POLAC INTERNATIONAL JOURNAL OF ECONOMICS
AND MANAGEMENT SCIENCE (PIJEMS)
DEPARTMENT OF ECONOMICS AND MANAGEMENT SCIENCE
NIGERIA POLICE ACADEMY, KANO

IMPACT ASSESSMENT OF CASHLESS ECONOMY POLICY ON ECONOMIC GROWTH IN NIGERIA

Abu Maji, PhD Department of Economics, Federal University, Lokoja, Kogi State

Titus Wuyah Yunana, PhD Department of Economics & Management Science, Nigeria Police Academy, Wudil-Kano

Abstract

The paper examines the impact of cashless economic policy on economic growth in Nigeria by the used of ordinary least square technique on quarterly data from first quarter 2012 to first quarter 2019. The findings indicates that automatic teller machine (ATM), point on sale (POS), internet banking (WEB) and mobile banking (MB) had positive impact on economic growth in Nigeria. Except for internet banking, all the explanatory variables had significant influenced on economic growth. The paper therefore recommends that government through the central bank of Nigeria should pursued cashless policy in the country in order to stimulate growth.

Keywords: Cashless Policy, Economic Growth, Internet Banking, Automatic Teller Machine, Mobile Banking

JEL Classification: E6; E52; E58

1. Introduction

The preface of digital banking in Nigeria by the Central Bank has concreted channels for a new epoch of development where the use and demand for physical cash is paving ways gradually. These present advancement in the Nigerian financial system would create ways for economic growth and development of the nation in all area of the economy.

A 'cash-less' economy forms the middle phase of a three-phased economic model of payment systems. This essentially means that developing countries particularly Nigeria would transit from a 'cash-based' economic model to 'cash-less' economic model before achieving the pure state of a 'cashless' economic model. A cash-based economy is one in which day-to-day payments and business activities are predominantly transacted in physical notes and coins (Baddeley, 2004). Cash-less economy, on the other hand, is an economy where the physical cash circulating in the economy is minimised while other forms of payment, especially electronic based payments, are utilised (Basel Committee, 1998, BIS, 1996). In other words, cash-less economy is a combination of the cash-based payment system and electronic payment systems, with the latter exceeding the former in terms of utilisation. A cashless economy represents the pure state of non-cash payment systems where no more sturdy coins and notes are printed for circulation by the Central Bank.

All the money in a cashless economy is private money issued by banks in the form of deposits, or some fancier e-money. According to European Central Bank (ECB) (1998), electronic money is broadly defined as an electronic store of monetary value on a technical device that may be widely used for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transactions, but acting as a prepaid bearer instrument. Analogous to this definition is that of cashless economy wherein there exist no notes and coins issued by central banks but by private financial institutions (De Grauwe, 2004).

In line with global trends, the Central Bank of Nigeria (CBN) in 2011 introduced Cash-less policy to the Nigerian economy. This Policy aims at reducing the amount of physical cash circulating in the economy whilst encouraging the use of alternative electronic products and channels for financial transactions. It started in Lagos State on the 1st of January, 2012 and later took off in other parts of the country on July 1, 2014. The choice of Lagos state as the starting point is explicable, given that Lagos is ahead of other states in terms of banking penetration and payment infrastructure (CBN, 2011).

The Policy, which has been endorsed by the Bankers' Committee, pegs the daily limit for withdrawal of cash in banks at N500, 000 and N3, 000,000 for individuals and corporate bodies respectively. Where individuals and

corporate bodies choose to withdraw more than the set limit, charges of 3% and 5% respectively on every N1, 000 above the approved limit would be incurred (CBN, 2011).

According to the apex bank, the Policy became necessary to discourage the high usage of cash across the economy which has a number of negative consequences including high cost of cash. In 2009, the direct cost of cash management to the banking industry was N114.5billion, and may be as high as N295.97billion in 2015. This spiralling cost of cash management, most of which is passed onto the consumer in the form of bank charges and lending rates, is as a result of the cash dominant economy existing in Nigeria. For example, in December 2008, Currency-In-Circulation (CIC) was N1.184 trillion but rose by 20.36% in December 2009. As at December 31, 2010 the total CIC value stood at N1.378 trillion, showing an increase of 16.5%. Further reports show that about 90% of daily withdrawals by bank customers are below N150, 000, thus, only about 10% of bank customers are responsible for the cost of cash management borne by all bank customers (CBN, 2011).

The infrastructures in Nigeria over the years have not been reputable and have thus given way to ineffectiveness to the sincerity in financial transactions in the banks. The technology available for carrying out banking transactions are not as effective as they ought to be therefore leaving people with no other choice than to keep cash in their houses. On these basis, this study aim at assesses the impact of the cashless policy on the Nigerian economy. The research work further divided the work into five sections. We explained the background to the study in section one. The second section review related literature and theory while section three looked at the methodology of the study. We present and analysed the results in section four while the final section drawn conclusion and make vital recommendations of the study.

Cashless Economy Policy in Nigeria

Cashless economy is an economy where transaction can be done without necessarily carrying physical cash as a means of exchange of transaction but rather with the use of credit or debit card payment for goods and services. The cashless economy policy commenced implementation in Lagos in 2012 and other parts of the country on July 1, 2014 and is applies to all accounts, except all embassies, diplomatic missions and multilateral and aid donor agencies in Nigeria. The policy provides that from March 30, 2012 in Lagos and July 1, 2014 in other parts of the country, a daily cumulative limit of N500, 000 and N3, 000,000 on free cash withdrawals and lodgements by individual and corporate customers respectively was imposed. Where individuals and corporate organizations carry out cash transactions above the limits, charges would be incurred. By this, banks are authorized to deduct 3% for every N1, 000 above N500, 000 transacted by individual customers, and 5% per N1, 000 above the N3 million limit transacted by their corporate customers.

The contravention of this provision by the bank shall attract a fine of five times the amount that the bank waives as a first offender and subsequently, the bank shall pay ten times the charges waived. It is imperative to note that the limit is set to apply to the account irrespective of the channel by which the cash was either withdrawn or deposited. Thus withdrawals or deposits made from over the counter, ATM and 3rd party cheques encashed over the counter all make up the cumulative limit. Furthermore, the limit applies to cash brought through Cash-in-Transit (CIT) companies, as the CIT companies only serve as a means of transportation CBN (2011).

Under the Policy, third party cheques above the sum of N150, 000 shall not be eligible for encashment over the counter. Rather value for such cheques shall be received through the clearing house. Thus any cheque issued with a value above N150, 00 to a third party can only be deposited into an account; as such cheques cannot be cashed. If a bank allows 3rd party cheque encashment, it shall be liable to a sanction of 10% of the face value of the cheque or N100, 000 whichever is higher.

Nigeria is a heavily cash oriented economy with retail and commercial payments primarily made in cash. Indeed, cash is a strong motivator in Nigeria's highly informal economy. According to the Central Bank of Nigeria (2012), cash related transactions represented over 99% of customer activity in Nigerian banks as at December 2011. In 2009, the CBN spent about N34b in printing currency notes, but as at December 2012, it was N17.97b. Recent report from CBN indicates that over 85%of the cash in circulation in Nigeria is outside the banking System while only about 15% are within the system (CBN, 2012).

According to the Central Bank of Nigeria (2012), cash related transactions represented over 99% of customer activity in Nigerian banks as at December 2011. In 2009, the CBN spent about N34b in printing currency notes, but as at December 2012, it was N17.97b. Recent report from CBN indicates that over 85% of the cash in circulation in Nigeria is outside the banking System while only about 15% are within the system (CBN, 2012).

Table 1: Cash Transactions

Withdrawal/Lodgement band	Volume of Transactions (%)	Value of Transactions (N'Bn)
0-N100,000	86%	491
N100,001-N150,000	4%	115
Above N150,000	10%	1469
TOTAL	100%	2076

Source: CBN, 2020

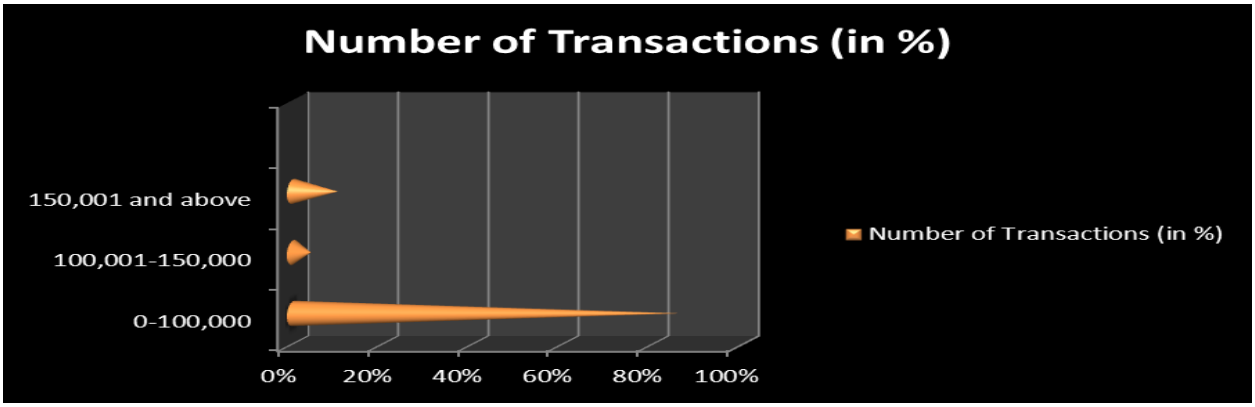

Figure 1: Cash Transactions

Table 1 and Fig 1 above show that "only 10 per cent of banks' cash transactions are above N150, 000, but they make up 71% of the value of cash transactions. About 90% of Nigerians carry out transactions below N150, 000. This means that the high patronage Nigerian banks receive is majorly from customers who are carrying out transactions below N150, 000. There are so many alternative payment systems in Nigeria which are even more convenient and safe, but people are not using them. If bank customers are encouraged to use the cash-less policy instruments such as the ATMs, Mobile money, POS, Web, etc, then the banking halls will be more welcoming and less crowdy.

2. Literature Review and Theoretical Framework

2.1 Literature Review

Olajide (2012) used descriptive survey to investigate cashless banking in Nigeria and its implications on the economy, found out that cashless banking will boost the economy in the long run if the Nigerian technological infrastructures will be put in place. Although in the short run, the policy may look impossible due to the level of adoption of the cashless policy channels.

Morufu and Taibat (2012) used qualitative survey to ascertain banker's perceptions of electronic banking in Nigeria. The results suggest that bankers in Nigeria perceive electronic banking as a tool for minimizing inconvenience, reducing transaction costs, altering customers queuing pattern and saving customers banking time.

Olatokun and Igbinidion (2009) used diffusion of innovation (DOI) theory to investigate the adoption of Automatic Teller Machines in Nigeria. They found out that the constraints relative advantage, complexity, observe-ability, compatibility, and trial-ability were positively related to attitude to the use of the Automated Teller Machine (ATM) cards in Nigeria.

Hogarth, Kolodinsky, and Gabor, (2008) used diffusion innovation theory to investigate the consumer payment choices: paper, plastics or electrons. They found out that increases in income and education also elicit a positive

effect on adoption of electronic banking, regardless of the technology. On the other hand, the impacts of other demographic characteristics on adoption were less clear.

Karjaluoto, Mattila and Pento (2002) used consumer acceptance theory to determine online banking acceptance. They found out that attitude towards online banking and its usage is significantly affected by prior computer experience, prior technological experience, personal banking experience and reference group influence.

De Grauwe (2000) examined the costs of cash and payment cards in Iceland and Belgium. These countries were selected because they provide a clear contrast as Iceland has one of the lowest rate of cash usage while Belgium is at the other extreme. For the cash payment system in Iceland, the study estimate the cash production and distribution costs incurred by Central Bank and subtract the revenues obtained through interest foregone on cash in circulation whereas, for the card-based system, they examine the card companies, commercial and savings banks, cardholders and merchants

2.2Theoretical Framework

1. Technology Acceptance Model

The theory of Technology Acceptance Model was proposed by Fred Davis in 1989. The theory has been developed to provide a better understanding of the usage and adoption of information technology. It is presently a prominent theory used in modelling technology acceptance and adoption in Information systems research. Technology Acceptance Model is an information systems theory that models how users come to accept and use a technology that will encourage economic growth. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. The factors are; perceived usefulness (PU) and perceived ease-of-use (PEOU). According to Technology Acceptance Model, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system.

2. Diffusion of Innovation Theory

This theory was developed by Gabriel and Rogers in 1962. Diffusion of innovations theory seeks to explain how, why, and at what rate new ideas and technology spread through cultures. He said diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. Rogers explained the process of Innovation diffusion as one which is dictated by uncertainty reduction behaviour amongst potential adopters during the introduction of technological innovations. Innovation Diffusion Theory consists of six major components: innovation characteristics, individual user characteristics, adopter distribution over time, diffusion networks, innovativeness and adopter categories, and the individual adoption process. Arguably the most popular of the six components of Innovation Diffusion Theory centres on the characteristics of the innovation itself.

3. Methodology

To analyze the impact of cashless economy policy on the Nigeria economy, multiple regression models was adopted. The data sets used for this analysis is the quarterly time series of the selected variables from 1st quarter 2012 to 1st quarter 2019. The choice for the period was as a result of the introduction of the cashless policy in January 1st, 2012 by the Central Bank of Nigeria. The data was extracted from the Central Bank of Nigeria quarterly reports and Statistical Bulletin of various years and others economic papers.

3.1 Research Hypothesis

The hypothesis below was tested as a means of carrying out the objective of the study:

H_0: Null hypothesis. Economic growth is not influenced by cashless economy policy in Nigeria. ($H_0 = 0$)

H_1: Alternative hypothesis. Economic growth is influenced by cashless economy policy in Nigeria. ($H_0 \neq 0$)

3.2 Technique of Analysis and Model specification

The study make used of analytical tool "regression techniques" [Ordinary least Square (OLS)] to assess the impact of cashless economy policy on the Nigerian Economy. To assess the impact of cashless economic policy on the Nigerian Economy, the linear regression model is specified as:

GDP = (ATM, POS, WEB, MB).....1

Where

GDP = Economic growth proxy by gross domestic product (GDP)

ATM= Automatic teller machine

POS= point of sale

WEB= internet banking

MB= mobile banking

The stochastic form of the model is:

$GDP_t = \beta_0 + \beta_1 ATM_t + \beta_2 POS_t + \beta_3 WEB_t + \beta_4 MB_t + U_t$.....2

Where

$\beta_0 - \beta_4$ are parameters to be estimated

U_t is the error term

4. Presentation and Analysis of Results

Equation 1 was estimated using Econometrics view and the results are presented bellow for the impact of ATM, POS, WEB and MB on Economic growth (GDP). The estimated regression equation for the model is given in table 2.

Table 2: Regression Results

Functional form	**Constant term**	**Coefficients**				**R^2** **0.93**	**R^{-2}**	**F-Stat**
		ATM	**POS**	**WEB**	**MB**			
Regression	3.14 (4.02)	0.42 (2.61)	0.18 (1.93)	2.39 (0.24)	0.27 (3.14)	0.931	0.884	67.214

Source: E-view 11.0

In table 1 the intercept is 3.14 which means without cashless economic policy (ATM, POS, WEB and MB) the economy of Nigeria will grow by 3.14%. The coefficient of ATM is 0.42, which means that an increase in ATM points and usage by 1% would lead to 0.42% increase in economic growth. It implies that ATM is not only correctly signed (positive) but also significant which is in line with the a priori expectation.

The coefficient of POS is 0.18 which implies that if POS increase by 1% it would lead to about 0.18% increase in economic growth in Nigeria. This implies that increase in POS is one of the major variables that influence economic growth as shown by the t-statistics. Furthermore, the coefficient of WEB is 2.39 which mean that the relationship is positive therefore a 1% increase in WEB would lead to 2.39% increase in economic growth. The coefficient of MB is 0.27. This means that a percentage increase in MB would definitely result to increase in economic growth by 0.27 percent.

The R-square figure is 0.931 with adjusted R-square of 0.884. The F-statistics is 67.214. The results show that 88% of what happen to economic growth (GDP) is explained by all the regressors (cashless economic policy variables). The remaining 12% is accounted for by the variables not included in the model. Finally, all the t-statistics of the coefficients are statistically significant except for internet banking (WEB). The F-statistic of 67.214 indicated that all the variables are significant in explaining economic growth. We therefore, reject the null hypothesis and accept the alternative that economic growth is influenced by cashless economic policy in Nigeria.

5. Conclusion and Recommendations

The research work shown that there is a relationship between economic growth and cashless economic policy in Nigeria. Ordinary least Square (OLS) was used and estimated the multiple regression model which has powerful predictive capacity for the explanation of the degree of impact of cashless economic policy on economic growth in Nigeria. The result indicates that all the explanatory variables have positive relationship with

economic growth and are highly significant except for internet banking. This study therefore concludes that automatic teller machine, point of sale and mobile banking are the major contributing factors to the growth of the economy. The research work therefore, recommends that cashless economic policy should be encourage and pursued with all alacrity.

Reference

Baddeley, M. (2004) "Using E-Cash in the New Economy: An Economic Analysis of Micropayment Systems". *Journal of Electronic Commerce Research* 5. *(4) UK, Cambridge.*

Basel Committee, (1998) "Risk Management for Electronic Banking and Electronic Money Activities". *Basel Committee Publications, No. 35*

Central Bank of Nigeria (2011) "New Cash Policy, Presentation for the Interactive Engagement Session with Stakeholders on Cash-Less Lagos". *Stakeholder Session – Supermarket Operators.*

Central Bank of Nigeria (2011) "Money Market Indicators & Money and Credit Statistics" *CBN StatisticalBulletin, CBN Publications, Abuja*.

Central Bank of Nigeria (2012) "Towards a Cash-less Nigeria: Tools and Strategies" *Retrieved, September 19, 2012*

De Grauwe, P., E. Buyst & L. Rinaldi (2000) "The Costs of Cash and Cards Compared: The Cases of Iceland and Belgium London". *De Brook Ltd*.

European Central Bank (1998) "Report on Electronic Money" *Frankfurt, August.*

Hogarth, J. M., Kolodinsky, J., & Gabor, T. (2008) "Consumer Payment Choices: Paper, Plastics or Electrons" *International Journal of Electronic Banking*, *1*(1), 16-16.

Karjaluoto, H., Mattila, M., & Pento, T. (2002) "Factors Underlying Attitude Formation towards Online Banking in Finland" *The International Journal of Bank Marketing, 20*(6),261-272

Mobile Banking: UNCTAD (2012) "Report, Africa Research Bulletin" *Economic, Financial and Technical Series, 48: 19345A–19346B. doi: 10.1111/ j.1467-6346.2011.04259.*

Morufu, O., & Taibat, A. (2012) "Bankers perceptions of electronic banking in Nigeria: A review of post consolidation experience" *Research Journal of Finance and Accounting*, *3*(2), 5-6.

Olajide, V. C. (2012) "Cashless banking in Nigeria and its Implications, 1-8." *Retrieved online on 23/06/2012*.

Olatokun, W. M., & Igbinedion, L. J. (2009) "The Adoption of Automatic Teller Machines in Nigeria: An Application of the Theory of Diffusion of Innovation" *Issues in InformingScience and Information Technology*, *6*(2), 373-393.