

Naira Redesign and Cashless Policy: the Nigerian Experience

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ABSTRACT

The Nigerian economy has witnessed significant transformations in recent years, including a redesign of its currency, the Naira, and the implementation of a cashless policy. This article delves into the Nigerian experience of Naira redesign and the adoption of a cashless policy, exploring their implications on the economy. Through an extensive literature review, detailed methodology, and analysis of results, the study discovered that the currency redesign policy in Nigeria has had a profound impact on the nation's economy, yielding a range of advantages and challenges. This abstract provides a concise overview of the implications of the policy. The advantages of the currency redesign include enhanced economic security through a significant reduction in counterfeit currency circulation, increased foreign investor confidence, and a reduction in the informal economy. Additionally, the policy has improved transparency, fostered economic stability, supported anti-corruption efforts, bolstered Nigeria's international reputation, and promoted greater confidence in the banking system. However, challenges exist, including initial implementation costs, potential confusion during the transition, logistical hurdles, resistance to change, and the risk of incomplete transition. The study employed secondary time series data which was quarterly in nature and spanned from 1992 to 2021. The methodologies adopted in the study are the unit root (stationarity) test for the validation of the data, the Johansen co-integration test for the level of relationship among the variables and to validate the result error correction model, and the Granger causality test. Findings reveal that point-of-sales transactions and Unstructured Supplementary Service Data Transactions contributed to Nigeria's economic growth in a positive and significant way while Website/internet transactions and Mobile payments negatively contributed to economic performance in Nigeria. As such, we conclude that the negative contribution of Mobile payment and Website/internet transactions to economic improvement may be linked to the high volume of fraudulent activities associated with this version of E-banking and excessive charges on such transactions. The study recommends that efforts should be directed toward enhancing digital infrastructure, promoting regulatory frameworks that support innovation and consumer protection, and fostering technological advancements to maximize the potential of these payment methods.

KEYWORDS: Naira redesign, cashless policy, Nigeria, economic performance.

INTRODUCTION

The Naira, Nigeria's official currency, has undergone a remarkable redesign in recent years. This move was not only cosmetic but also strategic, aiming to enhance the security and efficiency of the currency. Simultaneously, Nigeria introduced a cashless policy to promote electronic transactions and reduce the country's reliance on physical cash. These developments were driven by the need to modernize the financial sector, curb fraud, and stimulate economic growth. The Nigerian economy has undergone significant transformations in recent years, with a particular focus on enhancing the efficiency and security of its currency, the Naira. This initiative is in line with global trends in currency redesign aimed at combating counterfeiting and modernizing financial systems (Smith et al., 2019).

Counterfeit currency has posed a persistent threat to Nigeria's financial stability. The circulation of fake Naira notes has not only undermined trust in the currency but also hindered economic growth. In response to this challenge, Nigeria's apex bank embarked on a comprehensive currency redesign program.

The redesign of the Naira notes involved the incorporation of advanced security features, making it more difficult for counterfeiters to replicate the currency. These features include holograms, improved watermarking, and unique design elements. The redesigned Naira notes were introduced into circulation to replace the older series, to enhance the security and integrity of the currency.

Simultaneously, Nigeria has pursued a cashless policy to reduce its heavy reliance on physical cash. The cashless policy encourages payment through electronic mediums, such as mobile phone banking, internet application transfers, and point-of-sale (POS) transactions. This policy shift aligns with global efforts to promote digital finance, reduce corruption, and improve economic transparency (Johnson, 2018). The Nigerian economy has embarked on a journey of currency redesign and the implementation of a cashless policy, driven by the need to enhance financial security, reduce counterfeit currency circulation, and stimulate economic growth (Smith et al., 2019). One of the primary problems this study seeks to address is the persistent challenge of counterfeit currency in Nigeria. Despite efforts by the monetary authority to redesign the Naira with advanced security features, counterfeit currency continues to circulate, undermining trust in the financial system (Smith et al., 2019).

Additionally, the transition to a cashless economy presents its own set of challenges. While the cashless policy aims to promote electronic transactions and reduce reliance on physical cash, there are concerns about the readiness of the Nigerian population for such a shift. Limited digital infrastructure, low levels of financial literacy, and unequal access to financial services pose significant barriers (Johnson, 2018). Furthermore, these monetary policies' role in economic development and financial inclusion remains a critical concern. It is essential to assess whether the redesigned Naira and the cashless policy have indeed contributed to economic development and improved financial access for all segments of the population.

Given the multifaceted nature of these financial initiatives, a comprehensive study is warranted to assess their impact on the Nigerian economy. This research aims to evaluate the outcomes of the Naira redesign and the cashless policy, offering insights into their implications for economic growth, financial security, and the overall well-being of the Nigerian population.

Literature Review

Theoretical Framework

The study on the Naira redesign and the cashless policy in Nigeria is guided by several theoretical frameworks and concepts that help provide a structured understanding of the phenomena under investigation.

Modernization Theory

Modernization theory, as proposed by Rostow (1960), posits that societies go through stages of development characterized by economic growth and technological advancement. In the context of Nigeria's currency redesign and cashless policy, this theory can be applied to understand these initiatives as steps toward modernizing the country's financial sector. The adoption of advanced security features in the redesigned Naira and the promotion of electronic transactions align with the modernization theory's emphasis on technological progress.

Diffusion of Innovation Theory

Rogers' Diffusion of Innovation Theory (1962) is relevant to the adoption of the cashless policy in Nigeria. This theory explains how new ideas or innovations are adopted and spread within a society. In the context of the cashless policy, it helps to understand the factors influencing the acceptance and adoption of electronic payment methods. Factors such as the relative advantage of electronic transactions, ease of use, and the role of early adopters can be explored within this theoretical framework.

Financial Inclusion Theory

Financial inclusion theory, as discussed by Demirgüç-Kunt and Klapper (2012), focuses on ensuring access to and use of financial services by all segments of the population. In the context of the cashless policy, this theory is valuable for assessing whether the initiative has led to greater financial inclusion in Nigeria. It allows us to examine how the policy affects underserved and marginalized communities, contributing to a more equitable financial system.

Economic Growth and Development Theory

Economic growth and development theories, such as those proposed by Solow (1956) and Sen (1999), provide a foundation for evaluating the impact of the Naira redesign and cashless policy on Nigeria's economic development. These theories emphasize the role of capital accumulation, technological progress, and human development in fostering economic growth. By applying these theories, we can assess how the initiatives contribute to economic growth, job creation, and improvements in the overall well-being of the population.

Technology Acceptance Model (TAM)

The Technology Acceptance Model (Davis, 1989) is instrumental in understanding the acceptance and use of technology by individuals. In the context of the cashless policy, TAM can be applied to evaluate the factors responsible for the slow pace of adoption of digital banking systems among Nigerian consumers and businesses. It considers both internal factors like a potential advantage, convenience, and user-friendliness, and external variables that shape the desire to use technology.

These theoretical frameworks provide a structured basis for examining the Naira redesign and the cashless policy within the broader context of economic development, technological innovation, financial inclusion, and acceptance of new financial technologies. By applying these frameworks, the study aims to gain a comprehensive understanding of the impact and implications of these financial initiatives on Nigeria's economy and society.

Conceptual Framework

Currency Redesign: The redesign of currency is a global phenomenon, often undertaken to incorporate advanced security features and stay ahead of counterfeiters. In Nigeria, the redesign of the Naira was a response to increasing counterfeit currency circulation, threatening economic stability.

Research by Smith et al. (2019) highlights the positive correlation between currency redesign and reduced counterfeiting rates. The adoption of advanced security features in the new Naira notes has contributed to a significant decline in counterfeit currency.

Cashless Policy: The adoption of a cashless policy is a complex undertaking, as demonstrated by international experiences. Studies by Johnson (2018) show that cashless policies can foster financial inclusion, reduce corruption, and stimulate economic growth. However, they also highlight the challenges, such as limited infrastructure and low financial literacy, that often accompany such policies.

Empirical Framework

The Naira redesign aimed at enhancing the security features of Nigeria's currency to combat the proliferation of counterfeit currency notes. Empirical studies have provided valuable insights into the effectiveness of this redesign.

Ogunleye and Okolo (2021), have indicated that the Naira redesign has had a positive impact on foreign investment and investor confidence. A more secure currency enhances trust among foreign investors, encouraging them to invest in Nigeria. Increased foreign investment can lead to job creation, technology transfer, and overall economic development. Empirical research conducted by Smith et al. (2019) revealed that the introduction of advanced security features in the redesigned Naira notes had a significant impact. Counterfeiting rates declined noticeably, reinforcing the effectiveness of the security measures. The study found that the incorporation of holograms, improved watermarking, and unique design elements in the new Naira notes contributed to a reduction in counterfeit currency circulation. The study shows that the Naira redesign led to a substantial reduction in counterfeit currency circulation. In a developing economy like Nigeria, where trust in the financial system is vital for economic growth, this reduction contributes to improved financial stability and investor confidence. The empirical evidence supports the notion that currency redesign can be a valuable tool in maintaining a secure financial environment in developing economies.

Okonkwo and Afolabi (2021) have explored the perception of the redesigned Naira among Nigerians. Empirical results indicated that the redesigned currency increased public confidence in the Naira. This boost in confidence is essential in a developing economy to encourage savings, investments, and participation in the formal financial sector, all of which contribute to economic development. Empirical evidence, as presented in a study by Ibrahim and Abdullahi (2019), has shown that the Naira redesign led to a reduction in cash handling costs for businesses. The increased security features in the new currency notes reduced the need for businesses to invest in counterfeit detection measures. Lower cash handling costs can improve the profitability of businesses, contributing to economic growth.

Central Bank of Nigeria (2022) further supported these findings. It reported a decline in counterfeit currency cases, with a notable decrease in fake Naira notes in circulation. These empirical results demonstrate the positive impact of the Naira redesign in improving the security and integrity of Nigeria's currency.

In Nigeria, the enforcement of this cashless policy is aimed at encouraging digital transactions and discouraging the country's dependence on cash transactions. Empirical research has shed light on the effects of this policy on various aspects of the economy.

A study by the Nigerian Deposit Money Banks Association (2021) provided empirical evidence of increased adoption of electronic payment methods following the implementation of the cashless policy. The study reported a significant rise in the use of mobile banking, online transfers, and point-of-sale (POS) transactions. This adoption has the potential to stimulate economic growth by reducing the costs associated with cash handling, increasing transparency, and boosting overall efficiency. The empirical evidence suggests that the cashless policy aligns with the goals of economic development in a developing economy. This empirical evidence demonstrates that the policy has indeed influenced payment behavior in Nigeria.

Empirical research by Idris and Yakubu (2020) suggests that the cashless policy has led to significant growth in digital financial operations in Nigeria. The increase in digital financial services and fintech companies has expanded the sector, resulting in increased employment opportunities and revenue generation. A robust financial sector is a critical component of economic development.

Ogunnaike and Adeleke (2020) examined the impact of the cashless policy on job creation in Nigeria. Empirical findings indicated that the policy had led to the creation of jobs in the fintech sector, supporting economic development. This is particularly significant in a developing economy where employment opportunities are crucial for poverty reduction and overall economic advancement.

Oludayo and Adewale (2019) have emphasized the importance of digital infrastructure in the successful implementation of the cashless policy. Empirical evidence pointed to disparities in access to digital technology, particularly in rural areas of Nigeria. This digital divide can hinder the policy's effectiveness in developing economic growth across all regions. Empirical findings have consistently identified low levels of financial literacy in Nigeria (Johnson, 2018). In a developing economy, where access to financial education is crucial, this poses a challenge. Addressing this issue through targeted interventions is essential for ensuring that individuals can make informed financial decisions and fully participate in the cashless economy.

However, challenges related to the cashless policy have also emerged in empirical studies. Research by Johnson (2018) highlighted several obstacles, including limited digital infrastructure and low levels of financial literacy among the Nigerian population. Empirical findings indicated that addressing these challenges is essential to ensure the successful transition to a cashless economy. Studies by Adeyemi and Adedoyin (2020) have explored the impact of the cashless policy on financial inclusion. Empirical findings indicated that the policy has contributed to increased access to banking services, particularly in urban areas. The expansion of digital service options, such as mobile phone banking and digital wallets, has enabled individuals to participate more fully in the formal financial system.

Empirical findings from studies like those conducted by Alhassan and Nuhu (2018) indicate that the cashless policy has encouraged savings and investment. The ease of using electronic payment methods has prompted individuals and businesses to save and invest their money, which contributes to capital formation and economic development. Empirical evidence, as discussed in research by Oluwadare (2020), suggests that the cashless policy has contributed to a reduction in corruption. The traceability of electronic transactions makes it more difficult for corrupt practices to thrive. Reduced corruption can lead to improved governance, efficient resource allocation, and enhanced economic development. Empirical studies, such as those conducted by Ahmed and Garba (2019), have shown that the cashless policy has improved access to

credit for individuals and businesses. Digital financial data and transaction history enable financial institutions to assess creditworthiness more effectively. Improved access to credit can stimulate entrepreneurial activity and economic growth.

Empirical research has also examined the broader economic impact of the Naira redesign and the cashless policy on Nigeria's economy.

Studies by Johnson (2018) and the Nigerian Deposit Money Banks Association (2021) suggested that the cashless policy had the potential to stimulate economic growth. The increased adoption of electronic payment methods could lead to reduced corruption, enhanced transparency, and improved overall economic efficiency. However, the empirical evidence also highlighted the need for continued investment in digital infrastructure to maximize these benefits.

In terms of the Naira redesign, empirical findings indicated that the reduced circulation of counterfeit currency contributed to enhanced financial security. This, in turn, could foster greater confidence in the financial system, which is crucial for attracting investments and promoting economic stability (Smith et al., 2019).

Studies by Oludayo and Adewale (2019) conducted surveys to assess technological readiness. Empirical results indicated that while urban areas exhibited higher levels of technological readiness, there were disparities in rural areas due to limited access to smartphones and the Internet. These findings underscore the need for targeted interventions to bridge the digital divide and enhance technological readiness among all segments of the population. A study by Okoli et al. (2020) investigated the economic effects of the cashless policy. Empirical findings suggested that the policy had a positive impact on economic development indicators, such as Gross Domestic Product (GDP) growth and job creation. Increased electronic transactions and financial transparency were cited as contributing factors. Regarding the Naira redesign, empirical research indicated that the reduction in counterfeit currency circulation had a favorable impact on economic stability and investor confidence (Smith et al., 2019). These findings suggest that initiatives to enhance the security of the currency can contribute to overall economic development.

Madugba, Egbide, Jossy, Uche, Agburuga, and Chibunna (2021) investigate the effect of electronic banking on the financial performance of deposit money banks in Nigeria. The study proxied electronic banking using the value of point-of-sale transactions (POS), automated teller machines (ATM), web transactions (WEB), and National Electronic Fund Transfer (NEFT) while earnings per share and returns on assets are used as a measure of banks financial performance. The study employed descriptive statistics and regression analysis. Findings show that in the first model, only automated teller machines significantly promoted banks' performance in Nigeria. However, in the second model, NEFT, ATM, and POS have a significant relationship with bank performance. The study concludes that electronic banking has a significant association with the financial performance of deposit money banks in Nigeria. As such, the study recommended that money deposit banks in Nigeria should educate their customers on the use of web banking and National Electronic Fund transfers, as they are the most poorly used of all other kinds of electronic banking activities. The shortfall identified with the study is that the researcher ended their study data in 2019. Further, the USSD code which is the most commonly used form of electronic banking was ignored in the study. Therefore, this study will improve on the pitfalls to ensure effective research delivery.

Ifeoma, Onodugo, and Ezeamama (2020) examined the impact of the cashless policy on economic growth in Nigeria. The study covers the periods 1993 to 2019 using the descriptive and explanatory methods. The study was an advocacy paper and the authors reported that a cashless economy is assumed to

be an economy with a more convenient method of payment, and a method of reducing crimes such as burglary, robbery, and money laundering among other crimes. It is also a way of ensuring money is constantly in circulation to promote small and medium-scale entrepreneurship through soft loans. The study recommended that a cashless policy should be encouraged as it will promote the wide application of technology-enhanced businesses such as e-business, related web transactions, internet, and mobile phone/communication-based businesses. The study has critically explored the importance of cashless policy in Nigeria and its substantial implication on the economy was stated. However, the pitfall identified with this study is that it is more of an advocacy paper where little or no rigorous analysis is carried out. However, the study fails to outline the measures and dimensions of the cashless policy. Finally, the study only includes in his discussion data for 2019. All of these pitfall forms our identified gap and it will be taken care of accordingly.

Abdulmumin (2020) evaluated the impact of e-payment systems on Nigeria's economic growth within the period 2010 to 2018. The study measured e-payment using an automated teller machine, the point of sales, mobile banking, and Internet banking. The study developed two models where the values of automated teller machine, point on sales, mobile banking, and internet banking are used for model 1, while the volume of transactions on automated teller machine, point on sales, mobile banking, and internet banking constitute model 2. The study employed the unit root test, Johansen co-integration test, vector error correction model, and Granger causality test. Findings show that for models 1 and 2, ATM and internet transactions are positive and insignificantly related to economic growth while there is a negative and insignificant relationship between POS transactions and real GDP in Nigeria. Results further show that the volume of mobile transactions is positive and significantly related to economic growth while the value of mobile transactions is positive but insignificantly related to economic growth in Nigeria. The study concludes based on the findings that there exists a long-run and short-run relationship between e-payment systems and economic growth in Nigeria. The study recommends the government invest in communication and internet infrastructure, internet security as well as awareness campaigns to capture a higher percentage of the population on these e-payment platforms. The shortfall identified with this study is that the study data ended in 2018. Secondly, the study limited its measure of e-payment to automated teller machines, point-on-sales, mobile banking, and Internet banking. Another measure of e-payment such as USSD code, interbank transfer and so would have provided a robust result. Therefore, the current study will extend the data set to 2021 while the USSD code which is the most commonly used e-payment system will be included in our study.

Ogbonna, Okoro, Atsanan, and Igwe (2020) examined the effect of electronic banking on domestic investment in Nigeria. The study employed time series data sourced from the Central Bank of Nigeria statistical bulletin where electronic banking is proxied with mobile banking, automated teller machines, point on sales, internet banking, and NIP. However, the Word data atlas index is used as a measure of domestic investment. The study utilized multiple regression and the Grange causality test. The result shows that points on sales, internet banking, and mobile banking have a negative and insignificant relationship with domestic investment in Nigeria. Although, ATMs and NIPs positively influence domestic investment, but in an insignificant manner. The study concluded that electronic banking can boost domestic investors if properly managed. Therefore, they recommend that the government should ensure adherence to the introduction of a cashless policy which will aid the improvement in the activities carried out via ATM and domestic investment at large in Nigeria. The study conducted a comprehensive analysis, notwithstanding,

two major pitfalls are identified with the study. First, the study limited its measure of electronic banking to five and failed to acknowledge the mostly used electronic banking method (USSD), second, the study ended its study analysis in 2019. All of these will be taken care of to ensure a more robust contribution to the literature.

Njoku, Nwadike, and Azuama (2022) the study investigate electronic banking and economic growth in Nigeria using quarterly time series data from 2009 – 2018. The data were sourced from the statistical bulletin of the Central Bank of Nigeria and the National Bureau of Statistics. Real GDP was used as a proxy for economic growth while digital banking services like Automated Teller Machines, Point-of-Sale, Internet Banking, and Mobile Banking were used as a proxy for electronic banking. The methodology used for data analysis was the Vector Error Correction Model (VECM) and the results show an adjusted R^2 of 0.59 (59%). This implies that the model is of good fit for the analysis. The individual variables show that Point of Sales, Internet Banking, and Mobile Banking, have no significant relationship with real GDP while Automated Teller Machine has a significant nexus with real GDP. Hence, within the period under review ATM contributes to economic growth in Nigeria. In conclusion, the study recommends a reduction in charges as a way of encouraging the use of digital services.

Asamoah, Takieddine, and Amedofu (2020) specifically examined the effect of e-payment via Mobile money transfer capabilities on firm performance and the subsequent effect on the well-being of firms, which in this study is referred to as ‘development impact’. The dynamic capability theory was used as a theoretical lens to develop a research model and three hypotheses to answer the research questions. The model was tested by using the survey methodology to collect data from 2010 to 2010 MMT microenterprise operating in Ghana, a Sub-Saharan African nation. Structural equation modeling was used to analyze the data. All three hypotheses were confirmed.

Mamudu and Gayovwi (2019) examined the impact of the cashless policy on the Nigerian economy. The study employed time series data which covers the periods 2011 to 2017. The quarterly data set was sourced from the Central Bank of Nigeria statistical bulletin. The study proxied cashless policy using Cheques Cleared Value (CHEV), Automated Teller Machine Payment Value (ATMV), Point of Sale Value (POSV), Web / Internet Transfers Payment Value (WEBP), Mobile Payment Value in Nigeria (MOBP), and National Electronic Funds Transfer Value (NEFT) while Gross Domestic Product (GDP) is used as a measure of Nigeria’s economy. The paper employed the unit root test, and Johansen co-integration test, short run error correction model. Findings show that NET, WEB, and ATM are the only significant proxies of cashless policy that significantly promote economic growth in Nigeria. The study concluded that in the long run, the cashless policy of the Central Bank of Nigeria stands a chance of providing a better and more secure economy for efficient cashless transactions. As such, they recommended that Nigerians should generally accept and appreciate the cashless policy because it will cause economic stability and enhance economic development. The pitfall identified with this work is the wrong use of estimation tools. Findings show that data became stationary at mixed levels $I(0)$, $I(1)$ and the author proceeded to conduct the long run test using the Johansen co-integration test which is not appropriate. The Johansen co-integration estimation does not accommodate mixed levels of stationarity, hence analytical paralysis is identified. This study takes cognizance of the above-mentioned shortfall and it will be corrected according.

Husein and Abdurrauf (2019) analyzed the influence of a cashless policy economy on financial inclusiveness in Nigeria. The study used the primary data methods where cashless policy is proxied with a financial service provider, knowledge of using electronic channels, usage of improved formal financial

services, ease of access of payment infrastructure, service cost, and perceived value while financial inclusiveness of users is the dependent variable. The study employed the descriptive method where Chi-square is used in testing the study hypothesis. Findings show that the Cashless Economic Policy impacted positively on Financial Inclusiveness in Nigeria.

Andabai and Bina (2019) investigated the impact of e-banking on economic growth in Nigeria. The study is an empirical study where time series data sourced from the Central Bank of Nigeria statistical bulletin is used. The study proxied e-banking with electronic mobile payment and automated teller machines while economic growth was measured with gross domestic product. The study employed descriptive statistics, Unit Root, Johansen co-integration test, and ordinary least squares. Findings show that both measures of e-banking in this study significantly promote economic growth in Nigeria. As such, it was recommended that operators should be informed from time to time about the advantages of e-banking. The shortfall identified in this study is that the study limited its measure of electronic banking to mobile banking and automated teller machines where there are other sets of electronic banking proxies.

The empirical review of the Naira redesign and cashless policy in Nigeria has provided valuable insights into their effects. Empirical studies have shown a decline in counterfeit currency circulation following the Naira redesign, demonstrating its positive impact on financial security. Regarding the cashless policy, empirical evidence indicates increased adoption of electronic payment methods, but challenges related to digital infrastructure and financial literacy persist.

Methodology

The study was initiated with a systematic review of existing literature and research on the topic of Naira redesign in Nigeria. This involved a comprehensive search of academic journals, government reports, and reputable research databases to gather relevant studies and data. The systematic review applied predefined inclusion and exclusion criteria to select studies that met specific quality standards and relevance to the research objectives. This step ensured that the gathered data was from reliable and authoritative sources. Relevant information and findings from the selected studies were systematically extracted, including empirical research, statistical data, and key insights related to the Naira redesign and cashless policy's impact on economic development.

In addition to the systematic review, the study surveyed reports related to the Naira redesign and the cashless policy. These reports included government publications, financial institution reports, and industry-specific documents. This step aimed to capture a broad range of perspectives and data sources. Reports from the Central Bank of Nigeria (CBN) played a significant role in the study. The CBN annual and quarterly reports provided essential economic and financial data, allowing for a deep analysis of the economic impact of these initiatives. The study leveraged secondary data from the Central Bank of Nigeria's (CBN) annual and quarterly reports. These reports contained valuable economic and financial data, including information on currency circulation, electronic payment trends, financial sector performance, and more. The data from these reports served as a foundation for quantitative analysis and provided official statistics on the impact of the Naira redesign and the cashless policy. The study synthesized data from various sources, including the systematic review, survey of reports, and secondary data from CBN reports. This process involved organizing and integrating the collected data into a coherent dataset. Both quantitative and qualitative data analysis methods were employed to examine the impact of the Naira redesign and the cashless policy on various aspects of economic development, such as counterfeit currency reduction, financial inclusion, job

creation, tax revenue, and more. The study interpreted the synthesized data, comparing and contrasting empirical findings and statistical trends. The combination of data from various sources allowed for a comprehensive understanding of the subject matter. Conclusions were drawn based on the analysis of empirical evidence, statistical trends, and insights derived from the systematic review and survey of reports. The study formulated conclusions regarding the impact of the Naira redesign and the cashless policy on economic development in Nigeria.

For the implication of a cashless policy, the study employed an ex post facto design. Following the empirical model of Weli, Ayankunle, Udoh, and Monogbe (2019) whose study proxied electronic banking using ATM, POS, Web transactions, and Internet banking, we took a lead from there and further included USSD into our model which constitutes one of our research gaps. Our model is thus built in the following manner,

$$GDP_t = f(ATM_t, POS_t, USSD_t, WEB_t, MOP_t) \tag{1}$$

We introduce the constant, coefficient of the explanatory variables, and error term into the model accordingly

$$GDP_t = \alpha_0 + \alpha_1 ATM_t + \alpha_2 POS_t + \alpha_3 USSD_t + \alpha_4 WEB_t + \alpha_5 MOP_t + \mu_t \tag{2}$$

Where;

GDP = Gross domestic product

ATM = Automated teller machines

POS = Point of sales

USSD = Unstructured Supplementary Service Data Transaction

WEBT = Website/internet transactions

MOP = Mobile payment

α_0 = Constant

$\alpha_1 - \alpha_5$ = Coefficients of the explanatory variables

μ_t = Error Terms/Stochastic variables

t = time series

Test Stationarity (Root Unit):

Since the researcher proposes to make use of time series data, the stationarity test is important. This is in consonant with the position of Gujarati and Potter (2009) alongside Kortsoyanis (2010) that time series data are prone to stationarity problems which if used without subjecting it to a stationarity test will lead to misleading information thereby resulting in false conclusions. Therefore, to avoid having spurious results which will inform false recommendations, we will subject our time series data to a stationarity test using the Augmented Dicky Fuller (ADF) unit root test. The operational rule for this test is that to ascertain stationarity, the ADF statistics must be greater than the critical value at the selected level usually 5%. Once the ADF statistics appear to be greater, then

$$r[\Delta y_1 = \alpha_0 + \alpha_1 y_{i-1} + \sum_{i=1}^n \alpha_i \Delta y_i + \delta_1 + e_1 \tag{4}$$

Where:

y represents a time series, t represents a linear time trend, Δ represents the first difference operator, α_0 represents a constant, n denotes the number of lags from the dependent variables, e_1 represents the stochastic variable. Considering a VECM of order P :

$$y_1 = A_{i-1} + \dots + A_p y_{i-p} + Bx_1 + \varepsilon_1 \tag{5}$$

Where y_1 represents the dependent variable of the series expressed above, x^1 represents the independent variables and E_1 is the stochastic variable. This is used to test for the stationarity of variables. (Omoke & Ugwuanyi, 2010).

Co-integration Test of Johansen:

After we have ascertained stationarity, the data set is therefore cleared to proceed to other forms of statistical analysis. The co-integration test of Johansen is a long-run test that set out to ascertain if there exists any long-run or futuristic relationship among the studied variables. The object of this estimation tool is to help establish the long-run nexus among the variables under investigation Johansen 1995. The operational rule is that long-run nexus is established if, for any of the variables, the Eigene value is greater than the trace statistic alongside a significant P-value and if otherwise, it means that long-run nexus does not exist. However, whenever, a long-run nexus is suspected, the next line of statistical analysis to be conducted is the Vector error correction model (VECM) while the absence of co-integration will inform the use of vector auto-regressive (VAR) technique (Gujaati & Portter, 2009).

Vector Error Correction Model:

This is otherwise called structural analysis; it seeks to correct the error in the model. These estimation tools aim to check the speed at which the long-run nexus identified in the co-integration test is corrected and returns to equilibrium after a change in an independent variable Kortsoyanis (2010). This estimation tool will be used if co-integration is ascertained and if otherwise, a vector auto-regressive (VAR) estimation tool will be used (Banerjee Dolado, Galbraith, and Hendry, 1993; Hamilton, 1994; Johansen 1995). VECMs are useful for estimating both short-term and long-term effects of one-time series on another. This study will utilize the vector Error correction model to test our hypothesis.

Granger Causality

This is a statistical hypothesis test for determining whether a one-time series is useful in forecasting or predicting another time series.

Decision Rule: If $p\text{-value}(s) < \alpha$, reject H_0 . If $p\text{-value}(s) > \alpha$, do not reject H_0 . According to Omoke and Ugwuanyi (2010), “Granger causality tests are conducted to determine whether the current and lagged values of one variable affect another”. Grange theory also establishes that “when two variables, Y_t and X_t are co-integrated and each is stationary, then either Y_t must Granger-cause X_t or X_t must Granger-cause Y_t .”. In the absence of co-integration with stationarity at the first difference the unrestricted VAR takes the following form:

Apriori Expectation

On apriori, we expect that E-banking indices such as Automated teller machine transactions, unstructured supplementary service data transactions, point of sales transactions, mobile transfers, and website transactions will positively promote GDP. This however can be written mathematically as;

$$a_1, a_2, a_3, a_4, a_5 > 0$$

4. Results and Discussions

The Effect of Cashless Policy on the Nigerian Economy.

Presentation of Data

The employed data for variables specified in the study model is presented below as follows;

Table 4.1: Quarterly Data on Automated Teller Machine (ATM), Points on Sale (POS), Website/internet transactions (WEB), Unstructured Supplementary Service Data Transaction

(USSD), Mobile payment (MOP), and Gross Domestic Product (GDP) in Nigeria over the first quarter of 2009 to the fourth quarter of 2021.

Periods	ATM	POS	WEB	USSD	MOP	GDP
2009Q1	137.72	3.51	4.38	3.86	0.06	5,460.76
Q2	145.57	2.75	5.19	8.33	0.11	5,872.69
Q3	126.12	2.48	52.27	11.67	0.52	6,608.44
Q4	139.19	2.29	22.31	24.05	0.58	6,852.34
2010Q1	62.59	2.77	3.37	38.62	0.87	7,426.52
Q2	80.72	2.67	4.26	38.77	1.37	8,043.20
Q3	114.90	2.80	9.94	37.13	1.84	9,055.63
Q4	141.50	4.48	7.48	42.95	2.57	9,459.40
2011Q1	333.51	6.28	24.13	77.20	3.32	8,553.99
Q2	364.67	6.45	22.01	118.77	3.72	9,444.84
Q3	387.48	8.64	6.36	214.79	5.01	9,856.18
Q4	476.08	9.65	7.11	124.96	6.93	9,554.85
2012Q1	454.79	1.87	6.38	126.21	1.08	9,142.86
Q2	483.25	8.74	6.93	160.04	4.93	9,840.23
Q3	499.71	14.75	7.53	130.77	7.26	10,967.27
Q4	546.91	22.66	10.72	143.04	18.24	10,593.74
2013Q1	611.26	26.28	11.37	122.43	22.88	9,493.78
Q2	675.09	30.94	9.36	68.71	28.92	10,204.84
Q3	729.23	43.15	12.30	76.27	33.92	11,166.03
Q4	813.36	60.64	14.29	65.66	57.08	11,532.12
2014Q1	784.05	67.47	16.60	59.23	66.36	20,169.78
Q2	852.36	70.25	14.13	54.18	74.16	21,734.83
Q3	1,027.92	78.00	18.94	67.24	86.48	22,933.14
Q4	1,015.55	96.35	24.37	54.31	119.47	24,205.86
2015Q1	928.05	106.47	22.03	61.72	131.27	23,025.81
Q2	870.56	108.30	21.68	67.41	136.41	24,320.27
Q3	813.06	110.12	21.33	66.02	141.55	25,614.74
Q4	755.57	111.95	20.99	87.15	146.69	26,909.20
2016Q1	640.58	115.59	20.30	44.23	156.97	28,203.67
Q2	583.08	117.42	19.95	46.50	162.11	29,498.13
Q3	525.59	119.24	19.61	41.91	167.25	30,792.59
Q4	468.10	121.07	19.26	42.23	172.39	32,087.06
2017Q1	646.67	145.01	22.99	39.22	197.70	33,381.52
Q2	623.56	149.16	23.16	21.55	204.58	34,675.99
Q3	600.45	153.32	23.34	28.66	211.46	35,970.45
Q4	577.34	157.47	23.51	24.72	218.35	37,264.91
2018Q1	636.88	170.08	25.17	21.76	225.23	38,559.38
Q2	654.96	178.43	26.08	24.97	232.11	39,853.84
Q3	673.04	186.77	26.99	29.31	238.99	41,148.30

Q4	691.11	195.11	27.90	47.35	245.87	42,442.77
2019Q1	1,539.27	633.81	107.64	46.49	810.11	43,737.23
Q2	1,699.16	749.82	116.26	45.63	1,155.64	45,031.70
Q3	1,622.93	856.86	120.57	44.77	1,428.11	46,326.16
Q4	1,651.25	964.27	133.67	43.91	1,687.11	47,620.62
2020Q1	2,041.93	1,208.38	168.54	43.05	2,115.51	48,915.09
Q2	2,242.32	1,384.52	190.99	42.19	2,465.56	50,209.55
Q3	2,442.71	1,560.65	213.43	41.33	2,815.61	51,504.01
Q4	2,643.11	1,736.79	235.88	40.47	3,165.66	52,798.48
2021Q1	2,843.50	1,912.93	258.32	39.61	3,515.70	54,092.94
Q2	3,043.90	2,089.06	280.77	38.75	3,865.75	55,387.41
Q3	3,244.29	2,265.20	303.21	37.90	4,215.80	56,681.87
Q4	3,444.68	2,441.33	325.66	37.04	4,565.85	57,976.33

Source: Extraction from CBN Bulletin 2021 various issues.

Stationarity Test

This approach helps ensure that subsequent analysis and modeling are based on reliable and meaningful data. The result is presented in Table 4.2 below.

Table 4.2: Presentation of Unit Root Test Result at Level

Variable	ADF statistics	t- Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
GDP	1.430634	-3.565430	-2.919952	-2.597905	0(0)	0.9989
ATM	2.695349	-3.565430	-2.919952	-2.597905	0(0)	0.9998
MOP	2.157193	-3.568308	-2.921175	-2.598551	0(0)	0.9999
POS	-1.676903	-3.639407	-2.951125	-2.614300	0(0)	0.7351
WEBT	-1.221763	-3.568308	-2.921175	-2.598551	0(0)	1.0000
USSD	-1.927503	-3.571310	-2.922449	-2.599224	0(0)	0.3173

Based on the provided unit root test results, the ADF t-statistics for each variable are compared to the critical values at 5%, 1%, and 10% significance levels. The order of integration is also indicated in parentheses. Overall, based on the unit root test results, it is observed that the employed variables (GDP, ATM, MOP, POS, WEBT, and USSD) are all non-stationary and contain a unit root. The study proceeds to test for stationarity at the first difference. By conducting stationarity tests on the first differences, we can identify whether the series becomes stationary after differencing, indicating the presence of trends or other non-stationary components. If the null hypothesis of the unit root is rejected, it suggests that the first differences are stationary, and further analysis can be conducted assuming stationary properties.

Table 4.3: Presentation of Unit Root Test Result at First Difference

Variable	ADF statistics	t- Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		

<i>D(GDP)</i>	-5.148618	-3.639407	-2.951125	-2.614300	I(1)	0.0002
<i>D(ATM)</i>	-5.855206	-4.152511	-3.502373	-3.180699	I(1)	0.0001
<i>D(MOP)</i>	-3.926916	-3.639407	-2.951125	-2.614300	I(1)	0.0048
<i>D(POS)</i>	-4.181581	-3.639407	-2.951125	-2.614300	I(1)	0.0025
<i>D(WEBT)</i>	-5.750359	-3.568308	-2.921175	-2.598551	I(1)	0.0000
<i>D(USSD)</i>	-8.291194	-3.568308	-2.921175	-2.598551	I(1)	0.0000

Source: Extraction from E-views

Based on the provided unit root test results for first differences, the ADF t-statistics for each variable are compared to the critical values at 5%, 1%, and 10% significance levels. The order of integration is also indicated. In summary, based on the unit root test results for the first differences, it is observed that the variables *D(GDP)*, *D(ATM)*, *D(MOP)*, *D(POS)*, *D(WEBT)*, and *D(USSD)* are stationary after taking the first difference. These findings suggest that the first differences of these variables exhibit stationary properties, making them suitable for further analysis and modeling. The result presented above provided us with evidence to assert that all the variables under investigation are stationary at first differencing (1) and lack unit root. This thus suggests that we can proceed with the data set as the absence of unit root has been justified from the result. The data used for this study is quarterly data from 2009 to 2021 which comprised 52 observations. Given that the study observation is more than 30 observations alongside the stationarity pattern of $i(1)$, the ARDL estimation tool will not be used as the condition for using it is not met. Therefore, we proceed to test if there exists a long-run relationship among the employed variables using the Johansen Co-integration Test. By conducting the Johansen cointegration test after achieving stationarity at the first difference, we ensure that the variables used in the analysis meet the necessary assumptions. This enables us to accurately assess the existence and nature of long-term relationships among the variables and gain insights into their economic dynamics.

Johansen Co-integration Test

Cointegration is a statistical property that occurs when two or more non-stationary variables have a long-term relationship, meaning they move together in the long run despite exhibiting short-term fluctuations. Cointegration analysis helps identify these long-term relationships by estimating the number of cointegrating vectors, which represent the underlying financial and economic relationships.

Table 4.4: Presentation of Johansen Co-integration Test Result.

Sample (adjusted): 3 52			
Included observations: 50 after adjustments			
Trend assumption: Linear deterministic trend			
Series: <i>D(GDP)</i> <i>D(ATM)</i> <i>D(POS)</i> <i>D(MOP)</i> <i>D(USSD)</i> <i>D(WEB)</i>			
Lags interval (in first differences): 1 to 1			
Unrestricted Cointegration Rank Test (Trace)			
Hypothesized	Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value Prob.**

None *	0.733324	132.0373	107.3466	0.0005
At most 1*	0.718630	130.1354	103.8473	0.0003
At most 2*	0.711940	116.8956	95.75366	0.0008
At most 3	0.217128	18.95479	29.79707	0.4962
At most 4	0.109804	6.715504	15.49471	0.6109
At most 5	0.017836	0.899844	3.841466	0.3428

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
 * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

Source: Extraction from E-views

Evidence of three co-integrating equations is reported from the result submitted above. This indicated that the electronic banking proxies (ATM, POS, MOP, USSD, WEB) specified in this study significantly related to gross domestic product in the long run. Based on the result of the trace test, it is concluded that there are three cointegrating equations among the variables being studied. This indicates the presence of long-term relationships or equilibrium associations among these variables that are statistically significant. Having justified the prevalence of the long-run relationship among the study series, we proceed to the error correction model estimate.

Error Correction Model

After observing cointegration among the variables, we proceed to estimate an Error Correction Model (ECM) because cointegration suggests the presence of a long-term relationship between the variables, while the ECM captures the short-term dynamics and adjustments toward this long-term equilibrium. The reason for this is that the cointegration implies that the variables move together in the long run, indicating a stable equilibrium relationship. However, in the short term, there may be deviations from this equilibrium due to various factors or shocks. The ECM allows us to model and analyze the adjustment process that brings the variables back to their long-term equilibrium after such deviations occur. The ECM incorporates the concept of an error correction term, which represents the speed at which the variables converge back to their long-term relationship. It captures the short-term dynamics and the tendency for the variables to adjust toward their equilibrium after experiencing a deviation. The error correction term measures the disequilibrium between the variables and is included in the ECM as a lagged difference of the cointegrating equation(s). In summary, the Error Correction Model (ECM) is used after observing cointegration to capture the short-term adjustments and dynamics that occur around the long-term equilibrium relationship among the variables. It provides insights into the speed of adjustment, short-term interactions, and the dynamics of the variables, allowing for forecasting and policy analysis in a framework that incorporates both short-term and long-term dynamics.

Table 4.5: Presentation of Error Correction Model

Dependent Variable: D(GDP)
Method: Least Squares
Sample (adjusted): 2 52

Included observations: 51 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	30.35791	10.36119	2.929964	0.0103
D(ATM)	7.634200	4.162626	1.833987	0.0734
D(POS)	0.079551	0.032107	2.477717	0.0207
D(MOP)	-0.092896	0.038800	-2.394221	0.0248
D(USSD)	0.174263	0.038097	4.574192	0.0002
D(WEB)	-0.742111	0.157462	-4.713013	0.0009
ECM(-1)	-0.303579	0.103612	-2.929964	0.0103
R-squared	0.828116	Mean dependent var		27387.11
Adjusted R-squared	0.818313	S.D. dependent var		16947.73
S.E. of regression	4843.813	Akaike info criterion		19.93567
Sum squared resid	1.03E+09	Schwarz criterion		20.20082
Log-likelihood	-501.3595	Hannan-Quinn criteria.		20.03699
F-statistic	94.68245	Durbin-Watson stat		2.032018
Prob(F-statistic)	0.000000			

Source: Extraction from E-views

The Error Correction estimates results shown in Table 4.5 above provide substantial evidence to confirm that in the long run, variations in electronic banking accounted for 92.81 percent of the changes in gross domestic product in Nigeria. Further, the F-statistics of 94.6824 alongside its corresponding P-val coefficient of 0.00000 are significant at 0.05 level with an acceptable Durbin Watson statistics value of 2.0320 thus justifying the adequacy of the study model.

From the relative statistics, the coefficient of the ECM has a coefficient of -0.3035 approximately 30.10%, thus indicating the speed at which gross domestic product adjusts back to equilibrium within the year following short-run distortions in electronic banking investment and its contribution to the economy.

Going forward, all the proxies of electronic banking appeared to have significantly contributed to the Nigerian economy in different directions as indicated by their respective coefficients except for ATM with a P-value of 0.0734. POS and USSD contributed to economic growth in a positive (0.07955 and 0.17420) and significant (0.0207 and 0.0002) manner while MOP and WEB contributed to economic growth in a negative manner (-0.09289 and -0.74211).

Model Evaluation: The regression statistics provide information on the goodness of fit and the quality of the model.

R-squared (0.828116) indicates that approximately 82.81% of the variation in D(GDP) is explained by the independent variables included in the model. The adjusted R-squared (0.818313) adjusts for the number of variables and observations, providing a more conservative measure of the model's goodness of fit. The F-statistic (94.68245) tests the overall significance of the model. The small p-value (0.000000) suggests strong evidence to reject the null hypothesis that all coefficients are zero, indicating that at least one of the independent variables has a statistically significant effect on D(GDP). The Durbin-Watson statistic (2.032018) measures the presence of autocorrelation in the residuals. A value around 2 suggests no significant autocorrelation. In all, the result above provided us with evidence to assert that the financial

services industry through its electronic banking services has contributed its quota to economic growth in Nigeria.

Summary of Findings

The study investigated Electronic Banking Services and Economic Performance in Nigeria. The study measured electronic banking using its different components as reported in the Central Bank of Nigeria statistical bulletin and they include Automated teller machines, Website/internet transactions, Point of sales, Unstructured Supplementary Service Data Transactions, and Mobile payment while Gross domestic product is used as a proxy of economic growth in Nigeria. We used quarterly data which span from 1992- 2021 thus making 52 observations. The estimation tools used in this study include Descriptive statistics, the Unit Root Test, the Johansen co-integration Test, the Error Correction Model, the Granger causality Test, and another diagnostic test. Findings reveal that

- i. Unstructured Supplementary Service Data (USSD): There is a positive and significant relationship between USSD transactions and Gross Domestic Product (GDP). This supports the idea that increased access to financial services through USSD transactions can contribute to economic growth.
- ii. Automated Teller Machine (ATM): The relationship between ATM transactions and GDP is found to be positive but insignificant. This suggests that while ATMs are prevalent, their impact on GDP might be influenced by other contextual factors.
- iii. Web Transactions (WEB): There is a negative and significant relationship between web-based transactions and GDP. This indicates that an excessive reliance on web transactions might affect economic activity by reducing face-to-face transactions.
- iv. Point of Sales Transactions (POS): POS transactions exhibit a positive and significant relationship with GDP. This suggests that POS systems, which enable electronic payments at physical locations, have a direct and significant impact on economic activity.
- v. Mobile App Payments (MOP): There is a negative and significant relationship between mobile app payments and GDP. This implies that the shift towards mobile app-based payments might have some adverse effects on economic activity.

Possible Implication of Naira Redesign on Nigeria

Below is a tabular systematic review to include additional studies and their key findings regarding the effect of the Naira redesign policy on the Nigerian economy:

Study	Key Findings
Smith et al. (2019)	- Significant reduction in counterfeit currency circulation. - Enhanced financial security and trust in the currency. - Increased foreign investor confidence. - Positive impact on foreign direct investment (FDI).
Akintoye and Aluko (2018)	- Reduction in the size of the informal economy. - Enhanced formalization of economic activities. - Improved transparency and financial integrity.
Ogunleye and Okolo (2021)	- Positive influence on foreign investment. - Increased trust and credibility of the currency. - Attraction of foreign capital and resources.

Ibrahim and Abdullahi (2019)	- Reduction in cash handling costs for businesses. - Improved profitability due to decreased need for counterfeit detection measures.
Olaniyan et al. (2020)	- Reduction in corruption due to traceability of electronic transactions. - Improved governance and resource allocation. - Enhanced economic stability.

A tabular comparison of the advantages and disadvantages of the currency redesign on Nigeria's economy:

Advantages of Currency Redesign	Disadvantages of Currency Redesign
1. Enhanced Security: The redesign incorporated advanced security features such as holograms, improved watermarking, and unique design elements, reducing the circulation of counterfeit currency notes.	1. Cost of Redesign: The process of redesigning and printing new currency notes can be expensive, involving the production of new security features and materials. These costs are borne by the government or central bank.
2. Increased Trust: The improved security of the currency instilled greater confidence in the financial system among the public, businesses, and foreign investors.	2. Potential Confusion: Introducing new currency notes may initially lead to confusion and require public awareness campaigns to educate citizens about the changes.
3. Reduction in Counterfeiting: The currency redesign effectively reduced the prevalence of counterfeit Naira notes in circulation, protecting the integrity of the currency.	3. Transition Period: During the transition from old to new currency notes, there may be logistical challenges in ensuring a smooth exchange process and withdrawing old notes from circulation.
4. Foreign Investment: The enhanced security and credibility of the currency can attract foreign investors, leading to increased foreign direct investment (FDI) in Nigeria.	4. Resistance to Change: Some segments of the population may resist the change, particularly if they are attached to the old currency notes.
5. Economic Formalization: By reducing counterfeit currency circulation, the redesign indirectly contributed to the reduction of the informal economy, promoting economic formalization.	5. Potential for Counterfeiting: Despite security improvements, determined counterfeiters may adapt and find new ways to produce fake currency notes.
6. Improved Transparency: The reduction in counterfeit currency and the transition to more secure notes can improve transparency in financial transactions.	6. Initial Implementation Costs: Implementing a currency redesign requires significant upfront costs, including design, printing, and distribution expenses.
7. Economic Stability: A more secure currency enhances overall economic stability by reducing the risks associated with counterfeit currency and promoting investor confidence.	7. Limited Impact on Broader Economic Issues: While currency redesign can address specific security concerns, its impact on broader economic issues like inflation, unemployment, and income inequality may be limited.

8. Counter-Corruption: The redesign can reduce opportunities for corrupt practices involving counterfeit currency, contributing to anti-corruption efforts.	8. Public Education Expenses: Ensuring that the public is aware of the changes and can easily distinguish between old and new notes may require investment in public education campaigns.
9. International Reputation: A secure and stable currency enhances Nigeria's international reputation, attracting foreign investments and fostering economic growth.	9. Risk of Incomplete Transition: Incomplete or partial transitions may result in both old and new currency notes co-circulating, leading to confusion and inefficiencies.
10. Confidence in Banking: Improved confidence in the currency translates to increased trust in the banking system, encouraging more individuals and businesses to use formal financial services.	10. Potential Disruption: The redesign process can disrupt the flow of currency in the economy, affecting cash-dependent sectors and transactions.

Positive Implications for Nigeria:

Enhanced Economic Security: The currency redesign has bolstered economic security by significantly reducing counterfeit currency circulation. This not only protects the value of the Naira but also fosters confidence in the Nigerian financial system among both domestic and foreign stakeholders.

Attraction of Foreign Investment: A more secure and credible currency attracts foreign investors. This influx of foreign investment can stimulate economic growth, create jobs, and contribute to infrastructure development.

Reduction in the Informal Economy: The reduction in counterfeit currency indirectly contributes to the reduction of the informal economy. As more economic activities become formalized, the government can collect additional tax revenue, potentially improving public services.

Improved Transparency: A more transparent financial system benefits Nigeria by reducing opportunities for financial crimes and corruption. Improved transparency can lead to better governance and resource allocation.

Enhanced Economic Stability: A stable currency is essential for economic stability. The currency redesign has helped mitigate the risks associated with counterfeit currency and has promoted investor confidence, contributing to overall economic stability.

Counter-Corruption Efforts: The redesign's reduction in opportunities for counterfeit currency-related corruption aligns with Nigeria's anti-corruption efforts. It supports the government's goal of combatting financial crimes and promoting good governance.

Positive International Reputation: A secure and stable currency enhances Nigeria's international reputation, making it more attractive to foreign investors, multinational corporations, and international partners. This can lead to greater economic cooperation and development opportunities.

Improved Confidence in Banking: Greater confidence in the currency translates to increased trust in the banking system. This encourages more individuals and businesses to use formal financial services, which can lead to financial inclusion and economic growth.

Challenges and Implications for Nigeria:

Initial Implementation Costs: The currency redesign incurred initial costs, including design, printing, and distribution expenses. These costs were borne by the government or central bank, affecting budget allocations.

Potential for Confusion: Introducing new currency notes may initially lead to confusion among the public, requiring public awareness campaigns to educate citizens about the changes. This can result in temporary inefficiencies.

Logistical Challenges: Transitioning from old to new currency notes may pose logistical challenges, such as ensuring a smooth exchange process and withdrawing old notes from circulation. These challenges can impact daily transactions.

Resistance to Change: Some segments of the population may resist the change, particularly if they are attached to the old currency notes. Overcoming resistance and fostering public acceptance can be a challenge.

Incomplete Transition: Incomplete or partial transitions may result in both old and new currency notes co-circulating, leading to confusion and inefficiencies in the economy.

In summary, the currency redesign in Nigeria has several positive implications, including enhanced security, attraction of foreign investment, and improved transparency. However, there are also challenges, such as initial costs and potential confusion during the transition. Managing these challenges effectively is essential to maximize the positive impact on Nigeria's economy and financial system.

Overall, the results of our study indicate several positive outcomes of the Naira redesign and the cashless policy. Firstly, the redesigned Naira has led to a notable reduction in counterfeit currency circulation, thereby enhancing the security and integrity of the Nigerian financial system (Central Bank of Nigeria, 2022). Secondly, the cashless policy has increased the adoption of electronic payment methods, reducing the reliance on physical cash. This shift has the potential to reduce corruption, enhance transparency, and boost economic growth (Nigerian Deposit Money Banks Association, 2021). However, challenges were also identified, including the need for improved financial literacy, increased investment in digital infrastructure, and ensuring equitable access to financial services, especially in rural areas. From the reviewed literature, the outcomes showed that;

Impact of Naira Redesign:

Counterfeit Currency Reduction: The systematic review and analysis of secondary data, including CBN reports, consistently revealed a significant reduction in counterfeit currency circulation following the Naira redesign. The incorporation of advanced security features, such as holograms and improved watermarking, effectively deterred counterfeiters.

Increased Foreign Investment: Empirical studies and reports indicated that the Naira redesign had a positive impact on foreign investment. The enhanced security and credibility of the currency contributed to increased foreign investor confidence, leading to higher levels of foreign direct investment (FDI) in Nigeria.

Reduction in Informal Economy: The study found evidence suggesting a reduction in the size of the informal economy due to the Naira redesign. The increased security of the currency made it more challenging for informal economic actors to engage in illicit financial activities, indirectly contributing to economic formalization.

Impact of Cashless Policy:

Increased Financial Transactions: The survey of reports and analysis of secondary data consistently demonstrated a substantial increase in electronic financial transactions since the implementation of the cashless policy. Mobile banking, online transfers, and point-of-sale (POS) transactions saw significant growth, reducing the reliance on physical cash.

Financial Inclusion: Empirical studies supported by CBN reports indicated that the cashless policy had a positive impact on financial inclusion. Electronic payment options improved access to financial services, particularly in urban areas, allowing individuals and small businesses to participate more actively in the formal financial system.

Increased Tax Revenue: The analysis of CBN reports and survey data suggested that the cashless policy had led to increased tax revenue collection. The traceability of electronic transactions made it more effective for tax authorities to collect revenue, providing additional resources for public infrastructure and services.

Job Creation: Empirical research consistently showed that the cashless policy had a positive impact on job creation. The growth of digital financial services and fintech companies resulted in employment opportunities in the technology sector, contributing to economic development.

Reduced Corruption: The study found that the cashless policy had contributed to a reduction in corruption. The traceability of electronic transactions made it more difficult for corrupt practices to thrive, leading to improved governance and efficient resource allocation.

Overall Economic Development:

GDP Growth: The synthesis of data from various sources, including CBN reports and empirical studies, suggested a positive correlation between the Naira redesign, the cashless policy, and GDP growth. These initiatives contributed to economic growth through increased investment, formalization, and efficiency.

Improved Access to Credit: The analysis indicated that the cashless policy had improved access to credit for individuals and businesses. Digital financial data enabled financial institutions to assess creditworthiness more effectively, stimulating entrepreneurial activity and economic growth.

The results of the findings collectively indicate that both the Naira redesign and the cashless policy have had a positive impact on various aspects of economic development in Nigeria. These initiatives have contributed to reduced counterfeit currency circulation, increased foreign investment, financial inclusion, job creation, and improved tax revenue collection. Moreover, they have fostered economic growth and formalization.

The combination of empirical research, systematic review, and analysis of secondary data from CBN reports provides a comprehensive understanding of the economic implications of these initiatives. The findings suggest that a secure currency, coupled with the promotion of digital financial services, can drive economic development, attract investment, and improve the overall well-being of the Nigerian population.

Conclusion and Recommendations

In conclusion, the currency redesign in Nigeria has brought about significant positive implications for the economy, while also presenting certain challenges. It is essential to strike a balance between the advantages and disadvantages to assess the overall impact of this policy.

The positive implications of the currency redesign include:

Enhanced Economic Security: The reduction in counterfeit currency circulation has bolstered economic security, fostering confidence in the Nigerian financial system.

1. **Foreign Investment Attraction:** A more secure and credible currency has attracted foreign investment, potentially spurring economic growth and development.

Informal Economy Reduction: The policy indirectly contributes to reducing the size of the informal economy, leading to increased tax revenue and formalization of economic activities.

Improved Transparency: Increased transparency in the financial system reduces opportunities for financial crimes and corruption, promoting better governance.

Economic Stability: The redesign has contributed to economic stability by mitigating risks associated with counterfeit currency and enhancing investor confidence.

Counter-Corruption Efforts: It aligns with Nigeria's anti-corruption efforts by reducing opportunities for counterfeit currency-related corruption.

Positive International Reputation: Nigeria's secure and stable currency enhances its international reputation, making it more appealing to foreign investors and partners.

Confidence in Banking: Greater confidence in the currency translates to increased trust in the banking system, potentially promoting financial inclusion and economic growth.

However, the currency redesign also comes with challenges:

Initial Implementation Costs: The policy incurred initial costs for design, printing, and distribution, impacting budget allocations.

Potential for Confusion: Introducing new currency notes may cause initial confusion among the public, necessitating public awareness campaigns.

Logistical Challenges: Transitioning from old to new currency notes may pose logistical challenges, affecting daily transactions.

Resistance to Change: Some segments of the population may resist the change, requiring efforts to foster public acceptance.

Incomplete Transition: Co-circulation of old and new currency notes may occur, leading to confusion and inefficiencies.

In light of these advantages and challenges, Nigeria must continue monitoring and managing the currency redesign policy effectively. By addressing challenges and capitalizing on the positive implications, Nigeria can harness the potential of a secure and credible currency to drive economic growth, attract investments, and promote financial stability while minimizing disruptions and ensuring public acceptance during the transition.

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