Impact of Cashless Policy on Money outside the bank sector between 2012 to 2022.

Sikiru, Isiaka Olawale & Oyesiji, Yinusa Kolawole,

Email:easyola4real@gmail.com, oyesijikolawole@gmail.com,
Banking and Finance Department, The Oke Ogun Polytechnic, Saki

Abstract

Focus has been placed on enforcing the cashless policy that was adopted in Nigeria in 2022 as a result of the CBN's aims to minimize the amount of money outside banks in order to effectively govern the economy. The research examine the impact of cashless policy on money supply employed Ordinary least square (OLS), independent variable is cashless policy proxy for Automated teller machine, point of sale, web, Cheque, and internet and dependent variable is money outside the bank sector. The study revealed that all variables (Automated teller machine, point of sale, web, Cheque, and internet) proxy for cashless policy have insignificant effect on money out the bank sector. Government should formulate other policy to regulate money in circulation.

Keywords: ATM, Cashless policy, Internet, POS, WEB.

Introduction

The government of Nigeria intends to limit the amount of money in circulation by implementing a cashless policy. The use of cash as a means of transaction is no longer encouraged due to insecurity in the country, including kidnapping and demands for ransom. Money supply refers to the total amount of cash in use across all banking sectors.

The Nigerian Central Bank (CBN) is allowed to develop economic policy to control inflation, interest rates, and currency exchange rates. An increase in the money supply drives up inflation because it drives increased demand for goods and services, which drives up prices.

CBN controls other banks by expanding and diverting attention Amount of money. Since customers will be hesitant to borrow money, the CBN will increase interest rates to limit banks' ability to produce money and decrease interest rates to enable the creation of money. Deposit rates and bank lending rates are impacted by changes in interest rates (Laili & Siswanto, 2020).

Since commercial banks are deposit-taking institutions, the CBN can regulate the economy through them if there is more money in the banks than there is outside of them. The CBN is no longer able to manage the flow of currency. The amount of money in circulation was 1.4 trillion, and the percentage of it not held by banks increased from 78% in 2015 to 85% in 2022. The amount of money in circulation reached ₦3.23 trillion in October 2022, of which only ₦ 500 billion was held within the banking system and ₦ 2.7 trillion was kept outside of it (Buari 2023). This has an effect on how financial policy is managed and how well inflation can be managed. A focus on the implementation of the cashless policy was launched in Nigeria in 2012 as a result of the CBN's plans to limit money outside banks in order to effectively govern the economy. Cashless policies lessen cash transactions and increase the amount of money in the banking system, which may enable banks to control the economy. According to Omotunde, Sunday, and John (2013), CLP boosts employment and decreases cash-related robberies, which lowers the risk of carrying cash. Additionally, they claimed that CLP increases foreign investment and decreases corruption linked to cash.

Based on researcher knowledge there is scant study on money supply, those that study on determinant of money supply are few and fail to look at impact of cashless policy on money supply. Only Muhibudeen and Haladu (2015) work on relationship between cashless policy and money in circulation fail to examine the impact of cashless tools on money supply and limit their study to 2012. This study aim intend to fill the gap by examine the impact of cashless policy on money supply and extend the period to 2022.

Literature Review

Conceptual Review

The term "cashless banking" refers to a banking system that encourages non-cash (little cash) and more electronic-based transactions (payment for goods, services, transfers, etc.) through non-cash means, with the goal of reducing (not eliminating) the amount of physical cash (notes and coins) circulating in the economy. In other words, it combines systems that use checks with electronic banking. However, the phrase should not be misunderstood or confused with a scenario in which cash is completely eliminated from the economy.

When practically all forms of payment are made without the use of real currency, an economy is considered to be cashless.

There will be a variety of ways to make payments, including checks, wireless transfers, debit and credit cards, internet purchases, and mobile banking. A cashless society has several benefits, from regulating and managing the economy to protecting the entire financial system.

Cashless Economy Tools

The five main CLP instruments used in Nigeria are as follows, albeit one of them (the use of checks) is quickly aging.

ATM: An automated teller machine (ATM) enables customers of financial institutions to conduct financial transactions without the assistance of a human cashier, clerk, or bank teller. An automated teller machine (ATM) card, also known as a bankcard, client card, key card, or cash card, is a payment card given by a financial institution to its clients. It enables the client to use an ATM for transactions like deposits, cash withdrawals, getting account information, and other types of banking transactions, frequently through interbank networks.

Mobile (Internet) Banking Transactions: Internet Banking is defining as the provision of traditional banking services over the Internet. It is a product that is designed as a module within the new banking application that banks have implemented in order to meet the needs of its customers who use Internet banking. Internet banking enables people to start transactions over the internet without having to physically carry cash to make transactions, hence reducing the amount of currency that is in circulation as a CLP tool.

Mobile Banking: Customers of banks can obtain services using this product on-the-go. Customers can transact at anytime, anyplace. Mobile devices can be used to deliver services including account balance checks, transaction inquiries, stop checks, account verification, bill payments, electronic fund transfers, updates, and history, as well as other consumer services.

Point- of-Sale or terminal (POS) Machine: A point-of-sale machine is the type of payment terminal that credit/debit cardholders use to make purchases at retail locations. Customers could use it to carry out the following tasks: making retail payments, cashless payments, checking their cash back balances, buying airtime, printing mini-statements, etc.

Cheque: A cheque is a written instruction for money to be paid from a bank account. The person who has a current account with the bank and writes the check is the drawer. In other words, a check is a form of bill of exchange designed for use in place of carrying actual currency to make payments.

Cash in Circulation: This is the total amount of a nation's currency that is in use. This is how all of the money found outside of banks is made up.

Empirical Study

Obinna and Innocent (2021) used an ARDL bound testing model with the broad money supply (M2) as the dependent variable and the inflation rate, GDP growth, monetary base, and monetary policy rate as the independent variables to examine the factors influencing the money supply in Nigeria from 1981 to 2019. The outcome indicates that the main long- and short-term drivers of money supply in Nigeria are inflation rate, GDP growth, and monetary base.

Adediyan (2020)studies on money supply determinants with data onthe reserve ratio, high powered money (monetary base), liquidity ratio, currency deposit ratio, interest rate (money market interest rate, proxy by Treasury bill rate. Employed Autoregressive Distributed Lag (ARDL) approach, found that financial liberalization is an important factor in determining money supply in Nigeria, in addition to currency ratio, required reserve ratio and high-powered money. Conclude that the extent of the liberalization of the financial sector matters in decisions on the regulation of money supply in the economy.

Through the interest rate transmission mechanism of monetary policy, Laili and Siswanto (2020) investigated the link between a cashless society and inflation and evaluated economic growth from an Islamic perspective. The vector error correction model (VECM) was used as an estimating technique, and it was found that the cashless society has no direct impact on inflation. However, it may have an impact on the GDP and the monetary policy transmission mechanism. Islam regulates non-monetary transactions much like it does cash transactions. Make the case that, in an Islamic community, using money other than cash is equivalent to using cash, and that both must be used in accordance with the principle of flow and public benefits.

In their 2015 analysis of the connections between cashless policy tools and nonbank currency in the Nigerian economy, Muhibudeen and Haladu came to the conclusion that ATM and CHQ have a favorable but minor link with nonbank currency (COB). This weak link can be explained by the time frame of the study. The majority of the study's observational period was from 2009 to 2011 before implementation. Given that just the post-implementation era was examined and that ATM and CHQ had negligible effects in a perfect fitness scenario, it can be said that CLP tools have no impact on the movement of money outside of Nigerian banks. used the ordinary list square (OLS) method to analyze data with the variables listed below; ATM, cheque, WEB, POS, and MBT were independent variables; external currency is the dependent variable..

Methodology

The CBN's yearly reports served as the primary source of secondary data for the study. The primary variables employed were the amount of cash moving outside of banks (dependent variable) and the tools of CLP (independent variable), which included testing of ATM, POS, WEB, INT, and CHQ. The instrument chosen was one of the primary tools used by banks in Nigeria to eliminate physical cash carrying. Because we want to understand how each CLP instrument affects money outside banks, the study's dependent variable was cash in circulation outside banks. It is proof that the main goal of CLP is to minimize the amount of actual cash that is carried about for transactional needs. For the purposes of this study, we defined the total amount of currency in circulation as

Model specification

The model for this study is

$MS_t = \beta_0 + \beta_1 ATM + \beta_2 POS + \beta_3 WEB + \beta_4 CHQ + \beta_5 INT$

Where

MS = Money outside bank system

ATM = Automated teller machine

POS = point of sales system

WEB =

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CHQ = Cheques

INT = Internet

A prior Expectation

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 < 1$

Regression Analysis

Descriptive Analysis

Table   1

	MS2	ATM	POS	WEB	CHQ	INT
Mean	24.61062	4610.268	1090.785	214.4400	6166.187	1234.655
Median	24.85482	4479.193	603.7545	111.9708	6012.505	599.6256
Maximum	27.37879	6512.608	3204.753	675.9167	7674.857	5080.965
Minimum	22.36683	1984.659	48.00831	31.56736	4481.669	31.50933
Std. Dev.	1.614577	1770.360	1153.974	234.9173	1196.205	1675.167
Skewness	0.129150	-0.144314	0.887136	1.185420	0.018087	1.720391
Kurtosis	2.371738	1.578973	2.324728	2.827776	1.559298	4.639006
Jarque-Bera	0.153811	0.700875	1.201345	1.883514	0.692310	4.841772
Probability	0.925978	0.704380	0.548443	0.389942	0.707403	0.088843
Sum	196.8850	36882.15	8726.281	1715.520	49329.50	9877.240
Sum Sq. Dev.	18.24801	21939217	9321586.	386303.0	10016340	19643282
Observations	8	8	8	8	8	8

Table 1; the descriptive statistics show that the mean value of the Money outside bank system (MS2) is 24.61062 with a standard deviation of 1.614577. The maximum value for MS2 is 27.37879 in a year, while the minimum is 22.36683. The mean value of Automated teller machines (ATM) is 4610.268 per 100,000 adults with standard deviation of 1770.360% while the maximum and minimum are 6512.608% and 1984.659% respectively, the average value of Point of sales is ₦1090.785 billion with standard deviation of 1770.360% while the maximum and minimum are ₦ 3204.753 billion and ₦ 48.00831 billion respectively, WEB has average value of ₦ 214.4400 billion with standard deviation of 234.9173% while the maximum and minimum are ₦ 675.9167billion and ₦ 31.56736billion respectively, the mean value and standard deviation of cheques are ₦ 6166.187 billion and 1196.205% respectively while the maximum and minimum are ₦ 7674.857 billion and ₦ 4481.669 billionrespectively, the mean value of the internet (INT) was ₦1234.655billion with a standard deviation of 1675.167%. The maximum value for MS2 is ₦5080.965billion in a year, while the minimum is ₦31.50933 billion.

Table 2

Correlation Analysis

	MS2	ATM	POS	WEB	CHQ	INT
MS2	1.000000	0.118253	0.037974	0.106366	-0.094558	-0.064491
ATM	0.118253	1.000000	0.868857	0.778396	-0.945291	0.708800
POS	0.037974	0.868857	1.000000	0.898946	-0.909907	0.936563
WEB	0.106366	0.778396	0.898946	1.000000	-0.794333	0.734488

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CHQ	-0.094558	-0.945291	-0.909907	-0.794333	1.000000	-0.802695
INT	-0.064491	0.708800	0.936563	0.734488	-0.802695	1.000000

The relationship between the variable were depicted in the table above ATM, POS, and WEB have positive relationship with MS2, whereas, CHQ, and INT have negative relationship with MS2. POS, WEB, and INT have positive relationship with ATM, whereas, CHQ has negative relation. The relationship of WEB and INT with POS is positive while that of CHQ is negative, CHQ has a negative relationship with WEB while INT has positive relationship

Table 3

Regression Analysis

Dependent Variable: MS2
Method: Least Squares
Date: 08/09/23   Time: 15:44
Sample: 2012 2019
Included observations: 8

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	28.33355	30.63886	0.924759	0.4527
ATM	-0.000407	0.002965	-0.137201	0.9034
POS	0.002579	0.013639	0.189079	0.8675
WEB	-0.002675	0.022961	-0.116503	0.9179
CHQ	-0.000389	0.003414	-0.113867	0.9197
INT	-0.001368	0.005091	-0.268778	0.8133

R-squared	0.094641	Mean dependent var	24.61062
Adjusted R-squared	-2.168756	S.D. dependent var	1.614577
S.E. of regression	2.874109	Akaike info criterion	5.063068
Sum squared resid	16.52100	Schwarz criterion	5.122649
Log likelihood	-14.25227	Hannan-Quinn criter.	4.661217
F-statistic	0.041814	Durbin-Watson stat	2.672590
Prob(F-statistic)	0.997244		

ATM, POS, WEB, CHQ, and INT has positive effect on money supply but insignificant, indicate that cashless policy has no effect on money supply. Increase in ATM, POS, WEB, CHQ, and INT transaction does not influence money supply. The R^2 is 9.5% indicate that variation in money supply explain by variables include in the model by 9.5% while others variable explain variation by 90.5%.

Conclusion and Recommendation

Nigeria's acceptance of CLP is a recent development that was hurriedly imposed on both banks and customers when it was first introduced in 2012. This policy has an effect on business transactions, the population, and currency circulation outside of banks, which is the subject of this study.

The study revealed that all variables (Automated teller machine, point of sale, web, Cheque, and internet) proxy for cashless policy has insignificant effect on money outside the bank sector, is in line with Muhibudeen and Haladu and contrary to Aprior expectation. Government should formulate other policy to regulate money in circulation.

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