to a more inclusive financial system, improve transparency, and reduce cash related fraud.

Monetary policy conduct generally refers to the credit control measures adopted by the central Bank of a country. The objective of this conduct includes price stability, full employment, balance of payment equilibrium and initiating policies that encourage economic growth in Nigeria, among others. Invariably, the objective of monetary policy is intuitively linked with the cashless policy initiatives. CBN (2023) and IMF (2022) emphasise various instruments to control liquidity, which include the monetary policy rate, cash reserve ratio, open market operation, liquidity ratio, and foreign exchange intervention. To improve the transaction and effectiveness of monetary policy measures, the cashless policy enhances the traceability of transactions, among other advantages associated with the policy. As noted by Muhibudeen and Haladu (2015), the cashless policy reduces the volume of cash in circulation, enables better control over money supply, curbs inflationary pressure, and foster a more stable financial environment. Similarly, the electronic payment system, as advocated by the CBN cashless policy, encourage citizen to deposit money in the bank which leads to former credit extension, a phenomenon that is critical for economic growth as entrenched in CBN monetary policy objective.

These policy initiatives are not without some challenges, such as infrastructural deficits, cyber security concerns, limited digital literacy—especially in rural areas—and associated network challenges. However, the policy integrates monetary policy tools with modern payment technology to derive financial inclusion and enhance the overall efficiency of the financial sector. The main objective of the paper is to assess the progress of the cashless policy by analyzing the Nexus between monetary policy conduct and Nigerian economic growth.

Theoretical Literature

The paper is anchored on the quantity theory of money. The quantity theory of money explains the relationship between the quantity of money in circulation and the general price level. The theory states that the quantity of money is the main determinant of the price level or the value of money. Hence, the quantity of money in circulation determines the value of money. Irving Fisher proposed that, all things being equal, as the quantity of money in circulation increases, the price level also increases in direct proportion, and the value of money decreases and vice versa. If the quantity of money is doubled, the price level will also double and the value of money will be one-half. Conversely, if the quantity of money is reduced by one-half, the price level will also be reduced by one-half, and the value of money will be twice. The reality is, while the cashless policy of CBN aimed at reducing cash handling, the general price level will increase to include the cost of financing the policy, which includes the infrastructural cost, network availability and power supply.

The Keynesian theory of money and price attacked the classical quantity theory for keeping separate monetary theory and value theory (Jhingan, 2010). Keynes reformulated a quantity theory of money, which brought about a transition from a monetary theory of price to a monetary theory of output. What Keynes successfully did was to integrate monetary theory with value theory and link the theory of interest into monetary theory. According to Anyanwu (1993), Keynes distinguishes three motives for holding money balance. The transaction motive bridges the gap between receipt of income and planned expenditure with the main aim of meeting day-to-day needs and expenditure. The precautionary motive provides a reservoir of purchasing power that can be used to finance an unanticipated expenditure, which includes unforeseen contingencies. The speculative motives satisfy the desire to hold wealth in liquid form. Keynes introduced interest rates as the main determinant of demand for money, contrary to the classical theorists who emphasized the transaction and precautionary demand for money. Similarly, Keynes considers the extreme case of the demand for money. The case in which its speculative segment becomes infinitely elastic, when the rate of interest assumes the lower value of its normal range. When the interest rate is so low that every money

issue goes into an idle balance, such a case is referred to as a liquidity trap. Liquidity trap reinforces the cashless policy. However, liquidity trap demonstrates the inefficiency of monetary policy in revitalising the economy. If liquidity trap reinforces cashless policy in a negative way, the monetary authorities can adopt a policy mix where fiscal policy becomes the necessary option.

The monetarist theory led by Milton Friedman showed that velocity, or the demand for money, was a stable function of a limited number of key variables. The Freedman approach was to concentrate on the determinants of how much money people will hold rather than the motive for holding more. Hence, the demand for money, according to Friedman, is a function of several variables such as price level, price expectation, return on bonds and equities, ratio of human to non-human wealth, wealth or permanent income, and taste and preferences. Jhingan proposes two theories of the determinants of the money supply. The first view holds that the money supply is determined exogenously by the Central Bank. The second view holds that the money supply is determined endogenously by changes in the economic activities, which affect people's desire to hold currency relative to deposits and the rate of interest. By endogenous, it means that the supply of money is determined by the monetary authorities without necessarily relying on the forces of demand and supply. Endogenously implies that economic activities and market forces are at play in its determination. Therefore, the determinant of money supply are both exogenous and endogenous, which can be described broadly as the desire of people to hold currency relative to deposits, the level of bank reserves, and the minimum cash reserve ratio. The first two determinants together are referred to as the monetary base or high power money.

Jhingan (2010) identifies four principal objectives of monetary policy. They include full employment, price stability, economic growth, and balance of payment equilibrium. Ayanwu (1993) includes exchange rate stability as one of the cardinal objectives of monetary policy.

Full employment: Potters (2023) defines full employment as an economic situation in which all available labour resources are being used in the most efficient way possible. It is the absence of involuntary unemployment, which implies that everyone who is looking for a job is employed. One cardinal objective of monetary policy is to ensure a near-full employment scenario since research shows that a state of zero unemployment is not achievable.

Price stability: Bernanke (2006) explains that price stability means inflation is kept low and stable which preserves the integrity and purchasing power of the nation's currency. Price stability implies that money can be held in idle balance for transaction purposes without having to worry that inflation will wipe away the real value of the money balance. Bernanke further noted that stable prices are a

prerequisite to the achievement of the other mandated objectives of the central bank.

Economic growth: economic literature establishes a strong link between price stability and economic growth. The major impact of monetary policy on economic growth is the maintenance of price stability. It is the objective to balance price and output optimally and efficiently to ensure sustainable economic growth.

Balance of payment equilibrium: A state in which a country's total payments to other countries are equal to its total receipts from them is referred to as the balance of payment equilibrium. This objective is necessitated due to the problem encountered in the post-war year, where the growth of World Trade move at a faster pace than world liquidity, posing a serious challenge for international trade. Hence, Central Banks ensure the balance of payment equilibrium.

Exchange rate stability: The Central Banks ensure internal and external balances through the use of exchange rate stability.

Empirical literature

Pam (2017) analyse the effect of cashless policy on the financial performance of selected deposit money banks in Nigeria. The paper uses empirical data to explain the nexus between bank's financial performance and the cashless policy made by the CBN using panel data extracted from fourteen deposit money banks. Return on assets was used as proxy for bank performance, why transaction volumes through electronic banking product-such as ATM, POS, Internet banking, NIP and NEFT – serve as proxy for cashless policy. The paper reveal that the bank return on assets have increased significantly through the impact of the electronic banking transaction particularly ATM transactions. The paper clearly shows that cashless policy has improved the financial performance of the selected banks. In the same vein, the study concludes that cashless policy has improved trade, commercial activities and efficiency of financial activities in Nigeria. More importantly, Pam discourses challenges such as infrastructural deficiency, technological and social factors impeding full adoption of cashless policy. Obafemi and Araoye (2020) used structured questionnaire and descriptive survey to evaluate the acceptance and practicability of cashless policy in Nigeria particularly in Lagos State where the policy was first implemented as pilot run. The paper equally made an enquiry into the literature by confirming the viability of cashless policy in Nigeria. Using simple percentage techniques and chi-square tests in analysing the survey, the results confirmed that the policy has had a significant effect on the Nigerian economy. To enhance financial transparency and economic efficiency, the paper proposes a reduction in cash-based economy as put forward by the current cashless policy of CBN. Just like other studies, such as (Pam, 2017) Okeowo, 2024), the study insists that the infrastructural challenges, such as electricity supply and network reliability,

must be looked into, with a viable permanent solution. Public education and awareness must be taken seriously to improve acceptability and successful implementation. The paper established a positive relationship between cashless policy and economic growth; hence, there is need to modernise the payment system and there should be investment in infrastructure and public awareness for better outcomes.

Uruakpa (2023) analyses the factors influencing the success and sustainability of Nigerian cashless policy. The paper uses OLS and Granger causality tests to explain how various factors, such as ATM, web, and POS transactions, mobile payments, broad money supply, fiscal policy, credit to the private sector, and exchange rate affect currency circulation in Nigeria. Uruakpa's finding revealed that, fiscal and monetary policy, ATM and web transactions significantly reduce the money in circulation, which indirectly promotes the cashless policy agenda. On the other hand, credit to the private sector, POS transactions, and exchange rate volatility increase currency in circulation. It was recommended that the success of the cashless policy depend on some basic economic factors, such as improving credit availability to the private sector, addressing the exchange rate volatility, and concern over cash readily available at POS operators. Ogunlade and Amodu (2024) explain the relationship among the Nigerian cashless policy channels, Automated Teller Machine (ATM), Point of Sales (POS), web transaction, and Real Gross Domestic Product (RGDP) of the manufacturing sector. The study uses OLS in its methodology, and the finding reveals that the electronic channel of payment enhances financial transparency, with the POS channel having a significant positive relationship effect on the manufacturing sector performance, which further suggests operational efficiency in the sector. The study further shows that the ATM has a significant negative effect on the manufacturing sector, while the web channel shows a non-significant positive effect. The negative effect of the ATM on the manufacturing sector was attributed to the cost of infrastructural challenges associated with the cashless policy. The study suggests that if challenges such as cybersecurity, infrastructural deficits, and transaction costs associated with the cashless policy are addressed, the cashless policy offers an opportunity to improve manufacturing efficiency and financial inclusion. Collaborative effort among internet providers, government financial institutions, and manufacturers can be annexed to enhance overall economic growth through cashless policy and monetary policy conduct.

Olujobi (2022) explains the socioeconomic impact of the Nigerian 2022 currency redesign in conjunction with the cashless policy. The study opined that the cashless policy has significantly reduced the physical cash in circulation, including controlling inflation, curbing counterfeiting and supporting the transition towards a cashless economy. However, the cashless policy is not without a cost. The paper submitted that it has caused hardship to many Nigerians, especially the poor and the

vulnerable in the society, including the unbanked members of the community, which eventually caused significant cash shortages, unbearable economic distress, and long queues at banks. Olujobi also describes the psychological stress, violence, social unrest, and protests targeting banking facilities. The policy of moderating the Nigerian financial system and improving monetary control, as detailed in the cashless policy, is a step in the right direction; but lack of adequate public awareness and infrastructural readiness, including availability of adequate network that is equipped with modern technology, adversely affected its success. In line with the above, the study recommended adequate public awareness, improving infrastructural facilities, and a more gradual implementation strategy to ensure that the cashless policy, including the naira redesign, positively contributes to the Nigerian financial system.

Research Methodology

The research uses time series analysis from 1987 to 2023. More often than not, the data sets are not stationary, hence the need for constant tests to determine whether the mean, variance, and auto covariance are time invariant (Gujarati, 2005; Okeowo, 2023; Okeowo, 2024; Okeowo, 2019; Aladejano et al., 2021; Okeowo et al., 2023; Okeowo et al., 2024; Falade et al., 2021; Ozekhome et al., 2023; Ozekhome et al., 2024). After subjecting the data to a unit root test, it was discovered that the data properties are of I (0) and I(1); hence, the Autoregressive Distributed Model (ARDL) is used in the analysis. The operational form of the model is DLn (GDP) = α_0 + α_1D(INF) + α_2D(M2) + α_3INF + α_4M2 + et., where GDP is Gross Domestic Product, INF is the inflation rate, M2 is money supply, and et is the error term

Table 1: Unit Root Tests- 1987 to 2023 Series

Variables	ADF Test Stat. Level	conclusion	ADF Test Stat. 1st Diff.	conclusion
GDP	1.510062 (-2.954021)	Non-stationary	2.761382 (-2.95402)	Non-stationary
INFR	-3.112231 (-2.933158)	stationary	-6.168494 (-2.93500)	Stationary
M2	4.533760 (-2.951125)	stationary	-1.803090 (-2.95402)	Non-stationary

Result extracted from E-views output

The unit root test indicates that GDP is non-stationary at levels and at first difference. INFR is stationary at levels and at first difference. M2 is stationary at levels but non-stationary at first difference. The combination of I(1) and I(0) in the data properties

shows that ARDL can be used to analyse the parameters of an economic relationship. The bounds test in Table 2 indicates that the F-statistic is greater than the upper bounds value, which suggests that a long-run relationship exists among the variables used in this study

Table 2 Bounds Test of Co-integration Results

F-Statistic	3.80
Upper bounds	3.79

Table 2: Short-Run Dynamic Model

Variables	Coefficients	Std. Error	t-Statistic	Prob.
M2	0.005671	0.000730	7.771243	0.000
INFR	50206.73	151623.3	0.331128	0.7428

E-views output

Conclusion and Policy Recommendation

The study shows that monetary policy, through the cashless policy initiatives, if properly implemented, has a long-run positive effect on the Nigerian economic growth. The study shows that a unit change in economic growth necessitated by a cashless policy brings about a 0.5% change in money supply, implying the efficiency of monetary policy tools in increasing economic growth. However, contrary to Muhibudeen and Haladu's (2015) submission that the cashless policy has the tendency of reducing the rate of inflation, the policy results in over 500% increases in price level, implying that cashless policy initiatives must be accompanied by inflation targeting to achieve the desired result. Similarly, Muslikhat and Aprilianto (2022) also found that cashless policy initiatives and implementation in an economy increase inflation. The findings show that debit card usage in cashless transactions has a significant positive impact on inflation. The paper however, establishes that the linkages of an increase in inflation are through an increase in interest rate. However, Putra and Ratnassan (2020) argue that the cashless policy significantly affects inflation, though debit and credit cards individually had no significant effects; the overall cashless payment mechanism influences inflation dynamics in the economy. Gawae and Tonye's (2023) study also shows that despite expectations that the monetary policy conduct of the cashless policy initiative in Nigeria will reduce inflation by reducing physical cash in circulation, inflation in Nigeria increased during the period studied. Gawae and Tonye's research suggests that electronic money usage can reduce inflation and that debit card usage has little or no correlation with price increases. Hence, the findings contradict the notion that a cashless policy automatically raises inflation and indicate complexities in the relationship between cashless policy and inflation. There is a need for a robust security measure that guarantees the protection of data, codes,

and Personal Identification Number (PIN), which the cashless policy relies on heavily to be successful. As suggested by Okeowo (2024), there is a need for a complete overhaul of the country's infrastructural facilities, especially the digital infrastructure and improvement in internet and network provision to facilitate and promote innovation in the financial system.

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