POLAC ECONOMIC REVIEW (PER)
DEPARTMENT OF ECONOMICS
NIGERIA POLICE ACADEMY, WUDIL-KANO

IMPACT OF CBN CASHLESS POLICY ON THE DEVELOPMENT OF BANKING SECTOR IN NIGERIA

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Abstract

The study investigates the impact of cashless policy on the development of banking sector in Nigeria, Adamawa state as case study, designed questionnaire is the main instrument that is used in collecting primary data from staff and customers of some selected financial institutions in Adamawa state (FUGAZ). Cashless policy was measured by customer's perception with regard to financial inclusion (FINC) and cashless payment system (CSPS) to determine its impact on the development of banking sector (DVBS). Path analysis from structural equation models (SEM) was employed as the method of data analysis. The findings revealed that, Financial Inclusion had significantly impacted the Development in the Bank Sector with a regression weight of 2.1, indicating that Financial Inclusion significantly predicts changes in the Development in the Bank Sector. Specific indicators such as the relationship between Policy Infrastructure for Cashless PICT demonstrated a significant positive association. Similarly, the relationship between Cashless Payment System and DVBS was significant, signifying a substantial positive correlation between the variables. The study recommends that; the policy should incorporate local content, aligning with the core economic principles of Nigeria that are rooted in the socio-cultural values of its people. There is also pressing need for broader access to financial services. It is imperative to give greater attention to the factors influencing financial inclusion, including income, education, age, and gender. Additionally, priority should be given to factors such as formal account ownership, formal saving practices, and access to formal credit. The Central Bank of Nigeria (CBN) should engage in public enlightenment campaigns to educate the public about the intricacies of the cashless system. This will elevate awareness levels and potentially reduce resistance from the banking public

Keywords: Cashless Policy, Banking Sector, FUGAZ

1. Introduction

The recent evolution of technology for financial transactions positioned interesting questions for policy makers and financial institutions regarding the suitability of current institutional arrangements and availability of instruments to guarantee financial stability, efficiency and effectiveness of monetary policy. Over the course of history, different forms of payment systems have been in existence. Initially, trade by barter was common; however, the problems of barter such as the double coincidence of wants necessitated the introduction of various forms of money (Swartz et al, 2004). Nevertheless, analysts have been predicting the complete demise of study instruments and the emergence of potentially superior substitute for cash or monetary exchanges. The emergence of cashless policy served as a revolution the financial operations in the banking sector in Nigeria, unlike the barter system which involves the exchange of one good for another, a cashless environment refers to one in which transactions are carried out with minimal exchange of physical cash.

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 initiative of the Central Bank of Nigeria (CBN) is a move to improve the financial terrain but in the long run sustainability of the policy will be a function of endorsement and compliance by end-users (Ejiro, 2018). The introduction of the implementation of cashless policy (policy is program of actions adopted by government) began in Lagos State, Nigeria. That was because Lagos state accounted for 85% of POS and 66% of cheques transaction in Nigeria (CBN, 2011). The policy (Cashless policy) aimed at reducing the amount of physical cash circulating in the Nigeria economy and thereby encouraging more electronic–based transaction. According to Central Bank of Nigeria CBN (2011) the policy was expected to reduce cost incurred in maintaining cash-based economy by 90% upon its full implementation in Nigeria. The Cashless Policy was also in response to the challenges associated with the heavy reliance on cash transactions in Nigeria. Some of the key issues addressed by the policy include: High Cash Intensity, Weak Payment System Infrastructure, Corruption and Illicit Financial Activities among others. The vision of a cashless society, while ambitious, does hold the potential to bring about a range of benefits to the banking sector in Nigeria for the country and its people if implemented correctly. These transformations in the financial landscape have significant effects on the government, businesses, and society at large. (Adedamola, , 2023)

The world becomes increasingly reliant on technology; the traditional way of doing business is no longer feasible. A cashless society offers a more convenient and secure alternative to physical cash. The benefits are numerous, from faster transactions to reduced costs and risks associated with physical currency, such as theft and fraud. In the past, a cashless society was not an entirely new concept. However, with digital technology, it is now more achievable than ever. Electronic fund transfers, mobile payment apps, and digital wallets are now part of our everyday lives, and Nigeria is no exception. With the Cashless Policy, the country is on a path to become a cashless or cash-lite economy, and this presents an unprecedented opportunity for digital payment providers. For instance, Sweden is a country that has gone cashless, with over 85% of all transactions now made electronically. This has resulted in the creation of innovative financial solutions such as instantaneous mobile payment systems and even a national digital currency. Kenya also led the way in Africa with at least one individual in 96 percent of Kenyan households using MPesa for payments (Adedamola, G. February, 2023)

The Central Bank of Nigeria (CBN) has been driving the effort to establish a cashless society with several initiatives aimed at promoting digital payments and reducing the country's dependence on cash for over a decade. The 2012 digital payments directive, issued by the CBN, was a significant milestone in this journey. The directive required financial institutions to increase their investment in digital payment infrastructure, promote digital payments among their customers, and work with the CBN to develop a strong regulatory framework. Also Available data indicates that total assets of the banking sector increased by 9.4 per cent to reach N35.1 trillion at end-December 2017 from N32.1 trillion at end-December 2016."The structure of the Nigerian financial sector remained unchanged in 2017 although the number of licensed banks increased to 27, from 26 in 2016. The licensed banks comprise 21 commercial banks, five (5) merchant banks and one (1) non-interest bank. The number of bank branches, decreased to 5,450 from 5,571 in 2016

The 2012 digital payments directive, issued by the CBN, was also a significant milestone in this journey. The directive required financial institutions to increase their investment in digital payment infrastructure, promote digital payments among their customers, and work with the CBN to develop a strong regulatory framework. This initiative aimed to modernize the financial sector, increase transparency, and enhance efficiency in the economy (CBN, 2018). However, it was noted from Yaqub et al. (2013) that "one of the problems of cashless banking policy is customer's resistance to change in technology due to lack of awareness on the benefits of new technologies, fear of risk, lack of trained personnel in key organizations, tendency to be content with the existing structures and resistance to the new payment

mechanism." He further maintained that Nigeria as a developing country with a lot of rural areas where infrastructures or banks are almost non-existent. Cashless banking policy cannot be successful if implemented only urban areas where banks and enabling infrastructures exist while excluding the greater part of the country in the rural areas.

Despite the challenges, Nigeria banking sector witnessed a range of achievements, which included the expansion of financial access points such as automated teller machines (ATMs), point of sale (PoS) terminals, mobile cash (mCash) facilities, as well as the proliferation of e-payment platforms, and a significant increase in the adoption of electronic channels. The report on financial inclusion by CBN revealed that; ownership of an account with a financial institution or a mobile money provider in Nigeria dropped by 4 percentage points from 44% in 2016 to 40% in 2017. The 2017 Findex report further highlights the issues observed in the mid-term review of the NFIS strategy. For instance, the gender gap in account ownership widened by 24 percentage points with 51% men owning an account compared to 27% women (WDFI, 2017)

With the introduction of more payment systems, experts have been predicting the emergence of a cash less society. Today, we still pay with cash and checks, several payment instruments, such as credit and debit cards, are widely used. The use of paper money is more declining, but at a rather slow pace. As it were, Nigeria is a country heavily dominated by cash and there are some factors that negatively affect the choice of cash over non-cash instruments, some of these include time spent in counting and verifying cash, susceptibility to loss, time spent in the banking halls, amongst others (Nnanwobu, *et al*., 2011). Cash-based economy is characterized by the psychology to physically hold and touch cash, a culture informed by ignorance, illiteracy, lack of security consciousness and appreciation of the merit of digital payment. Cash, as a payment system, attracts lots of negative consequences such as high cost of handling cash, risks of using cash and keeping them in houses which eventually lead to high rate robbery, financial loss in the case of fire and flooding incidents. High cash usage results in lots of money outside the formal economy, thus limiting the effectiveness of monetary policy in managing inflation and encouraging economic growth. Also high cash usage enables corruption, leakages, money laundering, counterfeiting, mis-management, mutilation and depreciation in value if not invested.

In Nigeria today, infrastructure is a major problem that hinders the money deposit banks from attaining full potential in terms of certain policy implementations and its impact on financial transactions in the banking industry. The infrastructure in Nigeria over the years has not been reputable and thus has given way to ineffectiveness to the sincerity in financial transactions in the banks. According to Akhalumeh and Ohiokha (2011), some challenges with the introduction of cashless policy, their findings showed that 34.0% of the respondents cited problem of internet fraud, 15.5% cited problem of limited POS/ATM, 19.6% cited problem of illiteracy and 30.9% stayed neutral. While in some quarters there was fear of unemployment.

The level of technology in the nation is rather poor and increasing at a slow pace and as such hasn't given room for major development and policy implementations that may have risen. 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 in order to avoid having to spend lots of time in the banking halls due to low servers, interrupted power supply, bad internet services. Illiteracy and the low level of education of people does nothing else than leave people in the dark and therefore results into the inability of the people to understand when developments are being put into place. Many people do not see the need to keep their money in the banks or invest them due to the lack of understanding and also insufficient publicity and awareness measures. It was noted that the modern day banking services rely majorly on the adoption of information and communication technologies such as internet, telephone, automated teller machine; electronic fund transfer, magnetic ink character reader and other e- payment

systems in their day- to-day services to customers so as to remain competitive in the global economy. This study is different from the previous work in terms of objective, methodology and scope. The objective of this study is to examine the impact of payment system for cashless transaction and financial inclusion on the development of banking sector in Nigeria using some selected banks within Yola metropolitan of Adamawa state, the researcher also recognized efficiency in the use of information and communication technologies such as internet, telephone, automated teller machine; electronic fund transfer, magnetic ink character reader, security and other e- payment systems as a determinant of development in banking sector

2. Literatures Review

The implications of implementing cashless policies have been a subject of ongoing debate among scholars. A substantial body of literature explores both theoretical and empirical aspects, examining the efficiency of cashless payments and their impact on the banking sector. Various theories have been investigated, including the Technology Acceptance Model (TAM), Vulnerable Group Theory of Financial Inclusion, Innovation Diffusion Theory, Theory of Planned Behavior, Theory of Reasoned Action (TRA), and Effort Expectancy Theory (EET). This study specifically draws on the Vulnerable Group Theory of Financial Inclusion and the Innovation Diffusion Theory. According to this perspective, the spread of a new idea, such as cashless payments, is influenced by the innovation itself, communication channels, time, and the social system. Innovation, as defined by Ratcliff et al. (1999), refers to a novel idea, practice, or project perceived as such by an individual or another unit of adoption. Rogers (2004) outlines a process of innovation-decision involving knowledge, persuasion, decision, implementation, and confirmation. The Vulnerable Group Theory of Financial Inclusion argues that financial inclusion programs should target vulnerable members of society, including the economically disadvantaged such as the poor, young people, women, and the elderly. These groups are often the most affected by economic challenges, and including them in the formal financial sector is seen as a way to alleviate their hardships. Government-to-person (G2P) social cash transfers into formal accounts are suggested as a means to encourage vulnerable individuals to join the formal financial sector, promoting financial inclusion. Additionally, the theory posits that providing tools for financial inclusion, such as social cash transfers, can address income inequality concerns for vulnerable groups. This approach may offer compensation for existing disparities and provide an opportunity for vulnerable individuals to catch up with other segments of society. In summary, the theory advocates for targeted financial inclusion efforts directed at vulnerable populations in society.

On the empirical front, numerous empirical evidences can be seen studying the impact of CBN cashless policy on the development of banking sector; Kehinde and Adelowo (2016) carried out a study to assess the level of Nigerians preparedness for e-commerce and cashless policy using the level of Information Communication Technology (ICT) adoption, usage and infrastructure available covering a space of 13 years. The paper concluded that ICT policy needs to be fully implemented and private and public sectors collaborations or partnership should be supported to facilitate the ecommerce and cashless policy.

Taiwo, Kehinde, Afieroho and Agwu, (2016) carried out a study to appraise the implementation of the cashless policy since its introduction into the Nigerian Financial system, using one sample t-test. The results showed that the cashless policy will have the desired impact if a lot is done to ensure the implementation of an effective cashless policy system.

Odior and Banuso(2018) carried out a study in Nigeria, observed that 68.2% of the respondent complained about long queues in the bank, 28.9% complained of bad attitude of teller officers (cashiers) while 2.89% complained of long distance of bank locations to their home or work places. Likewise, in her 24th NCS national conference in December 2011, CBN data shows that 51% of withdrawal done in Nigeria was through

automated teller machine (ATM), while 33.6% was through over the counter (OTC) cash withdrawals and 13.6% through cheques. Payment was also done through point of sales machine (POS) which accounted for 0.5% and web 1.3%.

Akhalumeh and Ohioka (2018) observed some challenges with the introduction of cashless policy. Their findings show that 34.0% of the respondents cited problem of internet fraud, 15.5% cited problem of limited POS/ATM, 19.6% cited problem of illiteracy and 30.9% stayed neutral - the respondent not been sure of problem been expected or experienced. While in some quarters there was fear of unemployment, some believe it will create more jobs especially when companies manufacturing POS machine are cited in Nigeria. More so, data sourced from Central Bank of Nigeria portal shows that Lagos state, with a population of 17 million people, only has sixty one Point Of Sales, twenty bank branches and twenty four ATMs per 100,000 people which are far less to satisfy the needs of the population.

Ojeedokun (2018) studied the problem of cash based economy and cashless policy in Nigeria. For effective cashless implementation in Nigeria availability of sufficient and well-functioning infrastructure (notably electricity), harmonization of fiscal and monetary policy, regular assessment of the performance of cashless banking channels, consideration of the present state and structure of the economy, redesign of monetary policy framework and greater efforts towards economic growth whilst managing inflation should be considered.

Ugwueze and Nwezeaku (2018) examined the nexus between financial innovation and bank efficiency as well as the impact of financial innovation on efficiency ratio of deposit money banks in Nigeria from 2006 to 2014. The secondary data covering the period of the study were sourced from the Central Bank of Nigeria statistical bulletin. The unit root test was performed to ensure that the variables were free from stationarity defect linked with almost all time series data due to the nature they were generated. Edwin and Adele-Louise (2018) investigated the extent of the adoption and usage of the mobile phone banking services among banking customers in Nigeria and the associated problems. Mobile phones are now ubiquitous and a standard aspect of daily life for a large percentage of the world population.

Andabai and Bina (2019) Impact of cashless policy on deposit money bank performance in Nigeria (2000-2018) the study adopted *ex-post-facto* research design to source requisite information. Secondary data were used and collected from Central Bank of Nigeria Statistical Bulletin. This study used automated teller machine (ATM), point-of-sale (POS), and mobile banking (MB) as the explanatory variables to measure cashless policy; whereas, return on assets of deposit money banks was proxy for deposit money banks performance and employed as dependent variable. Hypotheses were formulated and tested using Ordinary Least Square (OLS). There is a significant impact of automated teller machine transaction on return on assets of deposit money banks in Nigeria. Point on Sales terminal transactions has a significant impact on return on assets of deposit money banks in Nigeria. Electronic mobile payment has a significant impact on return on assets of banks in Nigeria. The study concludes that cashless policy has a significant impact on deposit money banks performance in Nigeria. The study recommends that the policy makers should ensure that effective deployment of information technology due to its sophistication since the technology with relative perceived advantage. Policy makers and regulatory authorities should be able to provide security by physically and electronically to check the incidence of hacking by fraudsters.

Fatogun and Ajao (2020) conducted a study on Cashless policy and economic development in Nigeria. Regression analysis (Using OLS method) was used as methodology to examine the impact of cashless policy on cash movement through the usage of ATM, fund transfer, internet availability and to determine whether cashless policy has impact on delivery of financial transactions on economic development in Nigeria. Their findings revealed that; the study showed that cashless policy reduces the movement of cash through usage of ATM, fund transfer, mobile banking. It helps financial

transactions to be done without delay, it reduces money laundering. The study indicated that there is a very weak positive relationship between cash movement, joint effect of delivery of financial transactions and cashless policy (R= 0.245) and the model is not significant. However, for the relationship between internet availability, cashless policy and cash movement, the relationship between cash movement, the joint effect of internet availability and cashless policy is also weak (R = 0.295).

Stephen et al, (2020) Evaluation of Cashless Policy in Nigeria: The Pros and Cons. The researchers employed structured questionnaire to collect data and the data were analyzed using descriptive statistics with the use of mean, median, and percentage. The results indicate that the awareness level is almost globally known, however; there are still more technological devices and development that are needed for Nigerians to be considered among the top 20 economies to drive the development and modernization of her payment system in line with the global vision. Based on the findings, some recommendations made were: POS should be approved only for the unbanked areas, panic alert buttons should be included in the ATMs, and comprehensive insurance should be available for ATM cash hijackers.

3. Methodology

3.1 Research Design

For the purpose of this study, the design that was adopted was the descriptive survey design which was conducted in Adamawa. This design adopted allowed for the use of a representative sample from the whole population and for this reason, this survey design was chosen. It made use of a structured questionnaire to obtain the information from both the bankers and customers as to what extent of impact in which the CBN's cashless policy has on the Nigerian economy and the level of awareness the about the new payment system policy.

3.2 Data and Sources

This study mainly used primary data sourced from bank customers and FUGAZ banks in Adamawa State with a totaling of 5 with each of the banks having their branches spread across Adamawa. primary source of data used for this study was collected by administering a structred qestionnaire to a number of respondents. Primary data directly sourced by the researcher are known as Field research.

3.3 Method of Data Collection

For the purpose of this study, designed questionnaire is the main instrument that is used in collecting primary data from staff and customers of some selected financial institutions in Adamawa state (First bank, United Bank of Africa, Guarantee Trust bank, and Access bank Zenith bank). Likert five point scales ranging from 1-5(5=strongly agree, 4= agree, 3=undecided, 2= disagree 1=strongly disagree) are used as a basis of the questions. It was used to collect information including the confidentiality and anonymity of respondents.

3.4 Model Specification

The structural equation model used in the path analysis in order to determine the effect of CBN's Cashless policy on the development of the banking sector
The model is specified as thus;

$$Y^* = X^*\beta^* + \varepsilon^* \quad \textbf{(1)}$$

The Structural Equation Model (SEM) can therefore be expressed further as:

$$Y = X1\beta1 + X2\beta2 + X3\beta3 + \varepsilon1 + \varepsilon2 + \varepsilon3 \quad (2)$$

The Structural Equation Model (SEM) can also be specified as:
Where:
DVBS= Development of banking sector (SQS, POST, MOB, ATMD, CST, CWL)
Cashless policy = PICT, FINI, CPSM) e_1 - $e_{23,}$ (Residual or unobserved term)
DVBS 1 - DVBS 6 are the indicators (observed variables) for Development of banking sector;
PICT 1-PICT 5 are the indicators (observed variables) for Policy and infrastructure for cashless transaction; and

FINI 1 – FNI 5 are the indicators (observed variables) for financial inclusion

CPS 1 – CPS 5 are the indicators (observed variables) for Cashless payment system

SQS = Service quality and security; POST =POS terminal; MOB = Mobile Banking; ATMD= ATM dispensers; CST = Card system and CWL= Cash withdrawal limit

A priori Expectation

$\beta_1 > 0$; $\beta_2 > 0$; $\beta_3 > 0$; $\beta_4 > 0$;

3.5 Method of Data Analysis

In testing the hypothesis, the study employed path analysis from structural equation models (SEM) to estimate the latent variables which include Development in Bank sector, Policy and infrastructure for cashless transaction, financial inclusion and Cashless payment system. This technique is vital to analyse the data as the variables of interest are latent in nature (cannot be directly observed). Structural equation modelling is a multivariate statistical analysis technique that is used to analyse structural relationships. Path analysis was used to determine the structural relationships between observed variables and latent constructs. This method was employed by the researcher because it estimates the multiple and interrelated dependencies in a single analysis. In this analysis, two types of variables are used; endogenous variables and exogenous variables. The path analysis of the structural equation model was analysed using International Business Machine (IBM©) Statistical Package for Social Sciences (SPSS©) Amos 23.0 (Build 1607).

4. Results and Discussion

4.1 Correlation analysis among variables

Correlation analysis among variables provides insight into the latent variable relationships within the default model, offering estimates of correlations between Financial Inclusion, Cashless Payment System, and Policy Infrastructure for Cashless. The correlation between Financial Inclusion and Cashless Payment System is observed to be 0.7, indicative of a moderate to strong positive association. This implies that an increase in Financial Inclusion is likely accompanied by a corresponding increase in Cashless Payment System, and vice versa. A striking correlation of 1.0 is noted between Policy Infrastructure for Cashless and Cashless Payment System. This perfect positive correlation suggests a complete and direct relationship between these two latent variables within the default model. Changes in Policy Infrastructure for Cashless are mirrored precisely by changes in the Cashless Payment System, highlighting a robust and synchronized connection. Additionally, the correlation of 0.7 between Policy Infrastructure for Cashless and Financial Inclusion echoes the strength observed in the Financial Inclusion to Cashless Payment System relationship. This suggests a substantial positive association between Policy Infrastructure for Cashless and Financial Inclusion within the confines of the default model.

Table 1: Correlations between latent variables

Correlations: (Group number 1 - Default model)			Estimate
Financial inclusion	<-->	Cashless payment system	.7
Policy Infrastructure for cashless	<-->	Cashless payment system	1.0
Policy Infrastructure for cashless	<-->	Financial inclusion	.7

Source: Authors Compilation using (IBM © SPSS © Amos 23.0 (Build 1607)

Table 1 provides detailed information on the covariances between latent variables within the default model. These covariances are crucial indicators of the extent and direction of linear relationships between pairs of latent variables. Firstly, the covariance estimate between Financial Inclusion and Cashless Payment System is 0.1, with a standard error of 0.1. The critical ratio (C.R.) of 2.6 indicates that this covariance is statistically

significant (p-value = 0.0). This positive covariance suggests a linear association between Financial Inclusion and Cashless Payment System, and the significant C.R. implies that this relationship is unlikely to have occurred by chance.

Secondly, the covariance between Policy Infrastructure for Cashless and Cashless Payment System is fixed at 1.0. The absence of standard error and critical ratio values suggests that this covariance is predetermined or fixed in the model, indicating a specific and constant relationship between these two latent variables. Lastly, the covariance estimate between Policy Infrastructure for Cashless and Financial Inclusion is 0.3, with a standard error of 0.1. The critical ratio of 2.8 and a p-value of 0.0 again suggest a statistically significant positive covariance between these latent variables.

Table 2: covariances between latent variables

Covariances: (Group number 1 - Default model)			Estimate	S.E.	C.R.	P
Financial inclusion	<-->	Cashless payment system	.1	.1	2.6	.0
Policy Infrastructure for cashless	<-->	Cashless payment system	1.0			
Policy Infrastructure for cashless	<-->	Financial inclusion	.3	.1	2.8	.0

S**ource:** Authors Compilation, using (IBM © SPSS © Amos 23.0 (Build 1607))

Table 3 outlines the regression results from the path analysis of the Structural Equation Model (SEM) within the Default model. These results offer insights into the relationships between latent variables, providing estimates of regression weights, standard errors, critical ratios, and p-values for different paths in the model. The path from Policy Infrastructure for Cashless to Development in the Bank Sector indicated by directional par, exhibits a regression weight of 0.4, but with a high standard error of 2.8. The statistically insignificant critical ratio of 0.1 and a p-value of 0.9 suggest that Policy Infrastructure for Cashless does not significantly predict changes in the Development in the Bank Sector. Similarly, the path from Cashless Payment System to Development in the Bank Sector (par_12) displays a regression weight of -1.4, but the high standard error, low critical ratio of -0.2, and a p-value of 0.8 collectively indicate a lack of statistical significance. Thus, the influence of Cashless Payment System on the Development in the Bank Sector is not deemed significant in this model.

4.2 Reliability and Validity Test

The default Structural Equation Model (SEM) comprises 231 distinct sample moments, capturing various statistical properties from the dataset. These moments play a vital role in estimating the model's parameters and evaluating its fit to the observed data. With 47 parameters to be estimated, the model has 184 degrees of freedom, reflecting the balance between model complexity and available information in the data. The 184 degrees of freedom indicate a reasonable amount of independence in the dataset, contributing to the reliability of parameter estimates and the overall validity of the default SEM.

4.2.1 Result of Fitness of the SEM

The result of fitness of the model was determined using the Chi-square (CMIN) test, RMR/GFI test and RMSEA test as shown in table. The CMIN test, also known as the Chi-Square (χ^2) test, is a statistical measure used in Structural Equation Modelling (SEM) to assess the goodness-of-fit of a model.

Table 3: CMIN Test

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	47	459.3	184	.0	2.5
Saturated model	231	.0	0		
Independence model	21	930.0	210	.0	4.4

Source: Authors Compilation using (IBM © SPSS © Amos 23.0 (Build 1607))

Table 3 provides insights into the goodness-of-fit of three structural equation models: the default model, the saturated model and the independence model. For the default model, the Root Mean Square Residual (RMR) of 0.3 indicates a moderate level of discrepancy between the model and the observed data. The Goodness-of-Fit Index (GFI) of 0.8 suggests a reasonably good fit, adjusted by an Adjusted GFI (AGFI) also at 0.8. However, the Parsimony GFI (PGFI) of 0.6 indicates a moderate fit when considering model complexity. In contrast, the saturated model perfectly reproduces the data, as reflected by an RMR of 0.0 and a GFI of 1.0. The independence model, with an RMR of 0.2, exhibits a moderate level of misfit, while the GFI, AGFI, and PGFI values at 0.6, 0.5, and 0.5, respectively, indicate a suboptimal fit, even when accounting for model complexity and parsimony. Researchers typically seek lower RMR values and higher GFI values for a more desirable fit between the structural equation model and the observed data.

Table 4: RMR/GFI test

Model	RMR	GFI	AGFI	PGFI
Default model	.3	.8	.8	.6
Saturated model	.0	1.0		
Independence model	.2	.6	.5	.5

Source: Authors Compilation using (IBM © SPSS © Amos 23.0 (Build 1607))

Table 4 reports the results of the RMSEA (Root Mean Square Error of Approximation) test for two structural equation models: the default model and the independence model. Both models show an RMSEA of 0.1, indicative of a moderate fit to the observed data. The narrow 90% confidence intervals (LO 90 to HI 90, both at 0.1) provide precision in estimating the RMSEA, supporting the conclusion of a reasonably good fit. However, the PCLOSE values of 0.0 for both models reject the null hypothesis that the RMSEA is 0, implying that neither model achieves a perfect fit. These findings suggest that while the models exhibit a moderate level of fit, there is room for improvement in capturing the underlying structure of the data. Researchers commonly interpret RMSEA values close to 0 as indicative of good model fit, but the assessment may also depend on field-specific standards and context.

5 Conclusion and Recommendations

The study delved into examining the influence of the cashless policy on the development of the banking sector in Nigeria using Adamawa state as case of study. The findings of the research indicated that the cashless policy, as measured by Policy Infrastructure for Cashless (PICT), Financial Inclusion, and Cashless Payment System, demonstrated a significant correlation with the development of the banking sector in the state. Notably, the perfect positive correlation of 1.0 observed between Policy Infrastructure for Cashless and Cashless Payment System suggested a complete and direct relationship between these two latent variables. Changes in Policy Infrastructure for Cashless precisely mirrored changes in the Cashless Payment System, emphasizing a robust and synchronized connection.

However, despite the strong correlation observed among the variables, the path from Policy Infrastructure for Cashless to Development in the Bank Sector yielded a statistically insignificant critical ratio of 0.1 and a p-value of 0.9. This suggests that Policy Infrastructure for Cashless does not significantly influence or predict changes in the development of the banking sector. Similarly, the path from Cashless Payment System to Development in the Bank Sector, with a high standard error, low critical ratio of -0.2, and a p-value of 0.8, collectively indicated a lack of statistical significance. Consequently, the impact of the Cashless Payment System on the development of the banking sector was not considered significant in this model. In contrast, the path from Financial Inclusion to Development in the Bank Sector was found to be statistically significant, with a regression weight of 2.1 and a low p-value of 0.0. This implies that Financial Inclusion significantly contributed to predicting changes in the development of the banking sector within the context of the default model. Based on these results, it can be concluded that the financial inclusion in cashless economy had a significant impact on the development of the banking sector in Adamawa state.

Based on the summary of the major findings, the following conclusions can be drawn: The implementation of the cashless policy has positively impacted the development of the banking sector in Adamawa state, enhancing its productivity and effectiveness. This improvement can be achieved by empowering employees with end-to-end integration, evolving consumer self-service with AI, unifying the omnichannel experience, boosting access to financial literacy through digital adoption, and maintaining a balance between human and digital collaborations. Cashless banking demonstrates a strong positive relationship with overall banking performance, contributing to more effective and efficient work performance. Additionally, the adoption of cashless banking has notably improved economic transactions within the state. Furthermore, beyond the state level, the Nigerian economy as a whole has experienced significant enhancement through the adoption of cashless banking and transactions (Ropheka & Miapkwap, 2020). Based on these findings, the following recommendations are suggested:

i. Given the positive and significant correlation observed between policies, infrastructure for cashless transactions, and the cashless payment system with financial inclusion in the banking sector, there is a pressing need for broader access to financial services. It is imperative to give greater attention to the factors influencing financial inclusion, including income, education, age, and gender. Additionally, priority should be given to factors such as formal account ownership, formal saving practices, and access to formal credit. Ensuring the affordability and accessibility of banking services becomes crucial to facilitating the involvement of unbanked and underbanked individuals in the formal financial system. By providing straightforward savings accounts and low-cost transaction accounts, financial inclusion can be extended to the grassroots level.

ii. The deposit money banks management should periodically educate and sensitize customers with regard to cashless banking, its benefits, and risk exposure, among others.

Furthermore, it is essential for the policy to incorporate local content, aligning with the core economic principles of Nigeria that are rooted in the socio-cultural values of its people. The imposition of foreign banking practices should be avoided within the framework of the cashless policy. Deposit money banks need to consistently promote awareness and foster the acceptance of the cashless policy, particularly concerning mobile banking services. This encourages customers to utilize their mobile phones for various banking transactions, thereby contributing to the growth of the banking sector and the overall economy. Lastly, the Central Bank of Nigeria (CBN) should engage in public enlightenment campaigns to educate the public about the intricacies of the cashless system. This will elevate awareness levels and potentially reduce resistance from the banking public.

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